

**TRANSPORTATION AND HOUSING AND URBAN
DEVELOPMENT, AND RELATED AGENCIES AP-
PROPRIATIONS FOR FISCAL YEAR 2017**

HEARINGS

BEFORE A

**SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE**

ONE HUNDRED FOURTEENTH CONGRESS

SECOND SESSION

ON

H.R. 5394/S. 2844

**AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENTS OF TRANS-
PORTATION AND HOUSING AND URBAN DEVELOPMENT, AND RE-
LATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30,
2017, AND FOR OTHER PURPOSES**

**Department of Housing and Urban Development
Department of Transportation
Nondepartmental Witnesses**

Printed for the use of the Committee on Appropriations



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**TRANSPORTATION AND HOUSING AND URBAN
DEVELOPMENT, AND RELATED AGENCIES
APPROPRIATIONS FOR FISCAL YEAR 2017**

THURSDAY, MARCH 10, 2016

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:30 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Susan M. Collins (chairman) presiding.

Present: Senators Collins, Boozman, Capito, Daines, Reed, Murray, Schatz, and Murphy.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

OFFICE OF THE SECRETARY

STATEMENT OF HON. JULIÁN CASTRO, SECRETARY

OPENING STATEMENT OF SENATOR SUSAN M. COLLINS

Senator COLLINS. The subcommittee will come to order.

Today we welcome both Secretary Castro, who will testify on the President's fiscal year 2017 budget request for the Department of Housing and Urban Development (HUD), as well as Inspector General Montoya, who will discuss not only his office's budget request but also the oversight and other work the Office of Inspector General (OIG) has conducted at HUD. I look forward to hearing from both of you.

I am pleased to be joined today by our ranking member, Senator Jack Reed, a fellow New Englander, as we begin our subcommittee's work on the fiscal year 2017 appropriation. When offsetting receipts from the Federal Housing Administration (FHA) and Ginnie Mae are excluded, the President's request is nearly \$49 billion, an increase of nearly \$2 billion and 4 percent above the fiscal year 2016 enacted level. It's important for us to remember that this request does not exist in a vacuum. It must be considered in the broader context of an unsustainable \$19 trillion debt.

The budget cap for non-defense discretionary spending government-wide is essentially the same for fiscal year 2017 as it was for 2016. This subcommittee in particular has to cope with the central truths about HUD's budget that are present every year.

The cost of simply renewing existing rental assistance, which consumes 84 percent of HUD's overall budget, will increase, and,

as FHA returns to its countercyclical role, offsetting receipts will decline.

In addition to the constraint of needing an additional \$1.4 billion just to renew existing rental assistance, the subcommittee again must deal with the uncertainty of how much on offsetting receipts will be credited from FHA's mortgage insurance premiums.

The Office of Management and Budget's (OMB's) score of receipts is \$2.8 billion above fiscal year 2016. Good news to be sure, however, we must keep in mind that the Congressional Budget Office's (CBO's) baseline score for fiscal year 2017 is more than \$400 million below current levels and \$2.7 billion below the OMB's assumptions, an enormous discrepancy. Until the CBO finishes scoring the President's budget, prudence dictates that we assume the lower level as we review HUD's request.

In an environment where the top line remains flat, the increase of 4 percent over current levels proposed in the President's budget would be extremely challenging.

Yet rather than submit a budget request that seeks to bend the cost curve of rental assistance without doing so on the backs of low-income families and seniors, the Administration proposes new spending of \$750 million above what is needed to maintain existing rental assistance, plus an additional \$11.3 billion in new mandatory spending that lacks an offset and, frankly, is simply a gimmick to evade the current budget agreement.

Yet despite all of the additional spending requested, the Administration inexplicably once again proposes a \$200 million cut to the Community Development Block Grant (CDBG) program.

Well, just this week, mayors and other community officials were in town, and I can tell you that one of their top priorities is the CDBG program, because it remains one of the most adaptable and welcomed community and economic development and job creation programs, because it can be tailored to meet the unique need in each State.

In addition to my concerns regarding the proposed funding levels, I believe that it is critical that HUD continue to invest in the effective oversight of the management and physical condition of its assisted housing stock. It must provide technical assistance where needed, and it must take action implementing sanctions where appropriate.

Neither residents nor taxpayers are well served when poor conditions are allowed to continue. I am troubled to read about egregious examples of poor housing quality in States such as Tennessee and Florida, and I'm aware of similar problems in my home State of Maine.

But I am even more troubled to learn that some of these properties initially received passing inspection scores from HUD before public outcry compelled a second look. It is inexcusable that vulnerable residents are ever placed into substandard housing with serious violations, but it is doubly offensive when the taxpayers are subsidizing these unfit units.

This is the final budget request of this Administration, and is a good opportunity to reflect not only on the disappointments or shortcomings but also on what we have been able to accomplish

working together. I am particularly proud of what we have been able to do to reduce the number of people who are homeless.

Since 2010, investments made by this Committee have led to a 36-percent reduction in the number of homeless veterans, chronic homelessness has declined by 22 percent, and homeless families by 19 percent.

While we cannot yet point to meaningful reductions in youth homelessness, I believe that the targeted funding we just approved in December will bear fruit. We can point to improved communication among Federal agencies and targeted funding to better assess the number and needs of homeless youth as well as the effectiveness of current programs targeted to these vulnerable people.

Improved coordination among agencies and at the local level, especially in the context of coordination with the child welfare system, is still needed, and that's why I've joined several of my Senate colleagues in leading the effort to reauthorize the Runaway and Homeless Youth and Trafficking Prevention Act, as well as to introduce the Family Unification, Preservation, and Modernization Act.

I will continue to work with Senator Reed and others on this subcommittee to ensure that we respond to the housing needs of these vulnerable children and teenagers.

Finally, Senator Reed and I will be introducing a bill this afternoon to reform the Housing Opportunities for Persons with AIDS Program so that the formula no longer counts deceased individuals.

And yes, you did hear me correctly. The current formula actually counts people who are no longer living. Currently, 55 percent of the HIV and AIDS cases used in the formula represent people who have passed on. A formula change is very much needed to ensure that the scarce resources available are directed to communities most in need of assistance today.

[The statement follows:]

PREPARED STATEMENT OF SENATOR SUSAN M. COLLINS

The subcommittee will come to order. Today we welcome both Secretary Castro, who will testify on the President's fiscal year 2017 budget request for the Department of Housing and Urban Development, as well as Inspector General Montoya who will discuss not only his office's budget request but also the oversight and other work the OIG conducted at HUD. I look forward to hearing from each of you.

I am pleased to be joined today by our Ranking Member, Senator Jack Reed, as we begin the subcommittee's work on the fiscal year 2017 appropriation for the Department of Housing and Urban Development. When offsetting receipts from F.H.A. and Ginnie Mae are excluded, the President's request is \$49 billion, an increase of nearly \$2 billion and 4 percent above the fiscal year 2016 enacted level. This request does not exist in a vacuum and must be considered in the broader context of an unsustainable \$19 trillion debt.

The budget cap for non-defense discretionary spending government-wide is essentially the same as fiscal year 2016. This subcommittee, in particular, has to cope with the central truths about HUD's budget that are present every year: the cost of renewing existing rental assistance, which consumes 84 percent of HUD's overall budget, will increase, and as F.H.A. returns to its countercyclical role, offsetting receipts will decline.

In addition to the constraint of needing an additional \$1.4 billion just to renew existing rental assistance, the subcommittee again must deal with the uncertainty of how much offsetting receipts will be credited from F.H.A.'s mortgage insurance premiums. OMB's score of receipts is \$2.8 billion above fiscal year 2016. Good news to be sure, however, we must keep in mind that CBO's baseline score for fiscal year 2017 is more than \$400 million below current levels and \$2.7 billion below the OMB's assumption, an enormous discrepancy. Until CBO finishes scoring the Presi-

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Yet, despite all of the additional spending requested, the Administration once again proposes a \$200 million cut to the Community Development Block Grant program. The CDBG program remains one of the most adaptable and welcomed community and economic development and job creation programs that can be tailored to meet unique needs within each State.

In addition to my concerns regarding the proposed funding levels, I believe it is critical that HUD continue to invest in the effective oversight of the management and physical condition of its assisted housing stock. It must provide technical assistance when needed, and it must take action implementing sanctions when appropriate.

Neither residents nor taxpayers are well served when poor conditions are allowed to continue. I am troubled to read about egregious examples of poor housing quality in places such as Tennessee and Florida and am aware of similar problems in my home State of Maine. But I am even more troubled to learn that some of these properties initially received passing inspection scores from HUD before public outcry compelled a second look. It is inexcusable that residents are ever placed into substandard housing with serious violations, but it is doubly offensive when the taxpayers are subsidizing these unfit units.

This is the final budget request of this Administration and is a good opportunity to reflect not only on the shortcomings but also on what we have accomplished together. I am particularly proud of what we have been able to achieve in reducing the number of people who are homeless. Since 2010, investments made by this Committee have led to a 36 percent reduction in the number of homeless veterans; chronic homelessness has declined by 22 percent; and homeless families by 19 percent.

While we cannot yet point to meaningful reductions in youth homelessness, I believe the targeted funding we just approved in December will bear fruit. We can point to improved communication among Federal agencies and targeted funding to better assess the number and needs of homeless youth as well as the effectiveness of current programs targeted to these vulnerable young people. Improved coordination among agencies and at the local level, especially in the context of coordination with the child welfare system, is still needed. That is why I joined my Senate colleagues to lead the effort to reauthorize the Runaway and Homeless Youth and Trafficking Prevention Act, as well as to introduce The Family Unification, Preservation, and Modernization Act of 2015. I will continue to work to ensure that this Subcommittee responds to the housing needs of these children and teenagers.

Finally, Senator Reed and I will be introducing a bill this afternoon to reform the Housing Opportunities for Persons with AIDS program, otherwise known as HOPWA, so that the formula no longer counts deceased individuals. Currently, 55 percent of the HIV and AIDS cases used in the formula represents deceased individuals. A formula change is very much needed to ensure the scarce resources available are directed to communities most in need of assistance today.

Mr. Secretary, I hope you will commit to working with us on this important bill, and I look forward to hearing from you and Inspector General Montoya. I now turn to Senator Reed for his opening statement.

Senator COLLINS. Mr. Secretary, I look forward to working with you on this important bill, and to hearing from you and the inspector general. It now gives me great pleasure to turn to the ranking member, Senator Reed, for his opening statement.

STATEMENT OF SENATOR JACK REED

Senator REED. Thank you very much, Madam Chairman. It has been a pleasure working with you as the ranking member and in so many other ways.

And we've worked together for many years, even before our assignment together on this subcommittee, and I'm pleased and delighted that today we're joining to introduce the Housing for Persons with AIDS Program. As you pointed out, the formula must be corrected, and your leadership is going to make that change effective.

We've also worked for many years together on lead-based paint in our housing stock, and that's another critical issue that effects our constituents, not just ours, but across the Nation. And Mr. Secretary, I know you share many of our concerns, and we look forward to working with you on these issues and many others.

Welcome to the subcommittee. Thank you for your years of service. And you have shown a great deal of leadership advocating for families in need and the importance of ending homelessness. Thank you for that.

Let me also welcome David Montoya, who will be joining us for the second panel. David, you have served as HUD's inspector general since 2011. You bring a great wealth of knowledge in HUD's financial management performance, and we look forward to your testimony.

Today, as the chairman pointed out, we are here to discuss the fiscal year 2017 budget request for the Department of Housing and Urban Development. The Administration's discretionary budget request for HUD is \$49 billion, nearly \$2 billion more than fiscal year 2016. But this increase in spending is based on very optimistic Federal Housing Administration receipts, as the chairman pointed out.

As you are aware, these receipts are fundamental to HUD's budget request, and changes to these receipt levels in a year of tight budget constraints can mean the difference between maintaining current programs and literally cutting services.

I am concerned that the request assumes \$2.3 billion more in FHA receipts than in 2016, however, as again, the chairman intimated, CBO indicates that we could be looking at \$400 million less in receipts than in 2016, leaving your budget request with a \$2.7 billion gap.

As we all know too well, just last year we were faced with another threat of cuts to every budget through sequestration. We avoided that through great leadership, and particularly, Senator Collins and others.

But we have a responsibility to not only maintain our rental assistance programs, our home programs, but as you suggested, budget to expand programs that are necessary to the quality of life for many, many Americans.

Your proposal purports to do both, maintain our equities with respect to rental housing and other programs that are existing and also to provide enhanced choices, particularly for low-income Americans, in their housing. But if we're faced with cuts to the FHA receipts and do not have an increase in budgetary resources, it'll be very challenging to meet these dual objectives.

I support many of the proposals which you're advancing today. They include more than \$40 billion to maintain HUD's rental assistance program to continue the support for nearly 500 million households, it's absolutely essential; combined \$112 million in new vouchers and rapid re-housing assistance for families with children,

again, a very critical program; \$15 million to assist families who want to move to high opportunity areas, this is an issue that I think is one we have to address; and \$200 million to revitalize HUD-assisted housing through the Choice Neighborhoods initiative.

This program has been very effective in my home State you've been kind to visit, both in Woonsocket, Rhode Island, and Olneyville, a part of Providence. You want to address in the budget homelessness, and this is one of the areas where Senator Collins has taken a tremendous leadership role, increasing the Continuum of Care Program by \$414 million, as you want to do in your budget.

These projects, all of them, are extremely important, and we want to work with you to find a way to get them done. And while the request includes new targeted investment in homelessness on the discretionary side, it also assumes significant investment on the mandatory side.

Nearly \$11 billion in mandatory budget authority is requested over 10 years to end homelessness with children by, we hope, 2020. And while this mandatory request to fulfill the Administration's homeless goals is unlikely to be enacted given the present climate, I applaud the vision.

But I'm concerned that these broad investments do not include funding for a program that has proved essential, that's the HUD-Veterans Affairs Supportive Housing (HUD-VASH) vouchers.

Mr. Secretary, there are still veterans experiencing homelessness in this country, and I'd like to understand why the Administration did not include HUD-VASH in its request for the second year in a row.

Overall, what we have in front of us today is a budget request that emphasizes housing choice and opportunity for the many American families that struggle to meet their day to day needs. Our elderly, our disabled, working poor, they all deserve a fair chance at affordable and decent housing.

There are more than 400 parents and children in Rhode Island who remain homeless and deserve a place to call home. Our veterans also, as I point out, have fought to protect this country, they, too, deserve this opportunity. We're obligated to figure out the best and most cost-effective ways to address these needs, and Mr. Secretary, that is why you're here today to explain the budget and to work with us going forward so that we can achieve these objectives.

And thank you, again, Madam Chairman.

Senator COLLINS. Thank you very much, Senator Reed.

I want to give, since we don't have a huge number of members with us today, I want to just check to see if either Senator Daines or Senator Boozman have any opening comments, or whether you're content to wait. Thank you.

Secretary Castro, the floor is yours.

SUMMARY STATEMENT OF HON. JULIÁN CASTRO

Secretary CASTRO. Thank you very much, Chairman Collins, to Ranking Member Reed, and the members of the subcommittee. It really is an honor to appear before you today to discuss with you HUD's proposed budget for fiscal year 2017.

The President understands that expanding access to quality and affordable housing will put more Americans on a path to prosperity, and our budget honors his commitment to promote inclusive opportunity for all Americans.

This proposal comes at a time of great momentum for our Nation's economy. Over the past 6 years, businesses have added 14.3 million new jobs, the longest streak of private sector job growth on record. And now, our challenge is to provide every person with the chance to share in this promise. And at HUD, that starts with helping more folks to secure a safe and affordable place to call home.

Today, a quarter of American renters spend more than half of their incomes on housing. And too many families are forced to cut back on food, on health care, and other basic necessities just to put a roof over their heads. That's why the President's budget proposes to increase HUD's funding to \$48.9 billion, \$1.9 billion over the enacted level for fiscal year 2016.

As you noted, Chairman, between 84 and 85 percent of our budget would go solely toward renewing rental assistance for nearly 5.5 million households. But we've also taken strong steps that maximize our remaining resources to achieve bold goals, such as ending homelessness in America. We've made great strides in the 6 years since President Obama introduced his Opening Doors initiative, and the best example of this, a 36-percent decline in veteran homelessness between 2010 and 2015.

I want to thank you, Chairman, and Ranking Member, and all of the members of this committee for your continued support of HUD-VASH. The success proves that, by working together, we can fully fulfill the President's vision, and we can help the next generation to escape the cycle of homelessness.

HUD's Family Options Study shows that rapid rehousing and housing choice vouchers are the most effective solutions for families with children experiencing homelessness, so we've asked for a historic \$11 billion investment in mandatory spending over the next 10 years that will use these tools to assist approximately 550,000 families.

HUD is also committed to empowering Americans through housing mobility. We've requested \$20.9 billion for our housing choice voucher program, an increase of \$1.2 billion from the enacted level for fiscal year 2016. This would provide 2.2 million families with the chance to move into neighborhoods with better schools, safer streets, and more jobs, and to stay there for the long term.

But HUD's mission extends beyond housing mobility. Too many communities remain segregated by race and by income, and too many Americans see their futures limited by the ZIP Code where they were born. So HUD's proposed budget makes vital investments in underserved communities.

It contains \$200 million for Choice Neighborhoods, which helps transform areas of concentrated poverty by creating quality mixed income housing, improving public safety, and sparking growth for local small businesses. And \$50 million is requested for our rental assistance demonstration program to help make crucial repairs in 25,000 units of HUD-assisted housing.

We're also taking decisive action to protect children from the dangers of lead-based paint. We've requested \$110 million for our Office of Lead Hazard Control and Healthy Homes and \$2.07 billion for public housing administrative fees, which can be used by PHAs to, among other things, increase inspections and ensure property owners control lead hazards. And we're improving our policies to mirror the CDC's lead safety guidelines.

Finally, the President knows that many Native communities face significant barriers to opportunity, so this budget asks for \$780 million to improve housing and development on Native American lands, including \$20 million for youth programs like community centers and Head Start facilities. And we continue our commitment to providing safe, affordable homes through our Native Hawaiian Housing Block Grant Program.

The President's budget advances a fundamental belief, that all Americans deserve a fair shot at achieving their dreams. I look forward to working with this committee to fulfill this mission and to use housing as a powerful platform to spark greater opportunity for the American people. Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. JULIÁN CASTRO

Thank you, Chairman Collins and Ranking Member Reed, for this opportunity to discuss how HUD's fiscal year 2017 budget proposal follows the roadmap the President has laid out for jumpstarting our economy through educating, innovating, and building. This Budget targets our investments to the families and geographies that need them the most, and puts more Americans back to work.

HUD's Budget is an essential component of the President's vision of investing in the things we need to grow our economy, create jobs, increase skills training and improve education, while continuing long term deficit reduction. Our request maintains assistance to low-income families currently served by HUD programs, expands assistance to targeted vulnerable populations, including the homeless and Native Americans, and revitalizes neighborhoods with distressed HUD-assisted housing and concentrated poverty. HUD's work is critical to the Administration's efforts to strengthen communities, bolster the economy, and improve the quality of life of the American people.

Overall, the President's Budget provides \$48.9 billion for HUD programs, an increase of \$1.9 billion above the 2016 enacted level. This spending is offset by projected receipts of \$10.9 billion. Increases are provided to protect vulnerable families, make significant progress toward the goal of ending homelessness, and support community-centered investments, including funding to revitalize neighborhoods with distressed HUD-assisted housing and concentrated poverty. This budget is built on rigorous research and evidence of what works, providing flexibility and investing in strategies that have been proven to pay dividends for families and communities.

THE FISCAL YEAR 2017 HUD BUDGET

Provides Opportunities for America's Most Distressed Neighborhoods to Revitalize and Increase Economic Growth.—The Budget provides \$200 million for Choice Neighborhoods to continue to transform neighborhoods of concentrated poverty into opportunity-rich, mixed-income neighborhoods. This funding level will be used to revitalize HUD-assisted housing and surrounding neighborhoods through partnerships between local governments, housing authorities, nonprofits, and for-profit developers. Preference for these funds will be given to designated Promise Zones—high-poverty communities where the Federal Government is working with local leadership to invest and engage more intensely to create jobs, leverage private investment, increase economic activity, reduce violence and expand educational opportunities. To further support Promise Zones, the Budget includes companion investments of \$128 million in the Department of Education's Promise Neighborhoods program and \$24 million in the Department of Justice's Byrne Criminal Justice Innovation Grants program, as well as tax incentives to promote investment, jobs and economic growth.

The Budget proposes \$300 million in mandatory funds for a new Local Housing Policy Grants program. This program will provide grants to localities and regional

coalitions to support new policies, programs or regulatory initiatives that create a more elastic and diverse housing supply, and in turn, increase economic growth, access to jobs and improve housing affordability. These funds will support a range of transformative activities in communities across the Nation that reduce barriers to housing development, increase housing supply elasticity and affordability, and demonstrate strong connections between housing, transportation, and workforce planning.

Supports Strategic Infrastructure Planning and Investments To Help Make America a Magnet for Jobs.—HUD is committed to ensuring that its core community and housing development work contributes to more and better transportation choices; promotes equitable, affordable housing; helps communities address the lingering neighborhood impacts of the foreclosure crisis; and aligns Federal policies and funding to remove barriers to local collaboration. The Budget provides \$2.8 billion for the Community Development Block Grant (CDBG) formula program, and proposes reforms to better target CDBG investments to address local community development goals. The budget also provides \$950 million for the HOME Investment Partnerships Program to help State and local governments increase the supply of affordable housing and expand homeownership opportunities for low-income families.

Protects the Vulnerable Recipients of HUD Rental Assistance and Makes Progress on the Federal Strategic Plan to End Homelessness.—The Budget includes \$20.9 billion for the Housing Choice Voucher program to help about 2.2 million low-income families afford decent housing in neighborhoods of their choice. This funding level supports all existing vouchers and adds 10,000 new vouchers to the program, targeted to families with children experiencing homelessness. The Budget also includes \$10.8 billion for the Project-Based Rental Assistance program to maintain affordable rental housing for 1.2 million families, and provides \$6.4 billion in operating and capital subsidies to preserve affordable public housing for an additional 1.1 million families.

The Budget provides \$2.7 billion for Homeless Assistance Grants, \$414 million above the 2016 enacted level. The increased funding will enable HUD to maintain existing projects, fund the increased competitive renewal demand for Continuums of Care in fiscal year 2016, and create 25,500 beds of permanent supportive housing for chronically homeless persons to reach the goal of ending chronic homelessness in 2017. In addition, the Budget includes 8,000 rapid rehousing interventions for households with children, which will support the goal of ending child, family and youth homelessness by 2020, and \$25 million in new projects targeted to homeless youth.

In addition to the targeted requests for homeless families with children above, the Budget requests \$11 billion in mandatory funds for vouchers and rapid rehousing to end family homelessness. Approximately 550,000 families will be supported over 10 years to stabilize their housing and assist them to become more self-sufficient. This proposal is based on rigorous research and will give families the right support at the right time to promote better outcomes.

Improves Mobility Through the Housing Choice Voucher Program.—The Budget provides \$2.1 billion in Public Housing Authority (PHAs) administrative fees using a new evidence-based formula that not only more accurately reflects the actual cost of running the program, but ensures that PHAs have sufficient resources to provide low-income families greater access to opportunity areas. In addition, the Budget requests \$15 million for a new mobility counseling demonstration that is designed to help HUD-assisted families move and stay in higher-opportunity neighborhoods. A portion of the funding will also support an evaluation to measure the impact of the counseling pilot to further inform the policy process and design.

Puts HUD-Subsidized Public and Assisted Housing on a Financially Sustainable Path.—Public housing authorities (PHAs) house over three million families. To bring our rental housing system into the 21st century and continue to address the \$26 billion in public housing capital needs, the Budget includes proposals that would facilitate the conversion and preservation of additional Public Housing and other HUD-assisted properties under the Rental Assistance Demonstration (RAD). At the same time, the Budget provides \$50 million for a targeted expansion of RAD to Public Housing properties in high-poverty neighborhoods and requests authority to convert Section 202 Housing for the Elderly Project Rental Assistance Contract properties to Section 8 platforms.

Improves the Way Federal Dollars are Spent.—The Administration supports legislation to modernize the Housing for Persons With AIDS (HOPWA) program to better reflect the current case concentration and understanding of HIV/AIDS and ensure that funds are directed in a more equitable and effective manner. The Budget's \$335 million investment in HOPWA, in combination with the proposed modernization, will assist local communities in keeping individuals with HIV/AIDS housed, making

it easier for them to stay connected to treatment, and therefore improving health outcomes for this vulnerable population.

The Budget also provides \$35 million for the evidence-based Jobs-Plus program, a proven model for increasing public housing residents' employment and earnings. Through Jobs-Plus, public housing residents will receive on-site employment and training services, financial incentives that encourage work and "neighbor-to-neighbor" information-sharing about job openings, training, and other employment-related opportunities.

Invests in Research and Support to Make HUD and its Grantees More Effective.—The American economy of the future requires a Federal Government that is efficient, streamlined, and transparent. This Budget once again calls for the flexible use of resources through HUD's Office of Policy Development and Research, which the Department will use to invest in technical assistance to build local capacity to safeguard and effectively invest taxpayer dollars; conduct innovative research; and evaluate program initiatives and demonstration programs so we can fund what works and stop funding what doesn't.

The Budget also continues to invest in focused upgrades to the IT infrastructure to improve service delivery and to better track and monitor our programs.

Consistent with the previous 3 years, HUD's fiscal year 2017 Budget is structured around the five overarching goals the Department adopted in its new Strategic Plan 2014-2018. These goals reflect the Department's—and my—commitment to 'moving the needle' on some of the most fundamental challenges facing America. Indeed, every month, I hold HUDStat meetings on one or more of these goals, to assess progress and troubleshoot problems in order to: 1) ensure that HUD is as streamlined and effective as possible in the way that we administer our own programs and partner with other Federal agencies; and 2) hold our grantees accountable for their expenditure of taxpayers' hard-earned dollars.

GOAL 1: STRENGTHEN THE NATION'S HOUSING MARKET TO BOLSTER THE ECONOMY AND PROTECT CONSUMERS

This Administration entered office confronting the worst economic crisis since the Great Depression. And while the largest factors contributing to this crisis were market driven, the American people have turned to Congress and the administration for leadership and action in righting our Nation's housing market. HUD remains firmly committed to working together with communities and individuals to cope with these unprecedented challenges. This Budget drives economic growth by increasing access to credit and strengthening the FHA.

In fiscal year 2017, HUD is requesting \$400 billion in loan guarantee authority for the Mutual Mortgage Insurance Fund, and \$30 billion in loan guarantee authority for the General and Special Risk Insurance Fund. The need for FHA is clear as it stepped up in recent years to address the unprecedented challenges wrought by the housing crisis, playing an important countercyclical role that has offered stability and liquidity throughout the recession. While a recovery of the housing market is currently underway, FHA continues to act as a crucial stabilizing element in the market, and to assure ongoing access to credit for qualified first-time, low-wealth or otherwise underserved borrowers.

The Budget also includes a request for the FHA Administrative Fee that will assist FHA in performing critical Quality Assurance work by funding important Information Technology investments as well as administrative investments to maintain FHA as an effective partner with borrowers and lenders. This modest fee on lenders will be applied only prospectively, and these funds will make it possible for FHA to continue to increase access, helping to place homeownership within the reach of more Americans.

GOAL 2: MEET THE NEED FOR QUALITY, AFFORDABLE RENTAL HOMES

In an era when more than one-third of all American families rent their homes and over 7.7 million unassisted families with very low incomes spend more than 50 percent of their income on rent and/or live in substandard housing, it remains more important than ever to provide a sufficient supply of affordable rental homes for low-income families—particularly since, in many communities affordable rental housing does not exist without public support. HUD's 2017 Budget maintains HUD's core commitments to providing rental assistance to some of our country's most vulnerable households as well as distributing housing, infrastructure, and economic development funding to States and communities to address their unique needs. Overall, 85 percent of HUD's total 2017 budget authority requested goes toward renewing rental assistance for current residents of HUD-subsidized housing, including public

housing and HUD grants to homeless assistance programs, and to some limited, strategic expansion of rental assistance to specific vulnerable households.

HUD's core rental assistance programs serve some of the most economically vulnerable families in the country. In these programs, including Housing Choice Vouchers, Public Housing and Project Based Rental Assistance (PBRA): almost 75 percent of families are extremely low-income (below 30 percent of area median income) and an additional 20 percent are very low-income (below 50 percent of area median income). Although worst case housing needs decreased to 7.7 million in 2013 from the record high of 8.5 million in 2011, these needs are still a national problem. Housing needs have expanded dramatically during the past decade and were exacerbated by the economic recession and associated collapse of the housing market, which reduced homeownership through foreclosures and increased demand for renting."

Preserving Affordable Housing Opportunities in HUD's Largest Programs

This Budget provides \$20.9 billion for HUD's Housing Choice Vouchers program, which is the Nation's largest and preeminent rental assistance program for low-income families. For over 35 years it has served as a cost-effective means for delivering safe and affordable housing in the private market. This 2017 funding level is expected to assist approximately 2.2 million families and support new incremental vouchers for areas of high need, for targeted populations. This Budget adds voucher leasing opportunities through funding for approximately 10,000 new units of housing for homeless families with children.

The Budget also provides a total of \$6.4 billion to operate public housing and modernize its aging physical assets through the Public Housing Operating (\$4.6 billion) and Capital (\$1.9 billion) funds, a critical investment that will help over 1.1 million extremely low- to low-income households obtain or retain housing. Similarly, through a \$10.8 billion request in funding for the PBRA program, the Department will provide rental assistance funding to privately-owned multifamily rental housing projects to serve over 1.2 million families nationwide.

Rebuilding our Nation's Affordable Housing Stock

Over the last 75 years, the Federal Government has invested billions of dollars in the development and maintenance of public and multifamily housing, which serve as crucial resources for some of our country's most vulnerable families. Despite this sizable Federal investment and the great demand for deeply affordable rental housing, we continue to see a decline in the number of available affordable housing units. Unlike other forms of assisted housing that serve very similar populations, the public housing stock is nearly fully reliant on Federal appropriations from the Capital Fund to make capital repairs. Funding and regulatory constraints have impaired the ability for these local and State entities to keep up with needed life-cycle improvements. The most recent capital needs study of the public housing stock, completed in 2010, estimated the backlog of unmet need at approximately \$26 billion, or \$23,365 per unit. Funding for the Capital Fund has been insufficient to meaningfully reduce public housing's backlog of repair and replacement needs or even meet the estimated \$3 billion in annual accrual needs. Under the strain of this backlog, and without financing tools commonly available to other forms of affordable housing, the public housing inventory has lost an average of 10,000 units annually through demolitions and dispositions.

—*Rental Assistance Demonstration.* To help address the backlog of unmet capital needs and to preserve this critical source of affordable housing, HUD is continuing to implement the Rental Assistance Demonstration (RAD), a program which enables PHAs to convert public housing to the Section 8 platform. In addition to the public housing stock, the RAD program targets certain "at-risk" HUD legacy programs. Prior to RAD, units assisted under Section 8 Moderate Rehabilitation (MR) and Section 8 Moderate Rehabilitation Single-Room Occupancy (MR SRO) were limited to short-term renewals and constrained rent levels that inhibit the recapitalization of the properties, and units assisted under Rent Supplement (RS) and Rental Assistance Program (RAP) had no ability to retain long-term project-based assistance beyond the current contract term. As a result, as their contracts expired, these projects would no longer be available as affordable housing assets.

Conversion to Section 8 rental assistance, as permitted under RAD, is essential to preserving these scarce affordable housing assets and protecting the investment of taxpayer dollars these programs represent. Long-term Section 8 rental assistance allows for State and local entities to leverage sources of private and public capital to rehabilitate their properties. While the Department expects and continues to process Public Housing conversions of assistance without additional subsidy, HUD requests \$50 million in 2017 for the incremental subsidy

costs of converting assistance under RAD for properties that cannot feasibly convert to Section 8 at existing funding levels. This funding would also support a requested expansion of the RAD authority to include Section 202 Housing for the Elderly Project Rental Assistance Contracts (PRACs). Overall, the requested funding will be targeted to: 1) Public Housing properties located in high-poverty neighborhoods, including designated Promise Zones, and in areas where the Administration is supporting comprehensive revitalization efforts as well as transfer of assistance to high opportunity locations where there is a limited supply of affordable housing, and 2) Section 202 PRACs with significant recapitalization needs, including those properties with service coordinators for frail and elderly residents. The Department estimates that the \$50 million in incremental subsidies will support the conversion and redevelopment of approximately 25,000 Public Housing and Section 202 PRACs, while helping to increase private investment in the targeted projects.

In addition to the funding request, the proposed legislative changes to RAD are designed to allow for maximum participation by those PHAs and private owners whose current funding levels are sufficient for conversion. This includes, for example, elimination of the 185,000 unit cap, which will allow for a greater portion of the Public Housing stock that can convert at no cost to the Federal Government to participate in the demonstration.

GOAL 3: USE HOUSING AS A PLATFORM FOR IMPROVING QUALITY OF LIFE

Stable housing provides an ideal platform for delivering a wide variety of health and social services to improve economic, health, and broad-based societal outcomes. For some, housing alone is sufficient to ensure healthy outcomes, while others require housing with supportive services to assist with activities of daily living or longterm self-sufficiency, as well as proximity to crucial services. HUD's fiscal year 2017 Budget acknowledges this reality by making critical investments in housing and supportive services, and partnering with other Federal agencies to maximize resources and best practices. Moreover, these investments will save money in the long term, by avoiding overuse of expensive emergency and institutional interventions.

Preventing and Ending Homelessness

Nowhere is the relationship between housing and supportive services clearer than in the successful efforts in communities around the country to address homelessness, which have led to a 36 percent reduction in veterans' homelessness and a 22 percent reduction in chronic homelessness, and a 19 percent in family homelessness since 2010. Additionally, this work has yielded a substantial body of research, which demonstrates that providing permanent supportive housing to chronically homeless individuals and families not only ends their homelessness, but also yields substantial cost saving in public health, criminal justice, and other systems. This year's Budget once again invests in this critical effort, by providing \$2.7 billion in Homeless Assistance Grants. This funding level will support competitive programs that annually serve over 800,000 homeless families and individuals, and create 25,500 beds of permanent supportive housing for chronically homeless persons to reach the goal of ending chronic homelessness in 2017. The Budget also includes 8,000 rapid rehousing interventions for households with children. In addition, the Budget includes \$88 million for housing vouchers for homeless families with children and also proposes another \$11 billion in new mandatory spending to reach and maintain the goal of ending family homelessness by 2020.

Leveraging Capital Resources and Serving our Most Vulnerable

This Budget provides a total of \$659 million for the Housing for the Elderly and Housing for Persons with Disabilities programs. Doing more with less, the Budget proposes reforms to the Housing for the Elderly program to target resources to help those most in need, reduce the up-front cost of new awards, and better connect residents with the supportive services they need to age in place and live independently.

Historically, HUD has provided both capital advances and operating subsidies to non-profit sponsors to construct and manage multifamily housing for low-income people with disabilities. In an effort to maximize the creation of new affordable units in a time of funding restraints, in fiscal year 2012 HUD began providing operating assistance to State housing agencies that formed partnerships with State healthcare agencies for service provision to low-income persons with disabilities. These funds are used to set aside supportive units for this target population in affordable housing complexes whose capital costs are funded through Low-Income Housing Tax Credits, HOME funds, or other sources. Investing Section 811 funds under this authority allows HUD to rely on the expertise of the State housing agencies to administer the award and on the State healthcare agency to identify the

most critical population to be served and guarantee the delivery of appropriate services. In fiscal year 2014, HUD requested, and received, similar authority for the Section 202 program. Drawing on lessons learned from implementation in the Section 811 program, HUD will take advantage of efficiencies inherent in these same agencies' oversight responsibilities for tax credits, HOME funds or similar housing funding.

GOAL 4: BUILD STRONG, RESILIENT AND INCLUSIVE COMMUNITIES

No longer can the American economy tolerate the marginalization from the labor force of significant numbers of people because of individualized or systemic discrimination, or because they live in isolated neighborhoods of concentrated poverty. An American economy built to last requires an increased supply of affordable rental homes in safe, mixed-income communities that provide access to jobs, good schools, transportation, high-quality services, and, most importantly, economic self-sufficiency. As such, HUD's fiscal year 2017 Budget puts communities in a position to plan for the future and draws fully upon their resources, most importantly their people.

Each year HUD dedicates approximately 16 percent of its funds to the capital costs of housing and economic development projects throughout the country. Through this investment, HUD and its partners are able to provide better opportunities for people living in neighborhoods of concentrated poverty and segregation, offer choices that help families live closer to jobs and schools, and support locally driven solutions to overarching economic development challenges. HUD's capital grants—including the Public Housing Capital Fund, Choice Neighborhoods, CDBG, and HOME—are focused on assisting areas of great need, including communities with high unemployment.

Preserving HUD's Major Block Grant Programs for Community Development and Housing

Through both formula and competitive grants, HUD has partnered with local organizations and State and local governments to fund innovative solutions to community development challenges. Underpinning these partnerships is the fundamental philosophy that local decision-makers are best poised to drive a cohesive development strategy. In 2017, HUD is requesting a total of \$2.9 billion in funding for the Community Development Fund to support economic development initiatives and projects that demonstrate the ability to connect private sector growth to some of our country's most distressed citizens and communities, and \$950 million for the HOME program.

The Budget requests \$2.8 billion for the Community Development Block Grant (CDBG), which remains the largest and most adaptable community and economic development program in the Federal portfolio for meeting the unique needs of States and local governments. Since its inception in 1974, CDBG has invested in economic development at the local level, investing in infrastructure, providing essential public services and housing rehabilitation, and creating jobs primarily for low- and moderate-income families. Altogether, CDBG funding annually reaches an estimated 7,000 local governments across the country, in communities of all shapes and sizes. However, to ensure that CDBG funds effectively provide targeted benefits to these communities, especially to low- and moderate-income populations, HUD proposes a suite of reforms to strengthen the program; help grantees target funding to areas of greatest need; enhance program accountability; synchronize critical program cycles with the consolidated plan; and reduce the number of small grantees while providing more options for regional coordination, administration and planning.

Often, CDBG dollars alone are insufficient to complete crucial economic development projects that communities desperately need. In those instances, HUD offers another potent public investment tool in the form of the Section 108 Loan Guarantee program. Section 108 allows States and local governments to leverage their CDBG grants and other local funds into federally guaranteed loans in order to pursue large-scale physical and economic investment projects that can revitalize entire neighborhoods or provide affordable housing to low- and moderate-income persons. In 2017, HUD is requesting Section 108 loan guarantee authority of \$300 million, and the continuation of a fee-based structure will eliminate the need for budget authority to cover the program's credit subsidy.

In addition, the HOME program is proposed at \$950 million and the Budget proposes legislative changes to better target the assistance provided with this funding. HOME is the primary Federal tool of State and local governments for the production of affordable rental and for-sale housing for low-income families. In the past 21 years, HOME has completed 1.22 million affordable units. The Budget also proposes statutory changes that would eliminate the 24-month commitment requirement,

eliminate the 15 percent Community Housing Development Organization (CHDO) set-aside, establish a single qualification threshold, revise “grandfathering” provisions so that HOME participating jurisdictions that fall below the threshold three out of the 5 years would be ineligible for direct grants, and provide for reallocation of recaptured CHDO technical assistance funds.

Notably in 2017, CDBG and HOME are part of the proposed Upward Mobility Project, a new initiative to allow States, localities or consortia of the two to blend their CDBG and HOME allocations with funding from the Department of Health and Human Services’ Social Services Block Grant and Community Services Block Grant in a flexible way to achieve local goals. Communities would design Upward Mobility Projects around achieving a specific outcome—like increasing families’ earnings, improving children’s outcomes, expanding employment opportunities, or increasing housing stability—then employ the most promising evidence-based methods to achieve that goal. To support the Upward Mobility Projects, Federal agencies will partner with applicants to blend the identified funds and provide the appropriate waivers needed for required flexibilities, including but not limited to aligning household eligibility criteria, aligning and streamlining reporting requirements, and coordinating and sustaining service delivery.

In addition, the new Local Housing Policy Grants program would complement and leverage communities’ CDBG and HOME activities by providing a total of \$300 million in mandatory funding for competitive grants to increase economic growth, access to jobs and improve housing affordability by supporting new policies, programs or regulatory initiatives to create a more elastic and diverse housing supply. To that end, the funding would allow localities to make investments in areas like infrastructure expansion or improvement, housing market evaluations, code writing or design assistance, and stakeholder outreach and education.

Assisting Native Americans

Through innovative programming, HUD has found new ways to partner with American Indian and Alaska Native tribal governments to help these communities craft and implement sustainable, locally-driven solutions to economic development challenges. HUD recognizes the right of Indian self-determination and tribal self-governance, and has fostered partnerships that allow tribal recipients the flexibility to design and implement appropriate, place-based housing programs according to local needs and customs. In most of these communities, housing and infrastructure needs are severe and widespread, disconnected from transportation networks and isolated from key community assets including jobs, schools and healthcare facilities. In fiscal year 2017, HUD is requesting a total of \$786 million to fund programs that will directly support housing and economic development in American Indian, Alaskan Native, and Native Hawaiian communities nationwide, including:

- \$700 million for the Indian Housing Block Grant (IHBG) program, which is the single largest source of Federal funding for housing on Indian tribal lands today.
- \$80 million for Indian Community Development Block Grants, a flexible source of grant funds for federally-recognized tribes or eligible Indian entities, requested within the Community Development Fund. Of this funding, \$20 million is set aside for projects to improve outcomes for Native Youth, such as the development, rehabilitation or acquisition of community centers and health clinics.
- \$5.5 million for the Indian Housing Loan Guarantee Fund, which provides loan guarantees to increase the availability of mortgage lending on Indian reservations and other Indian areas.
- Increases the set-aside for colonias investment in communities along the U.S.-Mexico border from 10 percent to 15 percent, to address problems with lack of infrastructure, including adequate water, sewer facilities and decent housing.

In addition, up to \$5 million in funding requested for Jobs-Plus would be used to implement a demonstration of the successful Jobs-Plus model in Indian Country.

Transforming Neighborhoods of Poverty

The President has made it clear that we cannot create an economy built from the middle class out if: a fifth of America’s children live in poverty, at a cost of \$500 billion per year—fully 4 percent of GDP—due to reduced skills development and economic productivity, increased later life crime, and poor health; a growing population lives with the problems of concentrated neighborhood poverty—high unemployment rates, rampant crime, health disparities, inadequate early care and education, struggling schools, and disinvestment—all of which isolate them from the global economy.

That’s why HUD’s fiscal year 2017 Budget provides \$200 million for Choice Neighborhoods to continue transformative investments in high-poverty neighborhoods where distressed HUD-assisted public and privately owned housing is located.

Choice Neighborhoods—along with RAD—is an essential element of the President’s Promise Zones initiative, which is designed to support revitalization in some of America’s highest-poverty communities by creating jobs, attracting private investment, increasing economic activity, expanding educational opportunity, and reducing violent crime.

The President announced the first five Promise Zones in January 2014 and will designate an additional 15 Zones by the end of calendar year 2016. Communities compete to earn a Promise Zone designation by identifying a set of positive outcomes, developing a strategy, encouraging private investment and realigning Federal, State, and local resources to support achievement of those outcomes. The Promise Zone designation process ensures rural and Native American representation. Promise Zones will receive tax incentives, if approved by Congress, to stimulate hiring and business investment along with intensive Federal support and technical assistance aimed at breaking down regulatory barriers and using Federal funds available to them at the local level more effectively. Applicants from Promise Zones will also receive points for competitive Federal grants that will increase the odds of qualifying for support and assistance to help them achieve their goals.

Promise Zones are aligning the work of multiple Federal programs in communities that have both substantial needs and a strong plan to address them. The Promise Zones initiative builds on the lessons learned from existing place-based programs like the Department of Education’s Promise Neighborhoods and the Department of Justice’s Byrne Criminal Justice Innovation program, both of which receive substantial increases in the Budget. Other Federal agencies that will be aligning their work with that of local Promise Zone partners include the Departments of Commerce, Health and Human Services, and Agriculture.

The Choice Neighborhoods initiative is a central element of the Administration’s inter-agency, place-based strategy to support local communities in developing the tools they need to revitalize neighborhoods of concentrated poverty into neighborhoods of opportunity. The Department’s administration of the first rounds of funding for Choice Neighborhoods grants exemplify how our practices generate effective partnerships with local housing and community development efforts. In the past, many Federal grant programs followed a rigid, top-down, ‘one-size fits all’ approach that dictated what local policymakers could and could not do rather than listening to them and providing the tools they needed to meet local needs. Having served in local government myself, I am committed to a collaborative approach responsive to local needs—and believe the results thus far demonstrate that we are making good on that commitment.

Ensuring Inclusive Housing Nationwide

An inclusive community is one in which all people—regardless of race, ethnicity, religion, sex, disability, or familial status—have equal access to housing and economic opportunities. Throughout its portfolio of programs, HUD is committed to maintaining that inclusivity and providing accountability in housing and lending practices nationwide. Through inclusive development, education, enforcement of fair housing laws, expanded training and language assistance, HUD will affirmatively further fair housing and the ideals of an open society.

The Fair Housing Initiatives Program (FHIP) is critical to building and sustaining inclusive communities. FHIP is the only grant program within the Federal Government whose primary purpose is to support private efforts to educate the public about fair housing rights and conduct private enforcement of the Fair Housing Act. In fiscal year 2017, HUD is requesting \$46 million in FHIP funds, representing the Department’s strong commitment to fair housing. The requested amount will continue funding to support fair housing enforcement by all statutorily eligible private fair housing organizations. In addition, it will fund fair housing education at the local, regional and national levels.

The Fair Housing Assistance Program (FHAP) is a critical component of HUD’s effort to ensure the public’s right to housing free from discrimination. FHAP multiplies HUD’s enforcement capabilities, allowing the Department to protect fair housing rights in an efficient and effective manner. In fact, FHAP agencies investigate the majority of housing discrimination complaints filed in the United States. In fiscal year 2017, the Budget provides \$21.9 million in FHAP grants to nearly 90 government agencies to enforce laws that prohibit housing discrimination that have been reviewed and deemed substantially equivalent to Federal law.

Ensuring that an Economy Built from the Middle Class Out Includes Opportunities for Rural Americans

The Administration has placed a significant emphasis on ensuring that America’s rural communities are competitive in the global economy—particularly given the re-

ality that rural communities generally have less access to public transportation, along with higher poverty rates and inadequate housing. HUD serves families in small towns and rural communities through almost every major program it funds.

As the single largest sources of funding for housing on Indian tribal lands today, HUD initiatives in Indian country continue to have some of the Department's most successful track records. Programs like Indian Housing Block Grants, Indian Housing Loan Guarantees, and Indian Community Development Block Grants support development in remote areas where safe, affordable housing is desperately needed. HUD recognizes the right of Indian self-determination and tribal self-governance by allowing the recipients the flexibility to design and implement appropriate, place-based housing programs according to local needs and customs. Taken together, in fiscal year 2017 HUD is requesting \$786 million to fund programs that will support housing and development in American Indian, Alaska Native, and Native Hawaiian communities.

In addition, HUD and the Departments of Treasury and Agriculture meet regularly through the interagency Rental Housing Policy Working Group to better align and coordinate affordable rental housing programs. For homeowners, the FHA helps first-time homebuyers and other qualified families all over the country purchase their own homes. HUD has also entered into a Memorandum of Understanding with the Department of Treasury's Community Development Financial Institutions Fund and the Department of Agriculture—Rural Development, to expand the capacity of organizations providing loans and investment capital in underserved rural regions. The initiative, which is being piloted in colonias along the U.S.-Mexico border, will improve the delivery of funding from Federal agencies and private sources supporting small business, affordable housing and community facilities.

GOAL 5: ACHIEVING OPERATIONAL EXCELLENCE

A 21st century American economy that is a magnet for jobs and equips its residents with the skills they need for those jobs demands a government that's leaner, smarter, and more transparent. The current economic and housing crisis; the structural affordability challenges facing low-income homeowners and renters; and the new, multidimensional challenges facing our urban, suburban, and rural communities all require an agency in which the fundamentals matter and the basics function. As such, HUD remains committed to transforming the way it does business. This transformation is more crucial now than perhaps ever before—HUD remains at the forefront of the Federal response to the national mortgage crisis, economic recovery, Hurricane Sandy recovery, and the structural gap between household incomes and national housing prices—roles that require an agency that is nimble and market-savvy, with the capacity and expertise necessary to galvanize HUD's vast network of partners. HUD's 2016 Budget reflects these critical roles, by investing in transformation, research, and development that will be implemented strategically.

Investing In Our Staff

HUD's greatest resource is its dedicated staff. When employees attain skills and are motivated to use those skills to help their organization reach goals, the capacity of the organization grows and employees in the organization grow as well; which is why HUD is creating training and leadership development opportunities for employees at all levels. Over time, the rules and regulations that develop within an organization become hurdles instead of the helpful pathways they were intended to be. HUD is in the process of simplifying and combining programs, streamlining regulations, and eliminating rules and constraints. In addition, the Department is in the middle of a major reform of its information technology, human resources, procurement, and other internal support functions to give more authority to managers and provide better service to HUD customers.

In 2016, HUD is requesting \$1.365 billion in salaries and expenses, in addition to \$23 million for Ginnie Mae and \$129 million for HUD's Office of Inspector General (OIG). The HUD request includes several initiatives to streamline the HUD organization, consolidate functions for increased efficiency, and increase training for our staff. HUD is making specific investments of more staff to manage major rental assistance programs, increasing our ability to enforce new fair housing rules and provide more oversight to our community grant programs. The Department will continue to improve operations and create a dynamic organization capable of addressing some of our Nation's most difficult challenges.

Carrying Out Critical Program Demonstrations and Research

HUD's ongoing transformation is a multiyear effort that can only be achieved through the relentless focus of agency leadership, full transparency and account-

ability for real results, and sustained and flexible budget resources. The Department has taken an enterprise-wide approach to both technical assistance and research that has bolstered these efforts and increased the efficiency and effectiveness of the Department's programs. Further, this shared approach has provided a mechanism for innovative, cross-cutting technical assistance that goes beyond program compliance to improve grantee capacity, performance and outcomes.

While the Department's transformation is a crucial long-term commitment, HUD continues to prioritize these efforts in a responsible manner that ensures HUD's constituent services don't suffer at the hands of internal transformation. This year's Budget proposes to again fund research and demonstrations by transfers from program accounts. In fiscal year 2017, HUD's request includes transfer authority of up to \$120 million into the Office of Policy Development and Research, up to \$35 million of which will be for research, evaluations and program demonstrations, and at least \$85 million of which will be for cross-cutting technical assistance, including place-based technical assistance. This includes training, education, support and advice to help community development corporations and community housing redevelopment organizations carry out community development and provide affordable housing activities for low- and moderate-income persons, as previously funded through the Self-Help and Assisted Homeownership Opportunity Program (SHOP) account. This modified approach will enable HUD to better integrate technical assistance and capacity building.

Upgrading the Department's Information Technology Infrastructure

In 2017, HUD is requesting \$286 million for the Information Technology Fund. HUD will continue development efforts and will focus on delivery of discrete capabilities in our FHA and voucher management systems, as well as exploring consolidation of several grant management applications. In fiscal years 2015 and 2016, HUD deployed three successful releases of the New Core project, which transitioned key administrative and financial management functions to the Treasury Department in the largest financial management shared service arrangement established to date. HUD also implemented an enterprise-wide financial system that allows the Department to resolve material weakness and audit findings through a consolidated shared services infrastructure platform. These changes are allowing HUD to deliver services and manage these multi-billion dollar programs faster, more accurately and using better information for analysis.

CONCLUSION

Chairman Collins, this Budget reflects the Administration's recognition of the critical role the housing sector must play to ensure that America becomes a magnet for jobs that strengthen the Nation's middle class, including providing economic opportunity for all Americans, whatever their circumstances. Equally important, it expresses the confidence of the President in the capacity of HUD to meet a high standard of performance.

It's about making hard choices to reduce the deficit—and putting in place much-needed reforms to hold ourselves to a high standard of performance. But most of all, it's about the results we deliver for the vulnerable people and places who depend on us most.

FUNDING FOR VASH VOUCHERS

Senator COLLINS. Thank you very much, Mr. Secretary. I want to pick up where the ranking member, Senator Reed, left off, the issue of the budget containing no new money for VASH vouchers which go to our homeless veterans. The same was the case in last year's budget, and we remedied that by putting in funding for the VASH program.

As I indicated in my statement, we have made some significant progress, in large measure due to the VASH program as well as additional programs for homelessness prevention among our veterans in reducing the number of veterans who are homeless.

It's down by 36 percent by 2010. But I very much remember the Administration having a goal of ending homelessness among our veterans by the end of last year, and clearly, that didn't happen. We're not even close to that, even though we're continuing to make

progress, and there are some cities around the country that have achieved that goal.

So my first question is, why is the Administration proposing to zero out the VASH account in terms of new vouchers? And related to that, has the Administration changed its mind about reaching the goal of no homeless veterans?

Secretary CASTRO. I definitely appreciate the opportunity to answer that question. Let me answer your second question first. The Administration is firmly committed to effectively ending veteran homelessness, and so that goal remains.

I want to commend you and the committee again, Chairman Collins, for the investment that you all have made over the years in HUD-VASH. It has been, I think, absolutely key to the 36-percent reduction that we've seen. You're right that we did not request additional or new HUD-VASH vouchers, because we believe that the resources are there for HUD-VASH for who it includes to serve.

We think that the communities are making tremendous progress with those HUD-VASH vouchers. Last year, the committee did grant us additional HUD-VASH vouchers, and we are utilizing those, and we're going to utilize them in effective ways.

But through the combination of agencies that dedicate resources to homeless veterans and other mainstream resources at HUD, we believe that we can continue to drive down the number of homeless veterans.

I would also note, and I know that we had this conversation last year, that there are some veterans who did not fit into the HUD-VASH program, were not able to be served by the HUD-VASH program, that we believe that, through use of mainstream resources, that we can serve. One good example that I cited last year was veterans that were other than honorably discharged because of the don't ask, don't tell policy.

And so we think that we have the HUD-VASH vouchers that we need, and I commend the committee for the investment that it's made, and we can combine that with other mainstream resources and vouchers to get to functional zero on veteran homelessness.

PHYSICAL INSPECTIONS OF HUD ASSISTED PROPERTIES

Senator COLLINS. Mr. Secretary, as I mentioned in my opening statement, I'm deeply troubled by reports of deplorable living conditions in subsidized properties in Memphis, Tennessee, and Jacksonville, Florida. Last month, a judge in Cincinnati placed five HUD-assisted properties in judicial receivership after the city sued the owners regarding more than 1,800 health and safety violations.

The scale and the longevity of these problems highlight systemic concerns about the effectiveness of HUD's oversight, and those concerns are underscored by the fact that contractors hired by HUD to inspect the Florida property gave it a passing score just weeks before the city inspectors found hundreds of code violations, and indeed, the press mentions toilets leaking into bathtubs, roaches, raw sewage backing up into a bathtub, water leaking into apartments, trash, debris, sick children, a really appalling circumstance, which I know must trouble you gravely as well.

So what's wrong with HUD's system for inspection that properties could receive passing grades from HUD and then be cited by local inspectors with literally hundreds of serious code violations?

Secretary CASTRO. Yes, let me just begin by saying that, of course, I share your deep concern with the specific instances that you've cited that were mentioned in Florida and Tennessee and one in Maine recently.

And number one, I think that the vast majority of properties out there are being inspected and inspected well. And when there are issues, they're responded to in a responsible way by owners.

But there are instances that I don't think anybody can be proud of and that HUD is committed to improving our processes to better respond in a shorter timeframe to ensure that residents are not living in the kind of conditions that we've seen described in media reports and that we have received internal reports about.

So you asked what are we doing to improve this process. We have created an internal working group to look at our inspections process, to understand how we can strengthen it, to make sure that we're getting to properties like those troubled assets that have been noted in a quicker time, that we're ensuring compliance by the owners more quickly, and ultimately providing a better quality of life to residents.

Another component of this is making sure that residents get tenant protection vouchers more quickly so that they have a choice and, for the long-term, working with Congress to ensure that we can strengthen our enforcement capabilities.

So for instance, our fiscal year 2017 budget requests authority for HUD to issue double damages to owners that violate their Section 8 contract with HUD, a penalty that's less burdensome on tenants than abatement, and the same enforcement capabilities for the 202 project rental assistance contract properties for the elderly and disabled as for other Section 8 project based rental assistance properties.

So we want to make sure that we have all the tools that we can to effectively enforce, and that includes improving our own processes and working with Congress where we need that help.

Senator COLLINS. Thank you.

Senator Reed.

FEDERAL PROGRAMS FOR HOMELESS VETERANS

Senator REED. Well, thank you very much, Madam Chairman.

Again, Mr. Secretary, Senator Collins and I share this concern about the HUD-VASH vouchers, the fact that progress has been made, but there's no request this year for additional vouchers, even though roughly 48,000 veterans are still in the United States looking for homes.

Are there any other Federal partnerships or programs in place to provide housing and service to these veterans who are experiencing homelessness that could sort of soften the blow, if you will, or help you?

Secretary CASTRO. Well, there absolutely are, Ranking Member Reed, both within HUD and also in other agencies. And the U.S. Interagency Council on Homelessness (USICH) has been fantastic at coordinating the focus on veterans, but just to give you a good

example of that, the VA is continuing to fully fund the Supportive Services for Veteran Families, or SFVS, at \$300 million. They've committed to fully staffing all of the homelessness programs under their auspices. The Department of Labor has its Homeless Veterans Reintegration Program.

And we found that one of the most effective ways of driving down veteran homelessness, in addition to HUD-VASH, was to use mainstream resources, the prioritization of mainstream resources that go into the hands of veterans. And we are absolutely committed to continuing to do that.

UPDATING STANDARDS FOR LEAD PAINT

Senator REED. Thank you, Mr. Secretary. There's another area that the chairman and I share, and that is the lead exposure. And we've all been galvanized by the incident in Flint from water pipes, but roughly 70 percent of exposure comes from lead paint, which is ubiquitous. It's all over the place, particularly in older neighborhoods like Bangor and Portland and Providence.

And as you mentioned in your testimony, the CDC recently has strengthened the lead standard, because they found that minute quantities of lead are toxic, very toxic to children, and cause long-term damage. And you suggested that HUD is going to modify your stand to reflect this. Can you give us an idea when that will happen?

Secretary CASTRO. Yes. Well, we just submitted, on March 8, the proposed new rule to the OMB, and so this will go through the rulemaking process. One of the components of this is to bring our standard in conformity with the CDC standard.

I will note that, since 2013, we actually have strongly recommended that our grantees conform to that standard, but I also understand that strongly encouraging is not the same thing as requiring, so it will require that. It will also make more robust responsibilities that folks who come into knowledge about elevated blood levels in children have in terms of notification.

I also applaud—I know Senator Durbin is working on and other have proposed a lead-based paint legislation. We look forward to doing what we can with this new rule and also working with Congress to improve enforcement and inspections and so forth.

LEAD PAINT INSPECTIONS

Senator REED. And you've sort of led me to my next question, which is the issue of inspection. The chairman pointed out the broad based issues in terms of how do these properties slip through. When it comes to lead, information we have is it's sort of a variable standard, and it's not consistently enforced. And as you increase and strengthen the regulation, you literally will have more units that fall outside the standard.

Can you talk about how you're going to ensure that there's a consistent standard for lead inspections, it's enforced consistently, particularly in an additional group of units?

And the other issue I would just point out, and you suggested, too, is many times the only way you find out about this, not by a proactive inspection, but the child shows up in an emergency room, they draw blood, and they found they've been exposed, and then

suddenly, they go to the unit and start inspecting and saying, "Boy, this is terrible." I think we've both like to see that reversed. Your comments?

Secretary CASTRO. I believe we're in agreement here, and we're committed on our end actually to working toward a common inspection standard, and we're committed basically to improving this process fully within what is in our authority, including on the inspection standard.

You're correct that right now, based on whether it's multifamily housing or Section 8 housing, there are different categories of requirements and inspection standards, and we would like to work to bring those into harmony. And some of that, we can do on our own. Other pieces of that, we're definitely going to need congressional help.

I met with Senator Durbin just a couple of days ago on this issue, and so look forward to working on it.

Senator REED. Thank you.

Senator COLLINS.

Senator COLLINS. Thank you very much, Senator Reed.

Senator Schatz.

HOUSING VOUCHERS FOR THE HOMELESS

Senator SCHATZ. Thank you, Chairwoman Collins and Ranking Member Reed. And I want to thank Secretary Castro for the help that HUD has provided to Hawaii. And I had the opportunity yesterday to meet with Jennifer Ho and talk about our partnership with the PHAs and service providers in the State, and I just wanted to say thank you to you and your excellent staff.

And I also want to request that you stay engaged and make sure that, as we transition to a new administration, that we retain the commitment at the career professional level to maintain continuity. Whatever happens in city, State, and Federal administrations, this is a partnership that I think has to continue.

With respect to homelessness, I support the request for additional housing vouchers, but I want to understand how these vouchers are going to be allocated if funded.

And specifically, I want to make sure that places like Hawaii, that have the need certainly to justify more resources but are smaller than some of the big urban areas with needs that could frankly swallow up whatever else we're able to appropriate, how do we make sure these dollars are spent throughout the country wherever there are needs, including Hawaii, but also other rural areas?

Secretary CASTRO. And thank you, Senator, for your engagement with our staff. I know you and I have had the opportunity to sit down and speak to these issues, and I know how engaged you are on this and what a pressing challenge it is in Hawaii. I also just recently met, visited with the governor, and have, on a couple of occasions, visited with Mayor Caldwell of Honolulu.

Your question relates to essentially making sure that communities like those in Hawaii get their fair share, I imagine, of resources. And I want to assure you that, as we allocate these vouchers, that we do so in a way that ensures that it's not just the biggest of cities or the usual suspects, so to speak, that get these resources.

They're allocated, in fact, based on relative need, and that need is not determined just based on population, but instead, it considers other factors, such as the rate of homelessness in the area, availability of existing resources, the geographic concentration, housing market conditions, and other pertinent factors.

And so it is a multidimensional analysis that goes into the allocation of these vouchers. I'm very well aware of the challenge there in Honolulu particularly and on the West Coast more broadly.

I had a chance to sit down with several mayors in a West Coast mayor's summit to tackle some of these issues of growing street homelessness, unsheltered homelessness, and we look forward to continuing to work with you and the folks in Hawaii on this challenge.

Senator SCHATZ. Thank you. And thanks to Senator Reed and Chairwoman Collins' leadership.

NATIONAL HOUSING TRUST FUND

As you know, 2016 will be the first year that the States receive an allocation from the National Housing Trust Fund to focus on creating affordable housing options for people earning 30 percent of area median income (AMI). When do you expect to be able to push these dollars out?

Secretary CASTRO. Yes, we expect that the first allocations of the Housing Trust Fund, the HTF, will be made this summer.

There's a timeline here that will kick off basically in April, where States will have to submit to us a State allocation plan, and then we'll have 45 days to respond to that. So we think that the timeline, we're confident that the timeline now for the States that most timely submit their plan is going to be in the summer.

And we look forward to that, because, as you mentioned, this HTF is important, because it's serving extremely low-income individuals which suffer from the biggest gap in affordability for housing that is out there. So it's a unique tool that we can use to fill that gap.

FAIR MARKET RENT CALCULATIONS

Senator SCHATZ. Thank you. And in my limited time left, I'd like to just flag an issue for you, which I'm sure you're aware of, but especially in the State of Hawaii, this fair market rent (FMR), the level that is set in terms of FMR, is just totally unrealistic.

For instance, on Kauai, HUD set FMR for a two bedroom unit at \$1,238. It's actually \$1,800 throughout the island of Kauai. And so that's too big of a delta for people living on fixed income. It's too big of a delta in a place where we pay three to four times the national average in terms of electricity.

And so we're going to need your help to kind of remedy this, first of all in terms of the way you set FMR, but second of all, then you ask the county to conduct a study at its own expense, \$50,000 or so, and then I think that, you know, at both of those steps, we're not doing this right. Thank you.

Secretary CASTRO. Thank you.

Senator COLLINS. Thank you very much, Senator.

Senator Daines.

Senator DAINES. Thank you, Madam Chair. Secretary Castro, welcome to the committee.

I grew up in the housing business. My dad's a home builder, so I spent most of my summers working on construction crews there putting myself through college. And this is such an important issue for me personally, certainly housing, difference between a house and a home, right, such an important part of America, the American dream and so forth.

But this hearing does come in the wake of a long trail of instances, established a pattern within HUD of waste and abuse of taxpayer funds. I want to probe that a bit here with you, if I could, Secretary Castro.

Certainly, the mission of HUD is very laudable. The fact is, is repeatedly misallocated resources, that are meant to really help low-income households in the ordinary course of operations, and I'm concerned about accountability.

HIGH INCOME HOUSEHOLDS IN PUBLIC HOUSING

You've seen the July 21, 2015 inspector general report, which revealed that HUD provided housing assistance to over 25,000 households that exceeded the income limit, some earning incomes over \$90,000. These misallocated funds total over \$100 million.

At the same time, there were 600,000 low-income families were left waiting in public housing backlog. Let me put that in perspective. That's more families than in my entire State. These numbers aren't small.

The first question is, does HUD accept the responsibility for the over \$100 million that OIG estimated was misallocated away from low-income households?

Secretary CASTRO. Thank you for bringing this up, Senator. We share the concern here, of course. And the report from the inspector general did identify those 25,000 units out of about 1.1 million units.

We share the concern. We agree with the inspector general that, particularly in these egregious cases, some of which were pointed out in that report, these egregious cases of over-income tenants that they ought not to be living in public housing. So we, in short order, sent out a letter to public housing authorities strongly encouraging them to address these cases.

We also have put out an advanced notice of proposed rulemaking that would actually allow us to change the way that we handle these cases.

Senator DAINES. Yes, Secretary Castro, on that point, and I appreciate that rulemaking, that was result of what was required and prompted by the fiscal year 2016 appropriations bill.

Secretary CASTRO. Well, I think it's consistent with what the direction that HUD wants to go in as well. It's also true, though, that this issue has come up before. It came up a few years ago and was in the hands of Congress. And I think what it boils down to is that there needs to be some nuance in how this is approached.

For instance, if somebody is, you know, literally making \$20 more than the income cutoff, are we going to summarily put them on the street because they're \$20 off? It requires, I think, a recognition that we do want folks who live in public housing to work and

try and earn more income, so that they can better themselves and become upwardly mobile.

I think the challenge is, how much of a grace period do we give folks, recognized that we want them to be able to be more self-sufficient.

Senator DAINES. Yes, and I'd agree that the \$20 probably gives us less heartburn than those who were found making in excess of \$90,000 a year, which I think is a real concern.

Secretary CASTRO. I agree. Yes, I agree.

OFFICE OF INSPECTOR GENERAL—SEMI-ANNUAL REPORT TO CONGRESS

Senator DAINES. I want to pivot over and talk a bit now about another issue which the HUD inspector general semi-annual report to Congress published just this last September, September 30, 2015. The audit results revealed \$1.9 billion, with a B, of funds that could have been put to better use, according to the report, and \$2.1 billion in questioned costs. And again, I'm quoting the inspector general. I believe Congress must ensure that HUD is a good steward of taxpayer funding, and I'm sure you'd agree with that.

My question is, the inspector general just published its report here end of last fiscal, what can we expect the next semi-annual report that will be issued March 31, which is coming up here in a few weeks? What number can we expect to come out of that report, and what's your goal?

Secretary CASTRO. Well, our goal is that all funds are used exactly as they should be and that we improve our performance on this score. And so let me assure you that—and I know that the inspector general is going to testify in just a little while—

Senator DAINES. Well, let me say this. I spent 28 years in business. I understand aspirational targets, and certainly, we should aspiring to zero. But there's an old saying, at least coming from business, if you aim at nothing, you'll hit it.

I mean, is there a goal set here? If the inspector general said there's \$1.9 billion of funds that could be put to better use and \$2.1 billion questioned costs, did anybody sit down and say, okay, we're not going to get that overnight, we better set a target here, try to hit here in the next report?

Secretary CASTRO. Yes, the way that we approach that is to work with the inspector general and say these are the recommendations that the inspector general made so that we can cut down on those instances, and our goal is to implement those recommendations. And so across the board—

Senator DAINES. Well, let me say, a goal of implementing is an activity. I'm looking for the results. What result do you expect we'll see here? The activity produces—ultimately, it's a mean to an end. What's the end going to be do you think?

Secretary CASTRO. So I'd be glad to follow up with you on the ones that can implemented within this fiscal year, because you asked about the fiscal year, and so it depends on which ones can be implemented during the fiscal year and what their budgetary impact would be.

Senator DAINES. That would be helpful, because I think it's important that we all hold ourselves accountable with something that's quantitative. And so this will be a mid-fiscal report, then I'd

like to see a glide path March 16—or excuse me, March 31 will be a number followed by a September 30 number here as we’re trying to make that number lower.

It’s not going to get to zero, I think we all agree. We’d like to see it at zero. I think it’s important we have some glide path metrics here, so we can make sure we’re making progress here, reduce the waste and abuse of the program.

Thank you, Secretary Castro.

Secretary CASTRO. Thank you.

Senator COLLINS. Thank you, Senator Daines. I want you to know that one reason I’m inviting the inspector general to testify both at both HUD and Transportation at our hearings is precisely because of the issues you’ve just raised, so that we can make sure we hear from the inspector generals on the areas that deserve our further attention as well as the Secretary’s. So thank you for raising that issue.

Senator Murphy.

Senator MURPHY. Thank you, Madam Chairman. Good afternoon, Mr. Secretary. Good to see you again. Thank you very much for your visit to Connecticut about a month ago. You were very generous to spend a day with us, and we’re busy at work on many of the initiatives that you helped us launch and accentuate while you were there.

CHURCH STREET SOUTH PROJECT

I wanted to cover two topics with you this morning, one related to your visit, talk a little bit about HUD’s work with the city of New Haven to address the Church Street South project that you remarked on when you were there, and second, talk a little bit about the 811 Supportive Housing program moving forward.

But first, I think this is your last appearance before the Appropriations Committee. I just want to thank you personally for your work, for your focus on many of our shared priorities, and we really have noticed how attentive and the Administration has been to many members of this committee. So I thank you for that.

So maybe I’ll start with our situation in New Haven. You know the details. This is a HUD-funded project, Church Street South, that is really in absolutely decrepit condition, to the point where we’ve had to move many of the residents out. Black mold, bedbugs, really bad crumbling lead infrastructure are the main causes.

And I guess my question to you is two-fold. I just want to get your continued assurance that HUD is going to continue to work with us, not just to move the residents out of that facility but to then rebuild that affordable housing capacity, but second, what we’ve learned is that the Real Estate Assessment Center (REAC) doesn’t really look at some of the conditions that were the root cause of the problem in Church Street South. So for instance, black mold, bedbugs, and lead don’t seem to be part of that assessment.

And so I know you’ve got a short amount of time left between now and the end of the President’s term, but are you thinking about ways to make these REAC assessments maybe mirror some of the real threats that a lot of families are dealing with, mold and bedbugs at the top of the list, which are becoming, you know, real epidemic problems in places like Connecticut?

So one, do we have your continued commitment to help solve this particular problem? And then is there a reform of REAC that you'll be working on?

Secretary CASTRO. Yes, and let me just briefly say thank you, and I enjoyed the visit to Connecticut and having the opportunity to hear some of the concerns of folks throughout the State. And of course, we have been working on Church Street. We'll look forward to making sure that those residents have what they need in terms of tenant protection vouchers.

REAC INSPECTION PROCESS

To answer your question just directly, the answer is that we do need to improve our REAC inspections process. And I believe we can make some of those improvements internally, on others that we may need legislative help.

You brought up mold, for instance. It's my understanding that one of the challenges that we have is that right now, the detection of mold does not trigger a negation or subtraction of points to the degree that it probably should and that we need to adjust the scoring system there, and that in this case and in some other cases that we've seen, that that would help us be able to get to intervention or enforcement quicker.

So we would like to work with you. You absolutely do have my commitment to continue to work with you, both in ways that that can be improved, that that process can be improved, and that we ensure we're taking care of those residents.

SECTION 811 SUPPORTIVE HOUSING

Senator MURPHY. I appreciate both of those commitments.

In the time that I have remaining, just wanted to talk to you about the Section 811 Supportive Housing program, what a tremendous success that program has been over the course of the last 3 years. We were building about 500 new units out of 811 with Federal dollars when I came to Congress, in part because of legislation that I helped write, where now, over the last 3 years, we built 7,500 units with Federal dollars, great credit to the folks who have administered the changes that the law included in your Department.

But this year's budget, I think, flat funds 811. After 2 years of requests of about \$25 million in increases, there's not any new money in 811 this year. I just wanted to sort of ask you about the decision to flat fund 811 and ask you to give an update on the continued reforms that are really leveraging massive private sector and State level and local level dollars.

Big success story, but I don't want our successes to abate and us to maybe think that we don't need to allocate as much Federal money because of our success in getting other partners to put money into these projects.

Secretary CASTRO. And certainly, we're proud of those partnerships, and as you know, in 2012 and 2014, we completed two NOFA competitions that resulted in the award of \$218 million to 28 States and the District of Columbia.

You're right that we did request last year, I believe, funds for 700 new units. That request is not in the budget. I do put this into

the category of very tough choices that we made in this budget, but that's not because we're not committed to the 811 program. We see the value of it. We see the housing opportunity that it is creating out there for a needy population and look forward to continuing to work with you on it.

Senator MURPHY. States like ours are just in tremendous budget crunches, in part because, when you don't properly house these individuals, the cost of inappropriate care, where it—be in emergency rooms or prisons, gets passed largely down to State governments.

And so, coming from a State that has pretty regular budget deficits these days, this small investment that we make at the Federal level saves an awful lot of money to the taxpayer at the State level.

I know I'm preaching to the converted here, and I thank you for your commitment to the 811 program. Thank you, Madam Chair.

Senator COLLINS. Thank you. Senator Murray, welcome back to your old subcommittee.

Senator MURRAY. Great to be here. Thank you for the great job that you're doing, both of you. I really appreciate it.

HOMELESSNESS

Mr. Secretary, good to see you again. Let me start with an increasingly urgent issue in my State, that's homelessness, which I know is a struggle for many States, but it's gotten so bad now that the mayor of Seattle and the King County executive have both declared states of emergency. And I believe this issue really demands a coordinated and robust response from local, State, and, of course, the Federal Government.

The numbers actually really tell the story here. In the early hours of January 29, hundreds of volunteers walked through Seattle and King County neighborhoods, as they do everywhere, to count the number of people sleeping outside in doorways, cars, beneath overpasses, or just on the ground.

The preliminary results show a 19-percent increase in the number of unsheltered men, women, and children, and some parts of our county experienced increases of over 50 percent over last year, and that's, of course, on top of double digit increases the year before.

These are really heartbreaking situations for everyone, especially tragic when more and more children are involved. But it's not just happening in our most populated areas. It's happening in our suburbs, it's happening in smaller cities, Longview and Vancouver in my State, where families are actually being priced out of their homes.

And I really think it's important that the Federal Government does all it can to help provide the resources in coordination with State and local authorities. I was really encouraged to see the President's commitment to addressing this crisis reflected in your Department's budget request with targeted investments in rapid rehousing, permanent supportive housing, and new vouchers.

Many organizations in my State, from our housing authorities to groups like Seattle's Downtown Emergency Service Center, are really providing some excellent examples of how these investments can change lives for the better.

I wanted you to talk for a few minutes about HUD's strategy for addressing homelessness. And is there sufficient coordination between the different levels of government here?

Secretary CASTRO. Thank you, Senator Murray, for your leadership. I know that you and I have had a chance to speak on some of these issues, as well as Moving to Work (MTW), which I know is important to you.

Senator MURRAY. Right. Which thank you very much for your staff for working on that.

Secretary CASTRO. So we have had a lot of success over the last several years in reducing not just veteran homelessness but family homelessness, chronic homelessness. But it's also true that in the last year to 18 months, we've seen a spike in unsheltered homelessness in some communities, and particularly along the West Coast.

A few months ago in Portland, I joined the mayors of Seattle, Portland, San Francisco, and Los Angeles at this West Coast mayor's summit to address these very issues.

And so, number one, I want to assure you that our staff is working hand in hand with the Seattle mayor to see how we can provide technical assistance. We spoke at that meeting about waivers that might be offered to ensure that they could be as effective as possible with their resources. We spoke about the need for continuing to invest in housing first, because that is the most effective way to end homelessness, but recognizing that we need a successful street strategy as well for the unsheltered population.

And we see a similar thing in Los Angeles, that it's not just on skid row, it's out there in the suburbs and the other parts of LA that people don't normally think of as having homeless people.

So that's why I'm very proud of the proposal that's in this budget, both on the mandatory side and on the discretionary side, and particularly with regard to the population that we're talking about, the rapid rehousing intervention as well as the 25,500 units of permanent supportive housing to deal with chronic homelessness, these are the, I think, strategic investments that we can make to deal with the challenge.

Senator MURRAY. And I want to thank our chair, Senator Collins, and our ranking member, Senator Reed, for the commitment they have continually shown to make sure that no family who relies on a voucher to stay in a safe home loses that support. Even when this subcommittee had a really tough allocation last year, you made a commitment to that, and I really appreciate it.

LOCAL RENT COSTS

I'm going to work to continue to protect those existing vouchers and, of course, work for more. But a major challenge for HUD is proper allocation of the resources it has given for the voucher program. This is a really difficult task, given the complexity of local housing trends across the country, and I really do want to applaud you and your Department for working hard to continue to refine the formula used to accurately capture local rent inflation.

Seattle and King County in particular have experienced huge year-over-year rent increases that couldn't have been predicted. When HUD last fully revised its inflation formula, it was back in 2012. I was glad to hear that, when this year's inflation factor was

announced recently, HUD was better able to capture that drastic increase.

But this is an issue that requires continued analysis, and I just want to ask for your commitment to continue to examine that renewal funding inflation factor, to make sure it's working for what we need to today.

Secretary CASTRO. We absolutely will. And, you know, we were pleased to work in forecasting as we set those levels, and I think that's important, particularly for communities like Seattle, which ranks at the top in terms of the increase in rent. So we absolutely can make that commitment.

MOVING TO WORK

Senator MURRAY. Okay. And I did want to thank you, again, for your staff's hard work on the Moving to Work. It was really essential. And separately, if you can give us an update on how that's working, I'd appreciate it.

And I just wanted to mention to you, we have a vacancy in our regional HUD administrator office, and I've heard from many that the acting regional administrator, Donna Batch, has been just providing excellent reliable leadership, and I hope we can get that filled soon.

Secretary CASTRO. I'm glad to hear that. Thank you.

Senator MURRAY. Great. Thank you.

Senator COLLINS. Thank you, Senator. We will do one more round of questions for the Secretary before we turn to the inspector general. I know he's very much looking forward to another round of questions, and I didn't want to disappoint him in any way.

COMMUNITY DEVELOPMENT BLOCK GRANTS

Mr. Secretary, I mentioned how disappointed I am that the budget, once again, proposes a \$200 million reduction, that's nearly 7 percent, in the Community Development Block Grant program. Last year, the justification was that there were going to be legislative changes submitted to the Congress that would somehow justify the funding cut. We never received those legislative proposals.

Once again, in this year's budget request, the same funding reduction exists and the same promise of a legislative proposal that would justify the funding reduction is made. What are those legislative reforms, and when will we receive them?

Secretary CASTRO. Yes, thank you very much for the question. And I will say that I am a big fan of CDBG. As a former mayor, that was my favorite program.

Senator COLLINS. You're a mayor, right.

Secretary CASTRO. And I know how flexible it is. The mayors were in town last week, and of course, every time I see them, they mention how much they appreciate CDBG. So I am very much aware of how important this program, this particular program, is to America's local communities, and we do want to preserve it.

We do intend—we would like to submit legislation to create more flexibility and also to help communities maximize the resources that they have now. One example of that was for smaller communities, allowing them to share in terms of overhead cost or pool

their overhead costs, their administrative costs, so that they can use more of that money in an impactful way.

Something else that we're proposing here is this upward mobility initiative, and that's an initiative that would allow 10 communities, in a demonstration way, to pool their Community Development Block Grant, their home money, their Social Service Block Grant, and Community Service Block Grant funds between HUD and the Department of Health and Human Services (HHS), pool those together and get a bigger bang for their buck on local projects. We think that that's one way of making that money go further, by enhancing flexibility.

The other part of it, I would say, just candidly, chairman, is, you know, that we do see this extreme challenge with the housing need. And right now, our best estimate is that 25 percent of CDBG is actually used directly on housing.

And so what we have are—it's a great program, and I know that it's not only meant for housing, that it's meant for other infrastructure investments in local communities, and I know when I was mayor, we used it for that as well.

But in these difficult choices that we're making in the budget, also, we've chosen to focus a little bit more on, okay, how can we get that direct housing money to communities, and that's another reason.

Senator COLLINS. Well, we look forward to getting the specifics. I'm glad that you talked with your fellow mayors, and that they reminded you of the value of this program. It's been absolutely critical as the lynchpin of many economic development projects in my State, whether it's revitalizing downtowns or cleaning up waterfront areas. And it has produced investment, jobs, and better housing as well.

YOUTH EXITING FOSTER CARE

As you know, based on your visit to Maine, and I very much appreciated that visit where we went to the New Beginnings Youth Homeless Shelter in Lewiston, the issue of reducing the homelessness among our youth is one that is a passion of mine. And last year, Senator Reed and I worked very closely together to provide some new funding, despite the budget constraints.

But one area where there's clearly a breakdown among the supporting agencies at all levels of government is in the context of youth who are aging out of the foster care program. Youth that are exiting foster care are at a significantly higher risk of falling into homelessness, yet HUD's budget materials are silent, not only on coordination with the child welfare system, but also on how to better leverage these significant funding resources.

What is HUD doing to better coordinate with State and local facilities to help those young people who may, in some States, still be in high school, and yet are aging out of the foster care program and literally have nowhere to go?

Secretary CASTRO. Yes, thank you so much for that question. Number one, we do coordinate with child welfare agencies. And you're right that this is a particular challenge for young people who are aging out of that foster care system. And so we believe that, and we have proposed that, we be able to extend the time that a

person can avail himself or herself of that voucher from 18 months to 5 years, and that that is just so important to ensure stability in the person's life.

In the demonstration project that we've undertaken, we've combined it with family self-sufficiency. So we believe that the combination of these two, going up to 5 years and participation in the family self-sufficiency program, will set that young person on a more stable course to be able to, you know, get a job, be gainfully employed, provide for themselves, and become self-sufficient, because you're correct that all of the data shows that this is a particularly vulnerable population.

And we would be glad to follow up with you. If there are other ways that you think we ought to be working with child welfare agencies, we're glad to do it.

Senator COLLINS. Thank you very much.

Senator REED.

UNITED STATES INTERAGENCY COUNCIL ON HOMELESSNESS

Senator REED. Well, thank you, Madam Chairman, again.

One of the issues that's come up persistently is most of these programs, if not all of them, require interagency coordination. And when you responded to my question about VASH, you mentioned the Interagency Council on Homelessness, and that was formed in the 80s. It's scheduled to expire in October 2017. Actually, about ten times, it's been scheduled to expire. But it raises the issue of how you're going to do the coordination with veterans, for example, with the Department of Veterans Affairs (VA), with Department of Defense.

When it comes to the youth homelessness program, which Senator Collins led on, really, that's going to—engagement with Department of Education, engagement with local education authorities, Department of Labor. Will the demise or the projected demise of this Interagency Council impede your efforts in any way, or how are you going to plan to compensate for this?

Secretary CASTRO. Yes, and I'm glad to get to address this, Senator. USICH has just been tremendously important to achieving the reductions in homelessness that we have seen across the board. And the best example of that has been on veteran homelessness.

USICH coordinates the activities, as you know, of 19 different Federal agencies. Earlier in my remarks I mentioned, in responding to a question about HUD-VASH, about SSVF, about the Department of Labor's programs. Of course, there's HHS and so forth.

USICH has very effectively taken those different pieces and helped the agencies break through silos to work together effectively to reduce veteran homelessness. And it's doing the same thing this year on youth homelessness and other types of homelessness.

So I just want to note that I strongly support the President's call for extending the agency's authorization, at least until 2020. I believe that we would not nearly be where we are on veteran homelessness had it not been for the leadership at USICH. We just can't accomplish it in the same way without that coordination.

YOUTH HOMELESSNESS

Senator REED. Let me focus more specifically on youth homelessness. Again, last year, the subcommittee included \$33 million for demonstration to test and target intervention for youth. You're requesting this year \$25 million for a continuing care project that targeted youth. Does this \$25 million build on, complement? How is it related to the existing \$33 million program?

Secretary CASTRO. Yes, the way we see it—of course, what we see out there is tremendous need. And so we were very, very pleased with the \$33 million that was dedicated last year. We're in the process of making that real for communities out there, and we look forward to a competitive process and then an implementation where communities across the United States, who are being innovative and creative, will be able to drive down their numbers of youth homelessness.

This \$25 million request is meant to build on that, to further drive down those numbers on youth homelessness. And we think that the experience that we've had working in a cross-agency way on veteran homelessness will be very helpful as we address youth homelessness and family homelessness as well.

Senator REED. And you're confident that you can get the grants out under the existing \$33 million in such a way that they're ready to accommodate additional grants under your proposal this year?

Secretary CASTRO. I am confident.

Senator REED. Because one thing, frankly, we don't want to be in a situation where you're still really honestly trying to work out a grant program, and then you ask for sort of an additional add-on, but that, I think has—

Secretary CASTRO. Yes, I know, and I should have been more precise, perhaps, to say that I am confident in that, that we have a very dedicated team, and that we would ensure that that's done so that these two can work together.

FAMILY SELF-SUFFICIENCY PROGRAM

Senator REED. Let me ask a final question about the family self-sufficiency program. In 2015, we gave the Department authority to expand the program to project-based Section 8 households, and since then, you have started to pilot this at several sites. Can you give us the status of the pilot and when you think you'll be prepared to issue guidance so that all project-based property owners can apply or have access to it?

Secretary CASTRO. Yes, you know, we do believe that it makes sense for PBRA, or project-based rental assistance, to be able to participate in family self-sufficiency (FSS). And so right now, to give you an update, we're finalizing the implementing notice for FSS in multifamily properties. And we're looking forward to getting stakeholder feedback, and we're going to post the draft notice to the HUD Web site by March 15 to see comments from stakeholders.

Senator REED. Thank you. Thank you, Madam Chairman.

Senator COLLINS. Thank you very much, Mr. Secretary. I know that many of the members as well as Senator Reed and I have ad-

ditional questions, but we will submit them to you for the record, and we will keep that record open until Friday, March 18.

Senator COLLINS. We will now go to our second witness, Inspector General Montoya.

Secretary CASTRO. Thank you all very much.

Senator COLLINS. Thank you very much, Mr. Secretary. Mr. Inspector General, please proceed.

STATEMENT OF HON. DAVID A. MONTOYA, INSPECTOR GENERAL, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Mr. MONTOYA. Chairman Collins, Ranking Member Reed, and members of the subcommittee, thank you for the opportunity to discuss the Office of Inspector General fiscal 2017 budget request, the Department's top management and performance challenges, and our oversight of HUD's programs and operations.

I'm pleased to highlight the results from fiscal year 2015 semi-annual reports to the Congress and how our budget request supports and advances our efforts.

In 2015, our audits and other reviews resulted in nearly \$2 billion in recommendations that funds be put to better use, over \$2 billion in questioned costs, and nearly \$500 million in collections. Our investigative efforts also led to nearly \$670 million in restitution, judgments, recoveries, and receivables. When you add in our civil recoveries and receivables, our total results are close to \$6 billion.

According to an April 2015 report by Brookings, my office ranked third of all Office of Inspectors General for a high return on investment, meaning that for every dollar my office spent, we brought in approximately \$30 in savings or recovered funds between 2010 and 2014. Our overall return on investment for fiscal year 2015 is over 46-to-1.

Our request of \$129 million in fiscal year 2017 includes additional funds to hire specialized skills and resources to fund cost of living adjustments, increased benefit costs, and within grade increases. Our request is a modest one that will assist us not only to continue but to enhance our efforts and oversight of two very large financial institutions which are vital to the U.S. economy.

We will continue to build on the successes of the last number of years and ensure our work provides the means to keep the Secretary and the Congress fully and currently informed about the Department's problems and deficiencies while also highlighting best practices. I note that we have seen efforts by the Department to address their challenges.

Our mission is to also promote economy efficiency and effectiveness in the Department's programs and operations. In doing so, we have determined that achieving HUD's mission continues to be an ambitious challenge for its limited staff, given its diverse programs, the thousands of intermediaries assisting the Department, and the millions of beneficiaries of its housing and development programs.

Proposed and new program changes have introduced new risks, oversight, and enforcement challenges. For example, the national credit and financial crisis continues to have a profound impact on departmental operations. HUD is an important component of the Nation's housing industry, and in that, FHA-insured mortgages fi-

nanced approximately one-fourth of all home purchases in the United States. FHA's portfolio now exceeds \$1 trillion.

Over the past 5 years, Ginnie Mae has seen its outstanding mortgage-backed securities increase by more than 50 percent and has experienced its fastest growth in the last 6 years. As of August 2015, Ginnie Mae's mortgage-backed securities portfolio exceeded \$1.6 trillion and is estimated to reach the \$2 trillion mark in a little over a year.

We remain concerned that increases in demand on the FHA program are having collateral implications on the integrity of Ginnie Mae's mortgage-backed securities program, including the potential for increases in fraud.

Finally, in October 2016, my office reported on nine management and performance challenges facing HUD in 2016 and beyond. Our work has noted that these challenges are so interrelated and interconnected that one impacts another to such a degree that, in many cases, the Department will not be able to remedy one without first correcting another. This becomes a taxing challenge to determine which needs to come first or whether several need to be accomplished simultaneously.

A common thread underlying many of these management and performance challenges is the lack of a cohesive department-wide approach to enforcement, risk management, monitoring, and following through on our findings.

While HUD is starting to make some changes in certain programs to correct this, we will continue to stress a department-wide risk monitoring approach that is data driven and supports taking appropriate actions when warranted.

I want to acknowledge that I have regular meetings with Secretary Castro and Deputy Secretary Coloretti on HUD's management and performance challenges, and their continued interest and focus is paramount to ensuring HUD can address and correct these longstanding issues.

My office is strongly committed to working with the Department and the Congress to ensure that these important programs operate efficiently and effectively as intended for the benefit of those most in need now and into the future.

Again, thank you for the opportunity. I'm looking forward to the questions that you may have of me.

[The statement follows:]

PREPARED STATEMENT OF HON. DAVID A. MONTOYA

Chairman Collins, Ranking Member Reed, and Members of the Subcommittee, I am David Montoya, Inspector General of the U.S. Department of Housing and Urban Development (HUD). Thank you for the opportunity to discuss the Office of Inspector General's (OIG) fiscal year 2017 budget request. The committee also asked that I address the Department's top management and performance challenges and my Office's oversight of HUD's programs and operations.

The Department's primary mission is to create strong, sustainable, inclusive communities and quality, affordable homes for all. HUD seeks to accomplish this mission through a wide variety of housing and community development grant, subsidy, and loan programs. Additionally, HUD assists families in obtaining housing by providing Federal Housing Administration (FHA) mortgage insurance for single-family and multifamily properties. It relies upon many partners for the performance and integrity of a large number of diverse programs. Among these partners are cities that manage HUD's Community Development Block Grant funds, public housing agencies that manage assisted housing funds, HUD-approved lenders that originate

and service FHA-insured loans, Government National Mortgage Association (Ginnie Mae) mortgage-backed security issuers that provide mortgage capital, and other Federal agencies with which HUD coordinates to accomplish its goals. HUD also has responsibility for administering disaster assistance programs which has evolved substantially over the years. It also has assumed a prominent role in administering new mortgage assistance and grant programs in response to the Nation's financial crisis, to increases in foreclosures, and to declining home values.

I want to acknowledge that I have continuing open dialogues with Secretary Castro and Deputy Secretary Coloretti on the management and performance challenges that the Department faces and on the work my office does to bring these matters to their attention. I meet regularly with them and their key staff on areas of concern.

I am pleased to highlight the results from our last two Semiannual Reports to the Congress which showcase key results for fiscal year 2015. The Inspector General Act requires each inspector general to report on its results every 6 months. My office is charged with eliminating and preventing fraud, waste, abuse and mismanagement in HUD programs and operations, and the audits, evaluations and investigations conducted by my office have had a significant impact on safeguarding Federal funds. My office takes the approach that early detection and prevention are key to ensuring taxpayer funds are not lost. During the last two 6-month cycles, we issued 148 audits and other reviews, which resulted in nearly \$2.0 billion in recommendations that funds be put to better use, over \$2.1 billion in questioned costs, and nearly \$500 million in collections from audits. Our investigations led to nearly \$670 million in restitution, judgments, recoveries and receivables. Our audits, evaluations and investigations assist HUD in identifying program vulnerabilities and the rest of my testimony will focus on the management and performance challenges faced by HUD as well as the OIG's budget request for the upcoming fiscal year 2017.

OVERVIEW

The mission of the Office of Inspector General is not only to prevent and detect fraud, waste, and abuse in the programs and operations of the Department but to promote economy, efficiency and effectiveness as well. We accomplish this by conducting independent audits, evaluations, and investigations. The work performed by our auditors, evaluators, and investigators provides the means to keep the Secretary and the Congress fully and currently informed about the Department's problems and deficiencies while also highlighting best practices. After identifying problems and deficiencies, we make recommendations to improve operations and follow-up with departmental officials on corrective actions. We are committed to reducing fraud at the outset or at least halting it at the earliest opportunity. Protecting taxpayer dollars is one of the Inspector General's highest priorities in order to account for money going to the right place, doing what it was supposed to do, and having the results it was intended to have. We actively pursue financial and other fraud schemes in all of HUD's programs that can have a significant economic impact often at the expense of the American taxpayer.

FISCAL YEAR 2017 REQUEST

OIG requests \$129 million and 655 Full Time Equivalents (FTE) in fiscal year 2017. This includes additional funds for the cost of new hires and resources to fund cost-of-living adjustments, promotions, increased benefit costs, and within grade increases. Despite some struggles to replace lost staff previously due in part to budget interruptions, in fiscal year 2015 the OIG was able to make gains in total FTE as part of the overall goal of building the organization back to pre-sequestration levels. The OIG is continuing to build on this success into fiscal year 2016. Utilizing this active workforce management should allow the OIG to maintain a staffing base that is moving closer to historical norms and what is needed based on workload facing the organization. Twelve new FTEs are requested for fiscal year 2017 representing a small increase over fiscal year 2016. Approximately seven FTE will operate within the Office of Audit, where the skill sets needed will mostly concentrate on the increased workload as a result of bringing the HUD consolidated financial statement audits in-house which requires highly specialized skills in Federal financial auditing, actuarial modeling, and information technology (IT) skills. The remaining five new FTEs will bolster the Office of Evaluations multidisciplinary teams that work on overseeing, testing, and improving the information security systems and protocols in place within HUD, which require highly technical skills in IT security and penetration testing, especially in light of breaches to Federal IT systems.

OIG PROGRAM DIVISIONS

Office of Audit

The Office of Audit (OA) is responsible for conducting audits to identify, evaluate, and report on the Department's activities and programs so corrective actions can be taken and future problems can be prevented. Auditors assigned to headquarters and to seven regional offices initiate audits based on information obtained from program officials, program research, complaints, congressional requests, and risk assessments.

OA provides oversight across a wide array of responsibilities. The funding requested for the mission of OA allows the organization to expand and concentrate its expert oversight in several areas:

- Financial audits consisting of the HUD Consolidated Financial Statement including the audit of FHA (\$1.2 trillion mortgage insurance program) and Ginnie Mae (\$1.6 trillion in mortgage-backed securities) which determine whether financial statements are fairly presented, internal controls are adequate, and regulations have been followed. Because of the critical impact these agencies have had to the financial stability of the national economy particularly during the last downturn, the OIG began performing FHA's and Ginnie Mae's financial audits in-house in fiscal year 2014. This was done to ensure the highest level of accuracy and due diligence.
- Information system audits determine, among other things, the adequacy of general and application controls, and whether security over information resources is adequate, and in compliance with system development requirements. Ensuring taxpayer and HUD client information is stored with the guarantee that it will be safe and private is something system audits seeks to scrutinize and work to correct when vulnerabilities are found. In addition, OA has been involved with assessing new information system deployments within HUD, an especially large task with HUD's transition to a shared services system with the Department of Treasury.
- The Joint Civil Fraud Division is a multidiscipline team that audits and reviews, working with investigators, attorneys, and other support staff, any suspected financial fraud against HUD and makes referrals for civil actions and administrative sanctions. This group provides case support to the Department of Justice, Civil Division; United States Attorney's Offices nationwide; and HUD's Office of General Counsel to investigate and bring civil fraud cases. As a result, since this initiative began, the Government has reached civil settlements regarding FHA deficient loan underwriting totaling \$3.5 billion for alleged violations of the False Claims Act; the Financial Institutions Reform, Recovery, and Enforcement Act; and the Program Fraud Civil Remedies Act. Nearly \$2.4 billion of the \$3.5 billion in settlements is of direct benefit to the FHA insurance fund and I am proud that the HUD OIG staff from different components played a prominent role in these efforts.

Moreover, the OA has been incredibly successful in rooting out and exposing waste, fraud, abuse of taxpayer funds. In fiscal year 2015, the HUD-wide impact of the audit findings and reports totaled \$4.1 billion. This amount compared with the OIG's appropriated dollars means that for every appropriated dollar received, \$36 are returned to taxpayers or reallocated to other valued mission objectives. When combined with other OIG units (investigations, evaluations, and other support divisions) the overall return on investment rises to even more returned per dollar spent.

Office of Evaluation

The Office of Evaluation (OE) provides a flexible and effective mechanism for oversight and review of HUD's operations, programs and policies by using a multidisciplinary staff and multiple methods for gathering and analyzing data. OE is comprised of integrative teams, concentrating on areas of risk and multiple methods for analyzing data providing a flexible and effective process to produce impartial and reliable results. In an effort to concentrate resources where they can be most effective, and where the greatest institutional risk is present, several priorities have been identified:

- HUD maintains a tremendous amount of data in many diverse systems and databases. The ability for OE to leverage the information from those systems into products that can be used to identify fraud and wasteful tendencies before they occur, or early on so that they do not have the chance to grow into a larger problem, is a central goal and tenet of the OE mission. Using the data available to recognize patterns from historical events and to learn how those patterns can be used to prevent future incidents is a powerful tool that OE is trying to enhance in strength and deploy in larger scale. In addition to directly identifying

weaknesses in the administration of HUD funds and programs, the task of improving data analysis and predictive analytics will provide OIG with the best information when communicating with constituents, directing enforcement strategies, and allocating limited resources.

- Cybersecurity and insuring the protection of IT systems has become a mission of the utmost importance for the Federal Government as a whole. HUD is at a critical crossroads with the aging of the Department's IT infrastructure and the need to modernize these systems. In this environment, the opportunities for assessing cybersecurity are heightened. In addition many HUD systems are supported by outside vendors. While this model of IT acquisition and maintenance is sometimes necessary, it also creates additional IT security vulnerabilities or risk. OE contributes to the OIG's IT security mission by conducting necessary oversight and by monitoring these systems.
- OE is responsible for conducting the Federal Information Security Modernization Act of 2014 (FISMA) reviews and other IT operational evaluations. One of the best tools that the OIG has to measure this security effectiveness is technical testing to include "penetration testing." Penetration testing can be conducted in different ways and on multiple levels to technically test mandated IT security controls. Recently we conducted testing which greatly assisted in finding vulnerabilities within the HUD network and provided the OIG with additional key information and recommendations for FISMA reporting. Into the future, follow-up technical testing will be required by the OIG to validate corrective action of previously found vulnerabilities are being implemented by HUD, to assess other areas of the HUD network, FISMA assessment topics, or any future Federal cybersecurity guidance.

The Office of Evaluation is maturing and becoming fully staffed and operational with the heightened mission; the key to completing this process is ensuring the timely and consistent availability of budgetary resources and critical technical skills.

Office of Investigation

The Office of Investigation (OI) is responsible for the development and implementation of the OIG's investigative activities and is comprised of criminal investigators, investigative analysts, and administrative personnel. OI initiates and conducts criminal, civil and administrative investigations of possible violations of laws and regulations relating to the administration of HUD programs and HUD-funded activities as well as employee misconduct.

- The Office of Investigation has recently produced significant criminal and civil findings relating to HUD program fraud, including participation in large-scale settlements that have returned money to the FHA fund. OI has made it a priority to root out fraud involving the origination of FHA mortgages, multifamily equity skimming schemes at housing developments receiving HUD subsidized rental assistance for tenants, and at nursing homes. These efforts have produced noteworthy results in the past and this trend is expected to continue into the future. The OIG is a full-time participant in the Department of Justice's Financial Fraud Enforcement Task Force where the Inspector General is the Co-Chair of the Mortgage Fraud Working Group. This focus on finding and identifying fraudulent activity will continue to protect taxpayers from those who look to defraud the government, negatively impact the financial health of our economy, and undermine the true mission of HUD programs.

- OI also works to reduce fraud, waste, and abuse in the Public and Indian Housing arena, with a focus on Public Housing Authorities (PHAs). Ensuring that public housing dollars are being administered properly and utilized by the intended recipients is a challenge the Office of Investigation emphasizes every day. This work with the PHAs takes on many different forms: identifying public corruption, management and administration deficiencies, contract fraud, embezzlement, bribery, and rental assistance fraud. The fight against corruption also takes place in the management of Community, Planning and Development grant programs.

- OI continues to dedicate time and resources to the work in communities affected by previous disasters, such as the Gulf Coast area after Hurricane Katrina and, more recently, Hurricane Sandy. Designated disaster sites are provided large amounts of grant and emergency funding in the wake of these disasters. OI conducts investigations of fraud and abuse of disaster recovery funds efforts, assists to ensure that these resources are utilized properly, and leads the effort to prevent disaster fraud schemes. It also provides training to those entities tasked at the State and local level on how to detect and deter fraud and abuse.

Over the last 4 years the Office of Investigation has produced over \$4.3 billion in criminal judgments and nearly \$2.2 billion in recoveries. The reach of this office

is extended by resources that keep investigators in the field working with the tools they need to root out the waste, fraud, and abuse they are tasked with exposing.

HUD'S PERFORMANCE AND MANAGEMENT CHALLENGES

Achieving HUD's mission continues to be an ambitious challenge for its limited staff given the agency's diverse programs, the thousands of intermediaries assisting the Department, and the millions of beneficiaries of its housing and development programs. The national credit and financial crisis continues to have a profound impact on departmental operations. Proposed and new program changes have introduced new risks, oversight and enforcement challenges. HUD is an important spoke to the Nation's housing industry in that FHA-insured mortgages finance approximately one-fourth of all home purchases in the United States and in that it has stepped in to bolster the marketplace during economic challenges.

In October 2016, OIG reported on nine key management and performance challenges facing HUD for fiscal year 2016 and beyond. They are so interrelated and interconnected that our reviews suggest one impacts another to such a degree that, in many cases, the Department will not be able remedy one without first correcting another. This becomes a taxing challenge to determine which needs to come first or whether several be accomplished simultaneously. These challenges are in the following areas:

1. Human capital management,
2. Financial management governance of HUD,
3. Financial management systems,
4. Information security,
5. Single-family programs,
6. Public and assisted housing program administration,
7. Administering programs directed toward victims of natural disasters,
8. Office of Community Planning and Development programs, and
9. Compliance with the Improper Payments Elimination and Recovery Act of 2010.

Since our October 2016 report, my office has completed an additional evaluation relating to HUD's acquisition management and its efforts to address long-standing concerns in this area. I have added a discussion to summarize the results of that review.

Human Capital Management and Financial Management Governance

For many years HUD has struggled and been challenged to effectively manage its limited staff to accomplish its primary mission. HUD continues to lack a valid basis for assessing its human resource needs and allocating staff within program offices. Several studies have been completed in recent years by the Office of Personnel Management and the Government Accountability Office that point to a lack of human capital accountability and insufficient strategic management of human capital as pervasive problems at HUD. To some extent, these human capital challenges have contributed to HUD's inability to maintain an effective financial management governance structure which we have been reporting for the past 3 years as part of our annual audits of HUD's financial statements.

In our most recent report on HUD's fiscal year 2015 financial statements, we continued to report that HUD's financial management governance remained ineffective. While HUD and its components took steps to address some of the weaknesses in its financial management governance structure and internal controls over financial reporting, deficiencies continued to exist. Specifically, HUD needs to recruit and hire a Chief Financial Officer and Deputy Chief Financial Officer (CFO) with the requisite accounting and technical financial management skills to provide stronger direction to program office accounting so as to improve financial management and governance issues throughout the Department and specifically at Ginnie Mae. Additionally, HUD needs to be more consistent in its control and monitoring activities, including front-end risk assessments, management control reviews and reconciliation activities.

These conditions stemmed from the lack of a senior management council which limits the CFO's ability to stress the importance of financial management and to facilitate internal control over financial reporting throughout HUD. Additionally, as we have reported in prior year audits, HUD did not have reliable financial information for reporting and has been slow in replacing its outdated legacy financial systems. Weaknesses in program and component internal control that impacted financial reporting were caused in part by a lack of financial management governance processes. Entity-level controls could improve HUD's governance and enable the prevention, detection, and mitigation of significant program and component-level internal control weaknesses. As a result, there were multiple deficiencies in HUD's inter-

nal controls over financial reporting, resulting in misstatements on the financial statements and noncompliance with laws and regulations.

A 2015 report from the National Academy of Public Administration (NAPA) also recognized the need for an internal management council to strengthen HUD's financial governance structure and enhance its monitoring of financial activity and controls. Such a council would:

- Assess and monitor deficiencies in internal control resulting from HUD's assessment process.
- Advise the HUD Secretary of the status of corrections to existing material weaknesses.
- Inform the Secretary of any new material weaknesses that may need to be reported to the President and Congress through the annual financial report.

We believe that these are critical steps towards establishing effective internal controls. In addition to its concerns and recommendations regarding HUD's impending transition to a shared service provider for financial management functions, NAPA found that HUD should strengthen its finance workforce. As we have previously reported, HUD's ability to monitor and perform routine financial management activities has been hampered by both turnover and reductions in staff. Between 2009 and 2014, there was a 40 percent turnover in CFO staff and an 11 percent reduction in full-time permanent CFO employees. Between 2014 and 2015 there was a 15 percent turnover and a 9 percent reduction in full-time employees. The turnover and reductions have placed additional burdens on CFO staff and limited its ability to perform its duties in a timely and efficient manner.

In addition to issues at the Departmental level, we have identified significant financial governance issues within Ginnie Mae. In fiscal year 2015, Ginnie Mae failed to maintain a governance framework to ensure the reliability and integrity of Ginnie Mae's financial and accounting information. This failure in governance was the underlying cause of the problems cited in the Ginnie Mae financial statement audit report. Specifically, Ginnie Mae failed to adequately:

- Identify, analyze, and respond to changes in the control environment and risk associated with the acquisition of a multi-billion-dollar servicing portfolio.
- Establish accounting policies, procedures, and systems to manage and control the loan accounting and processing of the activities related to its defaulted issuers' portfolio.
- Oversee the implementation of the budgetary accounting module in its financial system to ensure accurate reporting of budgetary activity.

This condition occurred because of finance staff turnover and insufficient internal controls to manage the risks associated with business decisions and changes in its business environment. Additionally, Ginnie Mae's executive leadership failed to backfill a number of critical financial management positions, including the deputy chief financial officer, controller, and the economic modeling director, all of which have significant financial reporting roles. These positions had been vacant for an extended period, and Ginnie Mae relied heavily on contractors to compensate for finance staffing deficiencies. As a result, serious financial reporting deficiencies occurred at Ginnie Mae, the most recent of which required \$1.9 billion of restatement adjustments to HUD's fiscal year 2014 consolidated financial statements. Compounding the problem was Ginnie Mae's late notification, inadequate communication, and lack of transparency, resulting in difficulties for HUD's CFO to preparing consolidated financial statements within the required timeframes and ultimately inhibiting our ability to validate the accuracy of the accounting adjustments. Time will tell whether a recent leadership change within Ginnie Mae will ameliorate some of these conditions.

Ginnie Mae's management of risks associated with (1) handling complex and changing financial management operations without the appropriate accounting policies and procedures in place and (2) monitoring the work performed by third-party service providers on Ginnie Mae's multi-billion-dollar servicing portfolio have challenged Ginnie Mae's inadequate financial management staff. These governance weaknesses contributed to Ginnie Mae's inability to produce auditable financial statements.

Financial Management Systems

Annually since 1991, OIG has reported on the lack of an integrated financial management system, including the need to enhance FHA's management controls over its portfolio of integrated insurance and financial systems. HUD has been working to replace its current core financial management system since fiscal year 2003. The previous project, the HUD Integrated Financial Management Improvement Project (HIFMIP), was based on plans to implement a solution that replaced two of the applications currently used for core processing. In March 2012, work on HIFMIP was

stopped and the project was later canceled. This previous attempt to use a commercial shared service provider to start a new financial management system failed after more than \$35 million was spent. Our review of the project determined that OCFO did not properly plan and manage its implementation of the project.

In the fall of 2012, the New Core Project was created to move HUD to a new core financial system that would be maintained by a shared service provider, the U.S. Department of the Treasury's Bureau of Fiscal Services (BFS). We have completed two audits of HUD's implementation of the New Core Project. In the first audit, published in June 2015, we found that weaknesses in the planned implementation of release 3 of phase 1 in the New Core Project were not adequately addressed. We determined that HUD did not follow its own agency policies and procedures, the policies established for the New Core Project, or best practices. HUD will become the first cabinet-level agency to use a Federal shared service provider. The transfer of its financial management to a shared service provider has been widely publicized. If HUD is not successful in this implementation, it could reflect negatively on OMB's mandate to use Federal shared service providers. The weaknesses identified in this report relate to requirements and schedule and risk management. These areas are significant to the project plan, and the effectiveness with which HUD manages them is critical to the project's success.

Our second review, published in September 2015, found that HUD's implementation of release 1 of phase 1 was not completely successful. Due to missed requirements and ineffective controls, interface processing of travel and relocation transactions resulted in inaccurate financial data in HUD's general ledger and BFS' financial system. As a result, processing continued for more than 6 months with unresolved errors, leaving HUD's general ledger and BFS' financial system with inaccurate financial data and discrepancies in the balances between HUD's general ledger and Treasury's Government Wide Accounting System. We concluded that the implementation of release 1 confirmed the concerns we cited in our initial review. Although HUD had taken action to mitigate some of the problems that occurred with release 1 and address some of the issues we highlighted, we are concerned that HUD could be moving too fast with its implementation plans and may repeat these weaknesses.

We are also concerned about the current state of FHA's IT systems and the lack of systems capabilities and automation to respond to changes in business processes and the IT operating environment. In August 2009, FHA completed the Information Technology Strategy and Improvement Plan to address these challenges, which identified FHA's priorities for IT transformation. The plan identified 25 initiatives to address specific FHA lines of business needs. Initiatives were prioritized with the top five related to FHA's Single-family program. The FHA transformation initiative was intended to improve the Department's management of its mortgage insurance programs through the development and implementation of a modern financial services IT environment. The modern environment was expected to improve loan endorsement processes, collateral risk capabilities, and fraud prevention. However, to date, few initiatives have been completed because of a lack of funding. The transformation team is in operations and maintenance mode for the few initiatives that have been implemented, and has limited capability to advance with the project due to the continued lack of funding.

Overall, funding constraints diminished HUD's ability to complete the new application systems and phase out and deactivate the outdated systems. Some progress has been made by creating new systems with modernized capabilities that replaced manual processes. However, many legacy systems remain in use. Another concern is the ability to maintain the antiquated infrastructure on which some of the HUD and FHA applications reside. As workloads continue to gain complexity, it becomes more difficult to maintain these legacy systems, which are 15 to 30 years old, and ensure that they can support the current market conditions and volume of activity. The use of aging systems has resulted in poor performance and high maintenance costs. As part of our annual review of information systems controls in support of the financial statements audit, we continue to report weaknesses in internal controls and security regarding HUD's general data processing operations and specific applications. The effect of these weaknesses is that the completeness, accuracy, and security of HUD information is at risk of unauthorized access and modification.

Information Systems Security Controls

HUD information systems have extensive amounts of sensitive data, with thousands of entities in the private sector and program officials directly accessing and using HUD applications daily. However, HUD has not adequately planned for its future IT and IT security needs. The primary HUD infrastructure services contract is in a period of transition and the agency has been forced to issue short-term sole-

source contracts with the previous vendors to ensure continuation of service. Further, a significant number of critical HUD applications are legacy systems that are increasingly difficult to maintain and present security risks that HUD will be challenged to mitigate without modernization. Legacy systems are difficult or unable to migrate to cloud technology, further complicating the agency's long-term efforts to modernize and secure its systems and data while creating efficiencies and cost savings.

HUD has taken some initial steps to address these long-term challenges. The agency has finally filled and stabilized several key positions including the Chief Information Officer, Chief Information Security Officer, Chief Technology Officer, and Enterprise Architect. Strategic longterm planning documents have been developed, including an Enterprise Architect Roadmap aimed in part at guiding modernization efforts, and a Cybersecurity Framework to address IT security program deficiencies and prioritize initiatives to correct deficiencies. Notable change and implementation from these initiatives is not anticipated to be realized until later this year. Further, successful implementation of these plans will be directly dependent upon the agency's ability to obtain adequate resources including technical expertise. In the process of outsourcing infrastructure and application maintenance and support, HUD has divested itself of much of its technical expertise and continues to face significant staffing challenges. For example, an organizational chart provided to OIG during its fiscal year 2015 FISMA assessment reflected that 17 of the 35 key managerial/supervisory positions stationed at headquarters were either vacant (13) or filled by temporary "acting" personnel (4) during fiscal year 2015. This presents significant challenges to HUD's ability to conduct technical security reviews of its infrastructure (e.g., penetration testing, network assessments) or adequately oversee the technical security provided by vendors.

Meanwhile, our annual evaluation of HUD's IT security program, as mandated by Federal Information Security Management Act (FISMA), has revealed continued and extensive noncompliance with Federal IT guidance. As depicted in OIG's fiscal year 2015 FISMA report, HUD has extensive deficiencies in five of the ten program areas which OIG reports to OMB. HUD is showing progress in remediating these deficiencies; examples include significant upgrades in its security awareness training program, account access management, and issuance of proper guidance for managing Plans of Action and Milestones (POA&Ms). However, the agency has not adequately addressed many long-standing security weaknesses identified in prior OIG evaluations.

Procurement and Contract Management

In prior years, we have reported on various concerns relating to HUD's procurement and contract management including HUD's information technology infrastructure contracts and HUD's transition to the third generation of its management and marketing contracts that are used to manage and dispose of its extensive inventory of foreclosed Single-family properties. HUD continues to be challenged by its overreliance on contractors in general and its ability to allocate sufficient resources to adequately oversee its contractor work force.

HUD has developed several acquisition improvement initiatives to address the long-standing concerns in this area. We recently completed an evaluation to assess the status of these efforts and whether practices used by other agencies would enhance the quality and effectiveness of HUD acquisitions.¹ HUD had made progress in several areas, including revising and updating its procurement handbook and redesigning its web site. However, some initiatives had not been fully implemented or completed on schedule. HUD officials said that additional resources would be needed to effectively implement ongoing and planned improvement efforts. HUD had not developed a sound, cohesive strategy to address its improvement initiatives, and program offices did not all agree on resource requirements and respective responsibilities for their acquisitions staff.

Some of HUD's improvement initiatives did not follow successful program management practices or meet the U.S. Government Accountability Office's criteria for achieving an efficient, effective, and accountable acquisition function. We identified several successful practices of other Federal agencies that would improve HUD's acquisition function by using measurable objectives and goals, building partnerships, engaging stakeholders, managing change, streamlining functions, and training staff.

HUD procurement officials and the program offices did not always collaborate or communicate effectively and did not agree on the best way to address acquisition problems. HUD had also not maintained cost and performance metrics to determine

¹ Evaluation Report 2015-OE-0004, Comprehensive Strategy Needed To Address HUD Acquisition Challenges, February 2, 2016.

where inefficiencies existed. Program offices continued to experience challenges, and some sought alternatives in shared services arrangements with Federal agencies to accomplish their acquisition objectives because the Department could not do it for them. HUD leadership needs to address these issues, or its acquisition function will remain at risk.

Single-Family Programs

FHA's Single-family mortgage insurance programs enable millions of first-time borrowers and minority, low-income, elderly, or other underserved households to benefit from home ownership. HUD manages a sizable portfolio of Single-family insured mortgages exceeding \$1.2 trillion. Effective management of this portfolio represents a continuing challenge for the Department.

For the 6 years following the financial crisis of 2008, the FHA fund had failed to meet its legislatively mandated 2 percent capital ratio. From a low following the financial crisis, the fund has shown gradual improvement and, at the end of fiscal year 2015, the capital ratio stood at 2.07 percent. Much of this success is heavily dependent on a strong Home Equity Conversion Mortgage insurance program (HECM), a program we have reported on several times. The HECM program is sensitive to a number of factors that can influence its financial stability which then, in turn, can have a significant impact on the achievement of an adequate capital ratio as mandated by statute. While barely above the mandated level, this improvement is a positive development and occurred a year earlier than predicted at the end of 2014. Restoring the fund's reserves and finances has been a priority for HUD, and it has increased premiums, reduced the amount of equity that may be withdrawn on reverse mortgages, and taken other steps to restore the financial health of the fund.

It is incumbent upon the Department to make every effort to prevent or mitigate fraud, waste, and abuse in FHA loan programs. OIG continues to take steps to help preserve the FHA insurance fund and improve FHA loan underwriting by partnering with the Department, the U.S. Department of Justice, and multiple U.S. Attorney's offices nationwide in a number of FHA lender civil investigations. In some instances, these investigations involve not only the loan underwriting of FHA loans but also the underwriting of conventional loans and government-insured loans related to Federal programs other than FHA. For those investigations that involved OIG's assistance on the FHA-related part of the cases, the Government has reached overall civil settlements yielding nearly \$13.2 billion in damages and penalties in the last 4 fiscal years.

For the FHA-insured loans, results in the last 4 fiscal years have shown that a high percentage of loans reviewed should not have been insured because of significant deficiencies in the underwriting. As a result and as pointed out in the beginning of the testimony, the Government has reached civil settlements regarding FHA loan underwriting totaling \$3.5 billion for alleged violations of the False Claims Act; the Financial Institutions Reform, Recovery, and Enforcement Act; and Program Fraud Civil Remedies Act. Nearly \$2.4 billion of the \$3.5 billion is of direct benefit to the FHA insurance fund. Ongoing investigations are expected to lead to additional settlements that will further strengthen the health of the fund.

In spite of these positive steps, we remain concerned about HUD's resolve to take the necessary actions going forward to protect the fund. HUD is often hesitant to take strong enforcement actions against lenders because of its competing mandate to continue FHA's role in restoring the housing market and ensure the availability of mortgage credit and continued lender participation in the FHA program. For example, FHA has been slow to start a rigorous and timely claims review process. OIG has repeatedly noted in past audits and other types of lender underwriting reviews HUD's financial exposure when paying claims on loans that were not qualified for insurance, most recently last year. Adding to this concern, HUD increased its financial exposure by not recovering indemnification losses.

The Reverse Mortgage Stabilization Act of 2013 gave FHA the tools to improve the fiscal safety and soundness of the HECM program in a timelier manner. Despite the ability to quickly make needed changes as appropriate to the program, FHA faces challenges in ensuring that homeowners comply with the principal occupancy requirements (though not all dual HECM's are considered improper). For example, borrowers are not required to repay the loan as long as they continue to occupy the insured property as its principal residence. To date, OIG has completed four audits on the HECM program and compliance with principal occupancy requirements. Our initial audit identified borrowers with more than one HECM loan despite the principal occupancy requirement. Borrowers were able to obtain more than one HECM loan because of a lack of controls in place to identify this noncompliance. The De-

partment has been receptive to our findings and has implemented controls to address this problem.

Departmental clearance is a necessary and important process to ensure requisite agreement by applicable HUD leadership on the subject matter and content of a directive or policy change. This action requires a review by HUD offices that have expertise, policy or legal, with the subject matter of the change and that there is no conflict with other HUD or administration policies.

At a time when FHA is working to restore confidence in the housing market, OIG has concerns that when the Department is making program, policy or procedural changes, it is (1) not identifying the significant changes in its notice, (2) not following the formal clearance process and instead opting for a more informal method, or (3) avoiding the process altogether and making changes unilaterally. For example, in May 2015, HUD issued a notice in the Federal Register seeking OMB approval for information collection. However, OIG believes that the notice did not adequately describe the changes to be made. The Notice proposed to make changes to the loan-level certifications that lenders must make to obtain insurance from FHA. As a result, the certification process became ineffective and allowed loan originators, firms, or principals that have been convicted of certain violations to do business with FHA. However, this detail was not provided in the notice. Another example is FHA's Single-Family Housing Loan Quality Assessment Methodology (Defect Taxonomy). The goal of this methodology is to give lenders better clarity on the quality assurance reviews of their FHA loans. Although HUD stated that the draft Taxonomy documents had been published on FHA's Drafting Table web site, FHA did not follow the proper protocol for issuing a new directive. These changes fit the description of a directive change and should have been announced through the proper steps and clearance process as outlined in its own Handbook.

FHA also remains vulnerable to criminal activity and single-family criminal investigations continue to be a priority of my office. We recently concluded an investigation of Great Country Mortgage Bankers, a former FHA mortgage lender in Miami, FL. The owner of the company was sentenced in U.S. District Court to 135 months incarceration and 60 months supervised release and agreed to forfeit \$8 million following his conviction of conspiracy to commit wire fraud affecting a financial institution. From at least 2006 through September 2008, the owner and other conspirators specialized in approving FHA loans primarily for buyers of condominiums at complexes where he had an ownership interest. As part of the scheme, the conspirators provided false information on loan documents to qualify borrowers and in some cases, also paid inducements to borrowers to purchase the condominium units. Many of the loans defaulted, causing losses to FHA and financial institutions. To date, 25 individuals have been charged in this investigation, including the owner, 3 partner developers, and 20 former employees of the mortgage lender. Of those charged, 14 individuals have pled guilty, and 1 has signed a plea agreement. Losses to FHA exceeded \$64 million. This case, and others, highlight why the HUD OIG believes that FHA needs to remain diligent in its efforts, including keeping or enhancing practices that oversee and monitor abusive or wasteful behavior, aimed at those who seek to harm the viability of the program and ultimately the public.

Over the past 5 years, Ginnie Mae has seen its outstanding mortgage-backed securities increase by more than 50 percent and has experienced its fastest growth in the last 6 years. As of August 2015, Ginnie Mae's mortgage-backed securities (MBS) portfolio exceeded \$1.6 trillion and is estimated to reach the \$2 trillion mark in a little over a year and a half. We remain concerned that increases in demand on the FHA program are having collateral implications for the integrity of Ginnie Mae's MBS program, including the potential for increases in fraud. Ginnie Mae securities are the only mortgage-backed securities to carry the full faith and credit guaranty of the United States. If an issuer fails to make the required pass-through payment of principal and interest to MBS investors, Ginnie Mae is required to assume responsibility for it. Typically, Ginnie Mae defaults the issuer and assumes control of the issuer's government or agency MBS pools. Historically, Ginnie Mae issuer defaults have been infrequent, involving small to moderate-size issuers. However, major unanticipated issuer defaults beginning in 2009 have led to a multi-billion-dollar rise in Ginnie Mae's nationwide mortgage servicing as well as its repurchase of billions of dollars in defaulted whole loans to meet its guarantee commitments to MBS investors. In the near term, these changes have strained both its operating and financial resources.

Another key challenge facing Ginnie Mae is the risk posed by the growing number of Ginnie Mae issuers that are institutions other than banks. In June 2011, 7 of the top 10 servicers were banks, but by September 2015, only 4 of the top 10 servicers were banks. Ginnie Mae's potential for losses occurs when an issuer fails to fulfill its responsibilities. With the significant shift of its business going to

nonbanks, Ginnie Mae can no longer rely on the Office of the Comptroller of the Currency and other bank regulators to ensure that its servicers can meet their financial obligations. To mitigate the risks, Ginnie Mae will need to be more involved with nonbanks to adequately monitor them, which would require Ginnie Mae to increase its current staffing level and expertise.

With the approval of OMB and Congress, Ginnie Mae has significantly increased its management capacity. The total number of Ginnie Mae full-time employees increased from 89 in fiscal year 2012 to 130 at the end of fiscal year 2015. However, Ginnie Mae continues to rely heavily on third-party contractors to perform almost all key operating loan servicing, pool processing, and other functions. It is imperative to the country's larger financial health that Ginnie Mae be able to increase staffing with the needed skills, knowledge, and abilities to manage a \$1.6 trillion program.

Ginnie Mae could benefit from an estimated 30 positions with a higher salary level than what the general schedule allows in order to attract the needed and specialized skill sets to operate in the U.S. financial market. HUD's lack of human capital management support and a weak procurement process have contributed to Ginnie Mae's inability to promptly recruit and hire needed skills as well as hampered its ability to operate swiftly and timely in the marketplace.

Public and Assisted Housing Program Administration

HUD provides housing assistance funds under various grant and subsidy programs to public housing agencies (PHA) and multifamily project owners. These intermediaries, in turn, provide housing assistance to benefit primarily low-income households. The Office of Public and Indian Housing (PIH) and the Office of Multifamily Housing Programs provide funding for rent subsidies through public housing operating subsidies and the tenant-based Section 8 Housing Choice Voucher and Section 8 multifamily project-based programs. More than 4,000 intermediaries provide affordable housing for 1.2 million households through the low-rent operating subsidy public housing program and for 2.2 million households through the Housing Choice Voucher program. Multifamily project owners assist more than 1.5 million households.

Housing Choice Voucher Monitoring

HUD has a challenge in monitoring the Housing Choice Voucher program. The program is electronically monitored through PHAs' self-assessments and other self-reported information collected in PIH's systems. Based on recent audits and HUD's on-site confirmatory reviews, the self-assessments are not always accurate and the reliability of the information contained in PIH systems is questionable. PIH targets PHAs for various types of on-site reviews using its Utilization Tool and National Risk Assessment Tool. It also states that it will further address limitations with the Next Generation Management System, which continues to be delayed due to a shortage in IT funding. HUD will continue to face challenges in monitoring this program until it has fully implemented a reliable, real-time, and all-inclusive monitoring tool.

Central Office Cost Centers

We are concerned that HUD may not be ensuring that deFederalized administrative fees paid to PHAs for their public housing program are reasonable. We found that HUD could not adequately support the reasonableness of operating fund management, book-keeping, and asset management fees and Public Housing Capital Fund management fee limits. In addition, HUD lacked adequate justification for allowing PHAs to charge an asset management fee, resulting in more than \$81 million in operating funds being unnecessarily deFederalized annually. Our concern continues to be that the fee amounts implemented are not supported and may not be reasonable. Excess administrative fees, if deFederalized, are not required to be used for the public housing program. Ensuring that only the funds that are needed are transferred to the COCC will allow more funds to be used directly for the public housing program. After input from OMB, HUD and OIG have reached an agreement to implement the recommendations as stated in our audit report. HUD has agreed to reFederalize the fees and will be reevaluating the fee amounts. HUD will need to go through the rulemaking process to fully implement the changes, so it may take some time.

Cash Management Requirements

In fiscal year 2012, PIH implemented procedures to reduce the amount of excess funds accumulating in PHAs' net restricted asset accounts in accordance with Treasury's cash management requirements as directed by a congressional conference report. By that point, a significant amount of reserves had accumulated with the PHAs. As of 2015, most of the funds had been transitioned back to HUD. However,

PIH has not transitioned any of the excess funding from its Moving to Work (MTW) program PHAs. Through PIH's confirmation process, MTW PHAs reported holding \$556 million and \$514 million, as of September 30, 2014, and March 31, 2015, respectively. PIH must now validate these balances before it transitions the funds back. This process may take some time because the composition of these balances is complex and HUD was not tracking the funds for these agencies. Until HUD validates and collects the funds, MTW PHAs will continue to hold hundreds of millions of dollars in excess of their immediate disbursement needs, making the funds susceptible to fraud, waste, and abuse. Further, this is a continued departure from Treasury's cash management requirements.

Adding to this challenge, HUD continues to lack an automated process to complete the reconciliations required to monitor all of its PHAs and to ensure that Federal cash is not maintained in excess of immediate need. Reconciliations are prepared manually on unprotected Excel spreadsheets for more than 2,200 PHAs receiving approximately \$17 billion annually. This process is time consuming, antiquated and labor intensive, and does not allow for accurate financial reporting at the transaction level as required by FFMIA. This process also increases the risk of error and causes significant delays in the identification and offset of excess funding. We recommended that HUD automate this process during our 2013 financial statement audit, and the matter has been elevated to the Deputy Secretary for a decision.

Monitoring of Moving to Work Agencies

HUD's monitoring and oversight of the 39 PHAs participating in the MTW demonstration program is particularly challenging. The MTW program provides PHAs the opportunity to develop and test innovative, locally-designed strategies that use Federal dollars more efficiently, help residents become self-sufficient, and increase housing choices for low-income families. However, in the more than 15 years since the demonstration program began, HUD has not reported on whether the program is meeting its objectives which such a long-standing demonstration should assert. This is particularly important as under the MTW program participants receive less oversight from the Department. HUD has requested and Congress is considering expanding the program to include more participants without knowing whether participating PHAs are reducing costs to gain increased housing choices and incentives for families to work. HUD is experiencing challenges in developing program-wide performance indicators that will not inhibit the participants' abilities to creatively impact the program. It is developing renewal contracts to replace contracts expiring in 2018. HUD management developed new metrics to help measure program performance and states that the new contracts will allow it to better evaluate each PHA's performance. We continue to believe that this is essential before new agencies are allowed into the program. Moreover, HUD could benefit from a formalized process for terminating participants from the demonstration program for failure to comply with their agreement.

Overincome Families in Public Housing

HUD's challenge in addressing overincome families living in public housing units is exacerbated by public housing agencies' lack of desire to address these issues themselves. HUD's December 2004 final rule gave public housing authorities discretion to establish and implement policies that would require families with incomes above the eligibility income limits to find housing in the unassisted market. HUD regulations require families to meet eligibility income limits only when they are admitted to the public housing program. Neither public law nor regulations limit the length of time that families may reside in public housing. Our recent audit² showed that as many as 25,226 families, whose income exceeded HUD's 2014 eligibility income limits, lived in public housing. The PHAs that we contacted during the audit chose not to impose limits based on the notice. In response to our audit, PIH initially disagreed. After some public discourse, HUD issued a letter to PHA executive directors, strongly encouraging them to use the discretion available to them to remove extremely overincome families from public housing. However, HUD does not have the authority to require PHAs to implement limits. Consequently, to comply with our recommendation, HUD initiated the rulemaking process through an advanced notice of proposed rulemaking. Through this process, HUD will collect public comments from stakeholders and determine how to proceed with rulemaking. We will be part of this process. Our concern is that a nationwide policy may limit flexi-

² Audit Report 2015-PH-0002, Overincome Families Resided in Public Housing Units, July 21, 2015.

bility to protect tenants. Until a new final rule is established, PIH will need to find a way to encourage PHA participation and ensure the effectiveness of its policies.

Environmental Review Requirements

In recent reports,³ we demonstrated that PIH did not adequately implement environmental requirements or provide adequate oversight to ensure compliance with these requirements. The Offices of Housing and Public Housing did not adequately monitor or provide training to their staff, grantees, or responsible entities on how to comply with environmental requirements. Also, HUD did not have an adequate reporting process for the program areas to ensure that the appropriate headquarters programs were informed of field offices' environmental concerns. Further, our review of five Office of Public Housing field offices found that none of them followed environmental compliance requirements. HUD relied heavily on its Office of Environment and Energy to ensure compliance with environmental requirements. HUD stated that cross-office collaboration should be encouraged as a sensible and efficient way to achieve oversight and compliance objectives. While HUD shares OIG's concerns regarding responsible entities' compliance with environmental requirements and agreed with our recommendations, HUD believes that the program offices do not always have the authority to impose corrective actions or sanctions. We provided several examples in which environmental issues, if not detected, can severely impact the residents and communities as well as consume significant resources.

As a result, HUD began providing more training to staff and grantees and implemented processes to improve its training program and curriculum to better support all program areas. Also, HUD was piloting a recently developed electronic data system, HUD's Environmental Review Online System (HEROS), which is part of HUD's transformation of IT systems. HEROS will convert HUD's paper-based environmental review process to a comprehensive online system that shows the user the entire environmental process, including compliance with related laws and authorities. It will allow HUD to collect data on environmental reviews performed by all program areas for compliance. HUD's Office of Environment and Energy had also implemented an internal process within HEROS to track findings, which will allow the program areas to focus training on recurring issues.

While HUD has made improvements, it faces several challenges, including lack of resources, unclear guidance, and a perceived lack of authority to impose corrective actions or sanctions on responsible entities. Until HUD fully addresses these needed improvements, it faces an increased risk of creating a potential human health and safety concern as well as possible damage to the environment. For the five Office of Public Housing field offices we visited, PHAs spent almost \$405 million for activities that either did not have required environmental reviews or had reviews that were not adequately supported.

Physical Condition of the Housing Choice Voucher Units

In response to a 2008 audit report,⁴ HUD developed a plan to monitor the physical condition of its Housing Choice Voucher program units. HUD is testing a system of inspections similar to the model used for its public housing units and multi-family projects. However, this testing with an initial target completion date of September 30, 2014, is taking considerably longer than expected. HUD has performed initial inspections of a sample of its voucher units. However, it needs resources to continue developing the new protocol and related software for its comprehensive monitoring system. Meanwhile, we continue to identify PHAs with inspection programs which do not ensure that voucher program units comply with standards.

OIG's Fraud Prevention Program

To assist the department in addressing these various issues, my office has initiated a fraud prevention program. A key component of this is a series of Integrity

³ Audit Report 2015-FW-0001, HUD Did Not Adequately Implement or Provide Oversight To Ensure Compliance With Environmental Requirements, June 16, 2015; Audit Report 2014-FW-0005, Improvements Are Needed Over Environmental Reviews of Public Housing and Recovery Act Funds in the Detroit Office, September 24, 2014; Audit Report 2014-FW-0004, Improvements Are Needed Over Environmental Reviews of Public Housing and Recovery Act Funds in the Greensboro Office, July 14, 2014; Audit Report 2014-FW-0003, Improvements Are Needed Over Environmental Reviews of Public Housing and Recovery Act Funds in the Columbia Office, June 19, 2014; Audit Report 2014-FW-0002, Improvements Are Needed Over Environmental Reviews of Public Housing and Recovery Act Funds in the Kansas City Office, May 12, 2014; and Audit Report 2014-FW-0001, The Boston Office of Public Housing Did Not Provide Adequate Oversight of Environmental Reviews of Three Housing Agencies, Including Reviews Involving Recovery Act Funds, February 7, 2014.

⁴ Audit Report 2008-AT-0003, HUD Lacked Adequate Controls Over the Physical Condition of Section 8 Voucher Program Housing Stock, May 14, 2008.

Bulletins to aid commissioners and public housing executives to identify red flags of fraud and mismanagement. The series includes topics such as Procurement and Contracting, Embezzlement, Charge Cards, Fraud Policy, Hiring, and a Primer for Commissioners. These bulletins are available on the OIG public web site. To further alert public housing boards and directors of these bulletins, a direct emailing went out July 2015 that was signed jointly by Principal Deputy Assistant Secretary Lourdes M. Castro Ramirez and me. The letter emphasized that public trust and integrity is a collective responsibility, and encourages recipients to read and share the Integrity Bulletins.

The fiscal year 2014 appropriation language required HUD to work jointly with the OIG "...to determine the critical skills that PHA boards should have to effectively oversee PHA operations, as well as the actions HUD will take to ensure that PHAs possess them...." HUD has since developed a web-based training program for boards of commissioners. The training, named "Lead the Way" includes the basic skills and knowledge commissioners need to understand their roles and responsibilities. HUD is now in a second phase working with our office to update the training to add skills and knowledge for identifying risks and responding to them. The training will also cover identifying common fraud and mismanagement issues and how to report cases to OIG. The target for completion of the training is mid-summer 2016.

One challenge that has not been resolved is how to get commissioners to complete this training. HUD has no authority to require completion of the training of the boards (or PHA executive staff either). HUD reports that about 500 commissioners have completed the training. Industry group training for commissioners appears to have the same problem in getting commissioners to attend training with 300 commissioners being certified by the National Association of Housing and Redevelopment Officials, and a similar number being certified through the Public Housing Authority Directors Association. All these together have trained and certified about 7 percent of commissioners.

Professional certification for public housing commissioners and executive directors exists in a conflicting array of certificates offered by public housing industry groups. While these certification programs are available, completion of the training is not a requirement to serve as a commissioner or executive director.

We believe it would take congressional action to require boards and key executive staff to be certified. A certification body needs to be designated, with HUD approval of a curriculum, and timeframes established for phasing in the requirement. A requirement would also be useful that would establish a deadline for successfully completing the training. Certification of executive directors should likewise be mandated for at least medium and larger size agencies.

ADMINISTERING PROGRAMS DIRECTED TOWARD VICTIMS OF DISASTERS

The Department faces significant challenges in monitoring disaster program funds provided to various States, cities, and local governments under its purview. This challenge is particularly pressing for HUD because of the limited resources to directly perform oversight, the broad nature of HUD projects, the length of time needed to complete some of these projects, the ability of the Department to waive certain HUD program requirements, and the lack of understanding of disaster assistance grants by the recipients. HUD must ensure that the grantees complete their projects in a timely manner and that they use the funds for intended purposes. Since HUD disaster assistance may fund a variety of recovery activities, HUD can help communities and neighborhoods that otherwise might not recover due to limited resources. However, oversight of these projects is made more difficult due to the diverse nature of HUD projects and the fact that some construction projects may take between five and 10 years to complete. HUD must be diligent in its oversight to ensure that grantees have identified project timelines and are keeping up with them. HUD also must ensure that grantee goals are being met and that expectations are achieved.

My office has completed 16 audits and 1 evaluation relating to CDBG-DR funding for Hurricane Sandy and other eligible events occurring in calendar years 2011, 2012, and 2013. There are a number of other audits and evaluations, as well as investigative work, that are currently underway. Prior to Hurricane Sandy, HUD-OIG had extensive audit and investigative experience with HUD's CDBG-DR program, most notably, with grants relating to recovery after Hurricane Katrina and the terrorist attacks of September 11, 2001. Over the years, HUD has gained more experience and has made progress with assisting communities recovering from disasters, but it continues to face the following challenges in administering these grants:

- Ensuring that expenditures are eligible and supported;
- Approving the program waiver process;

- Certifying that grantees are following Federal procurement regulations;
- Conducting consistent and sufficient monitoring efforts on disaster grants;
- Promoting disaster resiliency within communities trying to recover; and
- Keeping up with communities in the recovery process.

I will elaborate on the first two areas above as they represent the most serious challenges faced by HUD.

Ensuring That Expenditures Are Eligible and Supported

In overseeing the CDBG–DR program, HUD must ensure that funds disbursed for disaster recovery programs are used for eligible and supported items. Our audits relating to Hurricane Sandy funding have identified \$3.5 million in ineligible costs, \$458 million in unsupported costs, and \$360 million relating to recommendations that funds be put to better use. We have highlighted three audit reports that demonstrate these challenges for HUD in administering grants made under this program:

- In our review of New York City’s Health and Hospitals Corporation,⁵ we determined that City officials disbursed \$183 million to the City’s subrecipient for unsupported salary and fringe benefits and unreasonable and unnecessary expenses and did not adequately monitor its subrecipient and sufficiently document national objectives. As a result, City officials could not assure HUD that (1) \$183 million in CDBG–DR funds was disbursed for eligible, reasonable, and necessary program expenses and (2) going forward the City will have adequate accounting and financial controls in place to ensure the remaining allocation of \$40 million will be properly spent for the purposes intended.
- In our review of New Jersey’s Sandy Integrated Recovery Operations and Management System, we found that the State did not procure services and products for its system in accordance with Federal procurement and cost principle requirements. The State’s procurement process was not equivalent to Federal procurement standards. As a result, it disbursed \$38.5 million for unsupported costs. It was also planning to disburse another \$21.7 million to extend the initial period of the related contract for 3 additional options years including \$9.1 million for costs that it had not shown were fair and reasonable.
- In our review of New York State’s buyout program,⁶ we determined that officials did not always administer the program in accordance with program procedures. As a result, officials disbursed \$6.6 million for properties that did not conform to published requirements. This amount included \$672,000 and \$598,300 for ineligible incentives and purchase prices in excess of authorized limits, respectively. In addition, documentation was inadequate to support that \$1.7 million was disbursed for eligible purchases and that \$8.7 million spent for contracts complied with Federal or State requirements.
- In our review of the New York Rising Housing Recovery Program,⁷ we found that officials did not establish adequate controls to ensure that CDBG–DR funds were awarded and disbursed for eligible costs. As a result, more than \$2.2 million in CDBG–DR funds was disbursed for ineligible costs and \$119,124 for unsupported costs. Additionally, the use of a statewide cost figure, by which more than \$87.5 million was awarded, was unsupported. Also, State officials needed to ensure that receipts were available to support work completed, or request that more than \$241.2 million be repaid.

We attributed these conditions to the grantees’ weaknesses in maintaining file documentation, unfamiliarity with HUD rules and regulations, and failure to follow State and Federal procurement regulations.

Approving the Program Waiver Process

We performed two reviews of the State of Louisiana’s Road Home Elevation Incentive (RHEI) Program, in 2010⁸ and a follow-up review in 2012.⁹ Based on these re-

⁵ Audit Report 2015–NY–1001, The City of New York, NY, Did Not Always Disburse Community Development Block Grant Disaster Recovery Assistance Funds to Its Subrecipient in Accordance With Federal Regulations, November 24, 2014.

⁶ Audit Report 2015–NY–1010, New York State Did Not Always Administer Its Rising Home Enhanced Buyout Program in Accordance with Federal and State Regulations, September 17, 2015.

⁷ Audit Report 2015–NY–1011, Program Control Weaknesses Lessened Assurance That New York Rising Housing Recovery Program Funds Were Always Disbursed for Eligible Costs, September 17, 2015.

⁸ Inspections and Evaluations Report IED–09–002, Inspection of the State of Louisiana’s Road Home Elevation Incentive Program Homeowner Compliance, March 2010.

⁹ Audit Report 2013–IE–0803, Follow-up of the Inspections and Evaluations Division on Its Inspection of the State of Louisiana’s Road Home Elevation Incentive Program Homeowner Compliance (IED–09–002 March 2010), March 29, 2013.

views, it appears that HUD has established a pattern and practice to either waive the program requirements, or retroactively approve the State's amended action plan after the fact, when deficiencies are identified with this program. The initial review's objective was to determine whether homeowners used funds to elevate their homes as set out in their grant agreements. The review found that 79 percent of the homes we inspected had not been elevated, strongly suggesting that the grant program was at risk and could fail to achieve its intended goal of reducing homeowner flood risks from future hurricanes. Our follow-up review found that as of August 31, 2012, the State did not have conclusive evidence that approximately \$698.5 million in CDBG-DR funds provided to 24,000 homeowners had been used to elevate homes. As an example of HUD's practice to minimize or eliminate original program requirements, HUD approved the State's Amendment 60 on July 26, 2013, which retroactively allowed homeowners who received a grant under Road Home to prove that they used those funds to either elevate or rehabilitate their home, although the grant was specifically intended for elevation only. The amendment is contrary to the elevation incentive agreement which stated that the funds were intended to assist homeowners to only elevate their homes. If the funds were not used for this sole purpose, they were to be repaid to the State.

In August 2015, HUD again unilaterally waived the Road Home program requirements. Specifically, HUD changed its 2013 documentation requirement for rehabilitation expenses to permit an affidavit by the homeowner and a "valuation inspection" by the State to determine the value of home repairs that were previously performed. This waiver of requirements was due to the fact that it was still having difficulty acquiring documentation from homeowners as proof of repair. This new approach does not consider whether recipients previously received grants or insurance funds for rehabilitation and could result in a duplication of benefits. While Congress provided considerable flexibility in the use of CDBG-DR funds, it specifically required HUD to establish procedures that prevent duplication of benefits.

HUD has not properly enforced the intent of the Road Home program, instead opting to change the rules *ex post facto* so that violations can potentially be excused. If HUD wishes to implement proper risk management in its programs, this most recent action seems to defeat the purpose as it announces to all recipients of HUD funds that noncompliance may be pardoned because the Department will allow it in the end with no consequences for divergent actions.

HUD's actions, and retreat from its position and the original intent of the approved State action plans, diminishes HUD's ability to properly administer grant agreements, provide proper oversight and enforcement when needed, and lessens the affected homeowners' trust and confidence that HUD maintains the highest standards of efficiency and fairness in its grant award process.

Government-wide Concerns

In view of the significance of funding to multiple agencies to address Hurricane Sandy, my office is leading a joint cross-cutting review with seven other OIGs¹⁰ to assess participating Federal entities' funding, expenditures, and monitoring. Our objective is to identify common concerns and make recommendations to improve oversight, enhance collaboration, and report on best practices.

As noted earlier, Congress imposed time limits with respect to the funding it provided to HUD in the Disaster Relief Appropriations Act, 2013. Funding for other agencies either included varying time limits or, in some cases, imposed no time limit and will remain available until spent. Based upon our audits of funds relating to prior disasters, we believe that imposing statutory deadlines will help to ensure that funds are promptly spent. HUD is not alone in facing challenges with timely expenditure of funding. A representative from the Department of Homeland Security's OIG told us that FEMA disaster funds remained unspent for extended periods and FEMA still had unspent funding relating to the Northridge earthquake (more than 21 years ago) and Hurricane Katrina (more than 10 years ago).

Funding for oversight activities also varied. Separate funding was provided to both HUD and HUD-OIG for oversight. The Department of Health and Human Services, which received more than \$500 million in funding, also received funding for its OIG but not for the agency to conduct administrative oversight. OIGs from the Department of the Interior, Environmental Protection Agency and the Department of Defense did not receive separate funding to provide for oversight of their respective agencies' funding that ranged from \$577 million to more than \$5 billion.

¹⁰In addition to HUD-OIG, OIGs from the following agencies are participating: Department of Homeland Security, Department of Health and Human Services, Department of Defense, Department of the Interior, Department of Transportation, Small Business Administration, and Environmental Protection Agency.

Our collaboration with other OIGs has noted a common concern with respect to time limits being placed on oversight funding relating to Hurricane Sandy. As is the case with HUD CDBG-DR funds, HUD-OIG's funding must be obligated by the end of fiscal year 2017. This presents a challenge for HUD-OIG because much of the expenditure activity under the CDBG-DR program will occur well after that date, as late as the end of fiscal year 2022. In addition, a waiver was obtained that allows the Department to extend program funds beyond the original deadline. It is unclear from the current statutory language whether HUD-OIG will be able to use its Sandy funding beyond the obligation deadline. HUD-OIG is planning to seek an opinion on the specific appropriation issue from the GAO.

As of the end of fiscal year 2015, over 70 percent of HUD's Hurricane Sandy funding remains unspent and until the bulk of that funding is spent, our ability to conduct effective oversight is limited. This is a concern with at least two other OIGs who have expressed similar concerns with the slow rate at which their respective agencies are using their disaster assistance funding. I urge the Congress to recognize that oversight activities conducted by the various agencies and their OIGs need to occur well beyond the obligation deadline and to consider providing relief to the affected organizations to extend the date at which these oversight funds will expire.

COMMUNITY PLANNING AND DEVELOPMENT PROGRAMS

Due to the use of what the Department calls the FIFO method (first-in, first-out as an accounting methodology of appropriated funds)¹¹ for committing and disbursing obligations, HUD's accounting for its Community Planning and Development formula grant programs' accounting does not comply with accounting standards resulting in material misstatement of HUD's financial statements. Since 2013, we have also reported that the information system used, the Integrated Disbursement Information System (IDIS) Online, a grants management system, was not designed to comply with Federal financial management system requirements. Further, HUD's plan to eliminate FIFO from IDIS Online was applied to fiscal year 2015 and future grants and not to fiscal years 2014 and earlier. Moreover, because of funding problems, completion of the elimination plan will be delayed until December 2016.

As a result, budget year grant obligation balances continued to be misstated and disbursements made using an incorrect U.S. Standard General Ledger (USSGL) attribute resulted in additional misstatements. Although FIFO has been removed from fiscal year 2015 and forward grants, modifications to IDIS were necessary for the system to comply with the Federal Financial Management Improvement Act (FFMIA) and USSGL transaction records.

The inability of IDIS Online to provide an audit trail of all financial events affected by the FIFO method made it impossible to quantify the financial effects of FIFO on HUD's consolidated financial statements. Further, because of the amount and pervasiveness of the funds susceptible to the FIFO method and the noncompliant internal control structure in IDIS Online, the obligated and unobligated balance brought forward and obligated and unobligated balances reported in HUD's combined statement of budgetary resources for fiscal year 2015 and in prior years were materially misstated. The effects of not removing the FIFO method retroactively will continue to have implications on future years' financial statement audit opinions until the impact is assessed to be immaterial.

HUD's continued inability to provide data to monitor compliance with the HOME Investment Partnership Act (HOME statute) requirements for committing and spending funds continues to remain a concern until appropriate system changes in IDIS Online are implemented and regulatory changes are fully implemented. The HOME Investment Partnerships Program is the largest Federal block grant to State and local governments designed to create affordable housing for low-income households. Because HOME is a formula-based grant, funds are awarded to the participating jurisdictions noncompetitively on an annual basis.

In 2009, OIG challenged HUD's cumulative method¹² for determining compliance with section 218(g) of the HOME statute, which requires that any uncommitted

¹¹The FIFO method is a way in which CPD disburses its obligations to grantees. Disbursements are not matched to the original obligation authorizing the disbursement, allowing obligations to be liquidated from the oldest available budget fiscal year appropriation source. This method allows disbursements to be recorded under obligations tied to soon-to-be-canceled appropriations.

¹²HUD implemented a process, called the cumulative method, to determine a grantee's compliance with the requirements of section 218(g) of the Statute and determine the amount to be recaptured and reallocated with section 217(d). HUD measured compliance with the commitment requirement cumulatively, disregarding the allocation year used to make the commitments.

funds be reallocated or recaptured after the expiration of the 24-month commitment deadline. After a continuous impasse with HUD, OIG contacted GAO in 2011 and requested a formal legal opinion on this matter. In July 2013, GAO issued its legal opinion affirming OIG's position and citing HUD for noncompliance. In its decision, GAO repeated that the language in the statute was clear and that HUD's cumulative method did not comply with the statute. Accordingly, GAO told HUD to stop using the cumulative method and identify and recapture funds that remain uncommitted after the statutory commitment deadline.

The effects of the GAO legal opinion require extensive reprogramming and modification to IDIS Online in addition to regulatory changes. However, these system and regulatory changes, which are already underway, will apply only to new grants awarded going forward and will not be changed retrospectively. Therefore, HUD's plan does not comply with the GAO legal opinion and allows grantees to spend HOME program funding that would normally be recaptured if the 24-month commitment timeframe was not met.

Compliance with GAO's opinion would enable HUD to better monitor grantee performance in a more timely, efficient, and transparent way. It also would strengthen internal controls, bring HUD into compliance with HOME statutory requirements, and accurately and reliably report financial transactions.

On June 16, 2015, we issued a memorandum to HUD regarding potential Anti-Deficiency Act (ADA) violations due to the noncompliance issues noted above. In the memorandum, we requested that the Chief Financial Officer (1) open an investigation and determine the impact of FIFO and the cumulative method for commitments for the HOME program on HUD's risk of an ADA violation; (2) as part of the violation, obtain a legal opinion from GAO and OMB to determine whether maintaining the cumulative method for determining compliance with the HOME statute results in noncompliance with the Statute and potential ADA violations; and (3) if HUD incurred an ADA violation, comply with the reporting requirements at 31 U.S.C. (United States Code) 1351 and 1517(b) and OMB Circular No. A-11, Preparation, Submission, and Execution of the Budget, section 145, (June 21, 2005). We determined that HUD has opened an ADA investigation in response to our memorandum.

We will continue to report that HUD is not in compliance with laws and regulations until the cumulative method is no longer used to determine whether commitment deadlines required by the HOME Investment Partnership Act are met by the grantees.

Subgrantee Monitoring

In fiscal years 2014 and 2015, at least seven of our audits have found that in some instances, little or no monitoring occurred, particularly at the subgrantee level. HUD focuses its monitoring activities at the grantee level through its field offices. Grantees, in turn, are responsible for monitoring their subgrantees. HUD should continue to stress the importance of subgrantee monitoring to its grantees. OIG has concerns regarding the capacity of subgrantees receiving funding from HUD programs, including grantees receiving CDBG Disaster Recovery (CDBG-DR) funds. Therefore, audits of grantees and their subgrantee activities will continue to be given emphasis this fiscal year as this continues to be a challenge for HUD and its grantees.

OIG Prevention Activities

To assist the Department with these and other Community Planning and Development Program concerns, we are currently working with HUD staff to issue a series of bulletins similar to the topics we have issued for public housing but adapting them to Community Planning and Development program grantees. The first of the series is scheduled for issuance in May. These will also be announced through a joint communique, signed by Principal Deputy Assistant Secretary Harriet Tregoning and me, to encourage public official to read and share the bulletins.

COMPLIANCE WITH THE IMPROPER PAYMENTS ELIMINATION AND RECOVERY ACT OF 2010

For the second year in a row, we determined that HUD did not comply with the Improper Payments Elimination and Recovery Act of 2010 (IPERA). Specifically, our fiscal year 2015 audit¹³ found that HUD did not adequately report on its supplemental measures and its risk assessment did not include a review of all relevant audit reports. Additionally, we found that HUD's estimate of improper payments

¹³ Audit Report 2015-FO-0005, Compliance With the Improper Payments Elimination and Recovery Act of 2010, issued May 15, 2015.

due to billing errors was based on out-of-date information, a finding that was repeated from the prior-year audit.

After exceeding the targeted improper payment rate of 3.8 percent in fiscal year 2012, HUD's goal for the targeted improper payment rate was increased to 4.2 percent for fiscal year 2013. While HUD met its fiscal year 2013 goal with an improper payment rate of 3.2 percent, with estimated improper payments of \$1.03 billion, it continues to face significant challenges to comply with the requirements of IPERA and further reduce its improper payments.

For example, without sufficient funding, it will be difficult for HUD to perform the studies needed to update its estimates of improper payments due to billing errors. Additionally, there were several recommendations from our fiscal year 2014 audit report¹⁴ without agreed-upon management decisions that had to be referred to the Deputy Secretary. During fiscal year 2015, HUD increased its efforts to address these recommendations, as well as current-year recommendations, and develop corrective action plans. HUD needs to continue its efforts to address our recommendations and improve its processes for reporting on its improper payments to become compliant with IPERA in the future.

DEPARTMENTAL ENFORCEMENT

A common thread underlying several of the issues discussed earlier is the lack of a cohesive departmental approach on monitoring and follow-through on findings. In an evaluation we conducted on the effectiveness of the Departmental Enforcement Center (DEC), we found that the Department does not have an enterprise risk management approach to monitoring. Its monitoring is for the most part siloed in each program office and the approaches and results differ greatly. While there were some successes, there is a much greater task that lies ahead. The DEC, working with the Office of Multifamily Housing Programs and the Real Estate Assessment Center, improved housing physical conditions and financial management of troubled multifamily properties. Although some other program offices had taken steps toward risk-based enforcement, they had not taken full advantage of the benefits demonstrated when programs allow the DEC to assess compliance and enforce program requirements. The DEC proved that it can remedy poor performance and noncompliance when programs are willing to participate in enforcing program requirements.

The DEC was established in part to overcome a built in conflict of roles. The HUD management reform plan stated that program offices had a conflicting role in getting funds to and spent by participants versus holding them accountable when fraud or mismanagement of the funds occurs. However, memoranda of understanding between the DEC and the program offices, for the most part, limit the DEC's ability to monitor, report, and take action to end noncompliance.

HUD is starting to make some changes. Recent attention has emphasized the point that improvements are necessary for the DEC, REAC and Office of Multifamily Housing to effectively oversee its aging portfolio. PIH is working with the DEC to identify risk-based triggers to target monitoring, and the Chief Financial Officer is leading a Departmental task force looking at enterprise risk management. The Department should strive for a Department-wide risk monitoring approach that is data driven and supports taking actions that will end noncompliance or will seek the return of funds or other enforcement steps when corrective actions are ignored.

CONCLUSION

The Department's role has greatly increased over the last decade as it has had to deal with unanticipated disasters and intervening economic crises, in addition to its other missions, that have increased its visibility and reaffirmed its vital role in providing services that impact the lives of our citizens. My office is strongly committed to working with the Department and the Congress to ensure that these important programs operate efficiently and effectively and as intended for the benefit of the American taxpayers now and into the future.

HIGH INCOME HOUSEHOLDS IN PUBLIC HOUSING

Senator COLLINS. Thank you very much. My first question for you follows up on the issue that Senator Daines mentioned, and that is, in your July 2015 report, you found that more than 25,000 families with household incomes exceeding HUD's program eligi-

¹⁴ Audit Report 2014-FO-0004, Compliance With the Improper Payments Elimination and Recovery Act of 2010, issued April 15, 2014.

bility income limits were receiving public housing rental assistance. This is disturbing for many reasons.

Your estimate was that HUD would pay over \$104 million over the next year for public housing units occupied by families that were over the income limits. That means that there are lower income families that aren't receiving assistance, and that clearly needs to be remedied.

I was also concerned that, of those 25,000-plus families, that nearly 18,000 of them had exceeded the qualifying amount for more than 1 year, so this wasn't a case where there was a temporary blip, if you will.

I'm also not talking about a hard-working individual who gets a pay raise at work and thus, is over the limit by a few hundred dollars for the year. What you found was that there were some individuals who owned assets and properties that were worth literally hundreds of thousands of dollars.

My question is, what has HUD done in response to your recommendation for better internal controls, and are you satisfied with the progress that HUD is making?

Mr. MONTROYA. Yes, ma'am. Thank you for the question. It is an important issue, as I said in my opening statement, that we address those most in need in our communities.

I want to make clear that our audit focused on two categories of over income. One was those numbers of family below a \$10,000 mark and then those that were above a \$10,000 mark for a given years. For those over \$10,000, I want to note that that was 47 percent of that 25,000 number that were over a \$10,000 amount per year income, and again, over a year. It wasn't just a blip on the radar.

I want to make clear also that these public housing authorities, since 2004, have had the authority to remove over income, or at least extremely over income families, as we noted, and have failed to do so. So while I know HUD took a lot of heat for its oversight, and certainly, it has some responsibility, proper oversight, I do want to note that housing authorities currently have that authority to do this.

I would recognize that HUD has sent a letter to these public housing authority directors, encouraging to follow that 2004 rule, and I know HUD is working with the Congress to implement some new legislation that would make this more mandatory.

The question for me is going to become what is going to be defined as extremely or significantly over income, and of course, what timeline will HUD put on that, how long do you have to be over income. I do want to make clear that we certainly recognize that people's incomes will ebb and flow, and we were looking for those extreme circumstances.

Senator COLLINS. But that's what you found, were some extreme circumstances.

Mr. MONTROYA. Yes, ma'am.

Senator COLLINS. Correct?

Mr. MONTROYA. Correct.

Senator COLLINS. Because none of us, I don't believe, would want to put someone out of public housing because of the ebb and flow,

as you say, and also, we don't want to discourage people from doing better at work.

Mr. MONTTOYA. Right.

Senator COLLINS. But clearly, there were egregious examples, as I read your report, that are very troubling, because it's taking away from scarce resources. Does HUD have the sufficient statutory authority that it needs to require the public housing authorities to implement and enforce limits?

Mr. MONTTOYA. No, ma'am. They currently do not have a regulation or a statute that will have them require the housing authorities to do this sort of thing, which is what they're seeking through Congress now.

Senator COLLINS. I know that they're also engaged in a notice of proposed rulemaking to try to address this. What was HUD's initial reaction to your report?

Mr. MONTTOYA. Well, unfortunately, what we've seen too often with some of my reports is the knee jerk reaction to say the inspector general is wrong as opposed to stopping to take a look at what it is regarding and having a conversation with us.

Very shortly after that position was taken by a lower level employee, I think the Secretary and the Deputy Secretary very quickly turned that around and were very much in agreement with what our position was, I think, once they understood what our report really was meant, designed to do, and that was identify those egregious examples, and of course to assist them to put these limited dollars that we're all talking about here to use for those that are most in need.

Senator COLLINS. Thank you.

Senator REED.

Senator REED. Well, thank you very much, Madam Chairman. And I, too, want to second your point, which is, I think, entirely pertinent.

This is not about a temporary spike in income, up or down. This is not about essentially some year where you do well, and the next year, you might do much worse. This is consistent and substantial.

Mr. MONTTOYA. We would agree with you, certainly, sir.

Senator REED. And thank you. One aspect of this issue is you mentioned, you know, that they certainly have the authority to remove these people from the property. Do they have the authority to raise the rent, so that they capture this extra income?

Mr. MONTTOYA. I believe that's what happened in some of these cases, they just allowed them to do the market rent. The problem is, when you do that in some of these situations, it takes that particular unit away from, you know, somebody who's on the waiting list.

Senator REED. Indeed. But I just want to be clear that one remedy, it's maybe not the best remedy, is that they can, in fact, and do, in fact, raise—

Mr. MONTTOYA. That is my understanding, sir, yes.

Senator REED. Right. But again, I think your point's well-taken. These units are very scarce.

Mr. MONTTOYA. That's correct.

Senator REED. And intended for people who otherwise would be literally homeless.

Mr. MONTROYA. That's correct.

Senator REED. There's another aspect of this, too, and I think I just want to make sure we cover the whole area, and that is we have been very aggressive in pushing family self-sufficiency programs, job plus programs.

In your analysis, have you made any correlation between these people who are making more money and participating in these programs? Because if we move sort of aggressively, and it turns out that the message we send is, if you get into a family self-sufficiency program to raise your wages or a jobs program, you're going to lose your housing, that's not the right message either.

Mr. MONTROYA. I would agree. And I don't think that we made the specific correlation, although we didn't find any of these extreme examples of somebody who was in the self-sufficiency type of program, and that's how they got to where they were. Certainly, that is a consideration.

But the idea of the self-sufficiency program is, of course, you'll, at some point, get to a point where you can move out of housing. So at some point, where is that deadline, and what is that amount, and I think that's what we're going to be anxious to see when—

Senator REED. No. I think you have raised some very serious issues and very important issues, and the Department must respond, and that is your function as the inspector general. So thank you for doing your job.

Mr. MONTROYA. Yes, sir. Thank you, sir.

HOUSING INSPECTIONS OF SECTION 8 VOUCHERS

Senator REED. One area that has been woven throughout the Secretary's testimony, your discussions, has been the consistency of inspections of the Section 8 voucher units. Your 2008 audit suggests that it was wildly inconsistent, etc. What progress has HUD made to ensure Section 8 voucher units are in compliance with current housing quality standards? That's come up repeatedly in both our questioning.

Mr. MONTROYA. I tell you, we struggle with that almost in every audit we do, finding that these units are just not very livable. I think the Secretary addressed that at some point these reviews didn't even really include mold or bedbugs. It was so lowly ranked in the scheme of things that inspectors could've cared less, even if they saw it, quite frankly.

And I think it boils down to some of these inspections are only as good as the inspector. Too often, from our investigative side of the house, we've seen unscrupulous inspectors who are going to go in, just give it a clean bill of health as quickly as they can, so they can make the amount of money they've charged to do this inspection and move onto the next thing. So we've seen a number of those kinds of issues.

We've also seen that in the lead-based paint sort of issue that you addressed earlier, where, you know, these communities and HUD is trying to do the right thing, but you have unscrupulous inspectors who will come in just give them a good, clean bill of health and move on, having made their income for the day.

So I think HUD is on the right track. We're certainly anxious to see them do a little bit more. I think REAC and the Department,

the real estate section that does these inspections has done well. I think, like anything, there's always more room for oversight. I would like to see more oversight, though, at the local level.

LOCAL BUILDING CODES

Senator REED. That raises an interesting question, because as the Secretary was discussing this issue, it struck me there are local building codes, there are local health and safety codes, and frankly, those are probably being violated, too, which municipality has full authority to go in and order—in fact, probably more authority to order correction, to place liens on the property, to go in and do the correction itself.

To what extent are you urging or the Department is contemplating a more significant role for local housing officials?

Mr. MONTROYA. Well, myself and the Principal Deputy Assistant at the Office of Public and Indian Housing (PIH), Ms. Lourdes Castro, we've joined together to do a number of different things, primarily driven on awareness.

We called them, as we started, fraud awareness bulletins, but it's migrated to a joint effort with her office to do more of an educational thing, sort of a technical educational thing. And of course, what we, as the inspector general, see as problems with regards to the inspectors, you know, it's a collective responsibility, so we all hold some level of that.

And you couldn't be more right with regards to the State and local ordinances that these inspectors have to live by, and often, they're only given a license to perform this if they follow State and local regulations. We've seen incidents where people are coming in as inspectors, and they're not even licensed.

So what we would look to see to do, and certainly what we try to do in our investigations, is when we find that unscrupulous licensed individual, we'd like to report them to the State and local. They lose their license. They lose their livelihood. So just how important is it to you to lie about a number of these things?

So those are the different kinds of enforcement things that I think we can all sort of fall in behind.

Senator REED. And those could be implemented immediately without legislation?

Mr. MONTROYA. I certainly think they could. I think certainly housing authorities, with advice from us, there's nothing wrong with picking up the phone and reaching to your local ordinance and saying, I just had Mr. John Doe, an inspector come in, and here's what happened, and I hear he's licensed by the city or by the State, and we'd like to report him.

Senator REED. Well, thank you very much, Mr. Montoya.

Mr. MONTROYA. Thank you, sir.

Senator REED. Thank you.

COMPLIANCE WITH FHA UNDERWRITING STANDARDS

Senator COLLINS. Mr. Inspector General, in your testimony, you highlighted the fact that, for the last four fiscal years, the results of audits and evaluations of the FHA fund revealed a disturbing percentage of loans that were reviewed that should not have been insured due to significant deficiencies in underwriting.

What actions do you believe are necessary on the part of the Department to ensure that lenders are in compliance with FHA's underwriting standards?

Mr. MONTROYA. Yes, ma'am. Thank you for the question. It's an extremely important question, as we've been struggling with this certainly since my tenure.

We often find that FHA, it struggles with its role to enhance and advance the market for home ownership for those low to moderate income individuals while at the same time playing the enforcement role, and often, those two don't seem to meet.

So certainly with regards to, I think, stronger enforcement on the behalf of FHA is an important issue, we have made recommendations for a number of years about these underwriting deficiencies and the fact that HUD should actually do more random sampling of these loans so that they can determine early on whether these loans are going to be viable in the long run or not. They're doing a better job at that, certainly not as fast as we'd like to see it.

We also think that, with regards to the claim process, HUD doesn't do a very good job often at reviewing these claims to ensure that they're not paying claims that are far more than they need to be paying. That's another area that impacts the fund, certainly with regards to their loss mitigation issues and whether, again, these claims should be paid. These are all enforcement issues that we think they should be taking a serious look at.

We are certainly doing our part. We are continuously finding lenders, and again, unscrupulous people out there who are trying to defraud the Department. We just did a large case in the Florida area. It amounted to about a \$65 million loss to the Department. It was a criminal investigation where we rounded up probably 25 people, a lot of folks, unfortunately, going to jail.

But there's so many different avenues of that that we're certainly trying to do our part to assist the Department in that role.

Senator COLLINS. Sounds to me like it's fortunate rather than unfortunate that they're going to jail, if they're defrauding the Department.

WASTE, FRAUD AND ABUSE IN HUD PROGRAMS

My final question to you is, as you survey the landscape of programs at the Department, are there any that particularly stick out in terms of being particularly vulnerable to waste, fraud, and abuse that you would like to bring to our attention.

Mr. MONTROYA. I don't know that I would single out any one program. I think they are all vulnerable in some way, shape, or form. I do want to acknowledge that, not only with PIH, but more recently with the Office of Community Planning and Development (CPD), we're working at the highest levels to do joint things, to go out there and train the communities and these professionals who are running these programs to understand where the red flags are, to understand where the hiccups and the roadblocks might be, so they don't get into that trouble.

Our motto is prevention first, because once we lose those funds, then we can't get them back. So we're doing as much as we can to assist them. I think if there was a program, albeit not a program that it would raise some real concerns, is HUD's information tech-

nology, because these programs, whether it's PIH or CPD, are so heavily wedded to these IT programs, that if you have a failure in one particular case, you know, a catastrophic failure, there is no other way to get the monies out to these individuals who are going to need it.

And constantly, in our IT security reviews, we are finding aging systems that are incapable of really patching from a security standpoint. HUD maintains millions of records of personally identifiable information that becomes susceptible in those kind of arenas. And really, what happens if these systems fail, and how do we get this money out to all these communities and all these recipients is sort of what's keeping us awake at night at this point.

Senator COLLINS. Thank you. I think that's a statement you could make about every single department in the Federal Government.

Mr. MONTOYA. It's unfortunate.

Senator COLLINS. And it is very worrisome. Thank you very much for your testimony. Senator Reed, do you have anything further?

HUD INFORMATION TECHNOLOGY SYSTEMS

Senator REED. I just want to thank you, Madam Chairman, for the hearing. And I think the point that the inspector general just made about the IT systems, as you point out, could be made, many Federal agencies.

And one of the dilemmas is that I would suspect that their system are probably already out of date by many years, and there's nothing in this budget really that would be a total recapitalization of their IT enterprise so that they'd be ahead of the curve.

Mr. MONTOYA. That's correct.

Senator REED. Yes.

Mr. MONTOYA. That's correct. They're basically in operation and maintenance mode. There is no advancement of these programs.

Senator REED. Yes, and again, that's something we could sort of find in probably every Federal agency, and that is a real, real problem. But I think you focused on something which is absolutely critical, so thank you, again.

Mr. MONTOYA. Thank you, sir. Thank you, ma'am.

Senator COLLINS. Thank you, Senator Reed.

Thank you very much, Mr. Inspector General, for being here with us. As we proceed with putting together this bill and getting more input, I'm sure we will have additional questions for you as well and hope that you won't hesitate to contact us with your recommendations and suggestions.

We are going to have a real challenge, as we always do, in writing this bill, given the fact that 84 to 85 percent of the budget is, if you will, spoken for, given that that's necessary for the renewal of vital rental assistance, and we need your help in finding efficiencies where they may exist.

So thank you very much for testifying today and for your assistance to the committee.

Mr. MONTOYA. Thank you.

ADDITIONAL COMMITTEE QUESTIONS

Senator COLLINS. The hearing record, as I mentioned, will remain open until next Friday, March 18.

[The following questions were not asked at the hearing, but were submitted to the Department subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR SUSAN M. COLLINS

RENTAL ASSISTANCE DEMONSTRATION

Question. The budget request proposes additional funding and authority for the Rental Assistance Demonstration in order to preserve affordable housing. However, the Department's implementation of the project-based rental assistance option for owners of properties eligible under the second component of RAD appears contrary to the goal of preservation. By arbitrarily limiting initial rents to 110 percent of the Section 8 Fair Market Rent, HUD discourages owners from participating in RAD and preserving scarce affordable housing options in high cost areas.

Why hasn't the Department fully utilized the flexibility and discretion to establish appropriate rent levels to preserve this housing stock that the RAD statute provides?

Answer. Section 8 (c)(1) of the U.S. Housing Act of 1937 allows the Secretary to set rents for new Section 8 contracts up to 120 percent of the Fair Market Rent (FMR). For properties assisted under Moderate Rehabilitation (Mod Rehab) contracts, HUD permits conversions at current contract levels, not to exceed this statutory cap. For properties assisted under the Rent Supplement/Rental Assistance Program (Rent Supp/RAP) programs, the rationale for limiting rents to 110 percent of the FMR is as follows:

First, the vast majority of Rent Supp/RAP projects—103 of 109 projects that are currently eligible under this conversion option, or 95 percent—have current rent levels below 110 percent of the FMR. Accordingly, a rental price set at 110 percent of the FMR would be a significant increase for the majority of our Rent Supp/RAP contracts.

Second, HUD's decision to set a rent limit of 110 percent of the FMR was also informed by the desire to maintain a financially consistent conversion option between project-based voucher (PBV) and project-based rental assistance (PBRA). PBV rents are statutorily limited to 110 percent of the FMR. Further, RAD conversions rely in part on transfers from the tenant-based rental assistance (TBRA) account to the PBRA account.

Finally, HUD has the statutory flexibility to allow owners to request a waiver of the RAD Implementation Notice (PIH 2012-32 Rev 2) to seek an alternative rent limit of up to 120 percent of the FMR. HUD is currently entertaining such waivers on a case-by-case basis.

Question. If an owner of a second component RAD property will get an enhanced voucher set at comparable market rent why would they participate in a preservation program that arbitrarily limits rents to a lower level?

Answer. Owners may receive an enhanced payment standard from an enhanced voucher being issued to a tenant, at the expiration of their Rental Supplement or Rental Assistance Payment (RAP) contract or when prepayment of an underlying Section 236 mortgage takes place. However, not all vouchers triggered through these events will yield an enhanced voucher. In order for a voucher to become an enhanced voucher, the market rents of the property would need to exceed 110 percent of the FMR. Further, since many of these projects are still encumbered by 236(e)(2) use agreements at the time of their conversion, the rent increase is not automatic. Rather, the owner would have to request a budget-based rent increase process with HUD or with their State housing finance agency. While it is entirely possible that the voucher will carry with it an enhanced payment standard, it is not a guarantee.

Further, the value of a long-term project-based subsidy contract cannot be discounted since the tenant-based subsidy is contingent on the tenant staying at the property. Many owners are only able to access debt and equity financing in conjunction with the execution of a long-term project-based subsidy contract. Since an enhanced voucher is mobile and a tenant can take it with them at any time, the Project-Based Rental Assistance (PBRA) or project-based voucher (PBV) contract that an owner receives as a result of a RAD conversion is the only way an owner can receive a long-term subsidy contract in place of the Rent Supplement, RAP, or Mod Rehab contract.

Question. Isn't it better to encourage preservation of these affordable housing resources by providing the owner with at least the same rent that they would get under another HUD program but which does not preserve the property as affordable?

Answer. As noted above, the rent paid to the owner using an enhanced voucher is not guaranteed—neither the rent level itself nor the ongoing payment of the rent if the voucher holder chooses to leave the property. In contrast, through RAD, the property owners receive a multiyear contract with adjustments to contract rents at regular intervals to ensure the long-term viability and affordability of the property.

FHA

Question. FHA's primary purpose is to act as a countercyclical balance during economic downturns, not to compete with the private market. Such a role was critical during the recession of 2008 to mitigate even further economic uncertainty and the loss of trillions of dollars in household wealth. But there comes a time when FHA should return to its traditional role. Through fiscal year 2015, FHA accounted for 19 percent of the total purchase mortgage market while its historical market share averages 13 percent. FHA's current market share is artificially maintained in part due to last year's decision to reduce single-family mortgage insurance premiums.

As we begin our work writing the fiscal year 2017 appropriations bills, does the Department plan to make further reductions to single-family mortgage insurance premiums, placing it in further competition with the private sector rather than returning to its countercyclical role?

Answer. FHA's mission is to ensure the availability of credit in the mortgage market while protecting the health of the Fund. With a constantly changing housing market and other economic forces, FHA must continually evaluate that balance, and when necessary make appropriate changes in pricing.

In regards to market share, FHA has a mission mandate to improve access to credit, not a market share or revenue mandate such as a private firm faces. The size and shape of overlap between FHA and others will continue to vary with changes in economic conditions, industry practices, and public policy objectives. Consequently, the Department cannot predict how the market will shift.

GAO

Question. According to GAO's review of the U.S. Government's fiscal year 2015 and 2014 consolidated financial statements, HUD was one of three agencies to receive a disclaimer on the audit of its financial statements. GAO also reported that HUD started fiscal year 2015 with eight material weaknesses, adding three new ones, and resolving two, to end up at the end of the fiscal year with nine material weaknesses. The Inspector General separately audited HUD and in addition to these material weaknesses, also identified eight significant deficiencies in internal controls, and six instances of noncompliance with applicable laws and regulations. According to the audit, these weaknesses were due to an inability to establish a compliant control environment, implement adequate financial accounting systems, retain key financial management staff, and identify appropriate accounting principles and policies.

What steps has HUD taken to improve on this situation and at least end fiscal year 2016 with fewer material weaknesses than it started with?

Answer. Improving HUD's longstanding financial management challenges has been a top priority. Between fiscal year 2014 and fiscal year 2015, by working closely with OIG, GAO and OMB, HUD has been able to drop its number of material weaknesses from 11 to 9 and anticipates improving upon those numbers in fiscal year 2016. This effort will not and has not been easy, but HUD is changing financial management across the Department to address the OIG's findings by investing in its people and our systems, re-engineering outdated processes, engaging with stakeholders, and implementing a financial shared-service provider.

—HUD is making progress in establishing a sound, resilient financial governance structure that is flexible enough to adapt to the changing landscape and complex program structure. HUD is tackling challenges by investing in its people and our systems, re-engineering outdated processes, engaging with stakeholders, and leveraging implementation of a financial shared-service provider to improve our financial reporting.

—*Public Housing Authority (PHA) Assets:* In 2015, HUD enhanced its capabilities for making timely reclassification of PHA data to address the material weakness regarding non-GAAP accounting for PIH assets and liabilities. We are continuing to make a concerted effort to obtain data from grantees which will allow

- for validation of the grant accruals and obtain data from PHAs to properly account for advance payments.
- Office of Community Planning and Development (CPD) Grant Accrual: In 2016, HUD's Office of the Chief Financial Officer and Office of Community Planning and Development made progress in addressing the non-GAAP validation of CPD's grant accruals by initiating a process to obtain data from the grantees, which will allow validation of the accruals.
 - CPD First In-First Out (FIFO) Formula Grant Payment Method and HOME Cumulative Method for Assessing Grantee 24-Month Commitment Requirement*: CPD formula grant programs used the FIFO accounting disbursement method for fiscal year 2014 and prior grants; and a cumulative method was used to determine whether HOME grantees met their 24-month commitment requirement. After considerable work with OIG, OMB, and GAO, HUD has changed its accounting to be grant specific instead of FIFO, and is in the process of amending the HOME regulation to change its method for assessing grantee compliance with the HOME commitment requirement from cumulative to fiscal year specific. The grant administration and financial systems have been modified to capture the level of detail to record the financial transactions and allow such grant-specific and fiscal-year specific reporting for disbursements and commitments for grants awarded for fiscal year 2015 and thereafter.
 - Ginnie Mae Financial Statements*: Ginnie Mae has also made significant progress on each of the material weaknesses identified by the OIG. Ginnie Mae has been overhauling legacy processes, and has filled three key leadership positions—including hiring a CFO, Controller, and a new Accounting Policy and Financial Reporting Advisor. Ginnie Mae continues to invest in accounting for non-pooled loans and properties at the loan level. As with FIFO, this will take time to resolve, but GNMA is making progress.
 - Finally, HUD is revamping the audit coordination and remediation process to more quickly identify, engage, and resolve potential issues and improve timeliness of resolutions, which will help to overcome our material weaknesses. As part of the process, we briefed the Office of the Inspector General on annual financial statement process based on implementation of shared-service provider (Treasury ARC).

HOUSING TRUST FUND

Question. The Housing and Economic Recovery Act of 2008 authorized the deposit of receipts from Fannie Mae and Freddie Mac into a new Housing Trust Fund in order to finance the development, rehabilitation, and preservation of affordable housing for extremely low-income residents. Along with the HOME program and the Low-Income Housing Tax Credit, the Housing Trust Fund is an important tool in the goal of eliminating homelessness and reducing the rent burden on the most vulnerable.

How much funding will be available for the Housing Trust Fund and when will HUD release this funding to the States?

Answer. Collections of assessments from Fannie Mae and Freddie Mac in the amount of \$186,256,610 were made available for the Housing Trust Fund (HTF) in fiscal year 2016. Of this amount, \$12,665,449 is temporarily unavailable due to the sequestration of 6.8 percent of the funds. After adjusting for sequestration, HUD will make \$173,591,160 available to HTF grantees, which HUD expects to announce individual allocations to States later this spring and execute this summer/fall.

Question. Last month your office issued a report on HUD's Departmental Enforcement Center (DEC). That report indicates that the DEC can improve the physical condition of housing stock and improve the financial management of troubled multi-family properties. However the report also indicates that the DEC has very limited authority to monitor failing participants or require enforcement in any program offices, and that in cases where program offices chose to disregard DEC's recommended enforcement actions, it could not appeal these decisions. The report concludes that HUD should provide the DEC with the authority, independence, and resources to address HUD-wide enforcement risks. Do you believe that the DEC should be moved out of the Office of General Counsel in order to address these concerns?

Answer. HUD's own management reform plan known as "HUD 2020" recognized the conflicting role program offices face in getting funds to and spent by participants while also holding them accountable. We think the Office of General Counsel may have a similar conflict as it protects HUD's program clients when the DEC recommends enforcement against those clients. The DEC could increase its effectiveness with broader enforcement authority that looks at HUD programs from an en-

terprise wide view. Independence for the DEC is also critical, which would allow it to take enforcement action when necessary to bring about program compliance. While the DEC would likely be effective regardless of its organizational placement, placement outside the Office of General Counsel may present the best resolution to independence concerns that arise when the enforcement program is part of the legal team that will defend the Department's position on enforcement.

QUESTIONS SUBMITTED BY SENATOR SHELLEY MOORE CAPITO

COMMUNITY DEVELOPMENT BLOCK GRANT

Question. CDBG provides many benefits, but I'd like to ask about an area that seems to be a natural fit under the scope of this program. West Virginians are unfortunately well below the national standard for broadband adoption.

Do you feel that CDBG grants could be a means for communities to invest in this vital capability in the 21st century?

Answer. Community Development Block Grant (CDBG) funding can be used by grantees in a variety of ways to promote broadband access and adoption.

- Installation of broadband infrastructure in particular neighborhoods or, in some cases, community-wide, can be carried out as an eligible public facility activity.
- Likewise, installation of broadband infrastructure to schools, libraries, hospitals, and similar community facilities can be eligible as a public facility activity.
- Installation of wiring in housing to support broadband service can be considered as a housing rehabilitation activity.
- Educational and training programs with respect to broadband usage could be qualified as eligible public service activities.

In each case, the activity would need to meet a national objective of the CDBG program and usually the national objective will be benefit to low- and moderate-income persons. The Department recently posted several questions and answers on use of CDBG in support of broadband on its website at: <https://www.hudexchange.info/resource/4891/cdbg-broadband-infrastructure-faqs/>. Further, HUD is proposing regulatory revisions that would require CDBG grantees to consider broadband access and adoption issues in preparing consolidated plans governing annual funding for the Office of Community Planning and Development's four formula funding programs (CDBG, HOME, Emergency Solutions Grants (ESG) and Housing Opportunities for Persons With AIDS (HOPWA)).

CONNECTHOME

Question. Could you share with us what HUD has learned so far from your ConnectHome pilot initiative to accelerate broadband adoption by children and families in HUD-assisted housing?

Answer. HUD's ConnectHome was officially launched less than a year ago, in July 2015. A total of 27 Public Housing Authorities and cities (a few are city/county consolidated metro governments) and one Tribal Nation received the ConnectHome pilot community designation. Almost all of the sites are currently working with Internet Service Providers (ISP) in their area to connect public housing families with school-age children to the Internet.

We have learned a lot about connectivity among public housing residents since this program was launched, including the following:

- Connecting public housing residents to the Internet requires the involvement of other key stakeholders in addition to the Public Housing Authority, the City and the ISP. To be successful, the collaboration should also include local schools and colleges, digital literacy groups and other organizations that serve young children, as well as foundations, businesses and other private partners.
- Local staff working on the ConnectHome initiative typically perform many other duties, which makes it difficult to dedicate the time necessary for the initiative to succeed.
- Once connectivity has been established, a second hurdle exists: securing laptops and computers for the families. While many public housing residents have smartphones that allow them to access the Internet, a significant number of residents may not have access to the Internet through devices such as laptops or computers. For school-aged children, a lack of appropriate hardware and software can pose a critical problem, as it is extremely difficult to complete homework assignments using a smartphone. At least one ConnectHome community has a relationship with its local college that donates used computers to ConnectHome residents. HUD is encouraging PHAs to connect with city govern-

ments and local colleges, non-profits, and businesses willing to donate used computers.

We are also pursuing research in conjunction with the ConnectHome initiative that will help to inform both ongoing and future broadband connectivity efforts in HUD-assisted housing. HUD's Office of Policy Development and Research is currently surveying residents across ConnectHome communities to estimate Internet connection rates, as well as to assess the types of devices commonly used by these residents to access the Internet. This will be HUD's first-ever nationwide look at Internet use among residents of public housing. Most research on the digital divide defines low income families as having incomes of \$25,000 per year or less, a range which encompasses incomes much higher than those of the average family in public housing. The results will be released in late spring of this year.

In addition, HUD plans to conduct a series of focus group discussions in several ConnectHome communities with an emphasis on understanding whether and how new subscribers experience the benefits of Internet connectivity in their homes, as well as what factors are keeping families from subscribing and lessons learned from the implementation of the ConnectHome initiative. HUD also plans to conduct a telephone survey of ConnectHome subscribers with a focus on understanding families' digital literacy and training needs.

QUESTIONS SUBMITTED BY SENATOR BRAIN SCHATZ

FAIR MARKET RENT

Question. I have heard from public housing authorities (PHAs) and a number of voucher holders on each of Hawaii's four counties who are frustrated that fair market rents are unrealistically low. This difference makes it hard for a person or a family to use a voucher especially in a neighborhood that may be near better schools and employment centers. And the only way for a county to meaningfully challenge the FMR is to pay for a rent study which can run \$50,000.

I have no doubt that intentions are good and HUD wants a successful program but the methodology appears systemically flawed, so what are we going to do? We need some combination of a better methodology or more administrative fees to PHAs if we expect them to pay for rent studies as the way to right size FMRs. I do understand HUD is pursuing the Small Area FMR but initial feedback from PHAs in Hawaii is that the result of that may not result in more accurate FMRs but will add to the administrative costs to administer vouchers across the State.

Answer. HUD does not believe that the Fair Market Rent (FMR) estimation methods are "systemically flawed." While there may be certain cases where HUD's FMR estimates are not in line with the local rental market, the overwhelming majority are sufficiently accurate to use in operating voucher programs. Out of the approximately 2,400 jurisdictions for which HUD estimates FMRs each year, generally less than a dozen areas request, and fewer still conduct, rent surveys because they feel the FMRs are not accurate. FMRs are, however, most likely to be out-of-line in markets that have had recent spikes in demand and where housing supply is slow to respond.

Hawaii's unique natural beauty creates demand for housing there beyond what purely local economic activity can support. This results in high, and potentially volatile, rents, and a serious shortage of housing affordable to low-income residents. That said, of the PHAs operating in Hawaii, only Kauai County appears to be at the limits of local flexibility to set payment standards around the fiscal year 2016 FMRs according to HUD's voucher tenant data. The remaining PHAs should explore further use of their payment standard-setting authority before conducting a survey. The Kauai County PHA should consult with HUD staff to see what options are available, aside from a rent survey, to make the voucher program work better there.

In terms of methodological improvements that might better capture recent, large changes in rent, HUD is assessing forecasting approaches that might better capture such local variation going forward.

FAMILY UNIFICATION PROGRAM-FAMILY SELF SUFFICIENCY DEMONSTRATION

Question. HUD recently released its FUP-FSS demonstration program to better improve system coordination between housing providers and child welfare agencies to improve outcomes for at-risk youth. I hope this demonstration will increase the utilization of FUP vouchers for transition age youth.

What other recommendations does HUD have to improve utilization of these vouchers and ensure that they are effective tools to assist transitioning these young people to adulthood?

Answer. HUD has begun working with the Children's Bureau at the U.S. Department of Health and Human Services (HHS) this year to provide joint guidance to PHA and Public Child Welfare Agencies (PCWA) on strategies for better collaboration in order to help increase referrals of youth to Family Unification Program (FUP) and improve coordination of housing and supportive services. There are, however, still several major barriers to youth accessing and successfully utilizing FUP vouchers.

One of the main barriers is the 18-month time limit on the FUP voucher for eligible youth. This time limit is one of the main reasons HUD pursued the FUP/FSS Demonstration Project, as well as proposed a statutory change in the fiscal year 2017 Budget. The demonstration project allows for an extension of voucher assistance for FUP youth from 18 months to up to 60 months (or 5 years). The 18-month time limit is often too short of an amount of time for youth to obtain stable housing and transition to adulthood and self-sufficiency, and the short timeframe of the voucher presents significant costs to the PCWA and PHA due to the necessarily frequent turnover. HUD continues to support the Budget proposal to extend the FUP youth time limit from 18 months to 60 months.

Even with extended timeframes, FUP youth will need critical supportive services from the PCWA. There is a need for critical new investments in PCWA in order to provide supportive services to former foster youth transitioning to adulthood. In a 2014 report on FUP for youth conducted by HUD, 40 percent of PCWA surveyed reported that funding for the supportive services for youth is either somewhat a challenge or a major challenge in some cases.

ASSISTED HOUSING AND CRIMINAL JUSTICE REFORM

Question. HUD recently published Notice PIH 2015-19, "Guidance for Public Housing Agencies (PHAs) and Owners of federally-Assisted Housing on Excluding the Use of Arrest Records in Housing Decisions" stating arrest records cannot be the basis for denying admission, terminating assistance or evicting tenants of federally assisted housing.

What are the methods HUD will use to determine compliance with this guidance, and how will requirements of this guidance take into account the balance between access to housing and the safety of all residents?

Answer. HUD's plans to enforce the guidance are consistent with its approach to enforcing other requirements related to admission or eviction. HUD Field Offices are preparing to conduct a compliance monitoring assessment, during which they will review PHAs' Admissions and Continued Occupancy Policies. Field Office staff will monitor whether a PHA's policies treat an individual's arrest as a reason to deny admission, terminate assistance, or evict that individual. Where policies are non-compliant, PHAs will be required to change them. On an ongoing basis, HUD Field Offices will monitor compliance via targeted reviews, with special emphasis on PHAs who are determined to be at a higher risk of non-compliance according to HUD's National Risk Assessment Tool (updated quarterly). Further, residents have the option of reporting any violation of any guidance and/or regulation in writing or by telephone. All complaints are investigated by the Field Office and the person is notified of the outcome. Finally, HUD will remind all PHAs that they must comply with the published guidance on an annual basis.

PHAs have an obligation to ensure the safety and security of their residents. While the guidance makes clear that an individual's arrest cannot be used to prove disqualifying criminal activity, it also states that a record of an arrest might properly "trigger" an inquiry into whether a person actually engaged in disqualifying criminal activity. As part of such an inquiry, the guidance allows a PHA or owner to continue to obtain and review the police report, record of disposition of any criminal charges, and other evidence associated with the arrest to inform its eligibility determination, and thereby make an informed assessment.

Question. What are the fair housing implications of screening out applicants with criminal records?

Answer. The Fair Housing Act (Act) prohibits both intentional housing discrimination and housing practices that have an unjustified discriminatory effect because of race, national origin, or other protected characteristics. While the Act does not prohibit housing providers from appropriately considering criminal history information when making housing decisions, selective use of criminal history as a pretext for unequal treatment of individuals based on race, national origin, or other protected characteristics violates the Act.

Additionally, criminal history-based restrictions on housing opportunities violate the Act if such restrictions have an unjustified and disproportionate impact on individuals of one race or national origin versus another. Under the standard for prov-

ing discriminatory effects claims set out in HUD regulations, a criminal history policy that causes a disparate impact lacks a legally sufficient justification, and therefore violates the Act, if either the housing provider cannot prove that the policy is necessary to serve a substantial, legitimate, nondiscriminatory interest, or a plaintiff can prove that the housing provider's interest could be served by another practice that has a less discriminatory effect.

In the context of criminal history-based housing restrictions, whether a particular policy that causes a disparate impact violates the Act will generally depend on whether, or to what extent, the policy takes into account such factors as the nature of a prior conviction and the length of time since the conviction. Discriminatory effects liability is always assessed on a case-by-case basis.

For more information, please consult the Office of General Counsel's Guidance on Application of Fair Housing Act Standards to the Use of Criminal Records by Providers of Housing and Real Estate-Related Transactions, issued on April 4, 2016.

LOCAL HOUSING POLICY GRANTS-AFFORDABLE HOUSING

Question. The lack of housing inventory is a major cause of the affordability crisis that cities are currently facing. In Hawaii, one-third of families pay more than half of their income on rent. While housing vouchers are an important tool, they cannot solve this challenge alone. Creating more units of housing will reduce the rent increases for those in market-rate housing, allow government assistance to stretch further, and keep our communities more affordable. HUD's budget includes \$300 million in mandatory funding to provide localities with resources to engage in comprehensive planning to solve this systemic problem.

How would this program work and how will HUD partner with localities to tackle these challenges if these additional funds do not materialize?

Answer. The initiative would fund competitive grants to be awarded to localities and regional coalitions of localities that demonstrate an ability to execute and carry out policy, program and regulatory streamlining initiatives that serve to create a more elastic and diverse housing supply. The funding would allow localities to address any needs that arise from the new policy, program or regulatory initiatives, e.g., infrastructure expansion and/or improvements, as well as support market evaluations, code writing assistance, design options, stakeholder outreach and education, and implementation. Funds would also establish a learning network that would provide ongoing capacity building to the organizations and entities, facilitate shared learning opportunities among similar cohorts, and share or disseminate the results of learning and resulting effective best practices.

In order to encourage innovation, learn from local experience, and better align multiple HUD and other Federal programs and reduce Federal barriers, local governments, with support from HUD and other Federal agencies would develop plans to realize their own visions for building more prosperous, affordable and economically vital regions.

Without these funds, HUD will look to use a portion of its technical assistance (TA) resources to support local efforts to increase housing supply, but TA funds are in high demand. HUD would also still try to create knowledge sharing among localities that have developed innovative, local solutions to housing supply challenges, which can be shared and possibly replicated. Unfortunately, these alternatives would not completely mitigate the time and cost that many localities need in developing and implementing these types of policy reforms.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER MURPHY

FHA

Question. After FHA reduced the Mortgage Insurance Premium, the agency's total number of loans endorsed increased by 73 percent in the third quarter of fiscal year 2015 (April-June) as compared to the year before, including a 34 percent increase in purchase-loan endorsements.

Can you differentiate between FHA's current market share of the low- to moderate-income single family borrower cohort as compared to Fannie Mae and Freddie Mac?

Answer. At this time, the Department cannot differentiate between FHA's current market share of the low- to moderate-income single-family borrower cohort as compared to those of Fannie Mae and Freddie Mac; but, FHA can demonstrate that the median FICO score of an FHA borrower, even post MIP reduction, is in the 680's and in line with FHA's mission to serve low- and moderate-income households. We would note though that this median is affected by our countercyclical role in the

market—and in times of market expansion and contraction, that the median FHA FICO score will ebb and flow accordingly as FHA serves the market for credit access in underserved households at all income ranges. Generally, as private capital comes back to the market—FHA median FICO decreases and rises when it leaves the market and more households need FHA insured financing.

Question. Following FHA's Mortgage Insurance Premium reduction last year, can you confirm that FHA loans are currently priced appropriately for their risk?

Answer. The estimated fiscal year 2016 and 2017 credit subsidy rates for those budget cohorts of -3.70 and -4.42 percent, respectively, indicate that FHA single-family forward loans are priced appropriately. Negative subsidy estimates mean that the cohorts' activity are estimated to result in savings to the government on a net present value basis.

Question. Do you believe that the GSEs are overpricing for their risk?

Answer. The Department is not in a position to evaluate the Government Sponsored Enterprises (GSE's) pricing since the GSEs use a different methodology, have different risk exposure, and charge different fees in their role as guarantors of mortgages on the secondary market.

SUBCOMMITTEE RECESS

Senator COLLINS. The hearing is now adjourned.

[Whereupon, at 4:04 p.m., Thursday, March 10, the subcommittee was recessed, to reconvene at a date and time subject to the call of the Chair.]

TRANSPORTATION AND HOUSING AND URBAN DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2017

WEDNESDAY, MARCH 16, 2016

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:30 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Susan Collins (chairman) presiding.

Present: Senators Collins, Blunt, Boozman, Capito, Reed, Mikulski, Coons, Schatz, and Murphy.

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE SECRETARY

STATEMENT OF HON. ANTHONY FOXX, SECRETARY

OPENING STATEMENT OF SENATOR SUSAN M. COLLINS

Senator COLLINS. The subcommittee will come to order.

Today, we welcome Secretary Foxx, who will testify on the President's fiscal year 2017 budget request for the Department of Transportation (DOT) as well as Inspector General Scovel, who will discuss his office's budget request and the oversight and other work the Office of Inspector General (OIG) has been and will be conducting at the Department.

The budget proposes \$98 billion for the Department of Transportation in mandatory and discretionary spending for fiscal year 2017. The administration has asserted that this request abides by the bipartisan budget agreement Congress passed last year. Regrettably, that is simply not accurate.

Instead of living within fiscal reality, the budget evades the caps by using the same old gimmicks that we have seen in past proposals. By shifting programs from discretionary to mandatory, the President is able to show a 36-percent reduction in spending under the budget caps. At the same time, he takes credit for increasing DOT's overall budget by almost 30 percent. This undermines the essence of the budget agreement.

I am also disappointed that just 3 months after Congress passed the Fixing America's Surface Transportation Act (FAST Act), the budget proposes an entirely new 10-year, \$495 billion, 21st Century Clean Transportation plan on top of the FAST Act. It is paid for by a new \$10.25 per barrel tax on crude oil and other unspecified business tax reforms.

I am simply perplexed by the administration waiting to put forth this plan now when Congress debated and passed a multiyear transportation reauthorization, which the President signed into law, just 3 months ago. It is particularly astonishing that after ignoring Congress' repeated requests to engage in developing the necessary reforms to keep the Highway Trust Fund solvent, the administration has finally proposed a source of funding, though unrealistic, as it enters its final year.

I just do not understand why this plan, which is a legitimate plan, even if it is not one that I think would pass, was not proposed last year in the midst of the negotiations on the FAST Act.

For the Federal Aviation Administration (FAA), the request includes nearly \$16 billion to support investments to keep our aviation system the safest and most efficient airspace in the world.

I have serious reservations about the legislative proposal in the House of Representatives. It seeks to privatize air traffic control outside of the FAA largely under the control of the major airlines. The public, in my judgment, would not be well-served by exempting any part of the FAA from annual congressional oversight, which is necessary to ensure accountability, and a sustained focus on aviation safety.

The United States has the busiest, most complex airspace in the entire world. Our Nation's air traffic controllers handle more than 50,000 flights a day and more than 700 million passengers each year. To liken our system to any other in the world is preposterous.

Congressional oversight ensures that the FAA maintains a system that works across the aviation industry, including for general aviation and supporting small and rural communities. Rural States like Maine and other States represented by members on this committee benefit greatly from services that connect rural America with the larger transportation network.

The Next Generation Air Transportation System (NextGen) is modernizing our air traffic control system, and it is happening today. Much of the backbone work for NextGen is finally complete. The FAA has safely reduced wake separation standards at 11 locations, and data comms departure clearance services are used at eight tower sites.

As a result, we will see reduced flight delays. That will be very welcome by us who travel back and forth every week to our home States. And it will also lower fuel consumption.

One of the most innovative DOT programs, which I have consistently advocated for, is the Transportation Investment Generating Economic Recovery (TIGER) program. I am very pleased to see that the Department and the administration continue to highlight the importance of this vital program.

TIGER has some flexibility to fund a wide range of transportation projects that demonstrate national or regional significance to economic growth and job creation. In my home State of Maine, TIGER has supported vital bridge, port, and rail projects that otherwise might not have been built.

I am also interested to hear more about the Department's implementation plan for the new freight and highway competitive program known as FASTLANE to address the critical freight issues facing our Nation's aging infrastructure.

With regard to our rail network, I am deeply concerned by the number of rail accidents that have occurred over the past several years, including earlier this week. I know this is of great concern to Secretary Foxx as well.

The Federal Railroad Administration's (FRA's) budget request highlights the need to ensure safe transportation of crude oil and other energy products across North America.

Unfortunately, last year, several members of this committee experienced firsthand the importance of this issue due to freight derailments in their States. All of us who live near Quebec, Canada, will never forget the 2013 inferno caused by a runaway freight train that killed 47 people and decimated the downtown of a small Canadian community.

Rail safety is a very important issue that this committee takes seriously, and I know the Department does as well. In recent years, we have provided funding for FRA to hire additional inspectors and safety personnel. Last year, we included funding to provide 33 additional safety personnel, as well as \$50 million for new railroad safety grants. I look forward to hearing the Department's progress in hiring inspectors and its timeline for allocating these railroad safety grants.

With this being the final year of this administration, I would also like to emphasize to the Secretary the importance of prioritizing the Department's regulatory agenda. There are many regulations working their way through the Department and the Office of Management and Budget (OMB). Priority should be given to regulations that are urgently needed and are required, indeed, mandated, by Congress. This is not the time to be issuing unnecessary, burdensome regulations in the midnight hours.

Finally, as we all know, Washington, DC, is experiencing its own transportation crisis today as the DC Metro is shut down for emergency inspections of power cable systems. According to the new general manager, the shutdown is the result of a fire at McPherson Square station on Monday, which is similar to a fatal fire that occurred at L'Enfant Plaza just 1 year ago.

The unfortunate timing of the notification for the 29-hour shutdown as commuters were heading home last evening is having a severe impact on the Federal work force, on tourists who are visiting their Nation's capital, and on the DC local school system.

Safety clearly must be the top priority for all transit agencies. While this was a very tough decision for Metro to make, it once again brings into question the reliability of the system and whether or not adequate oversight is being conducted in a system that it relied upon by so many daily commuters and tourists who visit the Washington, DC, area. I am sure that this issue will be brought up in questioning as well.

[The statement follows:]

PREPARED STATEMENT OF SENATOR SUSAN M. COLLINS

The subcommittee will come to order. Today, we welcome Secretary Foxx, who will testify on the President's fiscal year 2017 budget request for the Department of Transportation, as well as Inspector General Scovel who will discuss his office's budget request and the oversight and other work the OIG has been and will be conducting at the Department.

I welcome both of you and look forward to hearing your testimony.

The budget proposes \$98 billion for the Department of Transportation in mandatory and discretionary spending for fiscal year 2017. The Administration has asserted that the request abides by the bipartisan budget agreement Congress passed last year; however, this is simply not accurate. Instead of living within fiscal reality, the budget evades the budget caps by using the same old gimmicks we have seen in past proposals. By shifting programs from discretionary to mandatory, the President is able to show a 36 percent reduction in spending under the budget caps. At the same time, he takes credit for increasing DOT's overall budget by almost 30 percent. This undermines the essence of the budget agreement.

I am also disappointed that just 3 months after Congress passed the FAST Act, the budget proposes an entirely new 10-year, \$495 billion "21st Century Clean Transportation Plan" on top of the FAST Act. It is paid for by a new \$10.25 per barrel tax on crude oil and other unnamed business tax reforms. I am perplexed why the Administration waited to put forth this plan now when Congress debated and passed a multi-year transportation reauthorization, which the President signed into law, just 3 months ago.

It is particularly astonishing that after ignoring Congress' repeated requests to engage with this Administration on developing the necessary reforms to keep the Highway Trust Fund solvent, the Department has finally proposed a source of funding, though unrealistic, as this Administration enters its final year.

For the Federal Aviation Administration, the request includes nearly \$16 billion to support investments to keep our aviation system the safest and most efficient airspace in the world. I have serious reservations about the legislative proposal in the House that seeks to privatize air traffic control outside of the F.A.A., largely under the control of the major airlines. The public would not be well served by exempting any part of the F.A.A. from annual Congressional oversight, which is necessary to ensure accountability for program performance and a sustained focus on aviation safety.

The United States has the busiest, most complex airspace in the world. Our Nation's air traffic controllers handle more than 50,000 flights a day and more than 700 million passengers each year. These men and women from all over the country are responsible for providing us with the safest and most efficient airspace in the world. To liken our system with any other in the world is preposterous.

Congressional oversight ensures the F.A.A. maintains a system that works across the aviation industry, including general aviation and supporting small and rural communities. Rural States like Maine, and other States represented by Members on this committee, benefit greatly from services that connect rural America with the larger transportation network.

NextGen is modernizing our air traffic control system, and it is happening today. Much of the backbone work for NextGen is finally complete. The F.A.A. has safely reduced wake separation standards at 11 locations and Data Comm's departure clearance services are used at eight tower sites. As a result, we will see reduced flight delays and less fuel consumption.

One of the most innovative DOT programs, which I have advocated for consistently, is the TIGER program. I am pleased to see the Administration continues to highlight the importance of this vital program. TIGER has the flexibility to fund a wide range of transportation projects that demonstrate national or regional significance to economic growth and job growth. In my home State of Maine, TIGER has supported vital bridge, port, and rail projects that might not have otherwise been built. I am also interested to hear more about the Department's implementation plan of the new Freight and Highway competitive program, known as FAST LANE, to address the critical freight issues facing our Nation's aging infrastructure.

With regard to our rail network, I am deeply concerned by the number of train accidents that have occurred over the past several years, including earlier this week. The Federal Railroad Administration's budget request highlights the need to ensure the safe transportation of crude oil and other energy products across North America. Unfortunately, last year several members of this Committee experienced firsthand the importance of this issue due to freight derailments in their States. All of us who live near Quebec, Canada, will never forget the 2013 inferno caused by a runaway freight train that killed 47 and wiped out a community's downtown.

Railroad safety is an important issue that this Committee takes very seriously. In recent years, we have provided funding for F.R.A. to hire additional inspectors and safety personnel. In fiscal year 2016, we included funding to provide 33 safety personnel as well as \$50 million for new Railroad Safety Grants. I look forward to hearing the Department's progress in hiring inspectors and the timeline for allocating the Railroad Safety Grants. I will once again be looking closely at how we can best target Federal funds to reduce accidents in both passenger and freight trains.

With this being the final year of this Administration, I would like to emphasize to the Secretary the importance of prioritizing the Department's regulatory agenda in the months ahead. There are many regulations working their way through the Department and OMB. Priority should be given to regulations that are urgently needed and are required by Congress. This is not a time to be issuing unnecessary, burdensome regulations in the midnight hours.

With that, let me call upon my colleague and friend Senator Reed, the ranking member.

Senator COLLINS. With that, let me call upon my colleague and friend from Rhode Island, the subcommittee's distinguished ranking member, Senator Reed.

STATEMENT OF SENATOR JACK REED

Senator REED. Thank you, Madam Chairman, for your kind introduction and leadership.

And thank you, Secretary Foxx. Welcome. You have led the Department with great energy and honesty, and we appreciate very much your efforts over the months you have been leading the Department.

As you work through the last year of this administration, I want you to know that we all appreciate your leadership and the way you have worked with the subcommittee. So thank you again, Mr. Secretary.

Once again, I hope we can convince you to come up to Rhode Island for a visit. In your earlier trips to Rhode Island, you saw how our transportation is essential to our State, just as it is to Maine and Maryland and Missouri and West Virginia and every other State in the country. You visited our Port of Davisville, which, once again, celebrated another record year handling automobiles, over 269,000 vehicles in 2015, a remarkable economic engine for the State.

You have also helped us break ground on the T.F. Green runways for the new airport, so thank you very much. This project will be done in 2017. Indeed, two international airlines started service to Rhode Island because of the ongoing efforts. Thank you again.

And we are also working with you to study intercity rail, which is a key aspect of our economy, as it is in so many other metropolitan areas in the United States. We want to maximize intermodal efficiency. We want our airports, our rail systems, and our bus systems all to operate together. These intermodal connections are absolutely critical as we go forward. Thank you for your interest and your personal involvement.

There are, however, some potential difficulties facing the air traffic control system and airports in general. The chairman has pointed them out.

As you know, the House of Representatives is considering a bill to privatize air traffic control. Giving away billions of dollars in Federal assets to a nonprofit corporation controlled by airlines without any congressional oversight is I believe an ill-conceived idea at best. And I do not think that privatization will offer a path to safer skies.

I think it will, rather, stop NextGen investments in its tracks, increase costs to consumers, and cut services to small and rural commercial airports. I think it is a dangerous proposal that moves this country in the wrong direction.

What this country does need is investment in our airports, bridges, roads, transit systems. Again, the chairman pointed out the Metro service interruption of 29 hours, another indication underscoring the need for investment in transit, railroads, ports, a host of facilities that need additional resource, additional effort.

Deficiencies and underinvestment in our transportation system impact American lives in ways we feel every day. Once again, we feel it here in Washington today.

We have not been keeping up with the demand. We have not made the necessary investment to keep pace with this demand. The FAST Act we passed last year is to start, but America needs more investment in infrastructure that produces more jobs and a safer, more efficient transportation system to move our economy forward.

Our needs are great, as you well know. Roads and bridges throughout the country are crumbling and inadequate for the traffic they carry.

Rhode Island's Route 610 connector, for example, is crumbling with patches upon patches barely holding it together. As the director of our Department of Transportation said, his agency has been in design or on replacement for more than 30 years trying to deal with this problem. So this is not a recent development.

Under the leadership of our Governor, Governor Raimondo, the State has a vision, not just about fixing the 610 connector but also making it safe, adding a bus rapid transit lane so we can have an increase in transit in the State along with highways. That is thinking ahead and thinking big, and it is worthy of Federal support. And I am going to ask you to consider that.

Amtrak, which serves the Providence rail center, has a \$7.3 billion state of good repair backlog for the Northeast alone. Many of its assets are over a century old and need to be replaced. I support updating the entire corridor, including the Providence station, which is an important component to the overall system.

As I mentioned before, the FAST Act has provided modest growth in transportation funding. But, unfortunately, the levels fall short of demand. I do want to applaud you for your advocacy leading up to reauthorization and for pushing us to do more. Thank you.

Now it is your job to implement the law, and it is now our task on this subcommittee to make decisions about transportation funding for fiscal year 2017. Your request includes FAST Act, level funding for service programs as well as the new 21st Century Clean Transportation plan.

It is a bold proposal, and I appreciate the administration looking forward with big investments. It shows the world of possibilities on what we could achieve with the right vision.

For example, the administration's request includes \$1.25 billion for the TIGER program, which is in extremely high demand and is a linchpin in making innovative projects happen all across this country; \$15.9 billion for the FAA, which fully funds air traffic controller work force and provides \$1 billion for NextGen programs; \$2.3 billion for Amtrak current service; and \$3.7 billion for improving rail service nationwide. Again, critical.

And as I mentioned, we are looking very closely in Rhode Island at integrating all the services at T.F. Green Airport and also at the

Pawtucket and Central Falls locations. These funds would help expand service not only in Rhode Island but many other parts of the country.

\$1.2 billion for the National Highway Traffic Safety Administration, which will allow the agency to improve vehicle safety defect investigations. \$3.5 billion for FTA's capital investment grant program, which has seen a 70-percent growth in projects since fiscal year 2013.

These programs all rely on discretionary resources provided in the transportation, housing and urban development bill and they all save lives, create jobs, and grow the economy.

I know we will be unable to meet many of these goals due to budget constraints, but I know that you make your request based on the real needs you see and hear about each day. Congress needs to hear about these needs.

Again, Secretary Foxx, thank you for your service. I look forward to your testimony.

And thank you, Madam Chairman.

Senator COLLINS. Thank you very much, Senator Reed.

Normally, we would now turn to the Secretary's opening statement, but Senator Mikulski, I know that your constituents have been most affected by the Metro, so I wanted to give you an opportunity.

Senator MIKULSKI. I will do it in the question round.

Senator COLLINS. That sounds great. Thank you.

Senator Foxx—Secretary Foxx. I do not know whether that was a promotion or demotion.

[Laughter.]

Senator COLLINS. These days, it is hard to tell.

SUMMARY STATEMENT OF HON. ANTHONY FOXX

Secretary FOXX. Madam Chairman, thank you so much. And I want to thank the members of the committee, Ranking Member Reed, and the ranking member of the full committee, Senator Mikulski. Thank you all very much. I want to thank you for the opportunity to meet with you today to discuss the President's 2017 fiscal year proposal for the Department of Transportation.

At the outset, however, I want to begin my statement today by discussing the suspension of operations by Washington's Metrorail system. This service suspension has not only been disruptive to the local Washington, DC, community, but to the operations of the Federal Government. Ranking Member Mikulski has been a leader in the effort to get this system in shape, and she and I have worked together on this issue, despite many shared frustrations with the Washington Metropolitan Area Transit Authority (WMATA).

Earlier this year, the Federal Transit Administration (FTA) determined that the safety oversight entity that DC, Maryland, and Virginia had created was a failure. We then informed the three jurisdictions that we will temporarily assume safety oversight duties while they set up a new, stronger, permanent safety oversight entity.

Frankly, the three jurisdictions have not yet acted on their responsibility, and I have made that point abundantly clear in recent months and will continue to until that work is done.

However, all of us still need to roll up our sleeves and help WMATA help itself.

WMATA has hundreds of millions of unspent balances and open grants. I am directing the FTA to evaluate the status of these funds and prioritize their direction to safety wherever possible.

Also, as work proceeds on the jumper cable issue, the FTA will conduct a safety inspection blitz starting next week on three other critical areas that we have identified as serious problems for Metro: red light running, use of emergency brakes, and track integrity. This builds on inspections that have been conducted over the last several months.

Every year since I have been Secretary, I have urged Congress to pass a long-term surface transportation bill. Today, I have come in part to thank Congress for passing a bipartisan bill last year, the FAST Act, which has done a lot to remove the cloud of uncertainty hanging over our surface system for the better part of a decade.

Today, I ask you to join the Obama administration as we seek to build on the FAST Act with an even more robust 21st century-focused plan to win the future.

For fiscal year 2017, the President's plan includes \$98 billion in transportation investments, a significant increase over the FAST Act levels to support advancements in safety, repairing and replacing infrastructure, and driving forward innovation and emerging technologies that can help us move faster, more efficiently, and safer in the future.

The President's budget recognizes that neither our current patchwork funding approach nor the rigid and antiquated distribution of transportation dollars through formulas is going to put our Nation's infrastructure in the best possible position for our kids and grandkids. As the long and tortured debate about how to put together a surface transportation bill has shown, our transportation bills are no longer layups.

If we work hard now, it will save stress when the FAST Act expires. While the FAST Act helps, we are still playing catch-up, and the same demographic and economic pressures are coming.

Our future challenges, as our report *Beyond Traffic* tells us, will get even worse tomorrow than they are today; 70 million more people by 2045, creating even more demand on our transportation system; freight volumes increasing by 45 percent; 65 percent more trucks on the road; and more of the population concentrated in what social scientists and other observers called mega-regions.

In short, our funding and funding distribution models for America's transportation are rearview mirrors, and the massive demographic and economic pressures are our front windshield.

With the FAST Act's passage, Congress should rethink our strategy, and the President's budget offers a pathway for the future. Specifically, the President's request proposes a new clean transportation plan. This plan not only increases spending on infrastructure, it also looks to spend the money smarter, pushing it to the local and regional levels where system integration is most needed and projects can be built much faster.

That is why the President recommends a series of innovative, new grant programs that advance a 21st century approach with an

annual average budget of \$10 billion over the life of the plan. Also included is a nearly \$20 billion allocation for transit to address fast-growing needs, \$6 billion a year for high-performance rail, and finally a clean transportation plan that will help us prepare for the future by providing nearly \$4 billion over 10 years to research the integration of new technologies in transportation, including autonomous vehicles.

Some have already spoken to the allocation for NextGen and for FAA. This funding will enable the FAA to continue operations at current funding levels while maintaining its focus on aviation safety.

With that, I want to thank you, Madam Chairman, for allowing me to present the President's budget request to you. I look forward to your questions, and I again thank the committee.

[The statement follows:]

PREPARED STATEMENT OF HON. ANTHONY FOXX

INTRODUCTION

Chairman Collins, Ranking Member Reed, and members of the Subcommittee, I want to thank you for the opportunity to meet with you today to discuss the President's fiscal year 2017 budget plan for the Department of Transportation. The President's request totals \$98.1 billion in resources that will support the Department's top priority, safety. This plan is focused on the future with high impact investments in the safe integration of emerging technologies, such as autonomous vehicles and unmanned aircraft systems (UAS). It supports improvements that have the potential to transform transportation systems, save lives, and reduce carbon emissions. The President's Budget charts a path towards fundamental changes in the way the government balances and integrates transportation options in planning for the future.

ENHANCING SURFACE TRANSPORTATION

The surface transportation investments in the President's fiscal year 2017 Budget build on the recently enacted Fixing America's Surface Transportation (FAST) Act, which President Obama signed into law on December 4, 2015. The FAST Act is an important down-payment for building 21st Century surface transportation systems. It includes a series of important changes, to improve the efficiency of permitting and project delivery, including a number of provisions fostering ladders of opportunity, establishes new freight-focused funding programs, and makes changes to a number of the Department's safety programs. These changes include creating a new grant program and enhancing authority with respect to recalls, civil penalties, and the collection of safety data.

However, the FAST Act largely maintains current programs—including the traditional funding and program distribution between highway and transit funding, with limited support for multimodal plans and projects. While the FAST Act included authorization for rail programs, rail funding will continue to be determined on an annual basis, without the certainty provided by the multi-year trust fund structure that currently supports highway and some transit programs.

Thus, the fiscal year 2017 Budget builds on the FAST Act, taking the next steps to reform funding streams and encourage better planning and projects at the State and regional levels through increased investment in areas such as rail and transit. It also includes a series of new, multimodal programs that increasingly cut across traditional siloes, in support of more comprehensive regional strategies that connect communities and support climate and greenhouse gas reduction goals.

To address these concerns, the President's request directs investments over a 10-year period towards a 21st Century Clean Transportation Plan that reflect America's changing demographics and economy, while at the same time providing access to opportunity.

—As more Americans move to cities, regions, and megaregions, it is time for us to reassess how we plan for and use our limited transportation dollars.

—At the same time, this Clean Transportation Plan recognizes the impact today's transportation systems have on climate change and the environment and seeks

to build incentives that will encourage new, cleaner forms of transportation and better land use planning.

—This plan also acknowledges the important role that innovation and technology play in keeping transportation safe, reliable, and efficient by requesting funds for programs such as a new autonomous vehicle deployment pilot that will yield important benefits.

Overall, the President's Budget request represents a combination of these proposed 21st Century Plan investments and funding for the Department's traditional transportation programs. Key elements of the request include the following:

INVESTING IN CLEAN, 21ST CENTURY SURFACE TRANSPORTATION OPTIONS THAT REFLECT AMERICA'S CHANGING DEMOGRAPHICS AND PROVIDE ACCESS TO OPPORTUNITY

Enhances Clean Transportation Options for American Families.—Over the next decade, the Budget invests an average of nearly \$20 billion per year in new investments to reduce greenhouse gas emissions and provide new ways for families to get to work, to school, and to the store. The Budget would expand transit systems in cities, fast-growing suburbs, and rural areas; make high-speed rail a viable alternative to flying in major regional corridors; modernize our freight system; and expand the successful Transportation Investment Generating Economic Recovery (TIGER) program to support high-impact, innovative local projects.

Supports Investment Decisions Towards a "21st Century Regions" Approach That Reflects a Changing Demographics and Economy.—Currently, the majority of Federal transportation funding flows, via formula, through the State. To address the shifting demographics in America, this Budget balances that funding stream, by directing billions of dollars through regional governments, such as Metropolitan Planning Organizations, empowering them to play a stronger role in decisionmaking. Over a 10-year period, the Budget invests an average of \$10 billion a year towards a series of new, innovative multimodal programs that improve the balance of funding and decisionmaking and will accelerate the move towards smarter, cleaner, and more integrated communities. The funding would flow across transportation modes to support transit-oriented development; reconnect downtowns divided by freeways; and, bicycle and pedestrian networks.

The President's Budget fully supports FAST-authorized funding levels for surface transportation programs, aimed at keeping the system safe and in a state of good repair. In addition to the proposed increases for surface programs, the Budget fully funds FAST Act levels for fiscal year 2017, across transportation modes which include: \$44 billion to invest in the Nation's critical highway and bridge systems; nearly \$10 billion to support operations of public transit systems across the Nation; roughly \$730 million for the National Highway Traffic Safety Administration (NHTSA) to research and develop new, life-saving technologies and programs; and over \$640 million to support nationwide motor carrier safety through the Federal Motor Carrier Safety Administration (FMCSA).

ADVANCES PUBLIC AND PRIVATE SECTOR COLLABORATION TO ACCELERATE COST-COMPETITIVE, LOW-CARBON TECHNOLOGIES AND INTELLIGENT TRANSPORTATION SYSTEMS

Continues the Transition to the Next Generation Air Transportation System (NextGen).—The Budget requests a total of \$1 billion to support NextGen. This includes \$877 million for NextGen Capital investments, an increase of \$22 million above fiscal year 2016, which will advance modernization efforts; enhance automation; implement satellite-based surveillance capabilities; improve data communication practices and technology; and maximize traffic flow.

Funds Pilot Deployments of Safe and Climate-Smart Autonomous Vehicles to Create Better, Faster, Cleaner Urban and Corridor Transportation Networks.—To accelerate the development and adoption of autonomous vehicles, the Budget includes \$3.9 billion over 10-years for large-scale deployment pilots to develop a common multistate interoperability framework for connected and autonomous vehicles.

ENSURES TRANSPORTATION SAFETY KEEPS PACE WITH CHANGING TECHNOLOGY AND ORGANIZATIONAL NEEDS

Integrates Surface Transportation Technologies Safely Into the Transportation System.—High impact investments will support activities such as NHTSA's New Car Assessment Program (NCAP), to test vehicle safety through state-of-the-art equipment and more realistic crash dummies. The Budget invests \$35 million in fiscal year 2017 for this integration.

Strengthens Regulatory Enforcement Agencies Across the Department Through Resources and Organizational Changes.—Across the Department, agencies are taking

action to strengthen the regulatory and enforcement capabilities that are key to protecting the safety of travelers and movement of goods.

—Investments would provide over \$47 million for NHTSA's Office of Defects Investigation to improve its effectiveness in identifying safety defects quickly, ensuring remedies are implemented promptly, and notifying the public of critical defects.

—The Budget's \$295 million request for the Pipeline and Hazardous Materials Safety Administration (PHMSA) also includes proposed organizational changes to elevate the role of research and analysis in support of regulatory development and enforcement.

Supports Rail Safety Through Research and Development and Implementation of Positive Train Control (PTC).—The Budget includes \$213 million to support the Federal Railroad Administration's (FRA's) rail safety and development programs, including implementation and enforcement of PTC, as well as related track and bridge safety activities, and another \$53 million for additional safety research. This includes \$12.5 million to analyze and demonstrate the safety and environmental benefits of Electronically Controlled Pneumatic brakes.

Protects Our Maritime Interests.—The Budget provides over \$428 million for the Maritime Administration to implement programs that promote the economic competitiveness, efficiency, and productivity of U.S. Maritime transportation.

INVESTS IN 21ST CENTURY GOVERNMENT AND PROJECT DELIVERY

Modernizes Permitting and Project Delivery.—The Budget supports investments, consistent with new requirements in the FAST Act that ensure we are making 21st Century investments through 21st Century delivery mechanisms. The Budget expands the Administration's progress to expedite permitting and approval processes while protecting safety and the environment.

Supports Ongoing Establishment of a National Surface Transportation and Innovative Finance Bureau.—Building on the Administration's successful Build America Investment Initiative, the FAST Act created a new office to streamline and improve the application processes for credit programs, expedite project delivery, and promote innovative financing best practices. The Budget requests resources for implementation, as well as \$275 million for the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program, along with flexibility to also use resources from a range of new multi-modal programs to cover credit subsidy costs.

Protects Cybersecurity and Data Integrity.—The Budget includes \$15 million to continue improvements to the Department's cybersecurity protections, and another \$4 million to assist the Department in meeting the requirements of the Digital Accountability and Transparency Act of 2014.

When taken together all of these new initiatives support our expanding freight network, and address the ongoing need for improvements in the transportation options that support ladders of opportunity for all Americans.

PREPARING FOR REAUTHORIZATION OF THE FAA

Planning for the Future of the FAA.—The President's fiscal year 2017 Budget request includes a total of \$15.9 billion to support the ongoing work of the Federal Aviation Administration (FAA). This funding level would provide the FAA with "steady-state" funding overall when compared with fiscal year 2016 levels. The FAA's authorization is set to expire on March 31, 2016. As new legislative proposals are offered and considered, the President's budget continues to propose expanded funding flexibilities that would help FAA manage its resources in a more efficient and effective way.

Thank you again, for the opportunity to appear before you today and I will be happy to answer your questions.

Senator COLLINS. Thank you very much, Mr. Secretary.

We are going to start the questioning with the ranking member of the full committee, Senator Mikulski, in light of the fact that her constituents more than any of ours have been adversely affected by the shutdown of the Metro system.

Senator Mikulski.

Senator MIKULSKI. Thank you, Madam Chair, for once again your usual sensitivity and courtesy, something very much needed in the body politic, and the vice chair of the committee, Senator Reed.

Secretary Foxx, it is good to see you again. I want to commend you and your professional staff for the outstanding job that you do. You are a very hands-on administrator and your staff takes their job very seriously. We in Maryland are very happy and proud of our assets, whether it is the Port of Baltimore, the airport, the MARC commuter rail, or the Purple Line.

But today, we have heartburn once again over the Washington Metro. Seven-hundred-thousand people ride the Metro every day, 700,000 people. Some older senior citizens. Many work age going to work here at the Capitol and in the great District of Columbia. Some are schoolchildren coming to school here in our community, and they count on a system that is safe, reliable, and they can count on.

Well, you know what happened. Paul Wiedefeld shut down the system today. It was drastic. It was disruptive. And yet I believe it was necessary.

We are deeply concerned about this. I am no Janie-come-lately to this. Going back to 2009 when on June 7 nine people died when two Metro trains collided, we have been working to change the governance, improve the management, and bring more resources.

From 2009 to 2016, we have had seven incidents of tragedy. We have had 15 deaths, nine rider deaths, and six Metro deaths. Some happened at Metro itself. Right after the terrible June 9 crash in August, we had a Metro employee die in Silver Spring. He was hit by the maintenance equipment.

I will not go through every incident, but here we are, 2010, Metro employee struck by a maintenance truck. Shady Grove, the carwash fell on an employee who lost limbs. So it is at Metro that many of these accidents occur to Metro employees.

Then, of course, not too long ago, we had the terrible fire at L'Enfant Plaza where one person died, but 80 nearly died of smoke inhalation. They could not get out. Thank God for the District of Columbia first responders who literally moved heaven and Earth to get there to help them out.

So where are we today? We have tried to change the management structure. We have tried to improve the governance. You have been a big part of that, where you could appoint the board. And we have tried to increase money.

This subcommittee has put over \$1 billion into Metro every year. It helps us buy new crash-worthy cars.

So my constituents and those in the District of Columbia and Virginia say, well, we will tough it out for 1 day, but is this change going to be reliable? Is it going to be sustainable? Is it going to stick?

For months and years now, we have called for a culture of safety. But what we get is a culture of resistance to making changes for safety.

So my question to you, as someone who is really involved himself, and you have run into the buzz saw of resistance just the way I have, and the way Ben Cardin and Mark Warner and Tim Kaine have, and Senator John Warner when he was here, so my question to you is, what more can the Federal Government do to help? What more should we in Congress do? Do we need more money? Do we need more authority? What kind of change? Because what we need

is a Metro that really works, and in a way that people have confidence that when they get on, they will get off and they will be okay.

I also worry about the workers who themselves have often been hurt or injured.

What could you share with us today where we can make a change, where what you can do to help Wiedefeld get this literally on track, and a track that gets people where they need to go?

Secretary FOXX. Senator, first of all, I want to thank you for what I would call your ferocious advocacy on behalf of safety and on behalf of the workers and users of the system.

What I would say is that the coalition of the willing here has to involve the jurisdictions themselves, and it has to involve all stakeholders who have decisionmaking authority over WMATA. For months, for months, I have called on the jurisdictions to stand up an effective State safety oversight organization.

We took over State safety oversight temporarily to give them time to get it stood up correctly, and yet we have no concrete movement on the part of these jurisdictions.

That would be a good start. All of us, those jurisdictions, Congress, our Department, the board of directors, and the leadership of the organization itself, Mr. Wiedefeld and his team, have to have relentless focus on safety.

I am prepared to do more. I have already said that we are going to look at open grants that WMATA has available and look at directing those to safety-enhancing investments.

But I really think this is a place where WMATA is going to have to run itself in a safe fashion. The culture down there has got to change. And we cannot enable the continuation of these safety failures any longer.

Senator MIKULSKI. Well, first of all, thank you.

Second, I also want to say that we are not going to take the whole hearing today, and the leadership of the committee has been very generous to me this morning.

The Senators from Maryland to Virginia intend to hold an oversight meeting with Mr. Wiedefeld and other people who could help solve this problem as soon as we get back from our spring work period.

But are you telling me that Metro has unspent money that they could be using right now for safety? Why is it unspent? What do you think it could buy?

Secretary FOXX. Well, we have the authority to direct that they use those monies to focus on their safety priorities. Some of these dollars were appropriated or provided to them in past years for any number of things. I have the FTA team looking at whether any of these funds are constrained by contracts that WMATA may have.

But rest assured, we are going to make sure that resources are not the issue. But I think the point that I am trying to make is, I do not think it is just resources. I think it is culture, and I think it is a deliberate decision that is needed on the part of everyone involved in this to focus relentlessly on safety and get things right. We are digging ourselves out of a hole.

Senator MIKULSKI. I know my time is up, but what you are saying is there has to be an insistence and persistence, not only from

you, not only for me, but from the leaders of the jurisdictions whose constituents themselves ride it.

We have to look at not only the money but the consistently run red lights, and we had to make sure the tracks are rider-worthy, and then this whole issue. But the running of the red lights really is a fearsome issue.

Let's follow up in another meeting. I appreciate the fact that we have a beginning framework here.

Thank you very much, Madam Chair and Senator Reed.

Senator COLLINS. Thank you, Senator.

AUTONOMOUS VEHICLES

Mr. Secretary, I am very interested in the development of driverless cars, so-called autonomous vehicles, which could provide a substantial improvement to our transportation network, particularly by giving more options to seniors who are living in rural areas where there is not mass transit of any kind.

The key benefit, however, is in reducing the number of crashes and fatalities that occur every year due to human error. While fully autonomous vehicles may be years away, there are tools such as collision avoidance, lane deviation, electronic stability control, that can help reduce crashes in the near term.

The National Highway Traffic Safety Administration (NHTSA) has traditionally provided the testing regime and standards-setting for such new safety technologies.

The budget request includes a new \$4 billion request for over 10 years for large-scale deployment pilots to test autonomous vehicles in designated corridors. This appears to be an entirely new role for the Department, and there are no details in the budget on how this large amount of funding would be used.

What is the plan? Is the budget potentially duplicative of private sector efforts already underway to deploy these vehicles in real-world driving situations?

Secretary Foxx. Thank you for the question. You are correct that the proposal is \$4 billion over 10 years for pilot programs.

We also agree with you that the automated technologies have enormous potential for safety benefits. And to accelerate those benefits, we are proposing to invest these resources in support of real-world testing. Now there is private-sector testing that is currently being engaged in, but we believe that the Government has an interest in understanding further things like whether national policy should focus on licensing, what sorts of testing is reliable, information-sharing among States and the Federal Government, and to what extent we can build on those systems.

We have actually already speeded up the deployment of these systems through regulations, including the New Car Assessment Program (NCAP), which is beginning to require or at least encourage some of these technologies as you talked about, some of the automated types of systems to come into the vehicle as part of the grading system for NCAP.

Having said that, we believe it is beneficial for the private sector to test, just as the public sector tests. And many of these tests will be done in conjunction with the private sector.

SPEED LIMITERS

Senator COLLINS. Thank you. Last year, Mr. Secretary, I asked you about the status of the Department's proposed rulemaking on speed limiters or Governors, as they are also known. You stated at that hearing that the rule would be out "no later than the fall." Here we are in our hearing a year later and well-beyond last fall and the Department has yet to issue its rulemaking.

I am puzzled by this because this is a rule that will help to reduce highway fatalities. It has the support of the trucking industry. It has the support of various safety advocates.

Why has there been a delay in this rulemaking?

Secretary FOXX. So subsequent to our hearing last year, OMB did accept the heavy truck speed limit, or Notice of Proposed Rulemaking (NPRM), on May 18, 2015, as a top priority. We have been working closely with OMB to get that rule pushed out.

Based on our current estimates, we expect the rule to be completed by April 22, 2016. So within the next month or so.

Senator COLLINS. Thank you. I will hold you to that.

Senator Reed.

AIR TRAFFIC CONTROLLER STAFFING

Senator REED. Thank you very much, Madam Chairman.

We spoke about air traffic controllers previously in our statements regarding this proposed privatization. I think it should clear where both the chair and I stand on that one. But there is another issue and that is there is a significant number of controllers who are eligible to retire at FAA facilities. In fact, it looks like there are more potential retirees than there are individuals in the pipeline prepared to come aboard.

So what are you doing to ensure that there is no gap, that we have an adequate number of controllers?

Secretary FOXX. I can get you the statistics, Senator, but in short, we have annual hiring goals for air traffic controllers, and we are currently at about 54 percent of our hiring goal for the current year and still going. We feel very comfortable that we will meet that target this year.

You are correct that we do have an aging work force, and we are working to onboard new air traffic controllers and move them through our systems as quickly as possible so that we can stay ahead of that attrition.

In addition to the hiring goals, we are also looking at two other aspects of the process. One is getting folks to the FAA Academy or equivalent training as quickly as possible from the time they get onboarded. And secondly, we are actually looking at some of our testing programs to ensure that those are calibrated to get us the best possible air traffic controllers.

Senator REED. A follow-on question, the inspector general has raised concerns that when you are looking at your work force, you are looking at historical trends and not specific and critical facilities.

What are you and the FAA doing to better factor in facility-specific air traffic so that you might have the right number, but they are just not properly located?

Secretary FOXX. I would like to take that back to the FAA and give you a more complete answer. But what I would say is that our airspace remains fairly dynamic. We know where a lot of their traffic is, but we also have some modeling that helps us predict where we think it is going to get more intense over time.

I fully expect that our answer will reflect our projections going forward, and our response to that. But I would like to give a sharper answer from FAA.

NEXTGEN MODERNIZATION

Senator REED. Thank you very much, Mr. Secretary.

On a related issue, an FAA issue, the inspector general issued a report in January with some criticism regarding the management of NextGen modernization efforts. It was a rather long sweep in terms of the beginning of the program until today.

But can you fill us in on some of the reforms and the pace of reforms in this administration under your leadership?

Secretary FOXX. Sure. I will be honest, I cannot take full credit for what I am about to say. There have been a lot of people who have been working on this in this administration.

But effectively, what the FAA has done in this administration is rebaseline NextGen. There was a certain critical path for the project. It was way off scale prior to the administration. We have since right-sized that critical path. And we are meeting our targets even notwithstanding some of the budget shockwaves we have experienced in past years.

Some of the deliverables are the rolling out of metroplexes across the country; some of the flight enhancements like optimized profile descents, which are saving millions of dollars and tons of gasoline as planes land in our airspace; the development of ERAM; as well as the rollout of data comm, which will be coming on board over the next year or two.

So we feel good that we're starting to get capabilities out there. I think one of the big risks for NextGen is getting equipment in the cockpit of airplanes across the country, including general aviation, and we look forward to working with you and others to get that done.

Senator REED. Thank you very much, Mr. Secretary.

Thank you, Madam Chairman.

Senator COLLINS. Senator Capito.

AIRPORT RECONSTRUCTION PROJECT

Senator CAPITO. Thank you, Madam Chair.

I want to thank the Secretary for being here with us today. I read your interview in the New York Times business section last Sunday. I really appreciated learning a little bit about your history. The tributes that you paid to your parents, in terms of your education, I thought were very inspiring for the next generation, so thank you for doing that.

I have a localized question here. I am from West Virginia. As you are aware, a landslide at Yeager Airport in Charleston forced the evacuation of several people and destroyed the Keystone Apostolic Church. It was the engineered materials arrestor system (EMAS)

that collapsed, because our airport is built on top of three different mountains. Thankfully, nobody was injured.

There have been a lot of entities, including the FAA, that have been trying to do the repair work. We have also been working with FEMA and the West Virginia Division of Highways. The FAA provided the initial investment for the EMAS system, which prevents planes from going over the side of the airport down the hill.

I believe that the FAA should help us play a role in rebuilding a new one. We need a new one. This is a very important project for basic safety, but also, I have learned, will play into what types of aircraft will land or be permitted to land in the Yeager Airport, which obviously has great circumstances.

I know there is litigation pending on this matter, but I would like to get a sense from you any thoughts or perspectives you might have where the FAA could be more helpful to us and to the local community to try to rebuild the system.

Secretary FOXX. Obviously, first of all, I want to tell you thank you on behalf of my family, for your comments. That was very nice of you.

Secondly, to acknowledge that the collapse of the runway safety area at Yeager Airport is a very complex issue. The FAA continues to work with the airport. As they do that, I look forward to giving you updates on how that conversation is going. But I want the FAA to be helpful to you. I want the FAA to be helpful to the community in getting that service back up and running.

Senator CAPITO. Thank you. Hopefully, we can have subsequent conversations. The rebuild on that is estimated to cost between \$25 million and \$35 million. That is a lot for a county airport to be able to sustain.

I want to ask you about the Transportation Infrastructure Finance and Innovation Act (TIFIA) appropriation that you have in the budget and the development of the National Surface Transportation and Innovative Finance Bureau. In our State, we have really used these public-private partnerships to make our money go farther and complete some highways. I am curious to know, I noticed you asking for \$3 million in new resources for this implementation, so I am going to assume that this finance bureau has not been implemented yet. Is that correct?

Secretary FOXX. We are in the process of standing it up. We have some efforts underway to figure out which programs need to be consolidated and how to set up the staffing mechanisms. But I expect that by the time the year ends, we will have this organization stood up.

I think the goal is to have enough personnel and resources to make sure that it is delivering what you need in West Virginia.

PASSENGER FACILITY CHARGES

Senator CAPITO. Yes, I think every State is trying to maximize resources. Certainly, what has worked for us is to have the private company do the forward financing and then have a steady stream paying back, because if you can get them done sooner, they are cheaper—or less expensive. Nothing is cheap, but less expensive.

As I was reading through your report, I noticed an issue about the ability to increase the pass-through facility charge limit. I

guess that is a fee on every airline ticket from \$4.50 to \$8. Again, living in a rural area, smaller airports, what caused my concern was it would eliminate guaranteed Airport Improvement Program (AIP) entitlement funding for large hub airports. I do not know what that would do to a small or medium-sized airport. Who gets the flexibility to raise that? The local airport?

Secretary FOXX. So it would be local airports, but really the largest airports in the country, the rural airports, the smaller and medium-sized airports, would be held harmless. They would not have any change in their AIP grant access. But the larger airports would not have access to AIP, but they would have access to their own passenger facility charge (PFC) increases.

Senator CAPITO. What happens in smaller and more rural airports that have commercial services? It is so expensive. I mean, for me to fly back to West Virginia an hour, to Charleston, West Virginia, the capital city, sometimes your airline ticket can be \$700 and \$800 for a round-trip ticket. That is just preposterous.

So even though it is a small change, is just put prices even further and further out of the market. That is my concern on that.

But anyway, I thank you again. Thanks for your service, and we will follow up about Yeager and see what kind of help we can get from you and from the FAA.

Secretary FOXX. I look forward to working with you.

Senator CAPITO. Thank you.

Senator COLLINS. Thank you.

Senator Coons.

AMTRAK INVESTMENTS AND POSITIVE TRAIN CONTROL

Senator COONS. Thank you, Senator Collins.

Thank you, Mr. Secretary, for your service and your leadership.

As other Senators have commented, today's emergency shutdown of the DC Metro system was a big surprise, and for many an inconvenience. But as someone who rides Amtrak rail every day, I know what a priority safety has to be regardless of the transportation mode. So I appreciate your engagement and diligence in ensuring that we put passenger safety first.

Let me start by thanking you for your leadership, your focus, your staff's terrific work in responding to the I-495 challenge that we had in my home community of Delaware. DOT's support on the emergency relief funding and your ability and willingness to work well together, Federal and State agencies, in a compressed time-frame to fix a critical infrastructure problem for us was greatly appreciated.

I just attended the groundbreaking of an expanded Route 301 through Delaware with the Federal Highway Administration (FHWA) administrator, Greg Nadeau. It was only possible because of TIFIA financing.

I know Senator Collins and others have spoken about the value of TIFIA financing, but I just want to add my voice. It makes possible projects like this. Mayor Branner of Middletown has been working on it for, I think, 30 years, so it is a long hoped for investment.

Amtrak is of critical importance to my State, not just to me. Like the Vice President, I think I have spent more time on Amtrak than

with my family during my time in the Senate. I am pleased the President continues to be a strong advocate and supporter.

As Senator Reed mentioned, there is a \$7.3 billion backlog in State of Good Repair in the Northeast Corridor alone. While the FAST Act makes important progress in providing authorization, I am really concerned about the sufficiency of funding.

So tell me, if you would, what the positive train control (PTC) investments in your budget do for Amtrak and what you see as the prospects for sustaining investment in Amtrak and improving its State of Good Repair.

Secretary FOXX. So in terms of how far dollars would go specifically for Amtrak, we do not exactly have a number on that, in terms of how far our investments would go because that is sort of an Amtrak question in terms of how they would invest. But our budget actually contains \$1.3 billion for PTC. That, of course, is part of our desire to ensure that we are getting that system deployed as quickly as possible.

Senator COONS. I support the increased request for Amtrak, and I am hopeful that we will be able to sustain that over time.

Delaware actually happens to be one of the deadliest States in America for pedestrians, unfortunately. Tragically, it was number one in the country—this is on a per capita basis, obviously—in 2012, 2013, and number three in 2014 and 2015. The Federal Highway Administration (FHWA) has done some great research and funded some projects on how to deal with this.

But for us, it is really a suburban problem, not an urban problem. It is a challenge of high-speed, multi-laned suburban commercial corridors.

Can I help start a dialogue between your office, DelDOT, and advocacy groups about this issue and future research?

Secretary FOXX. Absolutely.

Senator COONS. I would be grateful for a chance to work with you on that.

Funding and continuation, as I mentioned, of the TIGER program is absolutely instrumental in advancing rail projects in the Northeast Corridor (NEC). And improving the NEC is the only way we can ensure our ability to add more commuter rail frequencies to all Delaware stations, including access to MARC service from Maryland.

I would be interested in your view on whether you think TIGER programs will continue to be reviewed and approved on a timely basis.

Secretary FOXX. Yes. We understand how important the TIGER program is. We quite frankly appreciate this committee's just incredible support for the program. You can rest assured that we are going to work hard to review and move those dollars out, so they can get people to work and do the good things that TIGER grants do.

Senator COONS. It has made possible that Delaware third track project, in part. There are some critical chokepoints south of Wilmington, but there are another two north of Wilmington, so it is my hope we can continue to work on that.

I am also encouraged by the great progress you are making with New York and New Jersey on the Gateway Tunnel project. Con-

gratulations. I suspect you have become a good friend of Senator Schumer's through all this, and I am hopeful we can continue to invest in that.

Secretary FOXX. And the Governor's.

SHORT LINE RAIL

Senator COONS. Let me just last mention that short-line railroads handle a great deal of agricultural commerce in my community and on the Eastern Shore of Maryland. If you could tell me briefly anything about how you think we can do a better job of helping America's short-line rail and the critical role they play for our ag sector.

Secretary FOXX. You are exactly right. Our short-lines are critical. I think the changes that the FAST Act made to hopefully make the Railroad Rehabilitation and Improvement Financing (RRIF) program more accessible to short-line railroads will be very helpful because many of them do have large capital needs that they cannot necessarily meet on their own. The RRIF program was designed to help them, so we want to use as much of our existing capacity in the RRIF program to help them.

We will do anything else we can think of to ensure that those short-line railroads are strong.

Senator COONS. Thank you very much, Mr. Secretary.

Secretary FOXX. Thank you.

Senator COLLINS. Thank you.

Senator Blunt.

SMART CITY CHALLENGE

Senator BLUNT. Thank you, Chairman.

Mr. Secretary, thank you for your leadership of the Department. The FAST Act, the 5-year highway bill. After 37 extensions of the highway bill, it is really well-received throughout the country. It would not have happened without your leadership, and we are all pleased we had a small part of working with you on that.

TIGER grants, as you know, the Champ Clark Bridge, which is I think the oldest bridge still crossing the Mississippi River, is going to be replaced with partially a TIGER grant, and a big commitment from both Illinois and Missouri. But I think the TIGER grant made that whole package come together.

Our hope now is that that bridge can safely be used until its replacement is put in place, because it is a significant detour to get to the next bridge on the river, if that bridge is not working. So thank you for that.

To follow up on Senator Coons' thoughts about the PTC, just awareness for you and the folks in the line of chairs there behind you, in the FAST Act, we authorized almost \$200 million of that \$1.3 billion to help commuter railroads install PTC, particularly in areas where the State has a significant obligation for how those commuter terminals work.

We have a situation in both Kansas City and St. Louis where access to some of that \$200 million—actually, it is \$199 million. I assume \$200 million would have been too much, so Congress, in its wisdom put \$199 million in that particular category. It is available for States who are involved in public transportation and have some

unique responsibility for implementing positive train control. I just wanted to mention that, so you are aware that it matters significantly to how the commuter rail system works in our State.

Also, I was pleased, as I am sure the other Smart City Challenge finalists were, to see Kansas City—I am sure everybody who had a city in that was pleased to be part of it. But I clearly think Kansas City is a great potential testing ground for Smart Cities.

It is the first Google fiber city. It is a nexus of interstate transportation from west of us, south of us, north of us. Several interstates come together there. And also putting in that new trolley system, they have been able to put some of the first phase equipment in already.

I know the chairman mentioned her interest and an interest I share with what is happening with smart car technology. How do you see that Smart City model coming together? And what do you think we learn by looking at the city you finally select? I think you are down to six or seven finalists now to be the Smart City finalist.

Secretary FOXX. It is a great question. I see three different buckets. One is what the private sector is doing, which is testing, innovating, coming up with new ideas for technology.

Currently, in general terms, there are some that are working on connected cars that talk to each other using kind of a GPS signal, and there is another group that is working on autonomous cars, which have a roving eye and kind of see the environment just like you and I do.

We actually believe those two technologies are going to merge and you are going to have autonomous connected cars in the future. But industry is working to innovate.

The second bucket is what we do at the government level. We have promised to give the industry our best guidance—not the industry, but even the States—good guidance on how to lay a foundation for this technology to be integrated into the marketplace. That is work that we have promised to do as an agency.

Then the third piece is, if you have the technology and you have the foundation, how do people actually make use of it? The Smart City Challenge is really our way of putting the challenge to American cities to help define how these technologies can be used. And not just those technologies, but how to use data and analytics better to shape this transportation decisionmaking, how does land use integrate with that.

So we are very pleased to see 78 great cities submit applications. We have seven finalists, and we plan to announce the winner of the challenge in June. But we also plan to give every city that has applied our best pathway to use Federal programs to implement the plans they sent to us so that there are hopefully no losers. Every city hopefully wins.

Senator BLUNT. Thank you, Chairman.

Senator COLLINS. Thank you.

Senator Schatz.

PEDESTRIAN SAFETY

Senator SCHATZ. Thank you very much.

Secretary Foxx, thanks for your leadership. I am still waiting to hear from you regarding your trip to Hawaii. We have a request.

As you know, we have some unique needs and some unique new projects, the Kauai TIGER grant, the rail transit program. And we are the most isolated populated place on the planet. So we have some unique transportation infrastructure needs.

As you know, I support community planning strategies to create walkable neighborhoods and to take care of pedestrians. I think you understand that transportation systems have to be complete. They have to be viable for cars and rail, for buses, for bikes, and for people.

Senator Heller and I worked in the FAST Act to include a provision that would allow the Department of Transportation to work with metropolitan planning organizations (MPOs) and other agencies to work on reducing traffic fatalities.

In particular, Hawaii has the unfortunate distinction of being number one in terms of senior fatalities on the street. We had nearly 5,000 in 2014, and that number continues to creep up.

So can you tell me what the Department will do to implement the policy that Senator Heller and I worked on in the FAST Act, and more generally, what you are doing this year to reverse the trend on pedestrian fatalities?

Secretary Foxx. First of all, thank you for the question. It is an incredibly important issue. When I walked into the Department, that was the one area, bike and pedestrian fatalities, where we were actually seeing an uptick. This year, I think our estimates are a 9 percent increase.

A couple things. Just this week, the Federal Highway Administration published new safety performance measures that call for State and regional targets to reduce highway deaths and injuries. And it includes a separate target for pedestrian and bicyclist fatalities and serious injuries.

We have also included a bike pedestrian performance measure to signal our commitment to nonmotorized safety.

We have also launched a Safer People, Safer Streets initiative with America's mayors. We have more than 200 mayors across the country who signed on to use best practices in their cities to build the kinds of sidewalks and pedestrian and bike facilities that are necessary to ensure safety.

There is still a lot of work to do and building on the language that you had put in the FAST Act, we are going to implement that as soon as we possibly can.

Senator SCHATZ. We are going to need your continued leadership, because one of the challenges that we have in Congress is that this has actually become, unfortunately, a partisan issue for some where it becomes a question of whether or not you support smart growth, location efficiency, multimodal transportation, rail, all those things, which sometimes cut along liberal and conservative lines when, in fact, if you look at mayors, if you look at the AARP, this is a question of keeping people safe as they walk around.

It was incredibly disappointing to see that this became a sort of dividing line about whether or not you think people ought to use cars.

We have two cars in our family. We use cars. We appreciate the highway system. We appreciate every aspect of the transportation system.

But I think it is going to require the continued leadership of the Federal Department of Transportation to push on MPOs, to push on not-for-profits, to make sure that everybody understands it cannot possibly be a partisan issue to keep our seniors and our kids safe as they walk to school or they walk to the market.

Secretary FOXX. Thank you. If I may just add one small additional point?

Senator SCHATZ. Please.

Secretary FOXX. Which is that on these revised NCAP standards, the way that we rate cars, the five-star rating system that NHTSA uses, one of the things we are going to score in the future is the collision avoidance systems that deal with things outside the car, including pedestrians.

That is another way that we are working to address this issue, and it is a way that technology did not make available just a few years ago but now we think it can. So that is another way we are trying to get at this.

Senator SCHATZ. Thank you very much.

Secretary FOXX. Thank you.

Senator COLLINS. Thank you.

Senator BOOZMAN.

TIGER

Senator BOOZMAN. Thank you, Madam Chair. And I thank you and the ranking member for holding this important hearing.

We appreciate having you here, Secretary Foxx, and all of your hard work on the behalf of improving our infrastructure in so many different ways.

I appreciate the work that Senator Collins and the committee have done to strengthen the TIGER program and provide critical infrastructure resources. I do hear concerns from applicants that the Department can do a little bit more to increase support and help applicants improve their proposals.

Then also, very importantly, those who were not fortunate enough to get a grant, as to what the problem was, how they can come back on the next go-round and really the criteria of what you are looking for. So we would like to work with you on that.

Can you talk a little bit about that and just tell us how you are trying to remedy that? I suspect you are hearing that a little bit also.

Secretary FOXX. Sure. I think it is a great point. I think Congress has done us a service by lowering the minimum amount that can be used, for example, for rural areas and even urban areas, because there are some communities where \$1 million or \$2 million could do something really big for that community.

Senator BOOZMAN. Very much. You understand that as an old mayor.

Secretary FOXX. I do. I do. I also understand that some communities can hire fancy consultants to package their proposals, and in some communities, you have two people sitting across a desk trying to figure out when the deadline is.

So what we have tried to do is to avail ourselves through a variety of mechanisms, outreach where we actually deploy people out

in the country to do focus groups with people to try to help them understand the process. We have done webinars.

By the way, we offer technical assistance. So if you or someone in your State called us and said, "Hey, I am thinking about applying to TIGER. Can someone help me work through the process?" my instructions to our staff is to help those folks get their package together and help them do the best they can in the process.

So those are the tools that we try to use. I am particularly concerned, quite frankly, for our rural areas that are a lot of times stretched thin and underresourced to make sure that we in the review phases are giving folks a very careful look and asking a lot of questions to try to make sure that we are making an evaluation that is fair to them.

So that is the work that we do. We have had some successes. In fact, the last round of TIGER, we had almost 40 percent of the TIGER grants go to rural America. I am very proud of our ability to do that.

Senator BOOZMAN. Very good. Thank you.

Secretary FOXX. Yes.

AIRPORT CERTIFICATION

Senator BOOZMAN. Another thing that I would like to emphasize is the importance of modernizing and improving the airport certification process. I know you have worked hard to help the aircraft industry. And again, to make it more competitive and successful, it would be nice if we could make it so that was a little bit easier to get done.

I would like you to comment about that, but also, on a related note, the FAA recently published their notice of proposed rulemaking on Small Airplane Revitalization Act. The purpose of the legislation is to improve safety while cutting in half the cost of new aircraft certification.

I believe the goal is to have the rulemaking done by the end of the year.

So both of those, that is, certainly, very important, and I think it really would greatly help our aircraft industry, which I know that you are very interested in doing. So can you comment about those things a little bit?

Secretary FOXX. Certainly, on part 23, which is the certification process you are referring to, I am very supportive of getting that rule done so that we can avail more of our industry of the advantages of being able to self-certify if they make certain requirements, if they meet certain requirements. So that process is underway.

I am very hopeful that we will have that rule out before the end of the year, certainly—hopefully.

And on the other one, I need to probably come back to you. I do not know that I am familiar with it, so I would like to have a chance to write you back on that.

Senator BOOZMAN. On the other one that you commented on, certainly, that is very important. It would be part of a significant part of the legacy, in the sense I know that you have worked very hard to get some of these things accomplished. But that is one that really does need to be and it is something we have grappled with for

a while and we appreciate you taking it on. So hopefully, we can get it done in a timely process.

Thank you all very much.

CONTRACT WEATHER OBSERVERS

Senator COLLINS. Thank you, Senator.

Mr. Secretary, we are going to do one more round of questions before we turn to the inspector general.

The budget, as you are well-aware, proposes to eliminate contract weather observers at 57 airports across the country and require that air traffic controllers perform those functions, in addition to their existing responsibilities.

In January, Senator Reed and I wrote to you and the FAA administrator, urging the FAA to fully assess all of the safety risks and hazards that could result from the loss of professional weather observers, particularly in cold-weather States like ours, prior to going through with the plan to eliminate the contract weather observer program at airports.

These observers are really important in providing real-time, critical weather information that helps keep our pilots and our passengers safe.

For example, in Bangor, Maine, air traffic controllers are simply unable to leave the tower, which would prohibit them from observing real-time conditions like freezing rain or ice, which may not be easily discernible from the tower. And that is what our current weather observers do at Bangor International Airport.

I also think it is important that our air traffic controllers remain focused on safely managing the air traffic, not on performing tasks that they are not specifically trained or have the experience to do and that others are now doing.

So my question is, Mr. Secretary, have you considered our recommendation that the safety risk management panel reevaluate its proposal to determine if this change is truly wise and what the impact would be on safety, particularly in cold climate States?

Secretary FOXX. Yes. Yes, the FAA is actually looking at this question. The way they are looking at this is they have deployed several panels to various sites across the country, including some cold-weather areas, to have these testers, if you will, test in accordance with FAA safety management systems.

The panels will come back to the FAA with recommendations. Those recommendations will not be final until they have gone through an internal process at the FAA.

So what I would say is that your letter has prompted the FAA to do a much more extensive review of this question, and that is prompting this work that is being undertaken. And no final decisions will be made until we have heard back from those folks, and we will, certainly, be happy to share what we hear back with you.

Senator COLLINS. That is very good to hear. I know that the air traffic controllers and the airport managers in both of our States would be happy to talk with FAA further also.

Secretary FOXX. Good.

Senator COLLINS. Let me switch to one other issue for my final question, and then I am going to submit the rest for the record. There are many, so you can be happy about that part.

Secretary FOXX. Thank you.

MARITIME TRAINING VESSELS

Senator COLLINS. Training ships at our State maritime academies are rapidly approaching the end of their service lives. The fleet ranges in age from 27 to 55 years old. Without training vessels, the maritime academies simply will not be able to prepare adequately the future generations of maritime workers. These vessels are an important part of the curriculum as sea time is required for graduation and for licensure.

Last year, in the 2016 budget, the administration requested and Congress provided \$5 million for the design and planning of a replacement vessel. I would note that the oldest vessel reaches the end of its service life in 2019, and the T.S. *State of Maine* at Maine Maritime Academy will reach the end of its service life in 2025.

I am disappointed, therefore, that instead of moving forward with the design and construction of the new vessel, which is what we anticipated, the budget request instead proposes to conduct yet another analysis of alternatives.

Now the Department has already completed a feasibility study and initial analysis of alternatives, and a preliminary business case analysis for the national security multimission vessel.

Mr. Secretary, I guess my question is, given the \$5 million that was provided, why isn't the administration seeking funding for the construction of a replacement training vessel, given the age of these vessels that are fast approaching the end of their useful lives?

Secretary FOXX. That was a very well-put question. The reality is that we have been debating this internally within the Department for quite some time. I think it is fair to say that our Maritime Administration feels very strongly that we need to tackle this issue and to get the new ships put in place.

I guess the best answer I can give you is that, in the course of balancing all of the equities throughout the budget process, this is one where we felt like additional independent verification and analysis and consideration of the training requirements for cadets, we believe that we need to look at this more in terms of understanding whether the ships are, in fact, necessary for training.

But I understand the argument on the other side and, certainly, understand if the committee feels differently about it.

Senator COLLINS. Having christened one of those ships, I can tell you that they are absolutely essential. Most of these cadets either end up going into the Navy or most of them into the Merchant Marine. If they do not have actual sea time, they cannot get the licenses that they need. They can't even graduate from these academies.

So let me just end by saying that I hope you will work with us. Surely, in a \$98 billion budget, we ought to be able to find this funding.

Senator Reed.

TRANSPORTING HAZARDOUS MATERIALS

Senator REED. Thank you very much, Madam Chairman.

Mr. Secretary, the Pipeline and Hazardous Materials Safety Administration (PHMSA) maintains a database with respect to special permits and approvals for hazardous materials transportation. The inspector general has issued a report that describes it as out-of-date and incomplete, which inhibits the ability of FRA inspectors to carry out their role of ensuring the safe transportation of these materials.

So could you comment on what the PHMSA is doing to address the issue? And, critically, when will the FRA inspectors be able to get ready access to that information to do their jobs?

Secretary FOXX. The fiscal year 2017 request includes investments and requests for funding to do some additional IT investments to help us in this regard. It is part of a 6-year IT strategy that includes a well-developed investment plan supporting improvements and a Web-based system.

PHMSA has made improvements to the hazardous material shipment data collected, including adding a Dun & Bradstreet identifying number and shipper profile information to its Web portal. It is also developing certification for a data operations quality management system that will improve user satisfaction with data portals, including the hazmat Web portal. And PHMSA is also developing an online smart form that will streamline the incident reporting process to improve the quality of data.

So there are steps that are being undertaken. We are also asking for resources in the budget to help us take those steps further.

SEXUAL ASSAULT AND SEXUAL HARASSMENT

Senator REED. Thank you, Mr. Secretary. Let me turn to another topic.

You are the Cabinet Secretary responsible for the United States Merchant Marine Academy. This is an issue that cuts across too many campuses across the country and for my service on the Armed Services Committee, it is also obviously an issue at the service academies, the Air Force, the Navy, and West Point. That is the issue of sexual harassment.

Each year there is a survey that must be done. Of the 136 women at the academy, 17 percent reported in this anonymous survey that they were victims of sexual assault, and 63 percent reported being a victim of sexual harassment.

I know you do not tolerate this. You do not accept it. The question is what we can all do to change the culture and to provide more training and more support, so these statistics improve dramatically and quickly.

Secretary FOXX. First of all, I want to thank you for the question, and I want to thank this committee, including Chairman Collins and former Ranking Member Patty Murray so much for continuing to focus on this.

It is a culture issue in our academies and, in particular, at the Merchant Marine Academy. When I came into the Department, we had this issue on the plate. We worked with the academy to ensure that there were people in place at the academy who were focused on making sure that complaints had a ready place to go and that they were being adjudicated effectively.

Unfortunately, this is an area where our success in that regard looks like failure because you start to get reports up.

The other thing that we have taken very seriously is to ensure we are being very intentional about ensuring more gender diversity in the ranks of recruits to the academy. The statistics that I have been given tell me that at the 25 percent level, the culture starts to shift and you begin to have a culture in which these types of behaviors are not tolerated and there is a critical mass of women there to enforce against that. So we are working on that as well.

But we will continue at this until we get it right.

Senator REED. I think just an aside, but the experience—my closest proxy is West Point—is that as more and more female cadets came in, that culture began to change, but more specifically, as more and more of the faculty and instructors and administrators were females, it accelerated that change.

I say with some pride that we have our first female Commandant at the military academy, so that is another direction I would encourage you to go in.

Secretary FOXX. Absolutely.

AMTRAK SERVICE

Senator REED. Final question, if I may, and that is the Northeast corridor, the Federal Railway Administration has launched this. They are looking ahead, which I commend them for, the vision for the Northeast corridor in the future. I would hate to see that vision exclude in any way services to Rhode Island.

Amtrak plays a key role in our economy. In fact, the Providence station is not only a large Amtrak station, it is the biggest Massachusetts Bay Transportation Authority (MBTA) station outside of Boston's South Station. To have a future which would avoid Rhode Island in any way, shape, or form, either through routes or through services, would be, I think, wrongheaded. So I wonder what you might comment.

Secretary FOXX. Yes, look, I know how the alternatives process works. But I see no future where Rhode Island gets bypassed. That is where I come down very solidly.

In fact, I have had conversations with Governor Raimondo about ways to potentially look at enhancing service in Rhode Island. We look forward to working with you and her on that.

Senator REED. Thank you very much, Mr. Secretary.

Thank you, Madam Chairman.

Senator COLLINS. Thank you.

Mr. Secretary, I very much appreciate your testimony today. I was thinking about the range of questions that you answered today, which literally spanned the spectrum from trains to driverless cars to metros to ships to bridges to subways. It really is an amazing span that your Department covers, and we did not get even get to two questions I wanted to ask you, one on buses and the other having to do with drones. So the number of areas under your responsibility truly is tremendous.

We will be submitting additional questions for the record, and the hearing record will remain open until next Friday, March 25, for other members to submit questions to supplement ours.

Senator COLLINS. I now thank you for testifying and would call up our next witness, the inspector general.

Secretary FOXX. Madam Chair, if I might just say one thing, I was talking to my staff yesterday and they said that this may be my last appearance before this committee, perhaps my final testimony, period, knock on wood. I hope that is true.

[Laughter.]

Secretary FOXX. But I wanted to say, on a personal note to both you and to the ranking member, that a lot of times in politics, particularly in a rancorous presidential election year, there is a lot of noise about how things do not work.

What I wanted to say to you is that I appreciated your friendship, your willingness to work out issues with us, and the fact that we all recognize that transportation is neither a Democratic nor Republican issue. It is an American issue.

So I just wanted to say thank you so much for your friendship. Thank you for the hard work that you do for our Department and for the American people, and I look forward to working with you through this budget process. Thank you.

Senator COLLINS. Thank you very much, Mr. Secretary. I very much appreciate those thoughtful words. I look forward, as I know the ranking member does, to working with you as we draft our bill. It has been a pleasure working with you, and I commend you for your leadership.

Secretary FOXX. Thank you.

Senator COLLINS. Thank you.

Our next witness today is the Hon. Calvin Scovel, the inspector general of the Department of Transportation.

Mr. Inspector General, when you are ready, please proceed with your statement.

STATEMENT OF HON. CALVIN SCOVEL, INSPECTOR GENERAL, DEPARTMENT OF TRANSPORTATION

Mr. SCOVEL. Chairman Collins, Ranking Member Reed, members of the subcommittee, thank you for inviting me to testify today on DOT's budget priorities. Each year, DOT spends more than \$70 billion across a wide range of transportation programs. Regardless of specific budget levels, effective oversight and management are key to meeting the Department's goals and protecting taxpayers' investments.

My testimony today focuses on three crosscutting management challenges: safety, stewardship, and IT security.

Improving highway safety continues to be one of the Department's most important priorities. In 2015, we made 17 recommendations to enhance NHTSA's ability to remove unsafe vehicles from roads. This includes collecting and analyzing more comprehensive vehicle safety data.

While NHTSA has taken steps to strengthen its defect investigations, the agency must now effectively implement its planned improvements to ensure automakers promptly identify defects and recall defective vehicles. Unsafe commercial drivers further threaten the safety of our highways, particularly those who repeatedly violate medical-, drug-, and alcohol-testing requirements and other safety regulations.

Of the 272 motor carrier safety cases that OIG's criminal investigators have initiated since 2008, 14 percent involved carriers that were banned from the roads for safety violations but continued to operate under a new business name.

At the same time, DOT must work to maintain our Nation's strong aviation safety record. The introduction of unmanned aircraft systems (UAS) creates one of the most significant safety challenges in decades. This week, FAA will have approved more than 4,000 commercial UAS to operate in our airspace, and the number of operators is certain to increase once FAA publishes a final rule for small UAS this year.

However, FAA has yet to establish standard procedures or training for air traffic controllers to safely manage UAS in the same airspace as manned aircraft. In addition, FAA inspectors lack clear guidance for how to conduct UAS oversight, and FAA lacks formal systems to track and classify the severity of UAS incidents.

With regard to stewardship, DOT has opportunities to improve oversight of its investments and assets. For example, we recently reported that FAA awarded a new \$727 million contract for controller training without first addressing longstanding issues that we had identified in its prior controller-training contract, issues that resulted in millions of dollars in cost overruns.

Similarly, last year we reported FTA had not fully implemented the required processes and internal controls to award and monitor \$10 billion in grant funds allocated for Hurricane Sandy relief. Strong risk-based oversight, financial controls, and planning are vital to eliminating fraud and maximizing Federal investments.

Sustaining a skilled workforce, DOT's most important asset, also remains a key challenge, particularly as workforce demographics change.

For example, 22 percent of DOT's acquisition workforce, not counting FAA, was retirement eligible last year. From air traffic controllers to FAA oversight personnel to vehicle defect analysts, DOT must identify how many staff it needs in these positions and ensure its training programs keep pace with changing technology.

Finally, with regard to IT security, DOT has made major progress in implementing the required use of personal identity verification (PIV) cards for all employees and contractors. This is a key step in securing access to facilities and systems.

However, DOT has been slow to address longstanding cybersecurity weaknesses, such as the lack of effective systems to continuously monitor for threats.

The September 2014 fire at a Chicago air traffic control facility also demonstrated the importance of effective contingency planning. Damage from the fire crippled that facility and its systems for 2 weeks, significantly impacting passengers and airlines.

Earlier this month, we reported that 5 of the Department's 12 operating administrations were not effectively testing or meeting all requirements for their disaster recovery plans.

The Department has consistently demonstrated its commitment to addressing these challenges, but effective management and follow-through remain imperative. My office will continue to assist the Department as it works to meet these goals.

Chairman Collins, this concludes my prepared statement. I am happy to answer any questions you and members of the subcommittee may have.

[The statement follows:]

PREPARED STATEMENT OF HON. CALVIN L. SCOVEL III

Chairman Collins, Ranking Member Reed, and Members of the Subcommittee:

Thank you for inviting me here today to discuss the Department of Transportation's (DOT) budget priorities. Each year, the Department spends over \$70 billion on a wide range of programs to meet its top priority of transportation safety and to maintain and modernize transportation systems. We remain committed to assisting DOT as it works to improve how it manages programs and resources. My statement today will focus on three cross-cutting management challenges: (1) addressing DOT's new and longstanding safety challenges, (2) continuing diligent stewardship over DOT's critical investments, and (3) enhancing DOT's information technology (IT) security and preparedness. Regardless of specific budget levels requested or approved, effective oversight and management of safety efforts, major transportation projects, and DOT assets are critical to ensure the greatest return on the taxpayers' investment.

SUMMARY

Safety is DOT's top priority, and the Department faces a range of emerging and longstanding safety challenges. These include safely integrating Unmanned Aircraft Systems (UAS) into the National Airspace System (NAS), addressing risks posed by the transport of hazardous materials (hazmat), and removing unsafe vehicles and commercial drivers from roadways. At the same time, DOT must carry out its safety mission within a framework of diligent stewardship over its investments and assets. In particular, continued attention to strengthening the Department's internal controls and risk-based oversight is critical to the efficiency of taxpayer-funded projects to build, repair, and maintain the Nation's surface transportation system. DOT can also do more to reduce risk in its billion-dollar efforts to modernize the Nation's aviation system and to develop and sustain a high-performing workforce. Finally, DOT continues to struggle to secure the 450-plus information systems it uses to conduct business and operate critical transportation systems, ensure continuity of operations, and safeguard systems from insider threats.

ADDRESSING NEW AND LONGSTANDING SAFETY CHALLENGES

Making the Nation's airspace, environment, and roads safer continues to be DOT's top priority. Addressing a number of new and longstanding safety issues we have identified will be critical for DOT to maintain and improve the Nation's transportation safety record. In addition to the new challenges of safely integrating UAS into the NAS, DOT must continue to reduce safety risks in transporting hazardous materials while improving safety on our Nation's roadways.

Integrating Unmanned Aircraft Systems Safely Into the National Airspace System

DOT, the Federal Aviation Administration (FAA), and industry have maintained a remarkably safe aviation system, with no fatal passenger accidents involving domestic commercial carriers in over 7 years. However, the growing demand for commercial UAS operations—for purposes ranging from precision agriculture operations to package delivery—presents one of the most significant safety challenges for FAA in decades. Analysts predict that as much as \$93 billion will be invested in the technology worldwide over the next 10 years.

The FAA Modernization and Reform Act of 2012 requires FAA to take multiple steps to safely integrate UAS into the NAS. However, FAA and industry have not reached consensus on UAS-specific technology standards that are critical to safe integration. For example, FAA and industry still lack standards to ensure that UAS can automatically detect and successfully maneuver around other aircraft operating in nearby airspace.¹

FAA also lacks a regulatory framework for UAS integration, which would govern areas such as small UAS (under 55 pounds) operations, beyond-line-of-sight procedures, larger unmanned aircraft systems, and pilot qualifications. FAA currently approves commercial UAS operations only on a case-by-case basis, leveraging an au-

¹ While FAA 14 CFR 91.113 describes a pilot's ability to "see and avoid" other aircraft, the UAS community is using the term "detect and avoid" to describe the desired capability of UAS.

thority granted by Congress to exempt small UAS from certification requirements.² So far, FAA has issued over 3,800 exemptions. We are currently reviewing the UAS exemption and safety oversight processes. FAA intends to issue its rule on small UAS operations in late spring 2016—more than a year and a half behind the schedule established in the act. However, several high-profile aspects of UAS use—such as package delivery—will not be covered under the rule, which underscores the need for further regulatory efforts. FAA also has not established standard procedures for safely managing UAS in the same airspace as manned aircraft or an adequate UAS training program for controllers.

As the number of UAS operations continues to grow, safety and oversight will remain a significant concern. According to FAA, reported UAS sightings by pilots have increased significantly, with more than 1,100 reports in 2015, compared to just 238 reported in all of 2014. Some reports indicated safety risks, such as pilots altering the course of their aircraft to avoid UAS. Despite these risks, FAA does not have a formal system to track and classify the severity of UAS incidents. In addition, FAA inspectors still lack clear guidance on how to conduct UAS oversight. FAA reports that, through its recently established registration process, nearly 370,000 operators have already registered their unmanned aircraft. The impending rule on small UAS is likely to further increase the number of UAS in our airspace, making UAS oversight an increasingly critical responsibility for FAA's safety inspector workforce.

Strengthening Cross-Modal Efforts To Address Pipeline and Hazmat Safety Risks

A key DOT mission requiring strong cross-modal efforts is mitigating the safety risks posed by transportation of hazmat. From 2010 through 2014, there were more than 3,000 pipeline and 78,000 hazmat incidents in the United States, including about 3,500 rail incidents involving hazmat. These incidents resulted in fatalities and injuries, as well as environmental and property damage. Transportation of hazmat by air also presents serious risks, with more than 70 incidents worldwide between 1991 and 2014 involving lithium batteries in aviation cargo and passenger baggage.³

The Pipeline and Hazardous Materials Safety Administration (PHMSA) works to implement robust and timely safety measures for mitigating significant hazmat and pipeline accidents. However, PHMSA has made limited progress towards meeting safety recommendations by the National Transportation Safety Board (NTSB) and congressional mandates. For example, PHMSA has not fully implemented a 2007 NTSB recommendation to require railroads to immediately provide emergency responders with real-time information regarding the identity and location of all hazardous materials on a train. PHMSA also has not fully implemented the safety measures included in the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011.⁴ These measures aim to improve operators' assessments of gas pipelines, require leak detection systems on hazardous liquid pipelines, and establish regulations for transporting carbon dioxide by pipeline.

On the aviation front, FAA established the Hazardous Materials Voluntary Disclosure Reporting Program (HM VDRP) in 2006, which allows air carriers to voluntarily disclose violations of hazmat regulations without receiving civil penalties. While this is a good step towards encouraging air carriers to improve hazmat safety, our 2015 report⁵ found that FAA lacked an adequate framework of internal controls to effectively carry out HM VDRP. For example, FAA requires air carriers to complete corrective actions for violations they disclose through the program. However, for 31 of the 48 (65 percent) closed cases we reviewed, FAA did not request sufficient evidence to verify that air carriers completed all corrective actions or conducted self-audits as required. In response to our findings, FAA recently issued a new policy to require air carriers to document all corrective actions taken and FAA regions to coordinate with FAA Headquarters on proposed corrective actions and significant HM VDRP cases. Effective implementation of this policy will require follow through with adequate training and guidance to maximize HM VDRP's potential as a safety program.

Finally, the Federal Railroad Administration's (FRA) enforcement of PHMSA regulations plays a large role in the safety of hazmat transported by rail. In fiscal year

²These requirements include the steps necessary to obtain an airworthiness certificate, including demonstrating to FAA that the UAS conforms to an approved aircraft design and is in condition for safe operation.

³These incidents included extreme heat, smoke, fire, or explosions in aviation cargo and passenger baggage.

⁴Public Law No. 112–90 (2012).

⁵Program and Data Limitations Impede the Effectiveness of FAA's Hazardous Materials Voluntary Disclosure Reporting Program (OIG Report Number AV–2015–034), March 13, 2015.

2015, FRA reported that its inspectors identified 1,670 violations of hazardous materials regulations, and the Agency fined railroads and other regulated entities⁶ roughly \$3.9 million. Key elements in an effective enforcement program are considering risk when allocating enforcement resources and imposing sufficient penalties to deter future violations. Last month, we issued a report identifying shortcomings in the risk assessments FRA uses for allocating hazardous materials inspection resources and raised concerns about FRA's use of civil penalties and lack of criminal case referrals to OIG. FRA has agreed to implement our recommended improvements.⁷

Increasing Safety on Our Nation's Highways

Recent large-scale recalls from automotive manufacturers and continued efforts to enforce motor carrier regulations highlight a number of safety challenges the Department faces. Over the last 2 years, General Motors (GM) has recalled nearly 9 million U.S. vehicles for a defect involving a faulty ignition switch after it received more than 100 reports of death claims and more than 200 injury claims.⁸ The GM recall and others have prompted reviews and recommendations on how NHTSA can improve its safety processes and controls, and NHTSA is working to address these concerns. For example, in 2011 we made recommendations to strengthen NHTSA's Office of Defects Investigations' (ODI) procedures for documenting and retaining evidence on defects investigations, coordinating with foreign nations to identify safety defects or recalls, and documenting its justifications for not investigating identified defects. Last month, we reported on NHTSA's progress towards those recommendations.⁹ While NHTSA has completed the agreed-upon actions, we are concerned with how it is implementing some of them; in particular, NHTSA lacks mechanisms to ensure staff consistently apply the new policies. For example in response to one of our recommendations, ODI agreed to document justifications for exceeding investigation timeliness goals; however, over 70 percent of delayed investigations we reviewed did not include justifications for why these goals were not met. We made two new recommendations to enhance ODI's quality control mechanisms, and NHTSA fully concurred.

NHTSA also agreed to implement the 17 recommendations stemming from our June 2015 audit, which found weaknesses with how ODI collects vehicle safety data and uses that data to determine whether to open an investigation.¹⁰ For example, ODI's processes were insufficient for verifying that manufacturers submit complete and accurate early warning reporting data, which can be essential for identifying potential safety trends or concerns.

It will also be critical for NHTSA to follow through on NHTSA's Path Forward, a 2015 self-evaluation report released by the Secretary of Transportation. Through this effort, the Secretary seeks to improve NHTSA's ability to hold manufacturers accountable by implementing more effective methods for overseeing carmakers and their suppliers, as well as collecting and communicating vital safety information. The Secretary also announced the formation of an expert panel to help strengthen NHTSA's defect investigation workforce. It will be important for DOT to closely monitor how NHTSA addresses the panel's findings and recommendations.

At the same time, DOT has important opportunities to improve the safety of its highway infrastructure, particularly the bridges and tunnels that connect our Nation's roadways. For example, the Federal Highway Administration (FHWA) must maintain momentum in its initiatives in response to our recommendations to implement data driven, risk-based oversight of bridges and implement improvements to bridge safety mandated under the Moving Ahead for Progress in the 21st Century Act (MAP-21).¹¹ FHWA must also continue its oversight of highway tunnel safety according to the National Tunnel Inspection Standards that became effective in August 2015 and maintain a national tunnel inventory.

⁶Entities that received these violations and fines may include railroads, shippers, or tank car repair facilities.

⁷FRA's Oversight of Hazardous Materials Shipments Lacks Comprehensive Risk Evaluation and Focus on Deterrence (OIG Report Number ST-2016-020), February 24, 2016.

⁸GM's ignition switch compensation fund had approved 124 death and 275 injury claims as of August 21, 2015.

⁹Additional Efforts Are Needed To Ensure NHTSA's Full Implementation of OIG's 2011 Recommendations (OIG Report Number ST-2016-021), February 24, 2016.

¹⁰Inadequate Data and Analysis Undermine NHTSA's Efforts To Identify and Investigate Vehicle Safety Concerns (OIG Report Number ST-2015-063), June 18, 2015.

¹¹FHWA Has Not Fully Implemented All MAP-21 Bridge Provisions and Recommendations (OIG Report Number MH-2014-089) August 21, 2014, and FHWA Effectively Oversees Bridge Safety, but Opportunities Exist To Enhance Guidance and Address National Risks (OIG Report Number ST-2015-027) February 18, 2015.

Another critical—and longstanding—highway safety concern is reducing motor carrier fatalities. Our safety investigations continue to identify challenges for the Department and the Federal Motor Carrier Safety Administration (FMCSA) as they seek to remove unsafe motor carriers from highways. Since fiscal year 2008, we have opened 272 criminal investigations involving motor carrier safety. I would like to highlight two focus areas where the Department and FMCSA can bolster their safety efforts.

First, FMCSA must take stringent enforcement and out-of-service actions to remove motor carriers that repeatedly violate and blatantly seek to circumvent safety regulations, including (1) hours of service regulations and records of duty status; (2) medical, drug, and alcohol testing requirements for drivers; and (3) vehicle inspection, repair, and maintenance records. In some instances, these carriers have been involved in multi-vehicle crashes and fatalities. While FMCSA has taken enforcement actions and is collaborating with our office and other law enforcement partners to remove these carriers from service, carriers intent on breaking the law continue to pose a significant threat to highway safety. Key actions to keep unsafe carriers off the road include effective vetting of carriers' applications, focusing resources on high-risk carriers, and prosecuting companies that are caught violating the law.

The second area concerns reincarnated carriers—carriers that attempt to operate as different entities in order to evade FMCSA's enforcement actions. Reincarnated carriers have been involved in approximately 14 percent of the motor carrier safety investigations we opened since fiscal year 2008. For example, in Texas, we investigated a company that was issued an unsatisfactory safety rating by FMCSA for numerous violations, including falsifying hours-of-service requirements and using drivers who were not medically examined or certified. After being placed out of service by FMCSA, the company reincarnated under a different name and was involved in a passenger bus crash that killed 14 people. FMCSA proposed that Congress modify Section 521 of Title 49 U.S.C. to make it a criminal penalty for knowingly and willfully violating an out-of-service order, which will assist in prosecuting reincarnated carriers. Criminal penalties under Section 521 currently contain only a misdemeanor provision, which is difficult to prosecute and less likely to result in jail time if prosecuted; therefore, its effect as a deterrent is limited.¹²

CONTINUING DILIGENT STEWARDSHIP OVER DOT'S CRITICAL INVESTMENTS

Diligent stewardship of DOT's investments of taxpayer funds is vital for the Department to effectively carry out its mission. While DOT remains committed to strengthening its oversight for highway, rail, and transit projects, opportunities remain to improve its risk-based oversight of projects and strengthen financial controls to protect its investments. In addition, FAA faces challenges in its efforts to provide effective contract and acquisition management—a critical element in reducing risk for the major programs and systems in which it has invested.

Maximizing Federal Investments Through Improved Risk-Based Oversight and Better Financial Controls

DOT receives over \$50 billion in Federal dollars annually to fund projects to build, repair, and maintain the Nation's surface transportation system. Strong risk-based oversight and financial controls are key to the success of the more than 100,000 transportation projects funded by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) each year.

FHWA recently revised its overall risk-based strategy to overseeing Federal-aid highway project funds. This revised effort includes improving the linkage between FHWA's annual assessments of State and Federal-aid highway programs and analyzing that information to better target its oversight reviews of highway and bridge projects. FHWA recently completed its first full performance cycle with these revised initiatives; in future performance cycles, management will need to assess whether the program is robust and working as designed and make improvements where needed.

However, to address more specific risks, FHWA needs to improve oversight of financial and program plans covering major highway and bridge projects—those exceeding \$500 million in funding—to implement its new guidance on project estimating, and address the backlog of pending Federal-aid highway project closeouts to ensure effective use of Federal funds. In addition, FHWA has yet to finalize improvements to its financial information system to improve project data used to oversee its programs.

¹²49 United States Code Section 521(b)(6)(A) is a misdemeanor statute for violations of certain FMCSA regulations.

FTA has similar opportunities to better target its oversight and use tools to meet its goals to ensure major projects are on time and within budget. For example, FTA did not verify the adequacy of the Metropolitan Washington Airports Authority's (MWAA) support for claimed costs on grant expenses for FTA's Dulles Rail Project.¹³ As a result, FTA initially reimbursed MWAA for more than \$36 million in unsupported and unallowable costs.¹⁴ In addition, FTA faces challenges in overseeing how local transportation agencies continue to use the approximately \$10 billion in relief funds for Hurricane Sandy. In 2015, we reported that FTA had not fully implemented the processes and internal controls (required by the Disaster Relief Appropriations Act) it established to award and monitor Hurricane Sandy funds.¹⁵ FTA also has yet to develop a formal coordination process with the Federal Emergency Management Agency to reduce the risk of duplicating emergency and disaster-related assistance.

Fraud remains another ongoing concern. For example, our investigators determined that an owner of a Massachusetts transit authority bus operator diverted grant funds that were designated to pay salaries, benefits, and other expenses for employees of the bus company.¹⁶ Similarly, during liaison and coordination efforts with FTA and other stakeholders, we discovered that a Hurricane Sandy grantee was not reporting fraud settlements to FTA. We have reported that the use of integrity monitors can help to prevent and detect fraud and noted the importance of sharing fraud allegations across organizations so we can partner to combat wrongdoing.¹⁷ As we stated in June 2015,¹⁸ FTA must focus on promptly addressing identified oversight issues; strengthening stakeholder agreements; and enhancing controls to prevent, detect, and report fraud.

Structuring Major Aviation Acquisitions To Successfully Manage Risk

FAA continues to award high-dollar contracts without fully addressing and mitigating risk in the acquisition planning and contract award stages, often resulting in large cost overruns and delays in system implementation.

First, FAA has had ongoing challenges in effectively structuring several of its major acquisitions.¹⁹ These issues have been prevalent with the \$1.8 billion Automatic Dependent Surveillance-Broadcast (ADS-B) system. ADS-B is a new satellite-based surveillance system for managing air traffic that is critical to the success of FAA's Next Generation Air Transportation System (NextGen). Since 2010, we have reported that FAA faces significant risks in implementing ADS-B and realizing benefits due to weaknesses such as its contract structure and oversight. For example, the ADS-B contract structure bundles tasks and costs, making it difficult for decisionmakers to manage the contract and track costs. In addition, FAA covered the first 18 years of ADS-B's 28-year lifecycle through one contract award, rather than breaking it into more manageable segments as OMB and the Federal Chief Information Officer recommend.²⁰ While FAA has finished deploying the 634 ADS-B ground

¹³ MWAA's Financial Management Controls Are Not Sufficient To Ensure Eligibility of Expenses on FTA's Dulles Rail Project Grant, (OIG Report Number ZA-2014-021), January 16, 2014.

¹⁴ FTA and Federal grant conditions require that grant recipients maintain support for federally funded project costs. MWAA did not have sufficient documentation to support some of the expenses charged to the Dulles Rail Project and these costs are considered unsupported. These principles also specify the types of costs that are allowable under Federal grant awards. An example of an unsupported cost that we found was invoices that said "labor" with no further details or documentation about what these charges included. An example of an unallowable cost that we found was \$54,000 for expenses that were outside the scope of the Phase 1 Project to which they were charged.

¹⁵ FTA Has Not Fully Implemented Key Internal Controls for Hurricane Sandy Oversight and Future Emergency Relief Efforts (OIG Report Number ST-2015-046), June 12, 2015.

¹⁶ The former owner was sentenced in July 2015 to 70 months in prison and ordered to pay \$688,772 in restitution in connection with his diversion of grant funds.

¹⁷ Initial Assessment of FTA's Oversight of the Emergency Relief Program and Hurricane Sandy Relief Funds (OIG Report Number MH-2014-008), December 3, 2013.

¹⁸ Oversight of Major Transportation Projects: Opportunities To Apply Lessons Learned (OIG Briefing No. CC-2015-010), June 8, 2015. We briefed Members of the Committee on Oversight and Government Reform, Subcommittee on Transportation and Public Assets, United States House of Representatives.

¹⁹ These acquisitions include the Wide Area Augmentation System (WAAS) Program, the Standard Terminal Automation Replacement System (STARS), and the En Route Automation Modernization (ERAM) system. FAA has awarded contracts for these large modernization efforts using a grand design, rather than through successive incrementally priced awards—each of which experienced cost increases, delays, and performance issues.

²⁰ FAA's AMS lacks sufficient guidance on practices that could minimize mistakes associated with acquisition planning, such as using modular contracting to award information technology

radio stations, based on our ongoing review, it remains unclear whether FAA has fully mitigated past problems associated with contract management and oversight to ensure it can achieve ADS-B technical requirements and do so within budget. We plan to issue our next report providing an update on how FAA is addressing ADS-B contract weaknesses later this year.

Second, FAA did not take sufficient steps to assess and mitigate risk factors we identified on a previous significant contract when selecting a bidder and awarding the new contract, potentially resulting in increased costs to the Agency. In 2015, FAA decided to award a \$727 million new Controller Training Contract (CTC), without first addressing longstanding issues we reported with its prior controller training contract, the \$859 million Air Traffic Control Optimum Training Solution (ATCOTS) contract. Specifically, in 2013, we reported that before awarding ATCOTS, FAA determined there was a 60- to 80-percent likelihood that the successful bidder would not meet FAA's training needs with the limited staff hours proposed.²¹ However, FAA did not require the contractor to address this issue prior to award and had to spend millions of dollars more than expected to make up for the shortfall in contracted resources. We made 10 recommendations in 2013 to improve FAA's management and oversight of the ATCOTS contract. We recently reported that while FAA addressed recommendations related to contract administration practices and oversight, it has not implemented those related to better defining training requirements and validating training costs.²² These recommendations were designed to improve FAA's ability to develop a comprehensive understanding of its training needs and, in turn, a more reliable estimate of the Agency's training costs. Because FAA awarded CTC without fully addressing these recommendations, it may encounter many of the same issues that compromised the success of the ATCOTS contract.

Developing and Sustaining an Effective and Skilled DOT Workforce

Maintaining an effective and skilled workforce is critical to ensuring a safe and vibrant transportation system. This means identifying and hiring the right number of staff with the requisite skill mix; adapting hiring and training practices to account for changing missions, requirements, and workforce demographics; and implementing policies and procedures that promote employees' success and ability to carry out DOT's mission effectively.

However, DOT agencies have not always taken adequate actions to ensure a robust workforce. For example, FAA lacks a comprehensive process for determining staffing levels needed to oversee its Organization Designation Authorization (ODA) program—a program that allows FAA to delegate certain functions, such as certifying aircraft components, to manufacturers and other organizations. Although FAA uses a staffing model to help identify overall ODA staffing needs, the model does not include detailed data on important workload drivers, such as a company's size and location, type of work performed, past performance, and project complexity and volume. In addition, FAA does not have the data or an effective model to accurately identify how many air traffic controllers it needs to maintain efficiency without compromising safety. Therefore, as we recently reported, many of FAA's busiest and most complex air traffic control facilities have a shortage of fully trained controllers.²³ We have an ongoing audit to examine FAA's new controller hiring process and the changes that have occurred since its implementation in 2014.

My office has made a number of recommendations to help DOT ensure its employees keep abreast of changing technology and missions. Now, agencies must follow through on actions planned in response to these recommendations. For example, in 2011 we found that NHTSA's ODI did not have a formal training program to help develop its current and future workforce to promote continuity of institutional knowledge. In 2015, NHTSA provided us a workforce assessment that evaluated its staffing and training needs for ODI. NHTSA must now fully implement the results of the workforce assessment to help inform future decisions on the resources required for this critical mission. Similarly, we found in 2014 that FHWA had not conducted a comprehensive assessment of MAP-21's impact on its workforce—despite the significant structural changes the act brought about, such as consolidation of several FHWA programs. FHWA has since completed an assessment that recognizes

contracts in incremental, workable segments; and using contract line items, with separate pricing, contract types, and deliverables, to better manage the acquisition.

²¹ FAA Needs To Improve ATCOTS Contract Management To Achieve Its Air Traffic Controller Training Goals, (OIG Report Number ZA-2014-018) December 18, 2013.

²² FAA Has Not Sufficiently Addressed Key Weaknesses Related to Its ATCOTS Contract (OIG Report Number ZA-2016-010), December 10, 2015.

²³ FAA Continues to Face Challenges in Ensuring Enough Fully Trained Controllers at Critical Facilities, (OIG Report Number AV-2016-014), January 11, 2016.

the Agency's need to make changes to the way it does business and deploys staff to meet MAP-21 requirements and carry out its mission effectively.

Changes in workforce demographics also present unique challenges for DOT. For example, 22 percent of DOT's acquisition workforce was retirement-eligible in fiscal year 2015, heightening the need for improved compliance with contracting officer (CO) training and experience requirements across all DOT agencies.²⁴ DOT's acquisition workforce is composed of hundreds of COs, CO representatives, and other supporting staff who provide agencies with the goods and services required to accomplish their mission at the best value to taxpayers.²⁵ While DOT has several training improvement initiatives under way for its acquisition workforce, our 2015 review found that it still needs to clarify and enforce its policies governing certification and warrant authority for COs.²⁶ Of the 63 COs we reviewed, 15 (24 percent) did not fully comply with DOT requirements. For example, 10 COs' certifications had expired, yet they continued to approve over 3,000 contract actions and obligate over \$731 million. While DOT recently revised its acquisition workforce policy in response to our report, full implementation of our recommendations and enforcement of these policies will be critical to ensure that COs have the appropriate training, experience, and certification to award and administer DOT's complex, high-dollar acquisitions.

ENHANCING DOT'S IT SECURITY AND PREPAREDNESS

Attacks on public and private sector information systems, carried out by increasingly well-funded and organized hackers, pose a continuous threat to the more than 450 information systems DOT uses to conduct business and operate some of the Nation's most critical transportation systems. While DOT has made progress in protecting its information systems, many remain vulnerable to compromise, underscoring the need for more effective contingency planning, and aggressive deterrence of insider threats.

Protecting DOT's Information Systems From Increasing Threats

DOT continues to face longstanding cybersecurity vulnerabilities and must take corrective actions to address identified weaknesses that pose threats to its information systems. To its credit, DOT has made major progress in implementing the required use of Personal Identification Verification (PIV) cards²⁷ for all DOT employees and contractors—a key step in securing access to DOT facilities and systems. DOT reported issuing PIV cards to 100 percent of its employees, and 98.3 percent have been configured for use in accessing networks—an increase of 74.5 percent from last year.

However, DOT has been slow to take corrective actions to address many other cybersecurity weaknesses. To help reduce cybersecurity risks, OMB requires agencies to track identified weaknesses using plans of actions and milestones (POA&M). Yet, in 2015, DOT had a backlog of more than 3,800 POA&Ms, which included 21 unimplemented recommendations we have made. DOT also remains behind schedule in implementing recommendations we have made in our annual Federal Information Security Management Act (FISMA) reports and other IT-related audits.

Many of our recommendations focus on key Administration priorities. For example, OMB requires agencies to implement continuous information system moni-

²⁴ FAA is excluded from these data and the scope of our work described in this paragraph because Congress exempted FAA from Federal acquisition laws and regulations in DOT's fiscal year 1996 Appropriations Act. Congress provided FAA with broad authority to develop its own acquisition process. Under this authority, FAA developed the Acquisition Management System and a set of policies and guidance designed to address the unique needs of the Agency.

²⁵ COs are Government employees who can bind the Federal Government to a contract. COs are responsible for ensuring performance of all necessary actions for effective contracting, ensuring compliance with the terms of the contract, and safeguarding the interests of the United States in its contractual relationships. Contracting Officer Representatives (COR) are Government employees responsible for monitoring the contractor's progress in fulfilling the technical requirements specified in the contract. For example, CORs maintain administration records, approve invoices and perform quarterly monitoring reports to confirm the contractor is meeting the terms and conditions under the contract.

²⁶ Some Deficiencies Exist in DOT's Enforcement and Oversight of Certification and Warrant Authority for Its Contracting Officers (OIG Report Number ZA-2015-041), April 9, 2015.

²⁷ A PIV card is a smart card that contains the necessary data for the holder to be granted access to Federal facilities and information systems and assure appropriate levels of security for all applicable applications.

toring, which can provide near real-time security information to senior leaders, by 2017.²⁸

However, DOT has not yet defined the practices or technologies that should be used or established common security controls²⁹ to help protect its information systems, including high-value asset³⁰ systems. Specifically, DOT is still conducting planning and research to determine the resources needed to ensure that common controls are properly used, implemented, and monitored. Until those are finalized, DOT remains vulnerable to more aggressive and complex cyber threats due to insufficient security controls.

Strengthening Contingency Plans and Security Protocols To Deter Insider Threats

We continue to find weaknesses in DOT's ability to plan for contingencies and recover from disruptions, even for critical systems. For example, our ongoing work has shown that several Operating Administrations did not conduct annual contingency plan testing for their selected mission critical or high- and moderate-impact systems to ensure they will work in the event of a disruption, as required.³¹ Specifically, 5 of the Department's 12 Operating Administrations did not comply with DOT policy to conduct such testing or meet all DOT requirements for their disaster recovery plans, potentially limiting their effectiveness at ensuring continuity of critical systems in the event of a malicious attack.

The importance of effective contingency plans was demonstrated on September 26, 2014, when an FAA contract employee deliberately started a fire that destroyed critical telecommunications equipment at FAA's Chicago Air Route Traffic Control Center in Aurora, IL. As a result of the damage, Chicago Center was unable to control air traffic for more than 2 weeks,³² thousands of flights were delayed or cancelled, and aviation stakeholders and airlines reportedly lost over \$350 million. While FAA completed comprehensive reviews of its contingency plans and security procedures following the Chicago Center incident, significant work remains to prevent or mitigate the impact of similar events in the future.

Notably, the event highlighted the need to enhance security and increase the flexibility and resiliency of the national air traffic control system. For example, FAA lacked the controls necessary to block access to a contract employee no longer assigned to this facility, thereby leaving the Center's high-value systems vulnerable to unauthorized access, disruption, and loss of information. Other insider threats pose significant threats to security, ranging from an employee who maliciously steals data to an employee who unwittingly opens infected email attachments. For example, in 2014, a DOT employee opened an infected email attachment and unleashed a serious computer virus (known as "Dyre") into DOT's network, compromising more than 5,000 computers and resulting in loss of productivity, email interruptions, and data loss. The virus was designed to steal information (including passwords), avoid routine detection, and generate new emails with attachments to further spread the virus. While DOT reported that the virus has been mostly eradicated, it noted the need to better train employees to protect DOT's systems to lower the risk of system compromise.

CONCLUSION

The safe and efficient movement of people and goods is vital to our Nation's economic growth, global partnerships, and quality of life. The Department has clearly demonstrated its commitment to advance these priorities. To continue addressing the management issues we have identified as well as a changing transportation environment, it will be important for the Department to follow through with new safe-

²⁸ Continuous monitoring involves establishing processes and capabilities to provide near real-time security information to senior leaders.

²⁹ Necessary to meet requirements of the National Institute of Standards and Technology (NIST), common system security controls are controls that exist in one system that can be used to protect other systems.

³⁰ High-value assets are assets, systems, or datasets that may be considered "high-value" by the Department based on the following attributes—sensitivity of the information, uniqueness of the dataset, impact of loss or compromise, system dependencies, and systems that are integral to supporting critical department communications. A system is considered "high impact" if the loss of confidentiality, integrity, or availability for that system could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.

³¹ Departmental Cybersecurity Compendium Supplement to DOT Order 1351.37, "Departmental Cybersecurity Policy," Version 3.0, September 2013.

³² Chicago Center's air traffic and airspace responsibilities were eventually transferred to other facilities, based on a 2008 contingency plan and airspace map. This required extensive adjustments to ensure adequate radar and radio communication coverage.

ty standards and recommended actions, stronger financial and project controls over major investments, and vigilant security and preparedness measures.

We remain committed to assisting DOT as it works to improve how it manages programs and resources and to our role in ensuring the greatest return on investment to taxpayers. I appreciate this Committee's continued support in the coming fiscal year to enable us to enhance our coverage of the Department's safety programs, high-dollar administrative and management assets, and information systems security.

This concludes my prepared statement. I will be happy to answer any questions you or other Members of the Subcommittee may have.

CYBERSECURITY

Senator COLLINS. Thank you very much.

I was very pleased that you mentioned cybersecurity and the vulnerabilities there. What is your assessment of the vulnerabilities and risk to critical infrastructure that is part of the Department of Transportation?

Mr. SCOVEL. Thanks for the question.

We are very concerned. It remains a significant vulnerability for DOT as it does for virtually every other agency across all of government. It is a threat that seems to grow by leaps and bounds. And despite the best efforts of the cybersecurity officials in DOT as well as other units of the Government, it is almost as if they are being overtaken by the threat and by technology itself.

As you know, we are required to conduct a Department-wide survey, if you will, of information security management every year. We have found that, in the past year, DOT made significant progress, as I mentioned, in the use of PIV cards, requiring PIV cards, which, when they are fully implemented across the board, will be essential not only for facility access, physical security, if you will, but also for what the techies call logical access. They can be used to gain access to particular security or computer programs.

On the other hand, where the Department has struggled is in implementing its plan of action and milestones (POA&Ms). They are plans of action and milestones to address critical vulnerabilities.

In fiscal year 2014, DOT had about 5,600 POA&Ms on the books. By the end of fiscal year 2015, they had reduced that number to about 3,200, so they had made some progress.

But those that remain constitute significant tough nuts, in our opinion, to crack. Many of those POA&Ms do not yet have start dates assigned to them. The Department has not yet been able to even estimate the remediation costs in order to implement those.

I mentioned in my prepared statement continuous monitoring, which is a top priority across all of government, so that senior officials can understand on a real-time basis when threats are appearing and what immediate action they may be able to take to deal with them.

In order to make progress on that, the Department has to identify those key nodes across all of DOT's cyberspace, so that if there are places where a single, common system security control can be effective, it can be placed at that one place, and it can have a ripple effect for security across the board.

Just very quickly, and I have talked a long time on this, because, as you know, it is a significant problem. DOT has about 200 critical systems out of the 463 on the books; 163 of those belong to FAA. DOT understands it needs to prioritize its cybersecurity efforts to

protect those most critical systems through the means that I mentioned, the POA&Ms, the continuous monitoring, and the common system security controls.

CYBERSECURITY—NEXTGEN

Senator COLLINS. That was an excellent answer, and I very much appreciate the thoroughness. This has been a major concern of mine.

Do you think that the NextGen system, which we are installing for air traffic control, will help decrease the vulnerability of our air traffic system to a cyber attack?

Mr. SCOVEL. Madam Chairman, it will help in some respects, but in other respects, the NextGen systems themselves may be vulnerable. We have undertaken some testing of some of the systems, ADS-B (Automatic Dependence Broadcast System) and others. We have concerns about those.

I am not at liberty in an open forum to discuss those, because our reports have been properly deemed, after review by the Department, to constitute sensitive security information. We have spoken with your staff on some of those matters in the past. We would be happy to come over and in a closed setting discuss them with you in more detail.

SEXUAL ASSAULT AND SEXUAL HARASSMENT

Senator COLLINS. Thank you very much. This is an issue that I continue to pursue from my seat on the Intelligence Committee as well.

I want to follow up on a question that Senator Reed asked the Secretary, and that has to do with sexual assault at the U.S. Merchant Marine Academy.

The Department's most recent report on the academy shows that the level of sexual assault and harassment remains unacceptably high. There continues to be a large discrepancy in the number of sexual assaults that are officially reported and the responses to the anonymous survey. That is very troubling because it implies that the midshipmen women still do not have the trust and faith in the academy's leadership to report incidents when they occur, whether it is on campus or at sea.

What recommendations do you have for how we can change the underlying cultural attitudes that the Secretary referred to that appear to either turn a blind eye to or in some ways not really condone but do not forcefully act on such a disturbing level of sexual assault and harassment at the academy?

Mr. SCOVEL. Madam Chairman, this is a most disturbing problem. You and I and Senator Murray have had discussions on this in the past, and I greatly appreciate your interest and concern on behalf of the students at the Merchant Marine Academy. I think the ranking member is exactly right when he pointed out earlier, in questions to the Secretary, his observations concerning his experience at West Point and elsewhere in the military, Senator.

But when a critical mass is achieved in the student body and even more particularly, in the administration leadership at the academy itself, things can change.

Obviously, as inspector general, I am not in a position to influence that, but where we have brought our forces to bear, on, that is, with the assistance and at the request of this committee and others, to take a look at what the school and the Maritime Administration have done, what they have planned, what other recommendations for improvement we might be able to make to them.

We did that in the 2014 report. We furnished them nine recommendations at the time. After close scrutiny, my staff concluded that the recommended actions had all been taken by the academy administration, so we were able to close all nine of our recommendations from the 2014 report.

At about the same time, the academy, much to its credit, embarked on its own action plan, 44 steps across six or seven different phases that they intended to carry out in order to make concrete progress on building the trust and confidence that you mentioned is necessary on behalf of students.

They closed their action plan in 2015 without having completed all 44 items that constituted the plan. They left—not unaccounted for, but unresolved, at least to our satisfaction—a handful. I think it was seven, to be specific.

But we are continuing our discussions. At the committee's request, we have been asked to examine the academy's actions on that action plan and see if it meets with our approval, at least. We are continuing those discussions. We are going to have further meetings over the next month or so on the remaining seven. We will be in a position at that point to come and discuss with the staff and you, if you wish, how we feel on the academy's progress.

You mentioned earlier, and it has come up, but I would like to mention it too, because it is a concern for me, and I have emphasized with our staff—that is, a look at the academy's action plan, however good it may appear to be for implementation on the grounds at King's Point. There are anywhere from 8 to 12 months of an academic year when students go out in very small groups and are at sea for extended periods of time and put into port in places that are much different culturally and, frankly, can get wild. We can all use our imaginations on things like that.

Those are opportunities for young people, male or female, to be vulnerable and to find themselves in trouble. So the Academy's action plan needs to really get at that specific point in order to have a fighting chance of getting trust and confidence back among the students.

Senator COLLINS. Thank you.

Senator Reed.

HAZARDOUS MATERIALS

Senator REED. Thank you very much, Madam Chairman.

And thank you, Mr. Scovel. Obviously, we take your reports very seriously, since we have used it for significant questions of the Secretary.

Again, going back to your report on hazardous materials transportation, one aspect of the report was a finding that many cases merit referral to your office for actual criminal investigation. Can you provide some examples of those types of cases?

Mr. SCOVEL. I can. I will be happy to.

Just to review it a little bit, and I will try to do it quickly, a couple years ago, I was on a field visit to one of our investigative field offices in Florida. And I spoke with one of our agents there who reported that in her 15-year career or so with our Office of Inspector General, she had received criminal referrals from virtually every other operating administration in the Department except for FRA. She was disturbed by that.

That got my attention. I came back to headquarters. We had on our planning schedule a look at FRA hazmat procedures, and I asked them to put in a specific objective to examine this question of criminal referrals. So we were able to tackle that.

I can say that in the cases that we looked at, and there were 75 between fiscal year 2010 and fiscal year 2014, we had received zero criminal referrals from FRA. We found, however, that there were instances of those 75—23 percent, as we looked at it through both auditors' and investigators' eyes, should have merited some attention from my staff, trained criminal investigators. So those were 17 out of the 75 cases.

A couple of examples. One company produced valves that had not been put through a required design approval process. Those valves later caused leaks on tank cars carrying hazardous materials. FRA chose to pursue civil penalties against that company and in March 2015 released a rail worthiness directive on valve replacement, but never referred the case to our office for criminal investigation.

Another example. A different company released overweight tank cars for use several times without rectifying the weight problems and after they had been certified by that company as underweight. These circumstances indicate possible false statements by a repeat violator, but FRA did not refer that case to our office for criminal investigation either.

A final example. Another company may have made a false statement when it did not include in a bill of lading the radioactive containers located on a flat railcar on the train, but FRA again did not refer the matter to our office.

Senator Reed, we have heard from every single other operating administration in the Department, including even the St. Lawrence Seaway Development Corporation, in those years, 2010 through 2014. Even St. Lawrence Seaway referred a criminal matter to us.

We have had zero from FRA, whether it was safety related or whether it was potentially grant-fraud related. As you know, FRA has significant oversight responsibility now for high-speed rail grants.

So we have embarked on a concerted effort, and I know we have the support and attention of the Department's highest leadership as well as FRA itself, in order to turn that around, without using every tool in the toolbox—which includes not only civil penalties to FRA's leadership but also criminal investigations, when properly warranted. It amounts to what I call partial disarmament on the part of the safety regulator. That is most disturbing. I would like to see it corrected.

CRIMINAL VIOLATIONS

Senator REED. Let me just follow up with a question. This is for my benefit as much as anybody else.

The procedure in the Department is that an agency would submit a potential criminal violation to your office. You would investigate it, and then you would submit it to the Federal Bureau of Investigation (FBI) or the Federal attorney? What is the stop out of your office?

Mr. SCOVEL. Thanks. We would take it to the assistant U.S. attorney, to the U.S. attorney in the district where the alleged violation occurred.

Quite honestly, they have their own priorities, as I am sure you understand. Counterterrorism and public corruption these days are number one on the list for FBI and Department of Justice attention. So matters like this can sometimes be difficult for us to attract attention. But with safety cases, particularly where the potential for grievous effects is significant, depending on when and where, we can often get Department of Justice cooperation.

Senator REED. So it is not like that FRA is going directly to the Federal level. They have to go through you. They are not going through you.

Mr. SCOVEL. Yes. This is in contravention I should say, too, of Department orders that are very specific—that when possible criminal activity comes to the attention of any of the modes, they are to refer it to the Office of Inspector General.

ADDITIONAL RESOURCES

Senator REED. Thank you. Just a final question on that, the administration submits a budget for your office and you submit a budget for your office. And we have to sort of parse it.

You are requesting additional resources from the administration's budget, including 25 additional full-time equivalent (FTE) positions, I believe. First of all, again, we appreciate the work you are doing and the work is increasing, I am sure. But can you explain how you are going to use this additional staff, and why you need it?

Mr. SCOVEL. I would be happy to, and thank you for the question. I have some notes, and if you will bear with me, I want to be careful in how I say this because we, of course, have had communications with the Department and with OMB as well as others on the Hill here already, and I want to make sure I am consistent.

Senator REED. Yes, sir.

Mr. SCOVEL. We have always appreciated it, at DOT OIG, this committee's, and your colleagues' committees over on the House side, concern and interest in and support across all the years. I have been the inspector general for a little over 9 years, and it has been magnificent.

Here is where we stand now. OIG's budget request to OMB was \$93.6 million in support of an estimated 422 career level FTEs. The President's budget request is for \$90.2 million in support of an estimated 397 career level FTEs. That would be sufficient as well for 13 student and expert FTEs.

We do appreciate that the President's budget is intended to help us move in the right direction. But I consider myself duty bound to advise you, and now that you have asked, we have advised OMB in our original budget request, the 25 additional FTEs we originally requested is the number of staff that would enable us to fully

execute our mission focusing on safety across all transportation modes while continuing to identify cost-saving opportunities and making recommendations to improve program efficiency and effectiveness. Operating below OIG's requested level puts at risk our ability to provide full and effective oversight of expanding DOT programs.

I submit that based on our office's record for many years now, whatever appropriated dollars are sent our way, we make tremendous use of. A traditional measure in the accountability community is called return on investment. In 2015, our return on investment was 32-to-1; for each single appropriated dollar, we were able to return financial recoveries to the Government of \$32. For the 5 years prior to that, it was 29-to-1. So that puts us really among the top tier of Federal Offices of Inspector General.

The resources we have requested for 2017 we believe are necessary to enable us to provide critical audit and investigative support of aviation and surface safety issues. We plan to sharpen our focus on administrative, management, and procurement programs with significant budget and information security impacts.

We need to maintain certain technical capabilities needed to conduct increasingly complex audits and investigations.

And we are also overdue, since we are talking about cybersecurity, to take measures to reinforce our own IT security posture.

We also have significant new oversight responsibilities, and we welcome them, that have been associated and handed to us through the FAST Act, the Digital Accountability and Transparency Act (DATA Act), the Grants Oversight and New Efficiency Act (GONE Act), and the Surface Transportation Board (STB) Reauthorization Act.

Full funding would enable us to, most importantly, cover the increasing personnel costs that are largely outside of our control and that have left us with insufficient funds to support our full allotment of career level FTEs.

Sir, 75 percent of OIG's budget goes to payroll, if you will. Much of the balance of that 25 percent is for expenses over which we have no control—rent and the Department's own working capital fund.

I will close by thanking you and the chairman and all members of the committee for your consistent concern and support for our mission. I well recognize that every government agency these days operates in a financially constrained environment. And I pledge to you that no matter what the final decision may be for our office's appropriation, we will do all we can with all we have, and my staff sitting behind me has heard me utter those exact words in all-hands meetings and everything else. We will always do all we can with what we have to support the Secretary and the Congress.

Senator REED. Thank you.

If I can make just one brief comment, the chairman has been very thoughtful about including the inspector general in these hearings, and the HUD inspector general has made the same basic comments about IT security, which is a multibillion-dollar, government-wide sort of cost that is recognized but not funded. We were commenting about that after he left.

So we have to do some thinking I think. Thank you, Madam Chair.

Mr. SCOVEL. Thank you, sir.

Senator COLLINS. I certainly agree with the ranking member in that regard.

Mr. Inspector General, I want to thank you so much, not only for your excellent testimony today. I was impressed, since we gave you know warning that I was going to ask you about cybersecurity, how extremely on top of that issue that you are, which I think is appropriate because I do believe it is one of the greatest vulnerabilities that we have facing our critical infrastructure and one that we have done the least to truly deal with in a serious way.

But I am always very impressed when I meet with you, have discussions with you, or hear you testify. So my thanks to you and your office and dedicated employees who are working hard to make sure the Department is as efficient as possible.

ADDITIONAL COMMITTEE QUESTIONS

The hearing record will remain open, as I indicated, until next Friday, March 25. Undoubtedly, additional questions will be submitted to you for the record.

[The following questions were not asked at the hearing, but were submitted to the Department subsequent to the hearing:]

QUESTIONS SUBMITTED BY SENATOR SUSAN M. COLLINS

Question. The Department recently announced the seven finalists for the Smart City Challenge, which is intended to provide \$40 million over 3 years to a medium-sized city for deployment of intelligent technologies. These may include technologies such as autonomous vehicles, urban automation, sensor-based infrastructure, and electric vehicle fleets to help reduce congestion and provide innovative solutions for safety and mobility.

Mr. Secretary, given the limited amount of funding available for research and technology, does it really make sense to spend a substantial amount of money on only one city?

Answer. On December 2015 USDOT issued a Notice of Funding Opportunity challenging medium-sized cities to solve tomorrow's transportation challenges using technology and innovation. The overwhelming response surprised us. Seventy-eight medium-sized cities from across the country—from Portland to Providence and from Anchorage to Albuquerque—submitted thirty-page vision proposals.

We intend to offer one city \$40 million because a substantial amount of money focused on one city has the potential to (1) be more effective in getting the attention of medium-sized cities, (2) inspire cities to use 21st century technology and innovation to solve tomorrow's transportation challenges, (3) produce solutions that are replicable in other medium-sized cities, (4) make the United States the leader in the development of smart city transportation solutions, (5) be enough money to create a demonstration that will make an impact in a medium-sized city, (6) encourage universities, foundations, NGOs to help these cities look to the 21st century solutions, and (7) be sufficient to attract technology companies to form partnerships with the seven finalists. While only one city will win, the Smart City Challenge started a conversation in seventy-eight cities that has the potential of changing how they look at transportation.

Question. As I mentioned in my opening statement, I am frustrated the Department continues to use the same old gimmicks we have seen in the past, shifting programs from discretionary to mandatory. The budget proposal, excluding funding for Amtrak, includes \$4.1 billion in proposed mandatory spending for "High-Performance Rail" all the while we have the Railroad Rehabilitation and Improvement Financing Program with nearly \$33 billion in available loan assistance sitting unobligated.

The fiscal year 2016 omnibus provided nearly \$2 million to the Federal Railroad Administration to support short line railroads with costs associated with RRIF loan

applications. Additionally, the FAST Act included reforms to RRIF to make the program more accessible.

Mr. Secretary, how does the Department plan to use the funds provided in fiscal year 2016 and given the changes made by the FAST Act what concrete steps are you taking to get RRIF funding out the door?

Answer. As directed by the fiscal year 2016 Consolidated Appropriations Act, the Department intends to use the \$1.96 million appropriated under Section 152 of Division L of the Act to assist Class II and Class III railroads in lowering costs related to applying for a loan under the Railroad Rehabilitation and Improvement Financing (RRIF) Program. Specifically, these funds will be made available for applicant expenses in preparing to apply and applying for direct loans and loan guarantees. The Department is currently developing guidance to define how these funds will be made available to eligible applicants to defray costs, ensure efficient application processing, and achieve loan closing.

Increasing access to and usage of the RRIF Program is a top priority of the Department. The program can play an important role in advancing major infrastructure projects and assisting potential borrowers in completing smaller infrastructure, equipment, and refinancing projects that play a vital role in the borrowers' operations and the overall performance of the rail network. Prior to the enactment of the FAST Act, the Department had implemented process improvements to increase stakeholder outreach, provide technical assistance to prospective borrowers, and improve the efficiency of the loan application process. In 2015, the FRA completed the same number of loans—two—as the previous 3 years combined.

The FAST Act contains several provisions intended to further streamline the loan approval process, increase applicant eligibility, and fund a wider array of projects.

The FAST Act also established the National Surface Transportation and Innovative Finance Bureau (Bureau) within DOT. The Department is in the process of establishing the Bureau to help consolidate outreach/coordination of DOT credit programs, process applications more efficiently, provide technical assistance, and communicate best practices regarding DOT financing and funding opportunities.

Question. Last fall, Administrator Huerta testified before this subcommittee on how to successfully integrate unmanned aircraft systems into our Nation's airspace. Given the rise in the number of U.A.S. sightings near our Nation's airports, I remain concerned about the threat posed by potential interference with airport operations. Mr. Secretary, what is the F.A.A. doing to address this alarming growth in "close calls" of U.A.S. near airports?

Answer. As of December 21, 2015, everyone who flies a UAS that weighs more than 0.55 pounds and less than 55 pounds outdoors must register using the FAA's new online registration system. Before completing registration, registrants must acknowledge safety guidelines, which include restrictions and requirements for flying near airports. As of the end of March, over 415,000 operators have registered.

Registration is a key component of the FAA's education efforts, which also include the No Drone Zone campaign, the B4UFLY smartphone app, and providing airports with educational public service announcements to display in their terminals.

Recognizing that education has its limits, the FAA is also working with inter-agency partners to evaluate UAS detection technology in the vicinity of airports. As part of the FAA's Pathfinder program, testing of a detection system developed by CACI International was completed at the Atlantic City International Airport in February 2016. A total of 141 tests were conducted—72 with a UAS on the ground and 69 with different, small UAS in flight. Engineers from the FAA, CACI, and the Department of Homeland Security will develop a final report of findings by August 2016.

The FAA pursues enforcement action against the operator where unsafe or unauthorized UAS operations occur that have a medium to high impact to the safety of the National Airspace System (NAS), where the operator is intentionally non-compliant, or where the case involves repeat violations. Enforcement action can take the form of a civil penalty or a certificate action if the operator holds an FAA issued certificate. If criminal statutes are implicated, the FAA also works with our law enforcement partners in prosecuting those cases.

Question. I have been outspoken about the need to improve the safety of our rail network, not just on the larger Class One railroads, but also on the "short lines." Maine has no Class One railroads. Therefore, short lines play an integral role in connecting goods to our citizens. In order to address their unique needs, Congress provided funding in fiscal years 2015 and 2016 to assist the short lines in building a stronger, sustainable safety culture through the establishment of the Short Line Safety Institute. The Short Line Safety Institute recently hired an Executive Director and last year began conducting safety culture assessments at several short line railroads across the country. How is the Department using feedback from these as-

assessments as it works with the Institute on the development of training, education, and recommendations to improve the safety performance of short lines?

Answer. The Short Line Safety Institute's (Institute) primary goals are to enhance and improve safety practices and to increase the short line and regional railroad industry's culture of commitment to safety through assessing their safety culture, recommending how to improve it, and providing leadership, training, and education about safety culture and conformance. The Institute will accomplish these goals through Four Pillars of activities:

- (1) *Safety Culture Assessment:* Conducting voluntary, non-punitive, confidential safety culture assessments (initially focused on railroads that transport crude oil);
- (2) *Education & Training:* Serving as a long-term training and education resource for short line and regional railroads; providing resources, based on industry "best practices", for strengthening railroad safety culture;
- (3) *Research & Evaluation:* Serving as a research center that compiles and disseminates information on safety needs and trends within the short line and regional railroad industry (e.g., assessing education/training needs, identifying communications gaps, and analyzing safety metrics over time); and
- (4) *Strategic Communications:* Disseminating timely information to industry stakeholders about the Institute's mission and vision and providing guidance on how to communicate internally and externally about safety culture improvement efforts stakeholders may undertake at their properties.

After a safety culture assessment, assessors synthesize information collected from multiple methods (interview, document review, observation, survey) from employees across all levels of the short line railroad. In addition to providing individualized feedback to the railroads assessed, the assessments are also used to identify industry-wide gaps in safety culture knowledge. The Institute will address these gaps with training, webinars, conferences, and other strategic education and communication efforts. As a result, the Institute will provide short line and regional railroads with the tools needed to drive safety culture change.

FRA is partnering with the American Short Line and Regional Railroad Association (ASLRRA) and the Institute in this effort, providing continuing support to the Institute as it strives to improve safety and safety culture in the short line industry. FRA's Office of Research & Development continues to work closely with ASLRRA, Volpe National Transportation Systems Center, and the University of Connecticut to ensure the Institute's processes and procedures are evaluated for effectiveness and based on scientific rigor.

Question. We continue to hear aviation stakeholders question the F.A.A.'s ability to implement NextGen. We have spent approximately \$6 billion on NextGen to date, but passengers, shippers, and aircraft operators have realized few benefits. This lack of progress seems to be one of the main arguments driving the push for significant changes to F.A.A.'s structure. Surely by now the aviation industry is seeing benefits from the billions of dollars this committee has provided. Can you tell us what progress F.A.A. has made on NextGen?

Answer. Passengers and operators benefit from NextGen in multiple ways, by flying on more direct paths to their destinations with fewer delays. NextGen benefits include fewer carbon emissions, contributing to a greener environment.

Nationwide, the FAA has measured \$1.6 billion in benefits to airlines and the traveling public from NextGen capabilities already in place since 2010 through 2014. Over the next 15 years, NextGen will produce an additional \$11.7 billion in benefits from those improvements. Once all currently planned programs are in place, the FAA expects NextGen to deliver \$134 billion in direct airline, industry, and passenger benefits through 2030. The benefits were based on the fiscal year 2014 Business Case for the Next Generation Air Transportation System.

Last year, the FAA completed deployment of the En Route Automation Modernization (ERAM) system, in all FAA Centers in the continental United States. The system is already processing information from the 634 ground transceivers that comprise Automatic Dependent Surveillance-Broadcast, ADS-B. In places such as Alaska and the Gulf of Mexico, our controllers can continuously track equipped aircraft, even though the nearest radar site might be several hundred miles away.

The FAA is making flying more efficient. The Metroplex initiative has transformed the airspace around some of our busiest cities, replacing inefficient ground-based routes. We now have scores of new satellite-based air traffic procedures in Houston, North Texas, Charlotte, Washington, DC, and Northern California.

The FAA has collaborated with the aviation industry through the NextGen Advisory Committee (NAC), a Federal advisory committee, to develop a plan to implement a number of high-priority NextGen capabilities in the areas of Multiple Runway Operations, Performance Based Navigation, Surface Operations, and Data Com-

munications. To date, the FAA and industry have completed 42 NextGen Priorities commitments, introducing a wide range of benefits into the NAS.

Question. In the fiscal year 2016 Omnibus bill, this Committee provided a substantial increase in resources to the National Highway Traffic Safety Administration for the Office of Defects Investigation. Given the dramatic increase in recalls and fines issued in recent years, ranging from fault GM ignition switches to Takata airbags, it was apparent NHTSA did not have sufficient engineers and resources to properly vet defect claims. The O.I.G. has issued several reports on NHTSA's inability to properly identify and address vehicle safety defects due to inadequate standards and procedures. I find it troubling that, according to the O.I.G., NHTSA has failed to consistently apply the recommendations from a 2011 report and lacks the mechanisms to ensure that staff consistently applies these recommendations. This finding from the O.I.G. makes me question whether the Department is truly making permanent changes as called for in I.G. reports for any of the agencies within DOT. Mr. Secretary, can you tell us how you, in the last few months of this Administration, will ensure the O.I.G. recommendations are taken seriously throughout the Department?

Answer. NHTSA has performed a comprehensive review of its defects program. NHTSA's internal review and the review performed by the O.I.G. last year form the agency's roadmap for building a more effective and comprehensive defects program. NHTSA established an aggressive schedule to implement all of the O.I.G. recommendations, and the agency will meet its June 30, 2016 deadline. NHTSA has already initiated additional actions to address O.I.G.'s recent recommendations about establishing controls and procedures over the new policies.

The Department, through its Office of Audit Relations and Program Improvement, recently initiated bi-monthly recommendation update meetings with each Operating Administration to discuss the status of every open recommendation. As of April 1, 2016, the Department had 547 open recommendations. The OIG has closed 152 open recommendations, including 5 of the 33 that it listed as high priority, based on actions taken by the Department to implement those recommendations. The potential savings of the closed recommendations total over \$518 million.

My office is carefully monitoring and will continue to monitor NHTSA's and other DOT agencies' progress in meeting the benchmarks established by the O.I.G.

Question. A local bus company in Maine has brought to my attention a troubling rulemaking issued by the Federal Motor Carrier Safety Administration, regarding "bus lease-interchange". This rule hurts operators who have a safe record but find themselves having to partner with other bus companies to provide service. For example, if bus company "A" breaks down on the side of the highway, full of passengers, then company "A" would have to find alternative service to get the passengers quickly and safely to their destination through a lease agreement with another company "B". This rule puts full burden of compliance and liability for company "B" on company "A", even though company "B" has DOT operating authority and its own safety record. This makes no sense if both companies have their own operating authority and are deemed safe by DOT. While the intent of this rule was to prevent unsafe carriers that attach themselves to reputable companies with DOT operating authority, the rule simply fails to do that. The very class of carriers that the rule was trying to go after would fall entirely outside of this final rule—in short, it really only hits the folks following the rules. The rule is detrimental to bus service providers across the country that regularly, and often without much notice, have to lease or charter additional service from other carriers. I am pleased to learn the Department delayed implementation 1 year. Mr. Secretary, do I have your commitment to address these concerns before the end of this Administration?

Answer. The Department acknowledges motor carriers of passengers' concerns about the Federal Motor Carrier Safety Administration's (FMCSA) 2015 final rule about the lease and interchange of buses. FMCSA received numerous petitions for reconsideration of the final rule and based upon a review of the petitions, determined that the compliance date should be extended to January 1, 2018 to provide sufficient time to address the issues raised by the petitioners. You have my commitment that FMCSA will issue a decision concerning each of the petitions for reconsideration by the end of the calendar year, and FMCSA anticipates publishing amendments to the final rule in the Federal Register for petitions which are granted, in early 2017.

QUESTIONS SUBMITTED BY SENATOR STEVE DAINES

Question. Secretary Foxx, the President's budget request is over \$98 billion. That is more than \$22 billion, nearly 30 percent, above last year's enacted amount. The

Office of Inspector General (OIG) reported to the Commerce Committee in January that there were 569 open recommendations with nearly \$2 billion in potential savings. What is DOT doing to expedite implementation of these recommendations?

Answer. The Department, through its Office of Audit Relations and Program Improvement, recently initiated bi-monthly recommendation update meetings with each Operating Administration to discuss the status of every open recommendation. As of April 1, 2016, the Department had 547 open recommendations. The OIG has closed 152 recommendations, including 5 of the 33 that it listed as high priority, based on actions taken by the Department to implement those recommendations involving questioned costs and funds put to better use, as identified by the OIG, total over \$518. The potential savings of the closed recommendations total over \$518 million.

Question. The single biggest savings is in Federal Aviation Administration (FAA) air traffic control (ATC) towers, totaling \$853 million. DOT's target action date is in July. What is DOT doing to expedite implementation of these ATC savings?

Answer. The FAA concurred with OIG Report #ST-2015-080: Efficiency of FAA's Air Traffic Control Towers Ranges Widely. The FAA is in the process of performing a "Deep Dive" into the facilities outlined in the report in order to determine the root causes of the inefficiencies. This will allow the FAA to determine if, in the interim, these causes have been corrected or if there are actions that can be implemented to improve efficiencies. The FAA is working to deliver a response to the OIG by the end of May 2016 and to issue a final response and results, as applicable, by the end of July 2016.

Question. Airports in Montana utilize the Federal Contract Tower (FCT) program. These towers account for approximately 28 percent of operations while only utilizing about 14 percent of funds. Would expanding the FCT program improve DOT's finances?

Answer. The FAA does not believe that expanding the contract tower program would improve FAA's or DOT's finances at this time. The FAA currently has no plans to convert any FAA towers into contract towers. Any expansion of the program would therefore solely involve adding more non-Federal towers to the program, thus raising FAA's overall costs.

Question. In addition to financial responsibility, maintaining a safe transportation network is critically important. When it comes to addressing behavioral safety issues, States agencies, not the Federal Government, have the best understanding of their individual challenges. One provision I was proud to champion in the Fixing America's Surface Transportation (FAST) Act was to qualify 24/7 sobriety programs for National Highway Traffic Safety Administration (NHTSA) safety grants. While implementing the FAST Act, how will DOT ensure States have the flexibility to institute safety programs that address their unique challenges?

Answer. NHTSA encourages States to develop creative approaches to improve safety. The general approach is to allow States the maximum flexibility consistent with statutory language. With regard to the implementation of 24-7 sobriety program grants, NHTSA plans to use the statutory language in the FAST Act as the basis to determine those States eligible for a grant. Although the statute specifies certain requirements that must be met in order to receive a grant, we believe it affords room for flexibility for a State to tailor an approach to suit its needs while satisfying the requirements imposed under the statute.

Question. The Amtrak's Empire Builder runs across Montana's Hi-Line, providing much needed connectivity to 12 rural communities. Amtrak completed a feasibility study that concluded a stop in Culbertson, MT would have a net positive impact on Amtrak's finances. How will DOT facilitate coordination between the Federal Railroad Administration (FRA), Amtrak, and local stakeholders to help bring this service online?

Answer. Amtrak's Long Distance routes, such as the Empire Builder, play a critical role in connecting the national rail network and provide a vital transportation alternative to communities throughout the country.

As directed by the Senate's fiscal year 2016 Transportation and Housing and Urban Development Appropriations Bill report (Report 114-75), FRA and Amtrak are in the process of re-evaluating a previous Amtrak feasibility study on adding a station stop along the Empire Builder route in Culbertson, MT. The Amtrak "Passenger Rail in the Bakken Region" study is due to the Appropriations Committee by December 18, 2016 and FRA and Amtrak are on track to meet this deadline. In addition to re-evaluating the revenue, ridership, and other operating cost metrics of the previous Amtrak study, the fiscal year 2016 Senate report language instructs FRA and Amtrak to also examine the capital infrastructure improvements that would be necessary to bring intercity passenger rail service to Culbertson, MT. FRA and Amtrak must communicate with local stakeholders and the host freight rail-

road, BNSF, to gather the resource and operational requirements needed to carry out the study.

FRA is always available to provide technical assistance to States and local governments regarding rail issues. Depending on the results of the study and whether Federal funding will be sought for the capital improvements required to add a station stop, FRA may also play a more formal role in the environmental, engineering, and design processes to construct the local government's preferred station facilities.

Question. Inspector General Scovel, the President's budget request is over \$98 billion, more than \$22 billion increase above last year. In a letter you sent to the Commerce Committee in January, you highlighted 569 open recommendations with nearly \$2 billion in potential savings if implemented. What is the status of these recommendations?

Answer. Of the 569 open recommendations we identified as of December 31, 2015, 174 have since been closed and 395 remain open. Additionally, since January 2016, we have issued 40 audit reports containing 145 new recommendations, of which 135 remain open. Accordingly, as of April 26, 2016, there are a total of 530 open audit recommendations.

HIGHWAY SAFETY

Question. In your testimony, you discussed recommendations for the National Highway Traffic Safety Administration (NHTSA). We discussed many of these recommendations, specifically the Office of Defects Investigation (ODI) recommendations, during a Commerce Committee hearing last June. What recommendations has NHTSA closed since our last meeting? Has NHTSA improved its stewardship of taxpayer resources?

Answer. Since my testimony on June 23, 2015, we have closed 6 of the 17 recommendations we made to improve ODI's pre-investigative processes. More specifically:

- Recommendation 6*, which was closed on September 30, 2015, was aimed at improving the quality of consumer complaint data and enhancing ODI access to important data sources such as pictures and accident reports. In response to our recommendation, ODI enhanced safercar.gov to:

- Provide definitions for affected parts¹ to assist consumers in appropriately categorizing their complaints,
- Provide guidance to consumers on what sort of information to include in their narrative descriptions of incidents and their vehicles that would be most helpful to ODI in identifying potential safety concerns, and
- Allow consumers to upload up to 5 files while submitting their complaints, and also encourage them to hold on to important information such as police reports and photographs for at least 5 years.

- Recommendation 13*, which was closed on October 30, 2015, was aimed at documenting supervisory review throughout ODI's pre-investigative process including data screening.² In response to our recommendation, ODI implemented a process to conduct a one-on-one meeting twice a month between each Defects Assessment Division (DAD) screener and the DAD chief to discuss all ongoing investigation proposals and issues. These meetings will also include discussion of any limitations confronted by screening staff, the need for future training, and staff utilization. These meetings will serve as a platform for the DAD chief to provide guidance to screeners. Additionally, ODI developed a process to document these meetings and to store the documentation within pertinent case files.

- Recommendation 15*, which was closed on October 30, 2015, was aimed at developing and implementing guidance on the amount and type of information needed to determine whether to open an investigation. In response to our recommendation, ODI developed risk assessment matrices that take into account the frequency and hazard levels associated with a potential safety defect. ODI guidance defines the specific information needed to populate the matrices, describes how that information is evaluated, and sets forth specific standards for when an investigation must be opened. The matrix groups issues into red, yellow and green—red suggesting that an investigation should be opened, yellow suggesting that more information is required to make a call, and green suggesting a low hazard. ODI also identified a plan to develop matrices in 11 areas

¹The online complaint submission form requires consumer to select up to 3 affected parts from a drop-down list of 18 options such as airbags, brakes, lighting, and powertrain.

²ODI has two groups that are primarily involved with its pre-investigation process: the Defects Assessment Division (DAD) and the Early Warning Division. OIG and ODI mutually agreed that ODI's process for supervising the Early Warning Division would be covered under its proposed action to close out recommendation 10.

that present the highest risk to safety such as cyber-security, brakes, and air bags by April 30, 2016.

- Recommendation 17*, which was closed on November 30, 2015, was aimed at documenting and establishing a process for enforcing timeframes to determine whether to open investigations and to establish a process for documenting justifications for these decisions. In response, ODI developed a process to ensure:
 - All investigation proposals will be reviewed and dispositioned by the appropriate investigative division within 6 weeks of initial transmittal. Additionally, if an investigation division chief does not make a decision on an investigation proposal in the prescribed 6-week timeframe, it will automatically be forwarded to the Defects Assessment Panel for consideration.
 - Compliance with the 6-week standard and the justifications for opening investigations will be documented in ARTEMIS through internal e-mails, defect assessment panel meeting minutes, preliminary evaluation opening resumes, and evaluations.
 - Justification for declining to investigate must reference either an applicable risk assessment matrix (see recommendation 15 above) or a detailed explanation of why the elements of a potential safety defect do not exist. The justifications will be documented in ARTEMIS.
 - Timely dispositioning of issues will be factored into division chief and ODI director's performance.
- Recommendation 3*, which was closed on March 31, 2016, was aimed at requiring manufacturers to develop and adhere to procedures for complying with early warning reporting requirements, and require ODI to review these procedures periodically. In response, ODI sent a notice to auto manufacturers requiring them to provide an explanation of their current procedures to comply with early warning reporting (EWR) requirements. Under this notice, manufacturers will have to describe their practices for ensuring the accuracy and timeliness of their EWR submission, as well as their process for ensuring the correct assignment and interpretation of ODI component codes. ODI developed a process for conducting ongoing periodic reviews of manufacturer practices to ensure their continued compliance with EWR requirements.
- Recommendation 10*, which was closed on April 18, 2016, was aimed at implementing a supervisory review process to ensure that all EWR data are analyzed according to ODI policy and procedures. In response ODI implemented a process to conduct a bi-weekly meeting between Early Warning Division (EWD) screeners—both Federal employees as well as contractors—and the EWD chief. These meetings will cover screeners' analysis of all forms of EWR data and allow the EWD chief to provide feedback to screeners, assess their familiarity with ODI policies and procedures, and keep them informed of any updates to those policies and procedures.

Based on our interactions with Agency staff and their actions taken to date, we believe that NHTSA is focused on implementing and closing our 17 recommendations, and is on the right path to improving the stewardship of taxpayer resources.

Question. Inspector General Scovel, in your 2015 Financial Information Security Management Act (FISMA) audit, you reported DOT had a number of challenges resolving plans of actions and milestones (POA&Ms)³—longstanding security vulnerabilities within DOT systems. What are DOT's challenges in resolving POA&Ms, and what is the Agency's status in implementing OIG recommendations?

Answer. In 2014, DOT had a backlog of over 5,600 POA&Ms. In 2015, DOT had only resolved 1,798 (32 percent), leaving more than 3,820 POA&Ms. Of the 3,820 unresolved POA&Ms:

- 2,023 POA&Ms do not have actual start dates. Of these, 188 are high priority, and 1,569 are medium priority.
- 960 POA&Ms had no documented remediation costs. Of these, 53 are high priority, 316 are moderate priority, 534 are low priority, and 57 are not categorized.

As part of our fiscal year 2015 FISMA audit, we issued 9 additional recommendations increasing the total number of OIG outstanding recommendations to 21. DOT's target action completion dates for all 21 recommendations indicate that actions would be completed by the end of fiscal year 2016. However, we note that several recommendations have been open since 2010.

³Per OMB Memorandum M-02-01,—A POA&M is a tool that assist agencies in identifying, prioritizing, and monitoring progress of corrective efforts for security weaknesses found in programs and systems.

QUESTIONS SUBMITTED BY SENATOR JACK REED

Question. What is the timing for the NHTSA rulemaking for the 405 grants?

Answer. The agency plans to issue an interim final rule implementing the provisions for the Section 405 grants in May 2016..

Question. Does NHTSA consider county-based or pilot 24/7 programs as qualifying for 405 and 164?

Answer. NHTSA is currently engaged in rulemaking to implement this and other statutory grant requirements, and plans to publish a rule in the near future. Under Section 405, a 24-7 sobriety program is defined as a State law or program that authorizes a State court or an agency with jurisdiction to require driving under the influence (DUI) offenders to be subject to testing for alcohol or drug use. Section 164 is similar in that States are responsible for meeting the statutory requirements and must either have the required law or program in place to be compliant.

Question. Should NHTSA be doing a rulemaking to certify 24/7 devices?

Answer. Under the grant program in Section 405 and the transfer program in Section 164, compliance is based on a State having a law or program that authorizes DUI offenders to be tested for alcohol or drugs. The statutes direct a State to meet process requirements related to testing to be determined compliant (e.g., at least twice per day or by continuous transdermal monitoring). They do not mandate a particular device or that any device be used. Consequently, we do not believe that certifying 24/7 devices is necessary under the programs.

Question. FRA and PHMSA have received increases in funding in recent years for safety with direct calls for more inspectors on routes that carry flammable liquids and passengers. What is the status for hiring the inspectors and safety personnel funded by this subcommittee at FRA and PHMSA?

Answer. Regarding PHMSA:

In fiscal year 2015, PHMSA received 7 additional inspection and enforcement positions to support the safe transportation of flammable liquids. The positions were allocated based on risk related to the transportation of flammable liquids. The position breakdown includes five new Inspectors located in Trenton, NJ (2), Kansas City, MO (1), Ontario, CA (1), and Houston, TX (1). In addition, there are two new Hazardous Materials Safety Assistance Team safety personnel located in Ontario, CA (1) and Atlanta, GA (1). As of April 2016, all positions have been successfully filled.

Regarding FRA:

The FRA received funding for 10 new inspectors, in fiscal year 2014, and five more in fiscal year 2015. All 15 of these positions have been filled

In fiscal year 2016, we received funding for four new inspectors. One of these positions has already been filled, and the remaining 3 are underway.

FRA also filled all 15 positions for which we received funding in fiscal year 2014 in our Office of Railroad Policy and Development. These critical positions included analysts, engineers, and environmental and freight policy experts. Additionally, we filled 14 more positions of the 20 for which we were funded for safety headquarters staff.

In fiscal year 2016, we received funding for an additional 29 regional and headquarters safety staff. FRA has already or will soon initiate the hiring process for all of these positions, and expects to fill most of them in this fiscal year.

Question. Tire Pressure Monitoring Systems: Motorcoach safety is a priority for both NTSB and the Committee. Per Section 32703(c) of MAP-21, DOT was directed to consider within 3 years whether motorcoaches should be equipped with direct tire pressure monitoring systems (TPMS). Such a requirement would be consistent with the 2009 National Transportation Safety Board (NTSB) Safety Recommendation H-09-022 that all new motor vehicles weighing over 10,000 pounds to be equipped with direct TPMS. Further, in February 2014, NTSB echoed the need for implementation this safety recommendation. The Committee requested a status update on the implementation of the MAP-21 requirement in Senate Report 113-182, which was adopted as part of the fiscal year 2015 omnibus appropriations bill.

The Committee is aware that the National Highway Traffic Safety Administration (NHTSA) recently conducted motorcoach safety equipment testing that included a testing of direct TPMS. Nonetheless, the MAP-21 deadline has passed and the NTSB's recommendation remains open.

What is the current status of the agency's consideration of direct TPMS on motorcoaches?

Will the agency promulgate requirements in this area consistent with Safety Recommendation H-09-022?

Answer. The agency has reviewed and evaluated the available crash data. The analysis did not reveal a safety need to justify regulatory action at this time. The agency will continue to monitor the crash data for tire under-inflation on motorcoaches and will pursue future regulatory action if warranted.

Question. FMCSA Regulations on Windshield Mounted Vehicle Safety Technology: The Senate Appropriations Committee is aware of current FMCSA regulations that limit the ability of commercial motor carriers to mount vehicle safety technologies on windshields to prevent obstruction of a driver's field of view. The Committee is also aware that the agency routinely has recognized the benefits of certain safety technologies, and under current rules have provided 2 year exemptions (the maximum time allowable under the current rules) for such technologies.

To that end, the Committee directed the FMCSA to move forward on prescribing regulations to modify 49 CFR 393.60(e) to permanently allow the voluntary mounting on a vehicle's windshield of vehicle safety technology likely to achieve a level of safety that is equivalent to, or greater than, the level of safety that would be achieved absent such an exemption. Further, the Senate also included such a provision in the FAST Act (Public Law 114-94), specifically Section 5301, which directed the agency to prescribe a regulation to address this, as well.

Please provide an update on the status of these directives?

When can the Committee expect an NPRM on this issue to be put forward?

Will the agency meet the deadline included in the FAST Act to promulgate a rule to meet the requirements of the law?

Answer. The Department's Federal Motor Carrier Safety Administration (FMCSA) has drafted an Interim Final Rule to amend 49 CFR 393.60(e) to permanently allow the voluntary mounting of vehicle safety technology in the windshields of commercial motor vehicles. FMCSA does not anticipate completion of the rulemaking by the June 1, 2016, deadline provided in the FAST Act. However, the Agency is committed to issuing the Interim Final Rule by July 1 and a final rule by the end of the calendar year.

Question. Amtrak PTC Deployment: We were all deeply troubled by the deadly Amtrak accident in Philadelphia last year.

Has Amtrak activated PTC on all Amtrak-owned infrastructure?

Answer. No. Amtrak has activated PTC on all 396 route miles of the Northeast Corridor (NEC) which it owns, and 97 route miles of line in Michigan. Its electrified Harrisburg line is currently undergoing final testing, and is expected to be in service in 2016, along with its Empire Connection in New York. All other Amtrak owned line segments are slated to have PTC activated, or in operation, by the end of 2017.

Segment Identification	Number of Route Miles in Segment	Status at End of Calendar Year	Estimated Start Date for Revenue Service Demonstration
NEC (Boston to Washington)	396	Operational/Complete	Completed
Philadelphia to Harrisburg	104	Testing	March 2016
Springfield Line (New Haven to Springfield, MA)	62	Installing	Dec. 2017
Empire Connection	10	Testing	April 2016
Michigan Line (Amtrak Owned)	97	Operational	Completed
Michigan Line (State Owned)	135	Installing	June 2017
Hudson Line (Poughkeepsie to Hoffmans)	94	Installing	Dec. 2017
Chicago Union Terminal	1.5	Not Started	Dec. 2017

Question. The next step that Amtrak will face is full deployment of PTC on the National Network. As you know, unlike the Northeast Corridor, most of Amtrak's operations occur over infrastructure owned by host railroads. I understand negotiations between host railroads and Amtrak over who will cover the cost for PTC implementation on the National Network are proceeding slowly, if at all. In order to meet the deadline for PTC implementation, Amtrak will have to make various investments in its rail network and equipment over the next two fiscal years.

What is the FRA doing to budget for the costs of PTC implementation on Amtrak's National Network?

Answer. The Department of Transportation has long-stated that public sector funding is necessary to assist resource-constrained commuter railroads, short line railroads, Amtrak, and States with implementing PTC. FRA has requested funding for PTC system development and implementation grants in every budget request dating back to fiscal year 2011 (which was released by President Obama on February 1, 2010). In fiscal year 2017, the \$1.9 billion FRA requested for Grants to Amtrak includes funding under both the Northeast Corridor and National Network for PTC capital, equipment, and maintenance costs. Further, FRA requested \$1.25 bil-

lion for PTC implementation under the new Consolidated Rail Infrastructure and Safety Improvement Program. In addition to supporting commuter and short line railroads, this program is targeted to assist States and Amtrak with their proportional share of PTC costs on Amtrak's State-Supported routes that are required due to Amtrak operations on those routes.

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. Secretary Foxx, the safe transport of crude-by-rail is of great importance to me and my constituents. In almost every meeting that I take back home, people tell me they are concerned about oil trains running through their towns. While I appreciate the Department's attention to this critical issue to date and the investments in the fiscal year 2017 budget request, there is more work to be done. And it needs to be done at a much quicker pace.

The National Transportation Safety Board issued three recommendations to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in January 2014 after finding that current regulations are outdated and do not account for the reality of trains frequently transporting more than 100 tank cars. Today, we have robust requirements for oil spill response plans for pipelines and ships. We need them for railroads, too.

Despite issuing an Advanced Notice of Proposed Rulemaking on comprehensive oil spill response plans in July 2014 and clear direction from Congress to begin a rulemaking within 90 days of enactment of the fiscal year 2016 Omnibus, PHMSA has failed to do so. In a January 4, 2016 letter you outlined that PHMSA expects to release a proposed rule no later than June 2016 and complete a final rule in June 2017. This time line is simply unacceptable.

Secretary Foxx, I am extremely disappointed in the continual delays on this critical rulemaking. My constituents are counting on this rulemaking to provide better protection for their communities and the environment. What is causing the delay? Do you need additional resources to support PHMSA's work on this rulemaking? I strongly urge you to begin and complete this rulemaking earlier than the current June 2016 and June 2017 timeline. We must ensure trains carrying oil are treated no differently than pipelines or maritime vessels.

Answer. The Pipeline and Hazardous Materials Safety Administration (PHMSA) shares your concerns and is working expeditiously to publish the Notice of Proposed Rulemaking (NPRM) entitled, "Hazardous Materials: Oil Spill Response Plans and Information Sharing for High-Hazard Flammable Trains." The DOT's Rulemaking Requirements⁴ outline the processes and procedures for completing significant rulemakings. In accordance with the procedures and as mandated by Executive Order, the Department provided the NPRM to the Office of Management and Budget (OMB) for interagency review on February 24, 2016. The interagency review process coordinated by OMB may take up to 90 days. Therefore, PHMSA expects the NPRM will be published in June 2016. The DOT rulemaking procedures also require a 60 day public notice and comment period. Receiving comments from our stakeholders, including the emergency response community, is essential to protecting people and the environment from the risks of hazardous materials transportation. The volume and complexity of comments also impacts the additional analysis and drafting during the final rule stage. Typically, final rules require 1 year after the close of the NPRM comment period to complete.

Question. Communities in Washington remain very concerned with the safety of the trains already running through their cities. And for good reason. Crude oil shipments by rail have skyrocketed in Washington State. The number went from almost no crude oil in 2011 to 17 million barrels of oil shipped across the State in 2013. With more than 10 refinery expansions or crude oil facilities under consideration in Washington, this figure could raise to 241 million barrels a year.

The new tank car standards rulemaking completed by DOT in May 2015 is a step in the right direction to improve the safety of transporting crude oil.

Secretary Foxx, is the Department on track to meet the first deadlines for upgrades to the DOT-111 non-jacketed tank cars by January 1, 2018 and the DOT-111 jacketed tank cars shortly thereafter by March 1, 2018? Do you foresee any problems with the manufacturing industry being capable of delivering these upgraded tank cars on this time line? The final rule also required any new tank cars constructed after October 1, 2015 to meet the enhanced DOT-117 design and performance criteria. How many of these DOT-117 tank cars have been produced and are in use today to transport crude oil?

⁴ See <https://www.transportation.gov/regulations/rulemaking-requirements-2012>.

Answer. As of the 4th quarter of 2015, there were 1,793 DOT-117 and DOT-117R cars used in flammable liquid service. Almost 1,600 of those cars were constructed after October 1, 2015, to meet the enhanced DOT-117 design and performance criteria. FRA does not expect the industry to have difficulty in producing additional DOT-117 cars.

Question. I understand that the FAA is proposing to eliminate the Contract Weather Observer (CWO) program at 57 airports, including Spokane International Airport in Washington State. Today, the CWO program provides weather monitoring, augmentation, and back up for automated weather systems (ASOS) at 136 airports across the Nation.

I believe this proposal would compromise aviation safety. The ASOS is limited in its ability to detect and accurately report on rapidly changing weather conditions and weather sensors periodically fail or malfunction. For example, weather such as freezing rain, freezing drizzle, smoke, and haze are critical to flight safety at Spokane International Airport, but these conditions are not reported by ASOS. In fact, in December 2015, the CWO program at Spokane International Airport documented over 900 separate augmentations to ASOS measurements. In addition, adding weather observation duties to air traffic controllers would degrade the speed and accuracy of the weather observations given existing workloads managing aircraft and requirements for air traffic controllers to remain in the tower and make weather observing their lowest priority.

Secretary Foxx, the CWO program is vital to the safety of our Nation's airspace and I am very concerned with this proposal. What analysis has the FAA conducted to ensure that such a change does not increase safety risks and hazards at these 57 airports? Furthermore, if the FAA believed air traffic controllers can and should take on weather observation duties why is this change not being proposed for all 136 airports that currently have the CWO program? What makes the remaining 79 airports with CWO programs different? I respectfully request that you reconsider this proposal and ask that you provide a full explanation of FAA's initial decision to eliminate the CWO program, including the stakeholder input and public comment that contributed to this decision.

Answer. In accordance with our Safety Management System, the FAA conducted two Safety Risk Management Panels (SRMP) at appropriate facilities in order to make updates to weather data and variables, and traffic volume and complexity. The SRMPs also reviewed factors to consider in determining whether to use air traffic controllers or contract weather observers (CWO) to observe weather. Stakeholders and industry groups served on the panels, including Southwest Airlines, National Air Traffic Controllers Association, National Business Aviation Association, Air Line Pilots Association, National Oceanic Atmospheric Administration, CWO vendors, and others.

Air traffic controllers currently function as weather observers at 75 percent of the towers in the NAS (391 facilities). CWOs function in that capacity at the remaining 136 facilities. As a result of the SRMPs, the updated policy identified 57 of those 136 facilities as having similar weather and traffic volume/complexity as facilities where air traffic controllers are used as weather observers, and at this time the FAA is considering transitioning these facilities to controller-provided weather services.

The SRMPs assessed the risk in transferring weather observation responsibilities from CWO to air traffic controllers at the 57 sites. No decision has been made at this time to transition any of the 57 CWO sites to controller provided observation services.

Each of these safety panels will result in a recommendation, but they do not make the final decision. The FAA must take a comprehensive view of safety when it makes its final decisions. Ensuring the safety of our aviation system is always the highest priority, and the importance of accurate, reliable and detailed weather observations will be a priority concern during this process.

Question. In the 2012 FAA authorization bill, Congress directed the FAA to develop a plan to realign and consolidate Terminal Radar Approach Control (TRACON) facilities. The FAA is now considering whether to close the TRACON facility at Grant County International Airport in Washington State and relocate the TRACON controllers to another airport.

Grant County International Airport provides unique civilian and military aviation services to the aviation industry, both in support of national security interests and to the local community. On any given day, there is a blend of fast moving military aircraft, Boeing production and test aircraft, and slower-moving civilian aircraft all utilizing the same airspace and the same five active runways. During the summer months, this airspace is also shared by aircraft fighting forest fires in the Northwest. Very rarely do these aircraft arrive at Grant County International Airport and

simply taxi off the runway as is the case at most other airports. Instead, these aircraft perform a variety of activities, including Rejected Take Off situations, simulated or actual equipment failures, touch-and-go landings, full stop and goes, wide area pattern work, and other operations that require an aircraft to hold on a runway or execute unusual maneuvers overhead.

Grant County International Airport is a critical training ground for the Air Force and Navy. C-17s from Joint Base Lewis-McChord (JBLM) operate on the assault strip, P-3s and P-8s from Naval Air Station Whidbey Island conduct touch-and-go training, F-15s from the Oregon Air National Guard and EA-18Gs from Naval Air Station Whidbey Island come to operate within the airport's pattern, and KC-135s come from Fairchild Air Force Base (AFB) for training exercises. For JBLM in particular, the conditions and characteristics of Grant County International Airport cannot be replicated elsewhere in the Northwest. In the case of Fairchild AFB, the airport provides easy access for military aircrew training, allows training to occur at times when it cannot at Fairchild AFB due to weather or runway closures, and serves as their ready reserve base in the event of a natural disaster or other emergency.

Secretary Foxx, I am concerned the FAA is not taking national security into account when it evaluates whether or not to close the TRACON at Grant County International Airport. Can you provide me with assurance that the FAA will in fact be considering national security when making the final decision?

Answer. The FAA is evaluating TRACON facilities and services for realignment across the NAS, as required by the FAA Modernization and Reform Act. For clarification, the FAA is considering realigning TRACON facilities so that air traffic control services would be provided at another location, and not closing facilities and ending the provision of air traffic control services. The air traffic control towers are not a part of this process.

The agency is fully committed to developing realignment recommendations and implementing any realignments in the safest manner, without affecting national security. At Grant County, the FAA management and Labor Union representatives met with stakeholders, including military, industry, and local government, to share information, answer questions regarding TRACON services, and discuss safety and security considerations. As required by the legislation, the FAA takes all stakeholder input and considerations into account throughout its analysis, recommendation development, and during the final decisionmaking stage of the process.

QUESTIONS SUBMITTED BY SENATOR BRIAN SCHATZ

Question. Safe Streets: Secretary Foxx, as you know I support community planning strategies to create walkable neighborhoods that minimize pedestrian fatalities. Hawaii has the highest pedestrian fatality rate among adults over 65 so this is more than an abstract philosophy to me, this is about reducing deaths among older people in Hawaii.

Unfortunately, traffic fatalities among pedestrians went up again to 4,884 deaths in 2014. The FAST Act included language Senator Heller and I worked to secure directing USDOT to work with States and MPOs to help them implement planning that takes into pedestrian safety into account.

Can you tell me how the department will implement this policy and generally what are you doing in 2016 to reverse the trend of pedestrian fatalities?

USDOT has created a number of planning tools, manuals and best practices for States, MPOs and others to refer to and that's important. But what is the next step to take all of that information and get States to integrate it into their regular planning and construction process and start reducing that 4,884 number?

Answer. First, I share your concern and assure you that safety is our highest priority and that commitment is the same for all forms of transportation people choose, including walking and bicycling..

The lead action FHWA is taking in 2016 to ensure pedestrian safety is the recently issued Safety Performance Management Final Rule (23 CFR 490), which requires all States and MPOs to annually establish and report on a target for each of five safety performance measures, including a nonmotorized safety performance measure: the number of combined nonmotorized fatalities and nonmotorized serious injuries on all public roads in the State or MPO planning area. This performance measure encourages all States and MPOs to address pedestrian and bicycle safety; recognizes that walking and biking are modes of transportation with unique crash countermeasures distinct from countermeasures to prevent motor vehicle crashes; and addresses the increasing trend in the total number of pedestrian and bicyclist fatalities in the United States. The Safety Performance Management regulation will

improve data; foster transparency and accountability; and allow safety progress to be tracked at the national level. More information is available at: <http://safety.fhwa.dot.gov/hsip/rulemaking>.

Regarding the FAST Act provision you reference (section 1442), DOT is committed to continuing to encourage States and MPOs to adopt standards for the design of Federal surface transportation projects that provide for the safe and adequate accommodation of all users of the surface transportation network.

We have significant programmatic work underway to build national capacity around multimodal planning and design issues, encourage a flexible approach to design, and reverse the trend of increasing pedestrian fatalities. This work will be captured in the report called for in section 1442.

Question. Transit Costs: Secretary Foxx, I've read several articles recently which discussed how per-mile transit and rail capital construction in the US costs two to five times more than it does in other industrialized nations, such as Japan or Spain. There are even some very wide variations within the United States. Experts agree that this is a problem that must be fixed, but don't fully know the cause of these differences. Some speculate the issue may be due to poor interagency cooperation, project design and routing, procurement challenges or perhaps regulatory barriers.

Here are some examples of the problem:

- New York City's price for one kilometer of subway or commuter rail tunnel is about five times more expensive than Tokyo's, eight times more expensive than Berlin's or Paris's, and twelve times more expensive than Barcelona's.
- Phase 1 of WMATA's Silver Line which is entirely above-ground and isn't located in a dense city center, clocked in at over \$150 million per kilometer. In many developed European and Asian countries, this would be enough to build a fully underground subway line in a dense urban core.
- For Amtrak, the Gateway project is estimated to cost \$25 billion, and its most ambitious plan for high speed rail on the Northeast Corridor would cost nearly \$300 billion. On a per-kilometer basis, this is about twice as expensive as the predominantly underground Maglev bullet train that Japan is building.

With the underlying goal of stretching our transit dollars further I'm interested in pursuing a study to identify the root causes of these cost differentials.

Is USDOT currently studying or otherwise working to understand why the costs of transit are so much more expensive in the U.S. than in other industrialized nations?

If so, can you describe those efforts including a timeline for the work to be complete?

Answer. FTA has not conducted an analysis comparing the costs of construction of transit systems within the United States with those of Europe or Asia. Additionally, FTA is not aware of research that has determined that the cost of constructing transit in the U.S. is more expensive than in other industrialized nations.

FTA cautions that the average costs per kilometer cited in the question may not accurately reflect the actual costs of construction. Cost per-mile comparisons may not include major items such as the number of stations constructed or the number of vehicles purchased. Additionally, the comparisons may not take into account whether right-of-way is privately or publicly held, costs of financing, etc.

FTA has undertaken considerable efforts to analyze costs of FTA funded projects. In 2005 FTA implemented a new capital costing format, the Standard Cost Categories, to establish a consistent format for the reporting, estimating, and managing of capital costs for major transit projects. This information is then housed within FTA's Capital Cost Database that currently contains the as-built costs for 35, federally-funded, light rail and heavy rail projects. The database is used for performing historical cost analysis and developing "order-of-magnitude" cost estimates for conceptual transit projects. However, the database does not include information for international projects and it is therefore difficult to make like-to-like comparisons with those projects.

Question. Port Financing: Secretary Foxx, I hear regularly from people in my State that they need more resources to improve port and harbor operations. Specifically the question I typically hear is, surface transportation has the Highway Trust Fund and airports have the Airport Trust Fund so why don't we have dedicated resources for land side improvements to our ports?

The FAST Act created some grant programs for which port improvements are an eligible use and directed the creation of a National Multimodal Freight Policy. My question is, are we on track to systematically partner with States and port authorities in a way that meets the infrastructure needs described in the Department's Beyond Traffic framework over the next 30 years?

Answer. The FAST Act includes several provisions to improve the condition and performance of the national freight network and to support investment in freight-

related surface transportation projects, including opportunities to enhance land-side improvements to ports. States and port authorities will have an unprecedented opportunity to partner in an effort to address our infrastructure deficit.

FASTLANE Grants, under the Nationally Significant Freight and Highway Projects program, authorizes \$4.5 billion for nationally and regionally significant freight and highway projects over fiscal years 2016 to 2020, with up to \$500 million authorized this year for freight rail, water (including ports), or other freight inter-modal projects. Applications for FASTLANE grants were due April 14, 2016, and we have had significant initial interest in the program, including from States and port authorities.

The Department has also taken important strides to educate ports about the existing eligibilities within the Surface Transportation Block Grant Program, the Transportation Infrastructure Finance and Innovation Act (TIFIA) program, and the Railroad Rehabilitation and Improvement Financing (RRIF) program. MARAD's StrongPorts initiative has published a Port Financing Guide and is partnering with the Build America Transportation Investment Center to provide technical assistance to ports looking to access U.S. DOT funding and financing.

Additionally, the TIGER grant program received \$500 million in fiscal year 2016 appropriations and offers another opportunity to fund port infrastructure projects. Through seven rounds, TIGER has awarded funding to 45 port projects totaling \$541.1 million, including two planning grants. These projects are located across 24 States and account for 11.7 percent of total TIGER funding.

These programs will help to meet some of the infrastructure needs described in our Beyond Traffic framework. The FAST Act provides certainty to States, local governments, port authorities, and the private sector; however, it is only a down-payment for building 21st Century surface transportation systems that our Nation deserves. The demand for surface transportation infrastructure investment is overwhelming, yet the FAST Act largely maintains current programs, with limited support for multimodal plans and projects. That is why the President's fiscal year 2017 budget request includes additional multimodal programs and investments, to build off of the FAST Act provisions and to continue to meet the infrastructure needs of our surface transportation system over the next 30 years.

Question. Paratransit programs: Secretary Foxx, the FAST Act includes several provisions to improve the mobility of people with disabilities including new flexibility for the use of funds for operating expenses to transit agencies that demonstrate paratransit improvement activities, new inter-agency coordination efforts among Federal agencies and new demonstration authority. Can you discuss the Department's plans to assure these programs get up and running as quickly as possible?

Answer. The FAST Act includes several provisions to improve the mobility of individuals with disabilities and the Federal Transit Administration (FTA) has moved quickly to implement these provisions as described below.

The FAST Act permits FTA grant recipients to use up to 20 percent (rather than up to 10 percent) of urban or rural transit formula funds to operate Americans with Disabilities Act (ADA) paratransit service if certain conditions are met. On February 16, 2016, FTA published in the Federal Register a Notice of FTA Transit Program Changes, Authorized Funding Levels, and Implementation of Federal Public Transportation Law as Amended by the Fixing America's Surface Transportation (FAST) Act and FTA fiscal year 2016 Apportionments, Allocations, Program Information and Interim Guidance that implemented this provision.

The FAST Act also created a new pilot program for innovative coordinated access and mobility, authorizing grants to eligible recipients to assist in financing innovative projects for the transportation disadvantaged that improve the coordination of transportation services and non-emergency medical transportation services. On March 29, 2016, a Notice of Funding Opportunity (NOFO) was published in the Federal Register announcing the availability of \$2 million of fiscal year 2016 funding under this program, as well as \$3.3 million in additional research funding for the Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility Grants (R2W Demonstration Grants). The FTA will be holding a webinar on April 20, 2016 to further explain the grant program to potential grantees. The application deadline is May 31, 2016. The goal of the competitive R2W Demonstration Grants is to find and test promising, replicable public transportation healthcare access solutions that support the following Rides to Wellness goals: increased access to care, improved health outcomes and reduced healthcare costs.

Finally, the FAST Act included new statutory requirements regarding the Federal Coordinating Council on Access and Mobility (CCAM), including a requirement to publish a strategic plan. FTA is working with its Federal agency partners on CCAM to develop a work plan that addresses the required elements of this plan. FTA is

already working together with staff from the Departments of Health and Human Service, Veterans Affairs, and Agriculture on joint projects to improve the linkages between transportation and healthcare. These projects include a series of Rides to Wellness forums to increase partnerships between healthcare and transportation providers, a research project to identify the impact of transportation on missed appointments and therefore on the cost of healthcare and funding to encourage innovative solutions to healthcare access challenges.

QUESTIONS SUBMITTED BY SENATOR LINDSEY GRAHAM

Question. The recently enacted FAST Act contains three tire-related provisions for which rulemakings are required: tire performance standards for rolling resistance and wet traction; mandatory tire registration by tire sellers at point of sale and; a tire recall lookup tool on NHTSA's web site. What is the agency's timetable for implementing each of these rulemakings?

Answer. The FAST Act requires NHTSA to promulgate regulations for tire rolling resistance and wet traction minimum performance standards by December 4, 2017. NHTSA has already begun the required testing to guide the wet traction regulation.

The FAST Act requires NHTSA to initiate a rulemaking for mandatory tire registration by independent sellers. However, there is no statutory deadline for completing this rulemaking and the agency has not yet developed a time table for completing this rulemaking.

The FAST Act also requires NHTSA to establish a publicly available and searchable electronic tire recall database. The statute does not require this provision to be implemented through a rulemaking and there is no statutory deadline. NHTSA has not yet developed a time table for completing this provision. The agency is gathering information and meeting with stakeholders to discuss each of these requirements.

Question. NHTSA has not completed a rulemaking required under the 2007 Energy Independence and Security Act (EISA) that mandated consumer information about tire fuel efficiency, wet traction and tread wear. The White House announced in December 2014 that NHTSA would finalize that rule by 2017. According to NHTSA's most recent schedule, a proposed rule should have been sent to OMB on February 10, 2016 but that did not happen. What is the agency's revised timetable for completing this rulemaking within the White House imposed deadline?

Answer. NHTSA published a final rule in 2010 establishing test methods that would be used for the new consumer information program. However, the 2010 final rule did not specify the content or requirements of the consumer information and education portions because NHTSA needed to conduct additional consumer testing and resolve important issues raised by public comments on the proposal. The agency is drafting a supplemental notice of proposed rulemaking and expects to finalize the rule in 2017.

SUBCOMMITTEE RECESS

Senator COLLINS. This hearing is now adjourned.

[Whereupon, at 4:24 p.m., Wednesday, March 16, the subcommittee was recessed, to reconvene at a date and time subject to the call of the Chair.]

**TRANSPORTATION AND HOUSING AND URBAN
DEVELOPMENT, AND RELATED AGENCIES
APPROPRIATIONS FOR FISCAL YEAR 2017**

WEDNESDAY, SEPTEMBER 21, 2016

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:30 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Susan Collins, (chairman) presiding.
Present: Senators Collins, Boozman, Cassidy, Daines, and Reed.

HOUSING VULNERABLE FAMILIES AND INDIVIDUALS:
IS THERE A BETTER WAY?

OPENING STATEMENT OF SENATOR SUSAN M. COLLINS

Senator COLLINS. The hearing will come to order.

Good morning. I am pleased to be joined today by our ranking member, Senator Jack Reed, as we begin our hearing examining whether there are more effective ways to meet the housing needs of vulnerable families and individuals.

The question of how best to house families and individuals in need of assistance has simply not received the attention it deserves.

Today, I want to focus on whether the place-based rental assistance of the current public housing and project-based Section 8 programs still has a beneficial role to play. Should limited Federal resources be directed to tenant-based Section 8 vouchers and existing projects converted to vouchers?

We focus on public housing and project-based Section 8 because unlike, for example, housing for the elderly or housing for the disabled programs, public housing and Section 8, intended to serve a diverse population, are not limited to a particular demographic group.

Public housing and project-based Section 8 both provide rental assistance that is tied to specific properties, limiting a family to receiving assistance only at that property. The tenant-based Section 8 program, on the other hand, enables a family to move at its discretion while continuing to receive rental assistance.

The biggest difference between public housing and project-based Section 8 is that public housing was built and is owned and operated with Federal funds by public housing agencies that are entities of State and local governments. Project-based Section 8 prop-

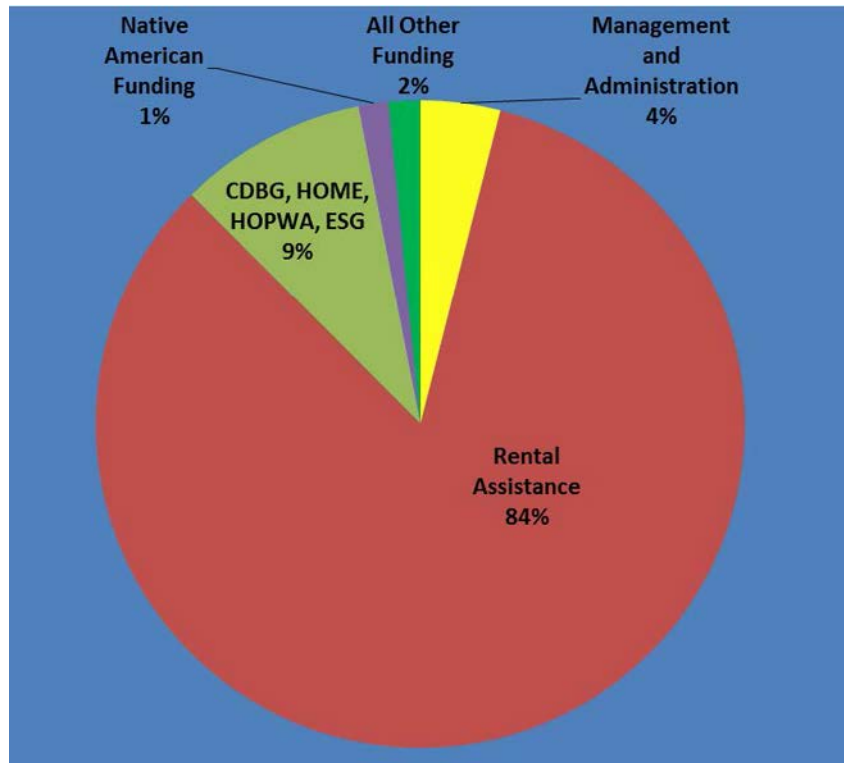
erties are privately owned, and HUD has entered into a long-term contract with the owner to provide rental assistance.

This conversation is particularly timely, given the overall fiscal constraints of the current budget caps and our Nation's \$19.5 trillion national debt.

In addition to the overall fiscal constraints, this subcommittee annually faces the uncertainty of how much offsetting receipts will be credited from the Federal Housing Administration's mortgage insurance premiums. These offsetting receipts significantly affect our ability to fund our programs. Ensuring that sufficient funds are provided to renew existing rental assistance has, however, always been a priority.

The challenge is that the cost of renewing rental assistance continues to grow by hundreds of millions, if not billions, of dollars each year. Rental assistance consumes an ever-larger share of HUD's budget. For fiscal year 2017, the rental assistance takes up 84 percent of HUD's overall budget, reducing funds available for other critical priorities, including the popular Community Development Block Grant and HOME programs. We have a wonderful chart, which I have asked to be brought over, that demonstrates visually how much of HUD's budget—right on cue—is consumed by rental assistance. And that is just keeping us even. Keep in mind that we are not beginning to serve many people who qualify for rental assistance and are very low income individuals.

[The chart follows:]



Senator COLLINS. Directing 84 percent of HUD's budget to rental assistance might be reasonable if it were to effectively meet the housing needs of all vulnerable families and individuals. However, as I pointed out, with notable yet relatively small exceptions, such as the HUD voucher program, the VASH program for our homeless veterans, our expenditures on rental assistance are barely holding on to the existing inventory of Section 8 and public housing units.

As the directors of homeless shelters will attest, there are so many families and individuals, including homeless young people, with tremendous unmet housing needs all across the country.

The issue goes beyond those who are actually homeless. Nationally only one out of four families eligible for housing assistance receives it. According to HUD's most recent estimate, approximately 7.7 million households experiencing the worst case housing needs, that is, renters whose incomes are below 50 percent of the area median, do not receive government-funded rental assistance and who pay more than half their monthly incomes for rent or live in severely substandard conditions, or both. In other words, we have this huge group of individuals who are very low income, and we are barely scratching the surface of serving them.

In addition to the funding challenges, emerging research also raises the question of whether project-based assistance is the best approach. Research released by a group of Harvard economists in 2015 makes the case that not only does the quality of the neighbor-

hood contribute to the health, well-being, and overall success of all of the residents, but also it had a significant impact on children moving into better neighborhoods. For these children, better neighborhoods contributed to improved long-term outcomes, including future earnings and college attendance, with each additional year in a high-poverty neighborhood leading to worse long-term outcomes.

Both OMB Director Shaun Donovan and HUD Secretary Julian Castro have pointed out that the single biggest predictor of a child's opportunity and even life expectancy is the ZIP code of the community in which that child grows up.

Unfortunately, existing public housing and project-based Section 8 properties are found predominantly in high-poverty neighborhoods. The Census Bureau defines an extreme poverty area as one with a poverty rate of 40 percent or higher. For public housing, 34 percent of properties are located in extreme poverty areas. For tenant-based vouchers, only 14 percent are located in extreme poverty areas.

I am concerned that the funding of existing project-based assistance in high-poverty neighborhoods may be creating more problems than it solves. With that in mind, if project- or place-based housing still has an important role to play, would we be better off divesting the current stock and investing in project-based housing in high-opportunity areas? That is one of the many issues I want to explore with our panel today.

As we consider alternative approaches to rental assistance, we should not forget that changes to the administration of the voucher program may also lead to better ways to assist vulnerable families and individuals. The Center on Budget and Policy Priorities, for example, points out that in 2015, over 70 percent of voucher tenants lived in the 100 largest metropolitan areas across the country and that in 35 of those 100 areas, voucher administration was divided among 10 or more agencies. In such situations, the large number of public housing agencies may well act as an unintentional barrier to mobility across a metro area. So looking at limited consolidation of housing agencies is one issue that we should explore as to whether it would lead to more opportunities for voucher residents to move to areas of greater opportunities. That is only one example of the kinds of reforms that have been suggested.

This morning, I have highlighted concerns that have been expressed about project-based rental assistance, concerns that lend themselves to the argument that we should consider replacing these units with Section 8 vouchers. But I want to be clear that the purpose of this hearing is to explore all of the options and that while I find these ideas intriguing, I do not have a preconceived policy preference. I am trying to figure out what is a very complicated issue and how we can better serve our very low-income families and ensure that we are targeting Federal investment to achieve better results for those families and to produce brighter futures for our most vulnerable children.

[The statement follows:]

PREPARED STATEMENT OF SENATOR SUSAN M. COLLINS

I am pleased to be joined today by our Ranking Member, Senator Jack Reed, as we begin our hearing examining whether there are more effective ways to meet the housing needs of vulnerable families and individuals.

The question of how best to house families and individuals in need of assistance has not received the attention it deserves. Today, I want to focus on whether the place-based rental assistance of the current public housing and project-based Section 8 programs still has a beneficial role to play. Should limited Federal resources be directed to tenant-based Section 8 vouchers and existing projects converted to vouchers? We focus on public housing and project-based section 8 because unlike, for example, the Housing for the Elderly and Housing for the Disabled programs, public housing and Section 8 are intended to serve a diverse population, and are not limited to a particular demographic group.

Public housing and project-based Section 8 both provide rental assistance that is tied to specific properties, limiting a family to receiving assistance only at that property. The tenant-based Section 8 program, on the other hand, enables a family to move at its discretion while continuing to receive rental assistance. The biggest difference between public housing and project-based Section 8 is that public housing was built and is owned and operated with Federal funds by public housing agencies that are entities of State and local government. Project-based Section 8 properties are privately owned, and HUD has entered into a long-term contract with the owner to provide rental assistance.

This conversation is particularly timely given the overall fiscal constraints of the current budget caps and our Nation's \$19.5 trillion national debt. In addition to the overall fiscal constraints, this subcommittee annually faces the uncertainty of how much offsetting receipts will be credited from the Federal Housing Administration, or F.H.A.'s, mortgage insurance premiums. These offsetting receipts significantly affect the ability of the subcommittee to fund its programs. Ensuring that sufficient funds are provided to renew existing rental assistance has always been a priority.

The challenge is that the cost of renewing rental assistance continues to grow by hundreds of millions, if not billions, each year. Rental assistance consumes an ever larger share of HUD's budget. For fiscal year 2017, rental assistance takes up 84 percent of HUD's overall budget, reducing funds available for other critical priorities including the popular Community Development Block Grant and HOME programs.

Directing 84 percent of HUD's budget to rental assistance might be reasonable if it effectively met the housing needs of all vulnerable families and individuals. However, with notable, yet relatively small, exceptions such as HUD-VASH vouchers for homeless veterans, our expenditures on rental assistance are barely holding on to the existing inventory of Section 8 and public housing units. As the directors of homeless shelters will attest, there are still families and individuals, including homeless young people, with tremendous unmet housing needs across the country. The issue goes beyond those who are actually homeless. Nationally, only one out of four families eligible for housing assistance receives it. According to HUD's most recent estimate, approximately 7.7 million households experiencing worst case housing needs—that is, renters whose incomes are below 50 percent of the area median, do not receive government-funded rental assistance and who paid more than half their monthly incomes for rent or live in severely substandard conditions, or both.

In addition to funding challenges, emerging research also raises the question of whether project-based assistance is the best approach to meeting housing needs. Research released by a group of Harvard economists in 2015 makes the case that not only does the quality of a neighborhood contribute to the health, well-being, and overall success of its residents, but also it had a significant impact on children moving to these neighborhoods. For these children, better neighborhoods contributed to improved long-term outcomes, including future earnings and college attendance, while each additional year in a high-poverty neighborhood led to worse longterm outcomes.

Both O.M.B. Director Shaun Donovan and HUD Secretary Julian Castro have often pointed out that the single biggest predictor of a child's opportunities, and even life expectancy, is the ZIP Code of the community where they grow up. Unfortunately, existing public housing and project-based Section 8 properties are found predominantly in high-poverty neighborhoods. The Census Bureau defines an "extreme poverty area" as one with a poverty rate of 40 percent or higher. For public housing, 34 percent of properties are located in extreme poverty areas. For tenant-based vouchers, only 14 percent are located in extreme poverty areas.

I am concerned that the funding of existing project-based assistance in high-poverty neighborhoods may be creating more problems than it solves. With that in mind, if project or place-based housing still has a role to play, would we be better off divesting the current stock and investing in project-based housing in high-opportunity areas? I look forward to hearing from our panel today on this point.

As we consider alternative approaches to rental assistance, we should not forget that changes to the administration of the voucher program may also lead to better ways to assist vulnerable families and individuals. The Center on Budget and Policy

Priorities, for example, points out that in 2015, over 70 percent of voucher tenants lived in the 100 largest metropolitan areas across the country and that in 35 of these 100 areas, voucher administration was divided among ten or more agencies. In these situations, the large number of public housing agencies may well act as an unintentional barrier to mobility across a metro area. Even limited consolidation of housing agencies in these areas could lead to more opportunities for voucher residents to move to areas of greater opportunity.

This is only one example of reforms that experts have suggested. I have no doubt that our panel has other such ideas as well.

This morning I have highlighted concerns that have been expressed about project-based rental assistance, concerns that lend themselves to the argument that we should consider replacing these units with Section 8 vouchers. I want, however, to be clear that I approach today's hearing with no pre-conceived policy preferences. This hearing is an opportunity to have a broader conversation that challenges us to explore what is possible and evaluate if we can target the Federal investment in rental assistance to achieve better results to produce brighter futures for our most vulnerable children.

Senator COLLINS. It is now my pleasure to turn to our ranking member, Senator Jack Reed of Rhode Island.

STATEMENT OF SENATOR JACK REED

Senator REED. Well, thank you, Madam Chairman.

This is a very important hearing and we are honored to have a distinguished panel of witnesses. So welcome, all.

Senator Collins and I both share a commitment to finding innovative ways to provide adequate, decent, affordable housing for all of our citizens. I must commend her for her leadership on this issue and so many others.

Again, we have called upon some very distinguished and insightful witnesses.

Ms. Erika Poethig from the Urban Institute, thank you. Erika has an extensive background on affordable housing preservation, which is evidenced by her prior roles at HUD and the MacArthur Foundation in Chicago. She has led numerous research efforts that have informed many of the transformative HUD policies that are under discussion today. Thank you for your work, for what you have done, and thank you for being here today.

We are also joined by Mr. Ed Olsen, who is no stranger to Congress. You have testified about low-income housing policy many times with insights and with quite insightful comments on that area. So thank you very much, Mr. Olsen.

And finally, we are joined by Mr. Rick Gentry. Thank you. San Diego Housing Commission. Mr. Gentry has on-the-ground experience with implementing HUD programs and can offer some innovative ways to think about this problem. Thank you again for joining us, Mr. Gentry.

We are here today because the Nation faces an affordable housing crisis. Only one out of every four eligible low-income households in this country receives the rental assistance they need to avoid homelessness. In Rhode Island, nearly 42,000 households spend more than 50 percent of their income on rent, and that is a 49 percent increase since 2000. So we are not doing better. We are falling behind. In fact, we will need to develop at least 3,460 units in Rhode Island of affordable housing each year just to keep pace with the growing population of our elderly and multi-generational residents. I can just tell you we are not even coming close to generating that kind of enhanced and new housing properties.

This gap is not unique to Rhode Island. It spans the entire Nation. As the chairman has pointed out, we dedicate 84 percent of HUD's budget to preserving rental assistance for nearly 5 million households, and we are just racing to stay in place. We are not getting ahead. According to HUD, the severely burdened renters group by 54 percent across this Nation between 2001 and 2013. This is a national crisis. It is getting worse. It is not getting better.

7.7 million renters are paying more than 50 percent of their monthly income on rent. That is way beyond what is reasonable for families. And in addition, it squeezes out other valuable investments, and it frankly squeezes out investments in demand in the economy so that when you look at growth rates that are tepid, some of it is because people do not have the discretionary income they used to have because of their rental burden.

So in order to effectively address this gap in quality, affordable housing, we need more resources, more units, more resources to support individuals in those units.

Just last year, we were faced with another threat of cuts due to sequester in the level of defense and non-defense budget caps, and with Senator Collins' leadership particularly, we were able to push back on that and able to raise the caps for both defense and non-defense. We are in that same dilemma, as we speak, anticipating next year's budget. We know if the caps do not go up, the problem will get worse. If the caps only go up for defense, this problem will get worse, in fact, quite a bit worse because there will be a tendency to offset those increases with further decreases on the domestic side.

So we have to face this challenge. And again, that is why this hearing is so important and so timely. Even if we do get relief, as the chairman has pointed out, essentially we are just making sure that we cover the rental assistance program. We are not doing the innovative extra things to create new units, to move people into those units, also to work with other agencies because one of the factors of how successful housing is supportive services for those who are in the housing. So we have to keep working.

I am pleased that both houses unanimously passed the Housing Opportunity through Modernization Act. That bill made important changes to HUD programs, even created savings that allow us to either house more families or reduce the cost of housing. So we are making progress there. A step in the right direction.

Today, we will consider other ways that we can reduce the cost of rental housing assistance while also expanding the supply of affordable housing for low-income individuals and families.

While today's hearing will focus on how HUD can better serve the vulnerable population, HUD alone cannot solve this problem. It will require working across Federal departments and in partnership with States and local governments because this has to be literally a team effort. So we are obligated to figure out the most cost-effective way to do that. This hearing can help us do that.

I thank you and I thank the chairman. Thank you, Madam.

Senator COLLINS. Thank you very much, Senator Reed.

We will now turn to our panel. I think Senator Reed essentially did a very nice job of introducing our panel, for which I thank him.

And so our first will be Dr. Ed Olsen, Professor of Economics and Public Policy at the University of Virginia.

**STATEMENT OF DR. EDGAR OLSEN, PH.D., UNIVERSITY OF VIRGINIA
PROFESSOR OF ECONOMICS AND PUBLIC POLICY**

Dr. OLSEN. Thank you, Senator Collins. I am delighted to be here today to share with you and the members of the committee what I know about the performance of low-income housing programs and share some ideas about how to get better outcomes from the money spent on them.

I speak from the perspective of a taxpayer who wants to help low-income families, albeit a taxpayer who has spent more than 40 years studying the performance of these programs. What I know is based in part on the research of hundreds of other researchers who like me have no financial interest in particular ways of delivering housing assistance. So I am particularly pleased that the hearing will consider major reforms of the current system because low-income housing assistance is fertile ground for reforms that would allow us to serve many more of the poorest households without greater public spending.

In my view, the current system has two main defects.

First, the majority of current recipients are served by programs of project-based assistance, whose cost is enormously excessive for the housing provided. The best study of HUD's largest program that subsidized the construction of privately owned projects indicated an excess taxpayer cost of at least 72 percent. The best study of public housing indicated an even larger excess cost.

The second major defect of the current system is that it provides large subsidies to some households while offering none to others in identical circumstances. And it provides subsidies to many people who are not poor while offering none to many of the poorest. Less than 35 percent of families with extremely low incomes on HUD's definition receive housing assistance. Phasing out programs of project-based assistance in favor of the system's most cost-effective program, the tenant-based voucher program, would ultimately free up the resources to provide housing assistance to millions of additional people.

I will offer several specific proposals to that end.

The low-income housing tax credit is the largest and fastest growing low-income housing program. Its costs are excessive for the housing provided, and most of the families served are not poor. Therefore, I think we should phase out funding for new tax credit projects and replace these tax credits with refundable tax credits for the poorest homeowners.

The best evidence also indicates that above-market rents are paid when the government renews use agreements with owners of privately owned subsidized projects. Therefore, when existing housing projects come to the end of their use agreements, we should not renew them, but instead give their tenants portable vouchers.

I also have some proposals for public housing reforms that would better use the funds and assets currently available to public housing authorities.

First, we should require each public housing authority to offer a housing voucher to each public housing tenant using its current budget for public housing.

Second, we should allow public housing authorities to charge market rents for the units vacated by families that accept the vouchers and use the increased revenue to improve their projects.

Third, we should allow public housing authorities to sell any of their projects to the highest bidder with the restriction that they must provide occupants with housing vouchers and use the net proceeds of the sale to improve the remaining projects.

Finally, the housing voucher program provides very large subsidies to recipients while offering nothing to other families in identical circumstances. The national mean subsidy to a household with one adult and two children and no countable income is about \$12,000 a year. A voucher subsidy of this magnitude enables its recipient to occupy a rental unit of about average desirability. From the viewpoint of poverty alleviation and basic fairness, it is surely much better to provide somewhat more modest housing to more of the poorest households rather than housing of this quality to a fortunate few. Therefore, I think we should provide new voucher recipients with a less generous subsidy and use the savings to provide vouchers to more of the poorest households.

I realize that this subcommittee does not have the authority to implement many of these suggestions, so I will make one recommendation that is clearly within the committee's authority and that would, I believe, have an enormous positive effect on the future course of low-income housing policy.

Specifically, I recommend that the committee appropriate the money for analyses of the highest quality that compare the cost-effectiveness of housing vouchers with the cost-effectiveness of various types of tax credit projects, including ones that renovate HUD's subsidized projects and ones involved in public housing's rental assistance demonstration. The cost of these studies would be trivial compared to the amount of money spent on these programs each year.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF DR. EDGAR OLSEN, PH.D.

Low-income housing assistance is fertile ground for reforms that would provide better outcomes with less public spending. The majority of current recipients are served by programs whose cost is enormously excessive for the housing provided. Phasing out these programs in favor of the system's most cost-effective program would ultimately free up the resources to provide housing assistance to millions of additional people and reduce taxes.¹

Furthermore, the current system of low-income housing assistance provides enormous subsidies to some households while offering none to others that are equally poor, and it provides subsidies to many people who are not poor while offering none to many of the poorest. Avoiding these excessive subsidies and focusing assistance on the poorest families will contribute further to poverty alleviation. Well-designed reforms of the current system of low-income housing assistance would substantially alleviate poverty with less public spending.

¹Edgar O. Olsen, "The Effect of Fundamental Housing Policy Reforms on Program Participation," University of Virginia, January 14, 2014, <http://eolsen.weebly.com/uploads/7/7/9/6/7796901/ehpfinaldraftjanuary2014coverabstracttextreferencetablesonlineappendices.pdf>.

OVERVIEW OF CURRENT SYSTEM

To appreciate the potential for alleviating poverty through housing policy reforms, it is essential to know the nature of current programs and the evidence about their performance.² The bulk of low-income housing assistance in the United States is funded by the Federal Government through a large number of programs with a combined cost of more than \$50 billion a year. Unlike other major means-tested transfer programs in the U.S., low-income housing programs do not offer assistance to many of the poorest families that are eligible for them. Eligible families that want assistance must get on a waiting list.

Most low-income housing assistance in the U.S. is for renting a unit, and the most important distinction among rental housing programs is whether the subsidy is attached to the dwelling unit (project-based assistance) or the assisted household (tenant-based assistance). If the subsidy is attached to a rental dwelling unit, families must accept the particular unit offered to receive assistance and lose the subsidy if they move, unless they obtain alternative housing assistance before moving.

Each family offered tenant-based assistance is free to occupy any unit that meets the program's minimum housing standards, that rents for less than the program's ceiling, that is affordable with the help of the subsidy, and whose owner is willing to participate in the program. Families retain the subsidy if they move to another unit meeting these conditions. Figure 1 indicates the percentage of households that receive rental assistance of various types.

[The chart follows:]

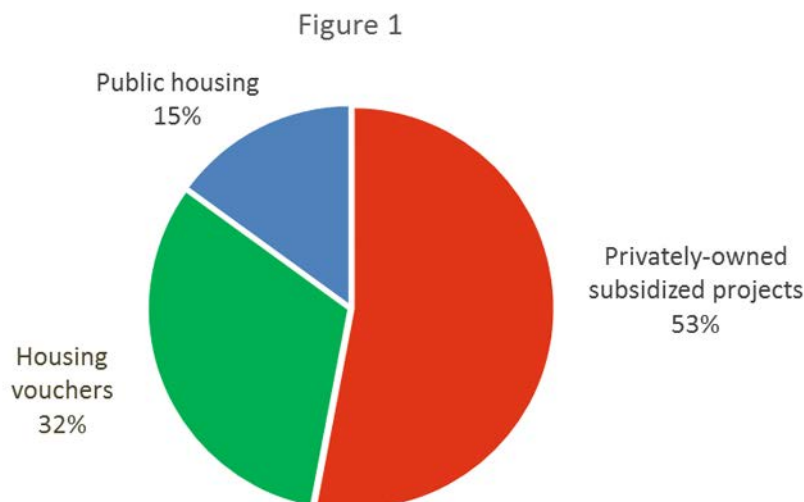


FIGURE 1. Percentage of Households That Receive Each Type of Rental Assistance

SOURCE: Author's calculations based on 2013 American Housing Survey.

NOTE: Includes assistance from U.S. Department of Housing and Urban Development and other sources.

The Department of Housing and Urban Development (HUD) housing voucher program is the only significant program that provides tenant-based assistance. It is the second-largest low-income housing program, serving about 2 million households and

² For a detailed overview of the current system of low-income housing assistance and a summary of the evidence, see Edgar O. Olsen, "Housing Programs for Low-Income Households," in *Means-Tested Transfer Programs in the U.S.*, ed. Robert Moffitt (Chicago: University of Chicago Press, 2003); and John C. Weicher, *Housing Policy at a Crossroads: The Why, How, and Who of Assistance Programs* (Washington, DC: AEI Press, 2012). For a more detailed account of the evidence, see Edgar O. Olsen and Jeff Zabel, "U.S. Housing Policy," in *Handbook of Regional and Urban Economics*, ed. Giles Duranton, J. Vernon Henderson, and William Strange, vol. 5 (Amsterdam: North-Holland, 2015).

accounting for about 32 percent of all households that receive low-income rental assistance.

There are two broad types of project-based rental assistance: public housing and privately owned subsidized projects. Both types have usually involved constructing new projects. In almost all other cases, they have required substantial rehabilitation of existing buildings. Many of these programs no longer subsidize the construction of projects, but most projects built under them still house low-income households with the help of subsidies for their operation and renovation. Overall, project-based assistance accounts for about 68 percent of all households that receive low-income rental assistance.

Public housing projects are developed and operated by local public housing authorities established by local governments, albeit with substantial Federal subsidies and regulations that restrict their choices. For example, regulations limit the circumstances under which housing projects can be sold and what can be done with the proceeds. In the public housing program, government employees make most of the decisions that unsubsidized for-profit firms would make in the private market—what to build, how to maintain it, and when to tear it down. Decisions about where to build projects have been heavily influenced by local political bodies. The public housing stock has declined by about 400,000 units since its peak in 1991. About 1 million households live in public housing projects.

Government agencies also contract with private parties to provide housing in subsidized projects. Most are for-profit firms, but not-for-profits have a significant presence. The largest programs of this type are the IRS's Low-Income Housing Tax Credit, HUD's Section 8 New Construction and Substantial Rehabilitation and Section 236 Rental and Cooperative Housing for Lower-Income Families programs, and the U.S. Department of Agriculture's Section 515 and 521 programs. Under these programs, in exchange for certain subsidies, private parties agree to provide rental housing meeting certain standards at restricted rents to eligible households for a specified number of years.

None of these programs provide subsidies to all suppliers who would like to participate. This is highly relevant for their performance. In general, subsidies to selected sellers of a good have very different effects than subsidies to all sellers. Subsidies to selected sellers lead to excessive profits and much greater wasteful rent seeking. About 4 million households live in projects of this type.

Performance of U.S. Low-Income Housing Programs

Many aspects of the performance of low-income housing programs have been studied, such as their effects on recipients' labor earnings and the types of neighborhoods occupied by them.³ We certainly do not have evidence on all aspects of performance for all programs, and the evidence leaves much to be desired in many cases. However, we cannot avoid making a decision about reforms until we have excellent evidence on all aspects of performance for all programs. Enough evidence exists to give policymakers confidence that certain changes would move the program in the right direction. Making no change in current policies is a decision.

Of all the differences in the performance of various methods for delivering housing assistance to low-income families, differences in cost-effectiveness are by far the most consequential for poverty alleviation. Evidence on housing programs' performance indicates that project-based assistance is much more costly than tenant-based assistance when it provides equally good housing. These studies define equally good housing to be housing that would rent for the same amount in the same locality in the unsubsidized market. This measure accounts for the desirability of the neighborhood and the housing itself. In the best studies, the estimated magnitude of the excess cost is enormous.⁴

The best study of Section 8 New Construction and Substantial Rehabilitation, HUD's largest program that subsidized the construction of privately owned projects, found an excess total cost of at least 44 percent.⁵ That is, the total cost of providing housing under this program was at least 44 percent greater than the total cost of providing equally good housing under the housing voucher program. This translates into excessive taxpayer cost of at least 72 percent for the same outcome. It implies that housing vouchers could have served all the people served by this program

³ Olsen and Zabel, "U.S. Housing Policy."

⁴ For a detailed summary of the evidence on the cost-effectiveness of low-income housing programs, see Edgar O. Olsen, "Getting More from Low-Income Housing Assistance," Brookings Institution, September 2008, http://www.brookings.edu/papers/2008/09_low_income_housing_olsen.aspx.

⁵ James E. Wallace et al., *Participation and Benefits in the Urban Section 8 Program: New Construction and Existing Housing*, vol. 1 and 2 (Cambridge, MA: Abt Associates, 1981).

equally well and served at least 72 percent more people with the same characteristics without any increase in public spending.

The best study indicates even larger excess costs for public housing.⁶ More recent evidence has confirmed the large excess cost of the Section 8 New Construction and Substantial Rehabilitation Program, and U.S. General Accounting Office (GAO) studies have produced similar results for the major active construction programs: LIHTC, HOPE VI, Section 202, Section 515, and Section 811.⁷ In contrast, a succession of studies over the years have found that the total cost of various types of tenant-based housing assistance have exceeded the market rent of the units involved by no more than the modest cost of administering the program.⁸

The preceding evidence on the cost-effectiveness of project-based assistance applies to units built or substantially rehabilitated under a subsidized construction program and still under their initial use agreement. Evidence from the Mark-to-Market program indicates the excessive cost of renewing use agreements for privately owned subsidized projects. In most cases, owners are paid substantially more than market rents for their units.⁹

The results concerning the cost-effectiveness of different housing programs illustrate the virtue of substantially relying on market mechanisms to achieve social goals, especially the virtue of forcing sellers to compete for business. Under a program of tenant-based assistance, only suppliers who provide housing at the lowest cost given its features can remain in the program. If the property owner attempts to charge a voucher recipient a rent in excess of the market rent, the tenant will not remain in the unit indefinitely because he or she can move to a better unit without paying more for it. Under programs of project-based assistance, suppliers who receive payments in excess of market rents for their housing can remain in the program indefinitely because their tenants would lose their subsidies if they moved. These suppliers have a captive audience.

Recent events in Washington, DC, vividly illustrate the pitfalls of providing subsidies to selected suppliers.¹⁰ The mayor has proposed spending about \$4,500 per month per apartment to lease units in buildings owned mainly by contributors to her campaign. This cost does not include services to these families, and most units are dormitory style. It has been estimated that these agreements would increase the market value of the properties tenfold. At the same time, families with HUD's Section 8 housing vouchers have been able to find regular two-bedroom apartments for rents around \$1,600 a month. These are better than average rental units that meet HUD's housing standards. The median rent of two-bedroom units in DC is about \$1,400.

The evidence on cost-effectiveness argues strongly for phasing out project-based assistance in favor of tenant-based assistance. This would contribute greatly to poverty alleviation without spending more money by increasing the number of poor families that receive housing assistance.

Phasing out project-based assistance will contribute to poverty alleviation for another reason. Under the current system, the best units in new projects in the best locations have very high market rents. They are much more desirable than the average rental unit. The worst units in the oldest projects in the worst locations have very low market rents. Identical families living in the best and worst projects pay

⁶Stephen K. Mayo et al., *Housing Allowances and Other Rental Assistance Programs—A Comparison Based on the Housing Allowance Demand Experiment, Part 2: Costs and Efficiency*, Abt Associates Inc., 1980.

⁷Meryl Finkel et al., *Status of HUD-Insured (or Held) Multifamily Rental Housing in 1995: Final Report*, Abt Associates Inc., May 1999, Exhibit 5-1; Mark Shroder and Arthur Reiger, "Vouchers Versus Production Revisited," *Journal of Housing Research* 11, no. 1 (2000): 91-107; U.S. General Accounting Office, *Federal Housing Programs: What They Cost and What They Provide*, GAO-01-901R, July 18, 2001, <http://www.gao.gov/products/GAO-01-901R>; and U.S. General Accounting Office, *Federal Housing Assistance: Comparing the Characteristics and Costs of Housing Programs*, GAO-02-76, January 31, 2002, <http://www.gao.gov/products/GAO-02-76>.

⁸Mayo et al., *Housing Allowances and Other Rental Assistance Programs—A Comparison Based on the Housing Allowance Demand Experiment, Part 2: Costs and Efficiency*; Wallace et al., *Participation and Benefits in the Urban Section 8 Program: New Construction and Existing Housing*; Mireille L. Leger and Stephen D. Kennedy, *Final Comprehensive Report of the Free-standing Housing Voucher Demonstration*, vol. 1 and 2 (Cambridge, MA: Abt Associates Inc., 1990); and ORC Macro, *Quality Control for Rental Assistance Subsidies Determination*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2001, chap. 5.

⁹For a summary of the evidence, see Olsen, "Getting More from Low-Income Housing Assistance," 14.

¹⁰Aaron C. Davis and Jonathan O'Connell, "Shelter Plan May Benefit Mayor's Backers," *Washington Post*, March 17, 2016; and Fenit Nirappil, "Shelters' Cost Stun Some D.C. Lawmakers," *Washington Post*, March 18, 2016.

the same rent. Therefore, the current system provides enormous subsidies to some families and small subsidies to others in the same economic circumstances.

Equalizing these subsidies would contribute to poverty alleviation. Under the housing voucher program, identical households within the same housing market are offered the same assistance on the same conditions. Therefore, providing incremental housing assistance in the form of housing vouchers rather than subsidized housing projects would contribute to poverty alleviation by giving larger subsidies to the families that would have received the smallest subsidies in the absence of reform and smaller subsidies to similar families that would have received the largest subsidies.

These inequities have not been carefully documented but are obvious to all knowledgeable observers. A recent segment on PBS NewsHour revealed that \$500,000 had been spent per apartment to build a housing project for the homeless in San Francisco.¹¹ This is expensive even by Bay Area standards. The median value of owner-occupied houses in the San Francisco metro area was \$558,000, and the median household income of their occupants was \$104,000. So this government program provided apartments to the poorest families that were almost as expensive as the houses occupied by the average homeowner.

Ensuring that the homeless occupy housing meeting reasonable minimum standards does not require anything like the amount of money spent on these units. More than 20 percent of owner-occupied houses in the San Francisco area sell for less than \$300,000. Furthermore, almost half of the families in the area are renters whose median income is about \$50,000. They live in much less expensive units than homeowners.

We do not need to build new units to house the homeless. They can be housed in satisfactory existing units at a much lower taxpayer cost. More than 6 percent of the dwelling units in the area were vacant at the time.

In Portland, Oregon, where the median value of owner-occupied houses was \$249,000, \$360,000 per apartment was spent to build another housing project for the homeless.¹² These cases are not anomalies. The HUD website is filled with photographs of such housing. The desire of the people involved in the current system to provide the best possible housing for their clients is understandable. However, this is not costless. Dollars spent on these high-cost projects are dollars not spent providing housing to more people.

Tenant-based assistance has other important advantages in addition to its greater equity and its much lower cost for providing equally desirable housing. For example, it allows recipients to choose housing that better suits their preferences and circumstances, such as living close to their jobs. This increases their well-being without increasing taxpayer cost.

In contrast to occupants of subsidized housing projects, voucher recipients have chosen to live in neighborhoods with lower poverty and crime rates. Susin found that public housing tenants live in census tracts with poverty rates 8.8 percentage points higher than in the absence of assistance, tenants in HUD-subsidized privately owned projects live in tracts with poverty rates 2.6 percentage points higher, and voucher recipients live in tracts with poverty rates 2.3 percentage points lower.¹³ Michael C. Lens, Ingrid Gould Ellen, and Katherine O'Regan found that occupants of tax-credit projects live in neighborhoods with crime rates about 30 percent higher than voucher recipients and only slightly lower than the crime rates in public housing neighborhoods.¹⁴ Because voucher recipients have much more choice concerning the location of their housing, this suggests that subsidized housing projects are poorly located from the viewpoint of recipient preferences.

Voucher recipients have exercised this choice in a way that benefits their children. A widely cited, recent paper shows that better neighborhood environments lead to better adult outcomes for children in recipient households.¹⁵ They have higher college attendance rates and labor earnings and are less likely to be single parents.

Before considering reforms of low-income housing policy, it is important to address a bit of folklore that has been influential in housing policy debates: that construc-

¹¹ PBS NewsHour, aired October 9, 2013 (New York, MGM Television).

¹² Peter Korn, "Police threaten complaint as calls mount at the commons," *Portland Tribune*, January 9, 2014.

¹³ Scott Susin, "Longitudinal Outcomes of Subsidized Housing Recipients in Matched Survey and Administrative Data," *Cityscape* 8, no. 2 (2005): 207.

¹⁴ Michael C. Lens, Ingrid Gould Ellen, and Katherine O'Regan, "Do Vouchers Help Low-Income Households Live in Safer Neighborhoods? Evidence on the Housing Choice Voucher Program," *Cityscape* 13, no. 3 (2011): 135–59.

¹⁵ Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz, "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment," *American Economic Review* 106, no. 4 (2016): 855–907.

tion programs perform better than housing vouchers in tight housing markets. Todd Sinai and Joel Waldfogel show that additional housing vouchers result in a larger housing stock than the same number of newly built units in subsidized, privately owned housing projects.¹⁶

In light of other evidence, the most plausible explanations are that subsidized construction crowds out unsubsidized construction considerably and that the housing voucher program induces more recipients to live independently. The voucher program serves poorer households that are more likely to be doubled up in the absence of housing assistance. Crowding out is surely greatest in the tightest housing markets. In the absence of subsidized construction in these markets, unsubsidized construction would be high, and unemployment among construction workers would be low. Subsidized construction would divert workers from unsubsidized construction.

Furthermore, it is reasonable to believe tenant-based vouchers get families into satisfactory housing much faster than any construction program, even in the tightest housing markets. For example, the amount of time from when new vouchers are allocated to housing authorities to when they are used by voucher recipients is surely less than the amount of time from when new tax credits are allocated to State housing agencies to when tax-credit units are occupied.

Even though some households do not use the vouchers offered, housing authorities can put all, or almost all, their vouchers to use in less than a year in any market condition. They can fully utilize available vouchers by over-issuing vouchers early in the year and then adjusting the recycling of the vouchers that are returned by families that leave the program late in the year. No production program can hope to match this speed in providing housing assistance to low-income households.

Proposed Reforms of Low-Income Housing Policies to Alleviate Poverty

The available evidence on program performance has clear implications for housing policy reform. To serve the interests of taxpayers who want to help low-income families with their housing and the poorest families that have not been offered housing assistance, Congress should shift the budget for low-income housing assistance from project-based to tenant-based housing assistance as soon as current contractual commitments permit and phase out active construction programs.

This section describes proposals for reform of low-income assistance that will alleviate poverty without spending more money. The reforms deal with all parts of the current system—active construction programs, existing privately owned housing projects, public housing, and the housing voucher program.

Active Subsidized Construction Programs. The Low-Income Housing Tax Credit (LIHTC) is the largest active construction program. It subsidizes the construction of more units each year than all other programs combined. LIHTC recently became the Nation's largest low-income housing program, serving 2.4 million households, and it is the fastest growing. The tax credits themselves involved a tax expenditure of about \$6 billion in 2015. However, these projects received additional development subsidies from State and local governments, usually funded through Federal inter-governmental grants, accounting for one-third of total development subsidies.¹⁷ Therefore, the total development subsidies were about \$9 billion a year.

Furthermore, the GAO found that owners of tax-credit projects received subsidies in the form of project-based or tenant-based Section 8 assistance on behalf of 40 percent of their tenants.¹⁸ The magnitude of these subsidies has never been documented. If their per-unit cost were equal to the per-unit cost of tenant-based housing vouchers in 2015, they would have added more than \$8 billion a year to the cost of the tax-credit program. If so, the full cost of housing people in tax-credit projects would have been about \$17 billion in 2015.

Unlike HUD's programs, the LIHTC is poorly targeted to the poorest households. Some tax credits are used to rehabilitate older housing projects built under HUD and U.S. Department of Agriculture programs that continue to provide deep subsidies to their occupants. Other tax-credit units are occupied by families with portable Section 8 housing vouchers. The families in these units typically have very low earnings. However, the majority of occupants of tax-credit projects do not receive these deep subsidies related to their income. Their average income is more than twice the average for the occupants who receive the deep subsidies, and they are well above poverty thresholds.¹⁹

¹⁶Todd Sinai and Joel Waldfogel, "Do Low-Income Housing Subsidies Increase the Occupied Housing Stock?" *Journal of Public Economics* 89, no. 11–12 (2005): 2137–64.

¹⁷Jean L. Cummings and Denise DiPasquale, "The Low-Income Housing Tax Credit: An Analysis of the First Ten Years," *Housing Policy Debate* 10, no. 1 (1999): 299.

¹⁸U.S. General Accounting Office, *Tax Credits: Opportunities to Improve Oversight of the Low-Income Housing Program*, GGD/RCED-97-55, 1997, 40.

¹⁹*Ibid.*, 146.

The poor targeting of its subsidies and the evidence on its cost-ineffectiveness argue strongly for the cessation of subsidies for additional LIHTC projects. Reducing new authorizations under the program by 10 to 20 percent each year would achieve this outcome in an orderly fashion. The money spent on this program would be better spent on expanding HUD's well-targeted and cost-effective Section 8 Housing Choice Voucher Program.

Because the congressional committees that oversee the two programs are different, this transfer of funds would be difficult to arrange. However, the committees that oversee the LIHTC could divert the reduced tax expenditures on the LIHTC to a refundable tax credit for the poorest low-income homeowners, thereby offsetting to some extent the anti-homeownership bias of the current system of low-income housing assistance. About 25 percent of all unassisted households in the lowest real-income decile are homeowners.²⁰ To avoid excess profits to sellers, it is extremely important that buyers are able to purchase from any seller.²¹

Existing Privately Owned Subsidized Projects. The second broad proposal to reform low-income housing policy in the interest of poverty alleviation is to not renew contracts with the owners of private subsidized projects. The initial agreements that led to building or substantially rehabilitating these projects called for their owners to provide housing that meets certain standards to households with particular characteristics at certain rents for a specified number of years. At the end of the use agreement, the government must decide on the terms of the new agreement, and the private parties must decide whether to participate on these terms. A substantial number of projects end their use agreements each year. When use agreements are not renewed, current occupants are provided with other housing assistance, almost always tenant-based vouchers.

Up to this point, housing policy has leaned heavily in the direction of providing owners with a sufficient subsidy to induce them to continue to serve the low-income households in their projects. We should not repeat these mistakes. Instead we should give their tenants portable vouchers and force the owners to compete for their business. The evidence on the cost-effectiveness of renewing use agreements versus tenant-based housing vouchers indicates that offering such vouchers would reduce the taxpayer cost of assisting these families. The savings could be used to assist additional families.

It is important to realize that for-profit sponsors will not agree to extend the use agreement unless this provides at least as much profit as operating in the unsubsidized market. Because these subsidies are provided to selected private suppliers, the market mechanism does not ensure that rents paid for the units will be driven down to market levels. If this is to be achieved at all, administrative mechanisms must be used. Administrative mechanisms can err in only one direction—providing excess profits. If the owner is offered a lower profit than in the unsubsidized market, the owner will leave the program. We should leave the job of getting value for the money spent to the people who have the greatest incentive to do so: namely, the recipients of housing assistance.

It is often argued that giving families that live in privately owned subsidized housing projects portable housing vouchers at the end of the use agreement will force them to move. This would not be the case if tenants are offered the same options as they are offered under the current system when the project's owner opts to leave the program. HUD will pay the market rent for the unit as long as the tenant wants to remain in it but offers the tenant the option of a regular housing voucher. This would enable the family to continue to live in its current unit without devoting more income to rent, and it would offer the family other options that it might prefer.

It is also argued that the failure to renew use agreements on privately owned subsidized projects reduces the number of affordable housing units. If the occupants of these projects are offered portable vouchers, this could not be further from the truth. When use agreements are extended, the only unit that is made affordable to an assisted family living in the project is its own unit. If that family is offered a portable voucher, many units become affordable to the family. Contrary to the arguments of lobbyists for project-based housing assistance, failing to renew use agree-

²⁰In determining a household's real income, this calculation adds an imputed return on home equity to the income of homeowners and accounts for differences in family size and composition and price levels across locations. Edgar O. Olsen, "Promoting Homeownership Among Low-Income Households," Urban Institute, August 20, 2007, Table 1, http://www.urban.org/UploadedPDF/411523_promoting_homeownership.pdf.

²¹Edgar O. Olsen and Jens Ludwig, "The Performance and Legacy of Housing Policies," in *The Legacies of the War on Poverty*, ed. Martha Bailey and Sheldon Danziger (New York: Russell Sage Foundation, 2013), 218–21.

ments on subsidized housing projects increases rather than decreases the stock of housing that is affordable to low-income households.

Public Housing. The public housing reform proposals are proposals to better use the funds and assets currently available to public housing authorities. They are designed to alleviate poverty by delivering better housing to tenants who remain in public housing, providing current public housing tenants with more choice concerning their housing, assisting additional households, and reducing the concentration of the poorest families in public housing projects. The proposals would require congressional action to change the restrictions on housing authorities, except possibly for those participating in HUD's Moving to Work Demonstration.

Currently, HUD provides public housing authorities with more than \$6 billion each year in operating and modernization subsidies for their public housing projects. My proposal would give each housing authority the same amount of Federal money as it would have gotten with the old system, so no authority would be able to object on the grounds that it would have less to spend on its clients. However, the proposal would alter greatly the restrictions on the use of this money and increase the total revenue of housing authorities.

The proposal requires every public housing authority to offer current tenants the option of a portable housing voucher or remaining in their current unit on the previous terms, unless the housing authority decides to demolish or sell its project. To ensure that housing authorities can pay for these vouchers with the money available, the generosity of the voucher subsidy would be set to use the housing authority's entire Federal subsidy in the highly unlikely event that all public housing tenants accepted the vouchers. The generosity of these vouchers would almost always differ from the generosity of regular Section 8 vouchers, although the difference would be small in most cases.

Housing authorities would be allowed to sell any of their projects to the highest bidder with no restrictions on its future use. This would provide additional revenue to improve their remaining projects or provide vouchers to additional households. The requirement that these projects must be sold to the highest bidder maximizes the money available to help low-income families with their housing. It also avoids scandals associated with sweetheart deals.

Many housing authorities would surely choose to sell their worst projects. With uniform vouchers offered to families living in all of a housing authority's projects, it is reasonable to expect that the vouchers will be accepted by more tenants in the worst projects. These are the projects that would be the most expensive to renovate up to a specified quality level. They are the types of projects that have been demolished under the HOPE VI program and that Congress intended to voucher out under the 1998 Housing Act. By selling the public housing projects on which they would have spent the most money and providing their occupants with vouchers that have the same cost as the authority's average net expenditure on public housing units, the public housing authority would free up money to better maintain its remaining units or provide vouchers to additional households.

When a project is sold, the remaining tenants in that project would be offered the choice between vacant units in other public housing projects or a housing voucher, the standard procedure when projects are demolished or substantially rehabilitated. When public housing units are vacated by families that accept vouchers, the housing authority would offer the next family on the waiting list the option of occupying the unit or a portable housing voucher. If the family takes the voucher, the housing authority would be allowed to charge whatever rent the market will bear for the vacant unit. This would provide additional revenue to housing authorities without additional government subsidies.

To reduce poverty concentrations in public housing projects, Congress might want to eliminate the income-targeting rules for families that pay market rents for public housing units. Indeed, it might want to eliminate upper-income limits for these families. Under current regulations, at least 40 percent of new occupants must have extremely low incomes. Under the proposal, the new occupants will receive no public subsidy, and so income targeting would serve no public purpose.

Each year some former public housing tenants who had used the proposed vouchers to leave their public housing units would give up these vouchers for a variety of reasons. The money saved from their departure should be used to offer similar vouchers to other families eligible for housing assistance. The recycling of voucher funds would ensure that the tax money spent on public housing will continue to support at least the same number of families.

The preceding proposals would benefit many current public housing tenants without increasing taxpayer cost. The public housing tenants who accept vouchers would obviously be better off because they could have stayed in their current units on the old terms. They would move to housing meeting HUD's housing standards that bet-

ter suits their preferences. Tenants who remain in public housing would benefit from better maintenance of their units.

The only public housing tenants who might be hurt by the proposal are tenants who want to remain in the projects that housing authorities decide to sell. Since it is impossible to justify renovating structures that reach a certain level of obsolescence and dilapidation, the initial opposition of a small minority of public housing tenants should not prevent benefits to the majority. Generally, public housing redevelopment has not required occupants' consent.

Given the difficulty of predicting all of the consequences of such far-reaching changes, we should start with a controlled experiment involving innovative public housing authorities willing to implement these proposals for a randomly selected subset of their public housing projects. This experiment would produce evidence on the effects of the proposals, and it would provide useful information for modifying them to avoid unforeseen negative consequences and achieve better outcomes.

Housing Voucher Program. Even though HUD's Housing Choice Voucher Program is the country's most cost-effective and equitable low-income housing program, it too offers opportunities for reform in the interest of poverty alleviation. The Housing Choice Voucher Program provides very large subsidies to its recipients while offering nothing to other families in similar circumstances.

In 2015, the national mean subsidy for a household with one adult, two children, and no countable income was almost \$12,000. The poverty threshold for this family was about \$20,000. A voucher subsidy of this magnitude enables its recipient to occupy a rental unit of about average desirability among two-bedroom units, that is, a unit with about the median market rent.

From the viewpoint of poverty alleviation correctly conceived, it is surely better to provide somewhat more modest housing to more of the poorest households rather than housing of this quality to a fortunate few. The current welfare system provides recipients of housing vouchers with resources well above the relevant poverty threshold, while leaving others without housing assistance well below it.

In the interest of ameliorating this inequity and reducing poverty without harming current recipients, new recipients could be offered less generous subsidies so that more households could be served with a given budget, and current voucher recipients could receive the generous subsidies that are offered by the current program. Because more than 10 percent of voucher recipients exit the program each year, this initiative will allow more families to be served each year without spending more money and will improve the program's equity. Eventually, all participants in the same economic circumstances would receive the same lower subsidy.

The new subsidy level could be chosen so that the voucher program could serve all of the poorest households that asked for assistance. At current subsidy levels, many more people want to participate than can be served with the existing budget. Reducing the voucher subsidy by the same amount for households at all income levels would make families currently eligible for subsidies less than this amount ineligible for voucher assistance. These are the currently eligible households with the largest incomes. This would free up money to provide vouchers to needier households that would not have been served by the current system.

By reducing the subsidies sufficiently, we would reach a point where all of the poorest household that ask for assistance would get it. Olsen analyzes the effect of alternative reforms of this type on who is served by the voucher program.²² This reform would surely reduce evictions and homelessness, although these effects have not been studied.

CONCLUSION

The rapid growth of spending on entitlement programs for the elderly that will occur until they are substantially reformed will create pressure to reduce spending on programs such as low-income housing programs whose budgets are decided each year by Congress. In this situation, we should be focusing on how to get more from the money currently allocated to these programs.

Building new units is an extremely expensive way to provide better housing to low-income households, and subsidizing selected suppliers is especially expensive. Renting existing units that meet minimum standards is much cheaper. This also avoids providing recipients of low-income housing assistance with better housing than the poorest families ineligible for assistance. The proposed reforms will gradually move the system of low-income assistance toward more cost-effective approaches and enable us to provide housing assistance to millions of additional people without spending more money.

²² Olsen, "The Effect of Fundamental Housing Policy Reforms on Program Participation."

It is often argued that a shortage of affordable housing calls for subsidizing the construction of new units. This argument is seriously flawed. Almost all people are currently housed. If we think that their housing is too expensive (commonly called unaffordable), the cheapest solution is for the government to pay a part of the rent. The housing voucher program does that. This program also ensures that its participants live in units that meet minimum standards. Building new units is a much more expensive solution to the affordability problem.

Furthermore, it is not necessary or desirable to construct new units to house the homeless. The number of people who are homeless is far less than the number of vacant units—indeed, far less than the number of vacant units renting for less than the median. In the entire country, there are only about 600,000 homeless people on a single night and more than 3.6 million vacant units available for rent. Even if all homeless people were single, they could be easily accommodated in vacant existing units, and that would be much less expensive than building new units for them. Furthermore, most of the 600,000 people who are homeless each night already have roofs over their heads in homeless shelters, which are also subsidized. The best provide good housing.

Reducing the substantial differences in subsidies across identical households that characterize the current system would contribute further to poverty alleviation. It would help fill the gap between poverty thresholds and the resources of the poorest households. The current system provides substantial subsidies to recipients while failing to offer housing assistance to many others who are equally poor. Even among the fortunate minority who are offered assistance, the variation in the subsidy across identical households living in subsidized housing projects is enormous. The best housing projects offered by a particular program are much more desirable than the worst, but tenants with the same characteristics pay the same rent for units in either. Because the most cost-effective program offers the same subsidy to identical recipients, the shift away from other programs toward it will focus more of the system's resources on the poorest families.

Senator COLLINS. Thank you very much, Professor. I very much appreciate the number of years you have spent on this issue and your very specific recommendation.

We will next hear from Erika Poethig, Institute Fellow and Director of Urban Policy Initiatives at the Urban Institute. Thank you for being here.

STATEMENT OF ERIKA POETHIG, FELLOW AND DIRECTOR OF URBAN POLICY INITIATIVES, THE URBAN INSTITUTE

Ms. POETHIG. Thank you, Madam Chairwoman, Ranking Member Reed, and members of the THUD Subcommittee for the opportunity to be an expert on this panel.

My name is Erika Poethig. I am Director of Urban Policy Initiatives at the Urban Institute, which is a nonprofit research organization dedicated to the power of evidence to improve lives and strengthen communities.

The views expressed before you today are my own and should not be attributed to the Urban Institute, its trustees, or its funders.

There is an overwhelming body of evidence that Federal rental assistance makes a difference in people's lives and communities. Increasingly, research demonstrates that housing serves both as an essential safety net and as a platform from which individuals, families, and older adults can improve their health, education, and economic outcomes. When families cannot afford housing, it undermines their ability to get to the next rung on the economic ladder and prevents older adults from aging safely and securely.

Yet, America's housing policy has never fully met the demand for affordable rental housing. Today, there are nearly 20 million households that qualify for housing assistance, but only one in four receives it.

I would like to make two points. One, we must expand Federal rental assistance. And, two, as we work to do so, we must use the best evidence available to reform existing policies and programs. Let me elaborate on these two points.

First, this committee has made the smart decision to prioritize Federal investment in rental assistance. But given the current and growing need, we must build a new generation of rental assistance focused on the most vulnerable households. We leverage housing as a platform for service delivery and access to opportunity by targeting expanded rental assistance to families with children earning less than 30 percent of area median income, people with disabilities, and older adults on fixed incomes.

Targeting these vulnerable populations pays dividends. Stable housing generates cost savings to other Federal programs. For instance, evidence suggests that for homeless families, rental assistance is more effective than costly services. At the same time, connecting the housing platform to services for older adults, such as health care coordination, has proven reductions in Medicare spending. This is one opportunity to bring new resources to the table as we work to expand rental assistance.

Second, evidence tells us that housing policy is one important lever to promote upward mobility. A low-income child that gains access to a low-poverty neighborhood will see their income as an adult grow by 30 percent. Unfortunately, our current programs are not well designed to enable individuals to reach their full potential. We need to reform existing policies and programs.

For instance, greater flexibility is needed to move project-based subsidy contracts to buildings in lower poverty neighborhoods. At the same time, we need to prioritize place-based investment strategies that can catalyze neighborhood revitalization and improvement, and we need to preserve existing assets in low-poverty communities.

Finally, the voucher program is a great tool to promote upward mobility. However, the program could be strengthened by the use of small area FMRs (Fair Market Rents) and by marrying vouchers to greater supports for mobility. That is why I am very excited and thankful to see that this committee included the mobility demonstration in the fiscal year 2017 appropriations bill that passed the Senate. The demonstration will generate timely and needed evidence to ensure that vouchers are indeed a platform for upward mobility.

Thank you very much for this invitation to testify. I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF ERIKA C. POETHIG

Thank you for asking me to testify at this hearing. My name is Erika C. Poethig, and I am an Institute fellow and director of urban policy initiatives at the Urban Institute in Washington, DC. The views expressed here are my own, not those of the Urban Institute, its trustees, or its funders.

Congress committed the first national resources to public housing during the Great Depression. That decision altered the course of millions of lives for the better, providing the most vulnerable Americans with a home that was otherwise out of reach and giving children the promise of a better future. Today, the long bipartisan legacy of affordable rental housing is in doubt. Millions of Americans are unable to find safe and secure housing that they can afford.

Housing assistance plays an important role improving lives across the age continuum. Yet America's housing policy has never fully met the demand for affordable rental housing. Over the next 15 years, the demand for rental housing will continue to grow. During this same time period, the number of senior renters is projected to double, increasing from 5.8 million to 12.2 million households. More than a quarter will pay more than 50 percent of their income for rent (Goodman, Pendall, and Zhu 2015). Absent increased resources for Federal rental assistance, America's older adult population will face increased housing instability and homelessness, which can lead to poor health and diminished quality of life. At the same time, safe and stable housing also plays an important role in the early stages of life. Rigorous evidence has demonstrated that housing assistance is an essential driver of economic mobility for low-income children. In order to meet a growing unmet need, we must expand Federal rental assistance to serve the most vulnerable households including older adults, people with disabilities, and families with children.

Today, over 5.1 million households use Federal rental assistance, which includes the housing choice voucher program, project-based rental assistance, public housing, and USDA programs. While we work to expand the Federal investment in housing assistance, we can also use the best evidence available to reform existing policies and programs in order to maximize better health, education, and economic mobility outcomes. Such reforms will require better alignment between Federal housing programs and policies, increasing incentives to move and preserve subsidies in lower poverty neighborhoods, tailoring approaches to address the continuum of housing and service needs, and capturing and reinvesting savings housing generates for Medicare and Medicaid.

Rental Assistance Creates Positive Benefits to Individuals and Families

The evidence of the importance of housing assistance for people's lives is overwhelming. Research demonstrates that housing is both an essential safety net and a platform from which families can improve their health, educational, and economic outcomes. Since 2008, more than 40 studies, by a wide array of scholars across many different institutions, have focused on how housing matters for individuals and communities. This body of research, which has been largely supported by the John D. and Catherine T. MacArthur Foundation, has found that housing location, stability, quality, and affordability affect kindergarten readiness, children's math and reading scores, child development, mental and physical health, and income growth.

There are four important ways housing assistance serves as a platform for better outcomes.

First, housing assistance frees up resources that can be invested in improving economic mobility and better health outcomes. For instance, when families cannot find affordable housing, they make tradeoffs that affect medical care, children's health, child enrichment activities, food security, and retirement savings (JCHS 2015; Newman and Holupka 2014). One third of households in the Milwaukee Eviction Court Study—a sample composed almost exclusively of very low-income renters who were trying unsuccessfully to afford their rent without a subsidy—paid at least 80 percent of their household incomes for rent (Desmond 2012). This leaves very little income to pay for other expenses. For seniors, rental assistance is an essential protection, as the potential to increase income is limited. Housing costs account for the largest proportion of older adults' expenses. Seniors spend more on housing than healthcare or anything else (Johnson 2015).

Second, housing assistance can reduce frequent moves for children and seniors. When families are not stably housed, it can lead to frequent school moves, high rates of absenteeism, and low test scores among children (Cunningham, Harwood, and Hall 2010). For older adults, housing stability coupled with age-restricted housing can create a platform to healthcare coordination and services that slows growth in Medicare costs. The Support and Services at Home (SASH) model leverages housing as a platform to connect residents of federally assisted housing with community-based services and care coordination. A recent study estimated that the growth in Medicare expenditures for early SASH participants was \$1,756–\$2,197 lower than the growth in expenditures for the comparison groups (Sanders 2014).

Third, housing assistance can be used to revitalize communities. In 1986, New York City Mayor Ed Koch launched a 10-year, \$5.1 billion capital plan for housing, investing local, State, and Federal resources to revitalize a distressed housing stock and preserving its affordability. Based on analysis by scholars from the New York University Furman Center for Real Estate and Urban Policy, this investment more than paid back the local investment through increased property tax receipts. The positive spillover effects from the investment were significant enough to justify government support for housing production, including the State and Federal resources

(Ellen et al. 2003). In the same study, Ellen and colleagues did not find the same spillover effects for the tenant-based voucher program largely because voucher holders are more dispersed and the aim of the program is not to revitalize neighborhoods but rather enable low-income households to rent housing from private landlords. At the same time, some evidence suggests that larger concentrations of voucher holders can produce negative effects in a neighborhood (Galster, Tatian, and Smith 1999; Popkin et al. 2012). When Galster and colleagues looked across neighborhoods they found that positive effects associated with concentrations of voucher holders were limited to high-value, predominantly white neighborhoods.

Fourth, housing assistance can help low-income individuals and families access low-poverty neighborhoods that would otherwise be unaffordable. In the United States, access to opportunity is intimately tied to place. Where you live determines school quality, available transportation options, proximity to jobs, and community assets. Because place is so closely linked to access to opportunity, housing policy can provide critical ladders of mobility for people experiencing poverty (Blumenthal and McGinty 2015). Moving to low-poverty neighborhoods can also improve mental health and lower incidence of diabetes and obesity, as demonstrated by the Moving to Opportunity (MTO) experiment (Ludwig et al 2013).

In 2015, a team of researchers led by Stanford economist Raj Chetty and Harvard economist Nathaniel Hendren published new empirical evidence that strongly supports the notion that opportunity and economic mobility are shaped, in part, by where you grow up (Chetty and Hendren 2015). Linking data from the MTO experiment to longitudinal data from the IRS, they conducted a national rigorous study of five million families to measure how strongly economic mobility and opportunity are shaped by the neighborhood in which you grow up. Their findings show that every year a child is exposed to a better environment improves a child's chances of success. Moving a young child from a high-poverty neighborhood to a low-poverty neighborhood improves her chances of going to college, lowers her chances of being a single mother, and increases her expected earnings by 30 percent. Chetty and Hendren's research also points to wide regional differences in access to opportunity.

Although Chetty and Hendren's study is based on a mobility experiment that used housing choice vouchers, vouchers are not the only mechanism for enabling low-income children to access low-poverty neighborhoods. The study's key insight is that place matters and the longer a low-income child spends in high-opportunity neighborhoods, the better she is able to climb the rungs on the mobility ladder. It is possible that these results might also hold true for project-based rental assistance and public housing located in low-poverty neighborhoods.

Demand for Affordable Rental Units is Increasing

Housing affordability is a long-term, systemic problem that has become a crisis. This problem touches nearly every community in the United States and undermines the ability of low-income individuals and families to get to the next rung on the economic ladder. This is a perpetual problem, driven by stagnating low wages and increasing operating costs. The dynamic is particularly problematic now because demand for affordable rental housing is surging and is not being met with sufficient supply.

Since 2000, the number extremely low-income households (ELI) has grown at a greater rate than the number of affordable housing units. Simply put, the demand for affordable housing is outpacing the supply. These two pressures make finding affordable housing even tougher for individuals and families with low incomes. The number of households who are housing cost-burdened is at a record high. In 2013, over one in four renters in the United States, or 11.4 million households, were facing severe rent burdens, meaning they spend more than half of their income on housing (JCHS 2016). Affordability challenges are especially pronounced at the lowest end of income spectrum. Over 70 percent of severely cost-burdened renter households are ELI, meaning they make less than 30 percent of the area median income (AMI).

The problem is not isolated to tight rental markets on the coasts. Forty-eight percent of very low income renters who live in non-metro areas face severe rent burdens. Housing in rural areas is twice as likely to lack complete plumbing as typical U.S. housing, and in tribal areas, substandard housing is even more common (JCHS 2016).

For those who are not living in assisted housing, the conditions are deplorable. HUD's biennial Worst Case Needs report documents housing needs for very low income renters (people with incomes no greater than 50 percent of AMI) who do not receive rental assistance. HUD considers two forms of worst-case housing needs: severe rent burden, which means spending 50 percent or more of household income on rent and utilities; and severely inadequate housing, which refers to housing with

one or more serious heating, plumbing, and electrical or maintenance problems. In 2013, there were 7.7 million very low income unassisted renters who had worst-case housing needs, which is 49 percent greater than in 2003. Severe rent burdens accounted for more than 97 percent of worst-case housing needs (Steffen et al. 2015).

Severe housing burdens are so prevalent partly because low-wage workers do not earn enough to afford adequate housing. A worker earning the Federal minimum wage would need to work 104 hours a week to afford a typical two-bedroom apartment. Renters on average earn \$14.64 an hour, while full-time wage earners on average need to earn \$18.92 an hour to afford a two-bedroom apartment. At the State level, the average hourly wage a full-time worker needs to earn to afford a two-bedroom apartment ranges from \$12.56 in Arkansas to \$31.54 in Hawaii (Leopold et al. 2015).

Supply of Affordable Housing Units is Not Keeping Pace With Demand

These affordability challenges for the lowest-income families coincide with a broader surge in rental demand. Between 2010 and 2030, the growth in rental households will exceed that of homeowners, five new rental households for every three homeowners (Goodman, Pendall, and Zhu 2015). According to recent analysis by my colleagues Rolf Pendall and Laurie Goodman, the United States added more than one million new households in 2015, but only 620,000 net new units were added to the stock, creating a shortage of just over 430,000 units. This gap has pushed up home prices and rents, a trend that is likely to continue (Pendall and Goodman 2016). Meanwhile, the stock of nonsubsidized housing that is affordable to extremely low-income renters has steadily declined. Thirteen percent of non-subsidized units with rents at or below \$400 in 2001 had been demolished by 2011. Nearly half (46 percent) of the remaining units were built before 1960, putting them at high risk of demolition (JCHS 2013). These market pressures are felt first by families at the lowest end of the income spectrum, many of whom are already severely cost burdened, further exacerbating their ability to find safe, stable, affordable housing.

The supply of affordable rental housing is not keeping pace with demand, in part because without scarce government subsidies, it is nearly impossible to build and operate rental housing in most markets (Blumenthal and Handelman 2016). Developers cannot make projects targeted to low-income renters pencil out, meaning that the expected revenue stream from rents is too low to cover the costs of maintaining the property and to pay back the debt incurred in development. Lenders loan money for housing development based on the property's expected income, and when rents are set to affordable levels, there's a huge gap between the money needed to build and the money lenders and investors are willing to provide. Increasing rents to generate additional expected income puts apartments out of reach for extremely and very low income households. In order for developments to pencil out, owners need subsidy contracts that guarantee a long-term commitment to cover the gap between what extremely low-income tenants can afford and the established rent.

THE PRIVATE MARKET ALONE CANNOT SUPPLY AFFORDABLE HOUSING

These market dynamics are why building affordable rental housing is truly a public-private partnership. But private contributions alone cannot close the affordability gap.

Public subsidies are needed to close the gap between the costs of constructing and operating affordable housing developments and the revenue such developments are able to bring in. The largest subsidy source for low-income housing development, the Low-Income Housing Tax Credit, is designed to make units affordable to households with incomes at 50–60 percent of AMI, up to twice the ELI limit. The assistance available through Federal block grant programs (such as the Community Development Block Grant) and most State and local programs cannot keep housing affordable to ELI renters over the long term (Cunningham, Leopold, and Lee 2014).

HUD's rental assistance programs are increasingly the only source of affordable housing for ELI renters in many areas. Yet, the need for rental assistance far exceeds the supply. Unlike other safety net programs—like Social Security, food stamps, Medicaid, or Medicare—housing assistance is not treated as an entitlement only 24 percent of the 19 million eligible households receive assistance (JCHS 2013). As a result, millions of low-income individuals and families face serious challenges ranging from severe cost burdens to overcrowding to homelessness.

Federal Rental Assistance Serves One in Four Eligible Households Through a Variety of Programs

Publicly and privately owned rental housing supported with Federal rental assistance represents an important supply of affordable rental housing, especially for ex-

tremely low-income households. Over 5.1 million households use Federal rental assistance, which includes the housing choice voucher program, project-based rental assistance and public housing. Altogether these three programs cost nearly \$35 billion in fiscal year 2016 and that is to support a level of subsidy that does not come close to fully meeting the need (NLIHC 2016). Sixty-eight percent of rental assistance recipients are extremely low income, meaning they earn 30 percent of area median income or less.

A mix of housing options is essential to serve the varied needs individuals and families living in public and assisted housing. Recipients of rental assistance include working families, single adults, seniors, and people with disabilities. In 2014, over 70 percent of non-elderly, non-disabled households receiving HUD rental assistance worked (CBPP 2015). About one third of rental assistance recipients are families with children. More than half of the recipients of Federal assistance are seniors or people with disabilities. And, as the older adult population grows and the number of senior renters doubles over the next 15 years, they are likely to become a larger share of households with rental assistance. For this population, rental assistance is an essential protection, as the potential to increase income is limited. Policies to support the housing needs of low-income older adults could substantially improve their financial security (Johnson 2015). Project-based units are especially important to seniors and people living with disabilities as it allows for the colocation of housing and services.

A brief overview of the programs follows:

- The housing choice voucher program* is the dominant form of Federal rental assistance. These tenant-based vouchers provide 2.1 million households with the opportunity to find housing in the private rental market. Vouchers typically help pay the difference between what a family can afford and the actual rent of a unit that meets HUD's health and safety standards, up to a regionally determined rent limit (Leopold et al. 2015). Families are expected to contribute the larger amount of either 30 percent of family income or the minimum rent amount of up to \$50. By law, 75 percent of new households admitted to the voucher program each year must be ELI. Nearly 40 percent of the households receiving housing vouchers are families with children, while another 40 percent are elderly or disabled, with some overlap (CBPP 2015).
- Project-based rental assistance* operates through an agreement between a private property owner and HUD. The program serves 1.2 million families. Households must contribute the greater of 30 percent of their income or a minimum rent of \$25, while the subsidy compensates the landlord for the difference between the tenant portion and the contract rent. By law, 40 percent of the project-based assisted units in a development must be designated for ELI households (CBPP 2015). The vast majority of developments were built between the 1960s and mid-1980s using financial incentives that included low-cost mortgages and subsidy contracts, but Congress has not authorized new subsidy contracts since the late 1980s (Treskon and McTarnaghan 2016). Nearly 50 percent of households assisted through the project-based rental assistance program are elderly, and 15 percent are disabled, with some overlap (CBPP 2015).
- Public housing* units are owned and operated by local public housing agencies. The program serves 1.2 million households, 72 percent of which are extremely low-income. Some public housing developments have been redeveloped as mixed-income properties, primarily through HOPE VI and the Choice Neighborhoods Initiative. New public housing is no longer being developed. The backlog of capital needed to support existing public housing has reached such a scale that it stands to jeopardize the number of desperately needed units available. In 2010, HUD estimated that 1.2 million public housing units needed an estimated \$25.6 billion for large-scale repairs (Finkel et al. 2010). As demand for affordable housing continues to rise, the need to preserve the existing stock of affordable units is vital—and less costly than building new rental housing. When the full costs of both construction and upkeep are tallied, new construction costs 25 to 45 percent more than preservation (Wilkins et al. 2015; Brennan et al. 2013). Of the households living in public housing, 33 percent are families with children, 31 percent are elderly, and 21 percent are disabled single adults or disabled adults with children.

Rental Assistance Strategies Need to Work for Both People and Places

U.S. rental housing policy is made up of many different tools and levers that operate at the Federal, State, and local level. At the Federal level, the Low Income Housing Tax Credit is the largest driver of rental housing production, but it is not designed to meet the needs of the lowest-income Americans. HUD's programs still fill that gap through tenant-based and project based-assistance, which primarily in-

cludes housing choice vouchers, public housing, Section 8 project-based vouchers, Section 202 and Section 811 supportive housing, and the newly established Housing Trust Fund. At the State level, housing trust funds often play an important role in filling financing gaps in LIHTC deals or providing rental assistance with State-generated revenues. For instance, 50 percent of the real estate transfer taxes collected in Maine are dedicated to the HOME fund, which provides gap financing as one of the eligible activities. Some States also raise capital through bonds and tax credits for housing. For instance, there is a referendum on the ballot in Rhode Island that would raise \$50 million in bond proceeds for affordable housing (Dunn 2016). Some States provide incentives or require developers and local communities to better integrate rental housing into low-poverty communities. At the local level, cities and counties design and implement housing programs using resources from CDBG and HOME tailored to local need. Cities also create incentives to leverage private-market development to create greater affordability and access to opportunity for low-income residents. Some cities also dedicate significant local resources to affordable rental housing.

This multiplicity of tools and approaches at different levels of government is both a strength and weakness. It allows communities to tailor housing strategies to market conditions, population need, and goals such as affordability, stability, quality, and access to opportunity; there are many ways to try to “move the dial.” But it also signals a basic need that is underfunded at every level of government. Every generation we create a new tool or strategy aimed at solving a problem that is largely the result of insufficient resources.

We need an evidence-based portfolio of tools that can be tailored to local context. But we also need sufficient investment to meet the need of America’s most-vulnerable households.

Below I outline five key ingredients to expanding and reforming rental housing assistance to better meet the needs of people who cannot afford housing, especially in areas of opportunity.

Expand Resources for Rental Assistance

A full expansion of assistance to all eligible ELI households is a necessary ingredient to serving vulnerable households. Under current policy, housing assistance is delivered through programs with more losers than winners: only one in four eligible households receive assistance. This imbalance creates fundamental challenges in the housing system and reduces its general effectiveness.

For these and other reasons, in 2014, the Bipartisan Policy Center’s Housing Commission called for expanding the housing voucher program to ensure that rental assistance is universally available to all ELI households (Lubell 2014). The BPC estimated that expansion of vouchers would extend subsidies to an additional 3.1 million households, bringing the total assisted to 6.7 million. Through the proposal, higher-income households would transition off vouchers, shrinking the gap from 3.1 million to 2.9 million (BPC 2015).

Housing vouchers are extremely effective in helping low-income families pay rent by filling the gap between what a household can afford and the fair-market rent. Rigorous evidence from the Welfare to Work voucher program found that receipt of a voucher reduced homelessness by 74 percent (Patterson et al. 2004). Researchers at the Urban Institute estimated that expanding housing vouchers to households with children would reduce child poverty 20.8 percent from the current baseline (Giannarelli et al. 2015).

Improve Access to Low-Poverty Areas

However vouchers alone may not be enough to effectively expand housing choice at scale. Even with a voucher, families face constrained choices due to factors such as lack of good information about neighborhood and housing options, lack of affordable units in opportunity-rich areas, and discrimination (Luna and Leopold 2013). Therefore, expanding resources for vouchers alone will not necessarily facilitate greater access to low-poverty neighborhoods.

The Obama administration has made some important strides to increase housing choice voucher use in low-poverty communities. In particular, HUD has proposed to expand the use of Small Area Fair Market Rents (SAFMRs) in order to enable housing vouchers to be used in neighborhoods with higher rents and presumably more amenities (Kahn and Newton 2014). HUD’s proposal, which concluded its comment period on August 15, would require State and local housing agencies to use SAFMR to set voucher subsidies in metro areas where vouchers are disproportionately concentrated in low-income areas, and allow agencies elsewhere to voluntarily adopt SAFMRs. Although the HUD approach is sound, the Center for Budget and Policy Priorities has recommended that HUD adjust its criteria for deciding where to re-

quire SAFMRs to ensure the policy is doing the most good (Fischer 2016). In hot-market areas, for instance, the policy may not be sufficient to help families access opportunity areas and may need to be coupled with other strategies such as counseling, source-of-income protections, portability between housing authorities, and move-in assistance.

Additional low-cost or no-cost strategies for encouraging access to opportunity neighborhoods includes giving greater weight to the location of voucher holders when assessing public housing authority performance, reinforcing compliance with the Affirmatively Furthering Fair Housing rule, and giving housing authorities an administrative fee bonus for better location outcomes (Sard and Rice 2016).

A complimentary strategy is HUD's policy for transferring budget authority via Section 8(bb)(1) of the Housing Act. This tool can be used for properties receiving the budget authority to move the subsidy contract to a building in a low-poverty neighborhood. PBRA subsidy contracts are a very important piece of a financing or refinancing request. They help an affordable housing development pencil out, and provide housing for extremely low-income households in areas with greater opportunity.

Preserve Access to Low-Poverty Areas

At the same time, it is important to preserve existing Federal investments in lower-poverty communities. Losing this resource by contract expiration of project-based assistance or vouchering out public housing would be a step backward in efforts to deconcentrate poverty and expand access to opportunity. Project-based rental assistance (PBRA) units house over 1.2 million low-income households (Jordan and Poethig 2015). Thirty-three percent of active PBRA units are at risk of loss largely because contracts that will expire in the next 24 months, which will allow property owners to leave rental affordability programs if they choose, or they are in poor physical condition. This amounts to over 446,000 units at risk of losing their affordability status. Sixteen percent of these at-risk PBRA units are in neighborhoods with poverty rates below 10 percent. Preserving these units leverages previous and existing investments to help keep low-income families in higher opportunity communities. Several States and cities have model approaches to encouraging preservation of at-risk units, but they rely heavily on support from the philanthropic sector and HUD regional office engagement, which is not uniform across the country (Treskon and McTarnaghan 2016).

Another effort to improve and preserve the public housing stock is the Rental Assistance Demonstration (RAD). This effort, currently still a pilot program, helps convert public housing projects in need of repair to project-based vouchers or rental assistance contracts. Doing this enables public housing agencies more flexibility to access much-needed private capital or other public funding sources, providing another stream of resources outside the Federal Government to help preserve and repair the backlog of capital needs. While this program holds promise, it is not yet clear how RAD will reach, if at all, some of the most distressed public housing units or units located in higher-poverty communities with less market activity. We also need to know more about how residents are faring through this conversion; an evaluation underway by scholars at the Urban Institute is looking at exactly this point. It is essential to better understand both the impacts to properties and the people who call them home before reaching a conclusion about the broader implications of the program.

Solve the Wrong Pockets Problem

More than half the recipients of Federal assistance are seniors or people with disabilities (CBPP 2015). Housing stability and easy access to services and amenities are paramount factors for these groups. A growing body of evidence finds cost savings to other systems when seniors and people with disabilities are stably housed and connected to services. Yet, we do not have standard mechanisms for capturing those savings in other systems like health and reinvesting them in the housing supply.

One approach is to build a case that housing assistance should be a reimbursable expense for Medicaid, especially when stable housing is proven to lower healthcare costs. Another approach is to provide HUD with demonstration authority to test different approaches, such as pay for success, which would enable cost savings in one system to be reinvested in affordable housing production or rental assistance. There are several examples of pay for success transactions paying for services on the site of affordable housing, but not the housing itself. Some additional Federal incentives might encourage local demonstrations that would use a pay for success model to finance rental assistance (Pay for Success n.d.).

Grow the Evidence Base

As we anticipate future demand for affordable rental housing, it is critical that we continue to grow our knowledge base about the most effective strategies for meeting these needs. At all levels of government, public leaders are increasingly leveraging the rapid growth of available data to evaluate how well their programs are working—and at what cost. Evidence-based policymaking is an approach to learning and doing “what works” that involves both real-time performance management strategies and longer-term evaluation of programs, as well as innovative data linking and analysis that can reveal new insights about how programs should be targeted. This data-centric approach can build ground for bipartisan compromise, as evidenced in the establishment of the Commission on Evidence-Based Policymaking, which has been spearheaded by Speaker Ryan and Senator Murray.

While a great deal of research has shown the value of housing assistance and mobility in increasing access to opportunity and improving long-term outcomes, much more research and experimentation is needed to discern the best ways to help families take advantage of mobility. The Mobility Demonstration proposed in the President’s budget would go a long way toward building an evidence base for strategies that encourage moves to low-poverty neighborhoods. It is also critical that Moving to Work (MTW) agencies are investing in high-quality evaluations of the interventions they are developing under their authority.

At the same time, we need to invest more in research on how these place-based investments may contribute to neighborhood revitalization and improved resident outcomes. HUD has learned through the evolution from HOPE VI to the Choice Neighborhoods program that a more comprehensive community development approach to public housing transformation better integrates the developments into their surrounding communities and enables the public housing agency and its partners to address longstanding issues such as crime, education, and employment as part of overall redevelopment efforts. Through these efforts, we have also learned that we need better mechanisms to protect tenants from long-term displacement and support their ability to stay, should they so choose. In communities that are revitalizing, place-based investments such as public housing or PBRA can be an important way to help residents stay and benefit from these changes but we need better ways to track these results.

Continuing to build the evidence base on rental assistance will require both increasing the supply of data available to researchers and pursuing further opportunities to integrate existing datasets. While much can be learned from surveys and from Federal, State, and local administrative datasets, private property owners and managers are an essential group in the evidence-building process; they often have more nuanced, on-the-ground information about tenure and outcomes than governments can collect. But because providing such information usually isn’t mandated by housing assistance programs, incentives should be developed to encourage owners and managers to regularly submit data on tenant outcomes. The form these incentives take may vary by program, but getting more consistent information from private owners will give researchers a clearer picture on best practices for place-based housing assistance.

Finally, researchers must be able to better take advantage of the rich datasets already available. Chetty’s and Hendren’s groundbreaking research relied in part on connecting previously unlinked datasets from government offices like the Census, the IRS, the Department of Housing and Urban Development, and the Integrated Postsecondary Education Data System. A range of other important data linking efforts are under way, including the development of integrated data systems hosted by universities, research organizations, or governments that serve as one-stop-shops for researchers to connect datasets across scales and policy areas. Though legal barriers and the important need to protect individual privacy can make data linking slow, only by expanding access to public data resources can researchers most effectively glean deeper insights about families’ needs and how these programs are able to meet them.

Senator COLLINS. Thank you so much for your testimony.

We will next hear from Richard Gentry, the President and CEO of the San Diego Housing Commission. I look forward to hearing your testimony.

**STATEMENT OF RICHARD GENTRY, PRESIDENT AND CEO, SAN DIEGO
HOUSING COMMISSION**

Mr. GENTRY. Thank you, Senator Collins, for having me here today, and thank you, Senator Reed, for that kind introduction. I do not know the quality of my track record, but I have been around for a while. I began my 45th year in this industry earlier this month, and I have worked in it all the way from my home State of North Carolina to now southern California. And I have seen a wide variety of iterations of affordable housing in the country, and that does come to bear on what my testimony is.

I will point out that I presented written testimony for the record. I am not going to try to repeat that. We certainly do not have the time for that, but I would like to hit three or four of the highlights from that paper.

Number one is I do not think it is good to start with defending particular programs. I think what is important are the principles involved in who we serve and who pays the bill for who we serve, and those principles are fairly obvious but I think bear restating. And that is, that we should look to achieve the greatest benefit of the program for the low-income families who are served and also to maximize the efficiencies and expenditures by the taxpayers who are footing the bill for all of these programs one way or the other.

I think that the methodologies involved in responding to those two principles are basically twofold. One I think is providing choice to the families involved. And I think that we transform low-income families from passive clients into active consumers when they are able to make choices which, in turn, empower them, and the choice of where a family lives is one of the most basic I think that any of us can have. I think that what can help turn a low-income family into a middle-income family is the recognition that they have a choice in their lives and that the choices they make can empower them and their families.

I think, in turn, the methodology locally that will help to create those choices are, as much as possible, local decisionmaking. I think different jurisdictions across the country have unique housing needs. I have seen that in the course of my career which has taken me from North Carolina to Texas back to Virginia, to Chicago, where I worked across the country as a low-income housing tax credit syndicator, and now to San Diego.

I think that decisions are best made when they are made on the local level. There is a term that is in great use in the European Union that I think would apply to this country as well, and that term is "subsidiarity." And subsidiarity means over there that when I make a decision in Brussels, if it can be made in London, why make it in London if it can be better made in Liverpool. And I think the analogy here is why make a decision in Washington, D.C. if that decision can be made in Sacramento. Why make it in Sacramento if it can be made in San Diego?

So I think getting the decisionmaking as close to the local action as is possible with the flexibility inherent in those decisions is another key to providing choice to the families and ensuring not only do the families get served well but that the taxpayers are rewarded with efficient programs as well.

That said, it is my belief in my 44 years of experience that public housing is itself a failed business model. It does not work. It is a top-down command-and-control, one-size-fits-all formula that tries to wedge everybody into the same box. And that is not to denigrate either the residents of the programs or the program operators. Indeed, if you can make a public housing program work, you can make just about anything in this country work in my opinion.

What I believe, though, is that the public housing program as it has been traditionally applied is like a metaphor of an assembly line. High volume of the same thing, which may have fit this country well in decades past. I think a better metaphor for our current society is that of a network of smart phones and personal computers that have the same platform but provide great variety in use of flexibility for the end user. That said, the Section 8 housing choice voucher program works very well in providing that flexibility.

I will point out as well that what we have tried to do in San Diego—and I would refer you to the San Diego model as spelled out in the paper and as described in great detail on the Housing Commission’s website—is what I believe the industry needs to move to. That is a balance between supply-side and demand-side housing for this business. And please bear with me. I always get those two mixed up.

The supply side is making sure that there is product to be housed in and the subsidies needed for that. Demand side is subsidies to the consumer to help them choose where to live and live in it successfully. I think getting a proper balance between those two is utterly crucial as we move forward.

I would be glad to go into that in more detail during question and answer.

[The statement follows:]

PREPARED STATEMENT OF RICHARD C. GENTRY

INTRODUCTION

Good morning, Chair Collins, Ranking Member Reed, and members of the subcommittee. I am Richard C. Gentry, the President and Chief Executive Officer of the San Diego Housing Commission, which serves low-income residents in the city of San Diego—the eighth largest city in the Nation and second largest city in California. I am honored to be here today to testify about Federal Section 8 Housing Choice Voucher rental assistance and public housing.

I began working in San Diego in 2008; however, my experience in affordable housing spans 44 years—beginning with the U.S. Department of Housing and Urban Development (HUD) in 1972. I have served as the CEO of the public housing authorities in Austin, Texas, and Richmond, Virginia, as well as working in the private sector as the Senior Vice President of Asset Management for the National Equity Fund in Chicago, Illinois, the Nation’s largest nonprofit Low-Income Housing Tax Credit syndicator, and as the Vice President for Public Housing Initiatives at the Local Initiatives Support Corporation (LISC) in Washington, D.C. My opinions today reflect the diversity of my background and the breadth of my experience.

Federal housing programs should be guided by two principles:

1. Achieving the greatest benefit of the program for the low-income families that are served; and
2. Maximizing efficiencies in the expenditure of taxpayer funds.

With this in mind, methodologies need to be evaluated to determine if they are the best practices to accomplish the mission of assisting individuals and families in the most effective way.

As methodologies are evaluated, two additional factors are essential to consider:

1. Housing Choice—Low-income families are transformed from “clients” into “consumers” when they are able to make choices, which empowers them. A lack of choices hinders families from reaching the middle class.
2. Local Decision-making—Different jurisdictions across the country have unique housing needs. With this in mind, decisions are most effective when they are localized as often as possible and are made at the level closest to the jurisdiction.

Public Housing and Section 8 Housing Choice Voucher Rental Assistance—History

Federally funded public housing in the United States dates back to the Housing Act of 1937, which provided Federal funds to public housing for low-income working class families. However, public housing proliferated after the Housing Act of 1949, which began applying income limits so that public housing served low-income residents, while working class families were supported in their access to private sector housing.

HUD was created by legislation in 1965 to oversee Federal housing programs for vulnerable low-income households, such as seniors, individuals with disabilities, and families.

The Housing and Community Development Act of 1974 and subsequent revisions to it, along with program rules from HUD, created the Section 8 Housing Choice Voucher rental assistance program.

It is important to note that private sector rental housing today continues to provide the majority of the rental housing opportunities for both Americans who receive Federal housing assistance and those who do not.

According to HUD, approximately 1.1 million American households live in public housing, which is 1 percent of the approximately 116 million households in the United States, based on U.S. Census Bureau data. In addition, approximately 3.4 million households, or 2.9 percent of all households in the United States, receive Federal Housing Choice Voucher rental assistance or Project-Based rental assistance, according to HUD’s proposed budget for fiscal year 2017 (October 1, 2016—September 30, 2017).

With that said, I believe that the United States’ traditional public housing program is no longer viable in its current form to continue serving the needs of low-income Americans. America’s traditional public housing program has been, since its inception, a top-down, one-size-fits-all, centralized, command-and-control program operated in Washington, D.C., that is intended for implementation uniformly across the country. In a country as large and diverse as the United States, a public housing program with centralized mandated rules does not work.

This is not criticism or denigration of the low-income individuals and families who live in public housing or those who operate the program. However, the program’s structure is flawed and needs to be changed to more efficiently use taxpayer resources to serve the housing needs of low-income Americans.

The public housing program reflects an assembly line methodology of producing a high volume of uniform housing across jurisdictions, which was better suited to American culture decades ago in the 1930s, 1940s and 1950s.

However, today’s culture reflects the influence of technological advancement and is analogous to a network of smartphones and personal computers supported by a standard structure, but with variabilities to meet individual needs. The Section 8 Housing Choice Voucher rental assistance program better serves this culture, delivering individualized assistance tailored to the needs of the individual customer.

The Section 8 Housing Choice Voucher rental assistance program is the most useful affordable housing program that I have seen the Federal Government develop in my 44 years working with affordable housing. It is the most effective option available in the United States today and in the future for providing affordable housing for low-income individuals and families.

In addition, it is important to keep in mind the need for funding at appropriate levels if public housing is converted to Housing Choice Voucher rental assistance. In its fiscal year 2017 budget, HUD proposed funding approximately \$9,500 per family for Housing Choice Voucher rental assistance (\$20.9 billion for 2.2 million families), compared with approximately \$5,863 per family for public housing (\$6.45 billion for 1.1 million families). Therefore, to successfully address affordable housing needs, the conversion of public housing to Housing Choice Voucher rental assistance requires a corresponding increase in funding per family.

As this subcommittee considers the question, “Housing vulnerable families and individuals—is there a better way?” I submit that providing affordable housing opportunities should look much like the San Diego model, with the innovative approaches we have implemented at the San Diego Housing Commission (SDHC).

PUBLIC HOUSING CONVERSION—THE SAN DIEGO MODEL

A landmark agreement on September 10, 2007, between SDHC and HUD transferred full ownership and operating authority for 1,366 public housing units to SDHC—the largest public housing conversion at the time.

“San Diego knows more about what San Diego needs than the Federal Government does. And when San Diego came to me and said we need to do this, I was compelled to listen,” said Orlando Cabrera, the former HUD Assistant Secretary, who approved the landmark agreement with SDHC.

SDHC paid HUD \$1,366—a nominal \$1 per unit—to acquire 137 properties with a combined fair market value of \$124.2 million. All the properties were debt-free.

In exchange, SDHC committed to leverage the equity lying fallow in these former public housing units to create at least 350 additional affordable housing units—a number SDHC far surpassed.

The SDHC Board of Commissioners and the San Diego City Council approved SDHC’s application to withdraw from HUD’s public housing program, which HUD also approved.

“What the San Diego Housing Commission did was basically say we can’t rely on the Federal taxpayer to continue to maintain units, because it’s not serving our residents well. It’s not serving our community well. They essentially took resources, and then they created better units with them,” said former HUD Assistant Secretary Cabrera.

Creating and Preserving Additional Affordable Housing

SDHC presented HUD with a variety of options it was considering to fulfill the obligation for the creation of additional affordable rental housing units.

HUD responded on Oct. 17, 2008, by approving seven options, all of which required SDHC to have a property ownership.

Ultimately, SDHC chose two courses of action that would create and preserve affordable housing for families in the city of San Diego:

1. Purchase the land and provide a loan and ground lease to the developers. After the 15-year tax credit compliance period, SDHC would have the option to buy the public-private partnership properties.
2. Purchase property directly or in partnership with a government agency.

Also required were a series of administrative steps to obtain the appropriate local approvals from the SDHC Board of Commissioners and the San Diego City Council, sitting as the Housing Authority of the City of San Diego.

These approvals would bring about internal changes to past operating practices and set up SDHC for the financing and ongoing management of the public housing conversion program.

SDHC then implemented an innovative Finance Plan that was developed in 2009, which leveraged significant private sector financial investment.

San Diego City Councilmember Todd Gloria, who served on the SDHC Board of Commissioners at the time the agreement with HUD was being negotiated, said: “I think the concern that I had was how do we maintain the solvency of the agency as we saw the subsidy being reduced. That obviously produced a lot of financial challenges to the organization.”

SDHC leveraged the equity from this new real estate portfolio to create or preserve 810 additional affordable housing in the city of San Diego through direct acquisitions and public-private partnerships. All of the units will remain affordable for at least 55 years.

Minimizing Financial Risk

In its loan underwriting, SDHC sought to minimize any financial risk. Among the key elements of the borrowing:

- Both Fannie Mae and FHA mortgage programs were used as sources of borrowing, providing more than one option for capital under circumstances when time was of the essence.
- SDHC limited its use of equity to only 78 converted public housing properties of five units or more, a total of 1,254 units.
- While lenders would have accepted a loan-to-value ratio (LTV) of 80 to 85 percent, SDHC limited itself to 70 to 75 percent, providing additional cash flow to support the debt load going forward.
- Variable interest rates were slightly better at the time, but SDHC used fixed-rate loans only to better quantify its risk, and used 30-year instead of 10-year loans.
- Reserve accounts also were established.

When SDHC closed its loans with Fannie Mae on December 30, 2009, it had raised \$37.1 million at a 7.32 percent interest rate.

The FHA loans closed on August 31 and September 30, 2010. SDHC raised \$58.2 million with a 3.76 percent interest rate.

Rehabilitating Former Public Housing Units

Lender requirements prompted SDHC to collect financial statements, rent rolls, appraisals, title and zoning reports, regulatory agreements and other documents—as many as 80 reports per property—on the 78 former public housing properties that were leveraged.

After the properties were reviewed, lenders requested that SDHC perform critical and non-critical repairs. While the original work list was lengthy, it was limited in scope.

SDHC capitalized on this opportunity to expand the scope of work and provide a more comprehensive rehabilitation program than what was required by the lenders. At the conclusion of rehabilitation, nearly \$3.2 million had been invested in the physical assets.

Housing Choice Vouchers for Residents

When the former public housing units converted to SDHC ownership, residents were provided with Federal Section 8 Housing Choice Vouchers.

They could then use the vouchers at their existing units or take them with them as rental assistance to another rental home of their choice.

This expanded the opportunities for affordable housing to hundreds of additional San Diego families and provided them with more choices.

Approximately 50 percent of the residents chose to stay at their existing units.

Vacancies in SDHC properties were filled with families who met the income eligibility established in the agreement with HUD.

Local Action Amid Declining Federal Investment

The public housing conversion emerged from a growing realization by the SDHC Board of Commissioners and executive leadership that SDHC's dependence upon the Federal Government's historic investment in construction and maintenance of public housing could not be sustained under the current Federal model.

Federal public housing subsidies for operations and maintenance were based on a formula, were not keeping pace with need, and were counterproductive to good private sector management techniques. Across the Nation, fewer new public housing units were being developed despite a growing demand for workforce and family housing.

"I think one of the most important things is that it created public-private partnerships, gave the Housing Commission the ability to sustain even more affordable housing units and to serve more people, to serve more families. And today if you look at the environment around us where you see an economic downturn, foreclosures, families who are in greater need than they were before, you know it was a really smart thing to do," California State Assembly member Toni Atkins, the former Speaker of the California State Assembly and a former San Diego City Councilmember, said in 2012.

On October 2, 2012, SDHC published a special multimedia digital report about the landmark public housing conversion and SDHC's Finance Plan, which is used today by other public housing authorities as a manual to emulate. The report, "Creating Affordable Housing Through Public Housing Conversion," is posted on SDHC's website: http://www.sdhc.org/uploadedFiles/Media_Center/Digital_Reports/Public_HousingConversionReport.pdf.

In addition to SDHC's own particular type of public housing conversion, there is another landmark Federal program that provides additional public housing authorities with similar opportunities to transform or enhance their public housing:

Rental Assistance Demonstration

Nearly 4 years after SDHC's landmark public housing conversion agreement with HUD, the Federal Consolidated and Further Continuing Appropriations Act, 2012, was enacted on November 18, 2011, creating the Rental Assistance Demonstration (RAD) program.

RAD allows public housing to be converted to long-term, Section 8 Housing Choice Voucher project-based rental assistance contracts. This conversion under RAD enables properties to obtain private financing to perform maintenance that had been deferred.

Although SDHC has not yet participated in RAD, we may utilize RAD in the future for our 189 remaining public housing units, and we support the public-private principles RAD is based upon.

PROVIDING FEDERAL RENTAL ASSISTANCE

Section 8 Housing Choice Vouchers

SDHC's largest program is Section 8 Housing Choice Voucher rental assistance. More than 15,000 low-income households in the city of San Diego, including formerly homeless San Diegans and chronically homeless Veterans, receive Federal Section 8 Housing Choice Voucher rental assistance from SDHC.

These households include more than 37,000 men, women and children.

Approximately 56 percent of these households are seniors or individuals with disabilities.

In addition to assisting low-income households to obtain rental housing, SDHC's Housing Choice Voucher program invests millions of dollars in the local economy each year.

In fiscal year 2016 (July 1, 2015—June 30, 2016), SDHC paid \$143,377,584 to approximately 5,600 participating landlords in the city of San Diego, who are essential to providing affordable housing to low-income San Diegans.

SDHC engages with private sector landlords to establish more affordable housing opportunities by providing Federal rental assistance.

SDHC partners with HUD to provide the most vulnerable San Diegans with rental assistance to help them locate housing in the competitive, high-cost San Diego rental housing market.

In addition, this program allows local agencies, such as SDHC, the flexibility to categorize Housing Choice Vouchers in ways that best serve their local communities, such as:

- Project-Based Housing Vouchers: Federal Project-Based Housing Vouchers are awarded to specific affordable housing developments to provide rental assistance linked to their units. When a tenant moves, the rental housing voucher remains with the affordable housing unit so that another low-income or homeless San Diegan is able to move into the unit and receive rental assistance.
- Sponsor-Based Housing Vouchers: SDHC awards Federal Sponsor-Based Housing Vouchers to nonprofit organizations, or “sponsors,” that provide supportive services to homeless San Diegans. Sponsor-Based Housing Vouchers provide rental assistance that pays up to 100 percent of the tenant's rent, depending on their income level.

Moving to Work

The U.S. Government's creation of the “Moving to Work” program in 1996 established a significant tool to provide affordable housing opportunities, combining the flexibility to foster innovation with continuing government oversight from HUD. Public housing authorities must submit their proposed new MTW programs to HUD for approval.

MTW lessens the impact of the top-down approach of the public housing program because it provides flexibility and allows local agencies to determine the most effective programs for their communities.

MTW has been especially significant in the expensive housing markets of California, including San Diego.

SDHC is one of only 39 public housing agencies, out of 3,400 nationwide, to receive the MTW designation from HUD, which allows flexibility to create innovative, cost-effective approaches to provide housing assistance to low-income families.

I want to thank the members of this subcommittee for your efforts to extend the contracts of MTW agencies, such as SDHC, for 10 more years, through 2028, which was approved in the Consolidated Appropriations Act of fiscal year 2016 on December 18, 2015.

This Congressional action also will expand the MTW program to an additional 100 public housing agencies across the country. I believe that the MTW program should eventually apply to all public housing agencies other than those identified by HUD as “troubled” to provide them with the structure and flexibility to design programs in their communities.

In San Diego, the MTW program has allowed SDHC to encourage families and reward them for productive activities, as you will see in my comments about the SDHC Achievement Academy.

SDHC's MTW initiatives provide: opportunities for Section 8 Housing Choice Voucher rental assistance participants and public housing residents to become more financially self-reliant; funding toward the creation and preservation of affordable housing for homeless San Diegans; and rental housing vouchers to address homelessness.

SDHC Achievement Academy

A significant component of SDHC's MTW initiatives is that we want to reward households for taking steps to move to work. The SDHC Achievement Academy is a critical MTW initiative to help low-income residents break the cycle of poverty and become more financially self-reliant.

On October 4, 2010, SDHC opened the SDHC Achievement Academy, a state-of-the-art learning and resource center and computer lab at SDHC's headquarters in Downtown San Diego. The SDHC Achievement Academy provides programs that emphasize career planning, job skills and personal financial education—at no cost to Section 8 Housing Choice Voucher rental assistance participants and public housing residents.

In fiscal year 2016 (July 1, 2015—June 30, 2016), 1,930 participants received services at the SDHC Achievement Academy.

The SDHC Achievement Academy's main program is Family Self-Sufficiency (FSS).

Heidi, age 39, was a homeless, pregnant teen when she began receiving Federal rental assistance from SDHC in 1997. She began participating at the SDHC Achievement Academy in 2012 and enrolled in FSS.

Working as a waitress, she was able to obtain an associate's degree in 2007. Two years later, she graduated from California State University, San Marcos with a bachelor's degree in criminology and justice studies. In spring of 2016, she earned her doctorate degree in sociology from the University of California, San Diego.

"There is absolutely no way that I would have had the opportunity to go to school if I didn't have my rent subsidized. I didn't have to work three jobs to support my family. I was able to take that time and go to school. I always felt like I had someone in my corner, someone that supported me, someone that wanted me to be successful, and I'm speaking specifically of FSS," Heidi said.

Heidi is looking for work as a professor and plans to phase out of Federal rental assistance, making assistance available for another low-income family.

SDHC utilized MTW flexibility to redesign the SDHC Achievement Academy's FSS, program, to provide enhanced opportunities for families to become more financially self-reliant.

Currently, 327 individuals are participating in the SDHC Achievement Academy's FSS program.

A voluntary, 2-year program, FSS provides a variety of courses, including: job training, career planning, and financial literacy education, such as budgeting, saving, establishing good credit, and income tax preparation.

Participants are required to follow a career plan and obtain a job working at least 32 hours per week. FSS is available at no charge to the head of household receiving SDHC HCV rental assistance and public housing residents.

SDHC Achievement Academy FSS participants are able to earn up to \$10,000 in an interest-bearing escrow account based upon their educational and employment-related accomplishments. Funding for these financial incentives is provided by HUD. FSS program participants may use these funds as they wish when they complete the program.

Path to Success

With the flexibility provided by MTW, SDHC created the Path to Success initiative to encourage Housing Choice Voucher families to become more financially self-reliant.

Under Path to Success, SDHC identifies Housing Choice Voucher rental assistance participants who are able to work (Work-Able).

With approximately 2,800 Work-Able families now paying toward their rent for the first time, SDHC's goal is to expand the Housing Choice Voucher program to those families on the waiting list, if it is financially feasible.

Providing rental assistance to families who are not working requires more Federal funds than assisting working families who contribute toward their rent.

Work-Able Families:

- Households with at least one adult who is under 55, not disabled, and not a full-time student ages 18–23.
- Full-time students ages 18–23 are considered Work-Able if they are the spouse, head or co-head of the household.
- Income and household circumstances are reviewed every 2 years instead of annually.

SDHC sees Housing Choice Voucher participants as partners in utilizing limited Federal funds to help as many families in need as possible.

Path to Success sets minimum monthly rent payment amounts for Work-Able families.

New minimum monthly rent payment amounts were implemented for Work-Able families, effective July 1, 2015:

- Households with one Work-Able person now pay a minimum rent of \$300 (up from \$200); and
- Households with two or more Work-Able individuals now pay a minimum rent of \$500 (up from \$350).

When the Path to Success initiative was implemented on July 1, 2013, the initial minimum monthly rent payment amounts were based on California's minimum wage standards—\$8/hour at the time.

SDHC determined what a Work-Able household could earn working 20 hours a week at minimum wage, and then calculated minimum rent payment amounts that would be approximately 30 percent of that monthly figure.

SDHC's Housing Choice Voucher program includes 6,587 Work-Able households. Of these, 2,814 pay minimum rents.

Work-Able families pay either the minimum monthly rent payment amount or the rent payment amount based on the family's annual income, whichever is greater.

Adjusted annual income is separated into income ranges. The lower edge of the range is used to calculate the family's rent payment.

Example:

- The monthly rent payment amount for any family with adjusted annual income between \$20,000 and \$24,999 will be calculated using \$20,000 as their income.
- It is possible that a family's monthly rent payment amount may decrease under Path to Success.

Hardships

Families may apply for a temporary hardship exemption from the minimum monthly rent payment amounts.

If the exemption is approved, the household is required to participate in SDHC Achievement Academy work readiness programs for the duration of the hardship period.

Elderly/Disabled Families:

The Path to Success minimum rent payment amounts do not apply to Elderly/Disabled households:

- Households where all adult family members are 55 or older, disabled, or a full-time student ages 18 to 23.
- Income and household circumstances will be reviewed every 2 years instead of annually.
- The minimum monthly rent payment amount for an Elderly/Disabled family is \$0.

Choice Communities

In San Diego, one of the programs that helps to achieve economic integration through more economically diverse, balanced communities is SDHC's Choice Communities program (not the Federal Choice Communities program), an MTW initiative that began on January 1, 2010.

SDHC's Choice Communities program helps Section 8 Housing Choice Voucher rental assistance participants move from high- and medium-poverty areas to low-poverty neighborhoods in the city of San Diego.

Since the launch of the program, 290 low-income families in the city of San Diego have been able to move to areas with more options for transportation, schools, and employment opportunities.

Leasing a three-bedroom home from a private landlord was possible for Maria and her two sons, ages 6 and 12, because of SDHC's Choice Communities program. A no-interest loan through the program helped Maria pay the security deposit for the rental home.

"I would not have been able to do that on my own because that's a lot of money for me as a single mom," said Maria, who works in customer service for a local hospital. Maria has received Federal HCV rental assistance for the last 6 years.

The Choice Communities program:

- Allows a higher monthly rent subsidy, or "payment standard"
- Provides no-interest loans of up to \$1,450 for security deposits, to be paid to the property owner, with low monthly repayments
- Provides additional resources, information and guidance to families interested in moving to one of the specified low-poverty Choice Communities

Overall, 807 Housing Choice Voucher families live in Choice Communities, including families who lived in these neighborhoods before the Choice Communities program began or who are new to SDHC's Housing Choice Voucher program and chose to live in these communities.

I believe that, as we move forward, many of the programmatic tools already exist to assist low-income families, as I have shown with the San Diego model for public housing conversion and SDHC's MTW initiatives. To help low-income families move out of poverty, it is essential for local agencies to be provided with the flexibility to choose the options that show the greatest success in their communities. As local agencies make these decisions, they are held accountable by HUD and local governing bodies, such as the SDHC Board of Commissioners and the Housing Authority of the City of San Diego.

ADDRESSING HOMELESSNESS

The flexibility to meet local needs is utterly essential to effective affordable housing strategies. Challenges are not the same in all cities and counties across the country. A specific challenge for affordable housing in San Diego is homelessness.

The San Diego region ranks fourth in the Nation in homeless population, behind New York, Los Angeles, and Seattle, according to the Annual Homeless Assessment Report to Congress, published in November 2015.

Housing First Model

The future of affordable housing includes providing housing opportunities for homeless seniors, Veterans, families, and individuals.

SDHC is a driving force of the national Housing First model in the city of San Diego—to provide homeless individuals with housing as quickly as possible, with supportive services as needed.

As an MTW agency, SDHC on July 1, 2010, became one of the first public housing authorities in the Nation to receive approval from HUD use Federal rental housing voucher funding to provide long-term housing for chronically homeless individuals.

HUD also approved SDHC's request to utilize its MTW status to invest its Federal funds to preserve or build affordable housing for homeless San Diegans.

HOUSING FIRST—SAN DIEGO

SDHC is applying the power of these Federal resources to address homelessness through HOUSING FIRST—SAN DIEGO, SDHC's 3-year Homelessness Action Plan (2014–17), which was launched on November 12, 2014.

Award Development Funds—Up to \$30 Million over 3 years (Up to \$10 million each year) to create permanent supportive housing that will remain affordable for 55 years.

To date, SDHC has awarded \$12 million in Federal, State, and City of San Diego funds administered by SDHC to four developments, which will provide a total 167 affordable housing units for homeless individuals.

Commit up to 1,500 Federal Rental Housing Vouchers for Permanent Supportive Housing to provide housing to homeless individuals and families (Award up to 300 new housing vouchers each year to complement 576 housing vouchers already awarded).

To date, SDHC has awarded a total of 822 Federal rental housing vouchers.

Renovate Hotel Churchill—72 Units of Permanent Supportive Housing: 56 units for homeless Veterans; 8 units for transitional age youth ages 18–25, such as youth aging out of foster care; and 8 units for adults exiting the corrections system who also need supportive services.

The grand reopening of the historical Hotel Churchill was celebrated on Monday, September 19. SDHC worked with our nonprofit affiliate, Housing Development Partners, to rehabilitate Hotel Churchill. SDHC invested \$9.2 million in MTW funds; \$2.9 million in HOME Investment Partnerships Program funds awarded by HUD to the City of San Diego and administered by SDHC; and \$3.2 million in City of San Diego funds administered by SDHC toward the \$20.6 million rehabilitation cost.

Invest MTW Federal Funds to Acquire Property that sets aside 20 percent of its units for permanent supportive housing for homeless San Diegans.

SDHC invested \$15 million in MTW Federal funds to purchase the 120-unit Village North Senior Garden Apartments. Twenty percent of the units—24 units—are set aside for homeless seniors.

Dedicate SDHC-Owned Housing Units—25 for Homeless San Diegans.

SDHC is one of the first public housing agencies in the Nation to commit affordable rental housing that it owns for this purpose.

This is a rapid re-housing component of HOUSING FIRST—SAN DIEGO. Since the program began, 13 families have become financially self-reliant and are now able to pay full rent or have moved to another apartment. The program served 135 individuals, including 87 children and 13 Veterans.

SDHC's multimedia digital report about HOUSING FIRST—SAN DIEGO was published on November 21, 2014, and is posted on SDHC's website: http://www.sdhc.org/uploadedFiles/Media_Center/Digital_Reports/SDHC%20Homelessness%20Action%20Plan.pdf.

New initiatives for the second year of HOUSING FIRST—SAN DIEGO include:

- The 1,000 Homeless Veterans Initiative*.—Provide housing opportunities for 1,000 homeless Veterans in the city of San Diego within 1 year—March 2017. Nearly 330 homeless Veterans have secured housing through SDHC's The 1,000 Homeless Veterans Initiative, which has four program components:
 - Landlord Outreach—"Housing Our Heroes"
 - Rapid Re-housing Assistance
 - SDHC Federal Veterans Affairs Supportive Housing Vouchers
 - SDHC Federal Housing Vouchers with Supportive Services

The Guardian Scholars Program at San Diego State University (SDSU)—A nationally unprecedented partnership between SDHC and SDSU to provide rental assistance for up to 100 students who have been homeless or at risk of homelessness.

The Monarch School Project—Federal housing vouchers for 25 families with students impacted by homelessness.

News releases about these new initiatives are available on SDHC's website:

- July 20, 2016: The 1,000 Homeless Veterans Initiative http://www.sdhc.org/uploadedFiles/Media_Center/News_Releases/NR%20Housing%20Our%20Heroes%20%20Progress%20Report7.20.16.pdf.
- December 3, 2015: The Guardian Scholars Program and The Monarch School Project http://www.sdhc.org/uploadedFiles/Media_Center/News_Releases/NR.SDHC-SDSU%20HousingFirstSanDiego.12.3.15.pdf.

CONCLUSION

Creating more affordable housing opportunities for low-income families requires innovative solutions that foster public-private partnerships.

As SDHC's experience demonstrates, converting public housing to Section 8 Housing Choice Voucher rental assistance is the type of ingenuity needed to maximize the benefit to low-income families, and to ensure that taxpayer funds are utilized efficiently.

With Section 8 Housing Choice Voucher rental assistance, low-income families are able to choose the housing that meets their individual needs, empowering them to be active consumers instead of clients—an option that public housing does not provide. In addition, the local economy benefits from the infusion of Federal funds paid to private landlords, who are essential partners.

The flexibility afforded by the MTW program enhances Section 8 Housing Choice Voucher rental assistance to achieve additional beneficial results.

As approaches toward affordable housing evolve in the United States, I encourage all of us to be constantly open to identifying a continuously changing variety of solutions and to recognize the importance of both the government and the private sector to meeting the housing needs of our unique communities.

Senator COLLINS. Thank you very much for your testimony as well.

Let me start with you, Mr. Gentry. The conversion of public housing at the San Diego Housing Commission was a long, multiyear effort, and I am sure at times that it was an extremely difficult one. I have a couple of questions for you.

One, as you reflect on the experience, what was the biggest challenge and the greatest success?

MOVING TO WORK PROGRAM

And second, how important was the Moving to Work program, which we have expanded, or was the Moving to Work program an important part of that conversion?

Mr. GENTRY. Ma'am, the biggest challenge was simply getting people to understand that we were not walking away from our re-

sponsibilities. In fact, we had a lot of criticism early on from people who you would have thought would have some of our best supporters that we were walking away from our responsibilities and did not want to serve poor people anymore. And the analogy I use for that is that people sometimes cannot differentiate between methodology and mission, and if the methodology changes, I think you have abandoned your mission.

My belief is that methodologies are in constant flux, constant change, and we should be continuing trying to do things better as we move forward and that is, we are continually breaking the mold and doing things in better and different ways. It does not mean we are walking away from our mission.

So I think simply getting folks to understand and support what we were doing throughout the community and also in this city frankly was our biggest problem. Beyond that, it was just a matter of working it out.

In terms of Moving to Work—and San Diego is one of the original Moving to Work agencies—my predecessor had unfortunately let the Moving to Work program lapse over the years so that it was abeyance at the time that the public housing conversion was approved by HUD, which was in September of 2007.

DEMOLITION/DISPOSITION ACTIVITY

The authorizing legislation was the demolition disposition part of the Housing Act of 1998. And in that regard, the conversion can be done by any agency whether they are moving to work or not.

I will point out also, because the critics will hear the demo dispo word and think that we got rid of property or walked away from our responsibilities, the Housing Commission in San Diego did not demolish a thing. We have not disposed of a thing. We still have those 1,366 units in our inventory. It is just that they are operating on San Diego Housing Commission principles now rather than public housing principles.

Senator COLLINS. Ms. Poethig, we know that the research tells us that the ZIP code in which one is raised is a likely predictor on how one is going to do in life. So it has a real impact on our children. You can go by public project housing in Washington, D.C. It is often dilapidated in high-poverty areas. The schools in those areas are not good.

Is continued subsidization of public housing in neighborhoods like the ones I described just perpetuating problems and an ineffective use of Federal resources?

There is an amazing study that was done by the Robert Wood Johnson Foundation that you may be familiar with that determined that the variation between neighborhoods can be so dramatic that in Richmond, Virginia, babies born within 5 miles of downtown Richmond face up to a 20-year difference in life expectancy.

PROJECT-BASED RENTAL ASSISTANCE

Ms. POETHIG. Madam Chairwoman, I share your concern about the public housing units that are in neighborhoods over 40 percent concentrated poverty and that there have to be better alternatives, if there are better alternatives. And I am happy to submit more in-

formation for the record because I think we should draw upon the experience of the vouchering out of public housing in Chicago, the Robert Taylor homes in particular, that were vouchered out without a particular plan, and what happened was people actually re-segregated into some of the very same communities. So vouchers did not necessarily promote the mobility of those families, and there were other concerns associated with rapid vouchering out that did not have an attendant plan.

Senator COLLINS. Thank you.

I have 5 seconds left, so I guess I will have to yield to my ranking member. And I will come back to you, Dr. Olsen, on the next round. Senator Reed.

Senator REED. Well, thank you very much, Madam Chairwoman.

HOUSING CHOICE VOUCHERS

Ms. Poethig, again, without the basis of the kind of analysis that Dr. Olsen and Mr. Gentry and you have done, the perception is, particularly after 2007–2008 with the housing crisis, people would buy houses because you could do it. If you saw “The Big Short,” you could do it with lots of interesting approaches.

Now there has been a huge shift into the rental market, driving the price up. And underlying the discussion about vouchers versus place-based support is the assumption that a voucher will get you a home. In fact, in some of these studies, the voucher will get you a home in a really great ZIP code. What is the reality? Does the voucher get you a home, or you have a voucher, but you do not have anyplace to live?

Ms. POETHIG. Thank you, Senator.

So as you know, the Raj Chetty study, the study by Harvard economists, has this incredible result. But Dr. Chetty has also said that it is mathematically impossible to imagine that all the people living in public housing in highly concentrated areas of poverty could, in fact, find housing in areas of low poverty. So that is just at a macro level.

Then within certain markets in certain communities, it is absolutely appropriate to be concerned about whether there is a supply of affordable rental housing available, particularly as we are going to be growing in the number of renters, even exceeding the number of homeowners in the next 15 years. And as that demand grows, it will put pressures on the supply that is not currently keeping up with demand. Currently we have 11.2 severely cost-burdened households, 70 percent of which are extremely low-income. These are people without assistance. So we have a ready group of people that fall in and out of homelessness as a result of not having sufficient supply.

Senator REED. Dr. Olsen, your comments? Because, again, I think this is a critical question because there is some compelling logic but also the reality is will this result in higher cost to the Federal Government as rental prices go up. Will it result in homes as people who have a voucher but do not have a home?

HOUSING ASSISTANCE SUPPLY EXPERIMENT

Dr. OLSEN. I do not think we need to be subsidizing construction to get the number of units that we want. The private market will do that.

But let me just tell you more specifically what would happen if you authorize more vouchers. We know this from the Experimental Housing Allowance Program, which operated an entitlement voucher program called the Housing Assistance Supply Experiment in two places. What happened in response to providing a lot of vouchers was that units that did not meet the standards were upgraded to meet them. So you had an increase in the supply of units meeting the standards, largely without additional units.

The homeless are the only people who do not have housing, but we don't need additional units to house them, there are about 600,000 homeless a night. There are over 3 million vacant apartments every night. The reason homeless people are not in those vacant apartments is they do not have the ability to pay for them.

HOUSING CHOICE VOUCHER PROGRAM

Senator REED. But this discussion is touching upon public housing. Ms. Poethig suggested that to take the public housing off, as in a way San Diego did—take it out and give people vouchers in lieu of that, that is adding to a population already existing of homeless people. And those 3 million empty units exist because some of them are too expensive even with the most elaborate public subsidies. If we go ahead and go to a tenant-based voucher system, do we build in the law the guarantee that they must be housed and where they are housed?

Dr. OLSEN. I do not think we are anticipating tearing down all public housing over a very short time horizon. We are talking about a very gradual process of getting rid of the very worst units, like we have already done. We have already lost 400,000 units from the peak, very gradually, 20,000 a year, over many years. The private market can easily accommodate the number of people who would go onto the market even if you tear down public housing units.

LOW INCOME HOUSING TAX CREDITS

The other thing to know about the voucher program is that it leads to more additional units than subsidized construction programs like the tax credit. That may seem very counterintuitive, but the explanation for it is that lots of people who are served by all types of housing assistance are doubled up prior to getting housing assistance, such as young mothers with children living with their parents. About 25 percent of the people in the voucher program were previously doubled up. Any housing program serves a certain number of people of this type.

HOUSING CHOICE VOUCHER PROGRAM

Because the voucher program serves the poorest people, there are more people served by that program who are doubled up. And so it increases the demand for new units more. The empirical result is that additional voucher units increase the housing stock more than additional units subsidized under construction pro-

grams. These results are reported in a paper in the "Journal of Political Economy."

Senator REED. When was that?

Dr. OLSEN. "Journal of Public Economy." Sorry.

Senator REED. When was that?

Dr. OLSEN. It was about 5 years ago. There is a reference to it, I think, in my written testimony, but if there is not, I will give it to you.

Senator REED. I would appreciate that. But I think what we are sensing—and again is that in these 5 years, there has been a tremendous shift into the rental market by college graduates who cannot afford homes, by people who choose to live in these. So I think that the data we are looking at right now and the trend that Ms. Poethig suggested are the increasing demand by relatively upscale individuals for housing is going to keep rental prices high and vouchers higher also.

But thank you. I will have a second round.

Dr. OLSEN. Just to follow up on that, the other thing that is happening, yes, more people are renters, but units that were formerly owner-occupied have been shifted to the rental market. There is a shift both in the demand and supply side.

Senator REED. Thank you.

Senator COLLINS. Senator Cassidy.

Senator CASSIDY. Folks, thank you.

You all know so much more than me. So I am going to pose a bunch of questions just as an academic, and then ask each of you to reply as you think is pertinent.

EMERGENCY RELIEF

One is very practical. The State I represent just had a huge flooding episode. Right now, it is the fourth worst natural disaster in the history of the United States, moving on way up to the third.

Now, there have been some reports that this has particularly impacted, as you might guess—there are 85,000 homes flooded, so assume three to four people per home. We have 350,000 to 400,000 people displaced out of their home.

I gather that those who have had the hardest time have been in subsidized housing, kind of what you just said, Dr. Olsen, but at large and acutely, that there is a sudden demand for rentals and prices go up, and folks with Section 8 have the least options. I do not have a solution. I am posing that because that is what we are grappling with. We would like your thoughts on that. Is it just that is the way life is?

Dr. OLSEN. Well, in the short run, the question is where should these people live. There were some vacancies to start with, but I am guessing not nearly enough to accommodate all of these people.

What happened after Katrina was that a lot of people had to move out of the area. They moved to Houston. They moved to Dallas. They moved to Atlanta.

Senator CASSIDY. They moved to Baton Rouge.

Dr. OLSEN. In the first instance, Baton Rouge, the closest place.

That may be an inevitable part of the solution. There are not enough units there. They have to have housing now. They cannot wait for a house to be built. So it may be that a part of the solu-

tion, given the numbers you have said, is some people are going to have to move elsewhere.

Senator CASSIDY. Solutions/results. Folks may not wish to be disrupted, but it just may be that is the result.

Dr. OLSEN. Right.

Senator CASSIDY. Does anybody else have a thought?

Ms. POETHIG. I would just add, I mean, that given the natural disaster, we do not have a flexible enough supply to be able to absorb the demand that happens after a natural disaster. As Dr. Olsen, Ed, pointed out, I think Houston and Baton Rouge and other communities ended up receiving many of the people who were displaced over time. So I acknowledge they have not necessarily all—

Senator CASSIDY. The chairwoman is going to cut me off, so I am going to cut you off first.

TENANT-BASED RENTAL ASSISTANCE

Ms. Poethig, you had mentioned that sometimes when you shut down Robert Taylor, you end up with a similar concentration of poverty but elsewhere. So now is a set of questions that I can imagine a homeowner who understands that we are going to begin moving folks into neighborhoods of less poverty. What you just said implied that if they were moved into a neighborhood of less poverty, that neighborhood became impoverished with negative social indicators.

So I am asking, what is the academic literature or the empiric experience show when you begin moving folks out of housing projects and/or with Section 8 housing into neighborhoods with less poverty? What is the impact of social indicators and property value upon the neighborhood into which they move? Does that make sense?

Ms. POETHIG. So I think one of the most important principles, if we were to consider this policy, is a policy of responsible relocation. That includes considerable supports for people as they make particular housing choices. And so that responsibility would include better information and ways in which they can move into neighborhoods fully equipped to be responsible residents in those particular communities.

PROJECT-BASED RENTAL ASSISTANCE, AND LOW INCOME HOUSING TAX CREDITS

There is research by George Galster that looks at voucher holders in comparison to place-based investments in low-poverty communities and finds, generally speaking that those place-based investments lead to more positive results.

Senator CASSIDY. Place-based means what?

Ms. POETHIG. It would mean public housing or PBRA, project-based rental assistance, in some cases tax credit properties, than dispersed voucher holders.

HOUSING SUBSIDIES

Senator CASSIDY. I am not quite sure I follow all of that. No offense, but there is just some lingo that you know that I do not.

Mr. Gentry, you got an average neighborhood in San Diego has homes—you know, middle class neighborhood—the homes are \$450,000.

Yes, sir. So empirically when you all move folks into those types of neighborhoods, again middle class folks, even though the home is so expensive, what happened to the property value and social indicators in those? And again, you all know your technical language so much. If I can ask you just to kind of make it a little bit plainer English so I can comprehend.

Mr. GENTRY. Well, I will make it very plain. I think the problem is one of algebra, frankly.

Senator CASSIDY. Is what?

Mr. GENTRY. Algebra. You have a certain amount of money and you have a certain number of people you serve. We serve people in what I call the modest marketplace. We do not have the amount of subsidy to help people move into higher-income neighborhoods.

Senator CASSIDY. But in San Diego, higher income—again, your property values are so high, you do not have to be a wealthy person to have a house which is valued very highly.

Mr. GENTRY. However, in San Diego, there are wide varieties of variations in the value of those properties and the cost of those properties. So our Section 8 voucher holders tend to wind up fairly concentrated as well. If you know San Diego well, they tend to be south of Interstate 8. They tend to be east, southeast, and south down around the border. And we do not have a whole lot of voucher holders in La Jolla or Point Loma. We have got a few.

CHOICE NEIGHBORHOODS INITIATIVE

If you notice in my paper, I do say that we have our own choice communities program where we have helped, but that has only served about—less than 300 families who have been able to move out of the nontraditional neighborhoods. And I will point out if everybody did, we would serve fewer families.

So the tension—and “tension” I think is the applicable word here—is that if you spend more per family to live in higher-income neighborhoods, which is what the rent in those neighborhoods warrant, with the same cost of dollars, you serve fewer families. So where do you draw the balance?

I think each community in the country is going to be different. I can tell you in Oakland, California and much of the Bay area, the Section 8 voucher program has pretty well stopped working because the value has gotten up so high and landlords who do not need the program to fill the properties do not participate that the Oakland Housing Authority has started project-basing most of its voucher supply or a good bit of it just in order to make the programs work and to provide resources for the residents.

San Diego has not gotten to that point yet, although it could be on the horizon if we do not get more absolute supply into the marketplace over the next few years.

HOUSING CHOICE VOUCHER PROGRAM

So I think in different parts of the country—you go to Oklahoma, Mississippi, and my home State of North Carolina, you still got good applicability and the voucher program works very well. But

it is going to be different in different places. You are going to have marketplace dynamics you need to take into account. Somewhere within all this tension, you are going to find solutions, but they need to be community-based and city-based and locality-based, sir.

Senator CASSIDY. I yield back. I am sorry. Thank you for being forbearing.

PROJECT-BASED RENTAL ASSISTANCE

Senator COLLINS. Thank you, Senator.

Dr. Olsen, earlier we heard Mr. Gentry describe the public housing approach as a failed business model. Do you agree with that?

Dr. OLSEN. Yes, because as I say, the cost-effectiveness studies show it is very costly for the housing that you get and other disadvantages too in terms of the location. The housing authorities in the early years tried to get the projects in better neighborhoods, but local opposition prevented that. So most of the projects were built in very low-income neighborhoods. That is part of how we got to where we are today.

But in any event, we are where we are today. As you said, we have a lot of projects in very poor areas, and they are often in very bad condition as well. And I think we should try to get away from that and give these people vouchers and let them try to spread out over the community.

PUBLIC HOUSING CAPITAL FUND

Senator COLLINS. Ms. Poethig, Congress is now providing roughly 50 percent of the annual capital needs for the public housing. And that is clearly, from your perspective, part of the problem because it means that there are nearly 10,000 public housing units that are at high risk of being lost each year because they are simply crumbling, and they are not safe, and they are not suitable for people to live in them.

I know that your first preference is likely more funding, but putting that issue aside, do you believe that we should be going more in the direction of project-based rental assistance and Section 8 tenant vouchers?

TENANT-BASED AND PROJECT-BASED RENTAL ASSISTANCE

Ms. POETHIG. So I believe that one of the efforts that we should build upon is the use of subsidy contracts. So this is the primary form in project-based rental assistance. And with project-basing vouchers, this has been a tool that others have used to enable development to happen because they enable developers to go the private marketplace and seek funding to build the units themselves with a hope that they are actually building in lower-poverty communities.

So I do believe that the subsidy contracts are a very important tool, coupled with other supply tools that enable housing to be built for people with extremely low incomes. The tax credit does not work for people with extremely low incomes. It needs to be married to rental assistance.

Senator COLLINS. Mr. Gentry, I really am impressed with what you were able to accomplish in San Diego. I imagine it was both

difficult and at times controversial. I am wondering what happened, if you could walk us through more detail, such as is in your written statement. What happened to the public housing that you converted? Did it become project-based, tenant housing? Was it razed? What happened? Did tenants buy some of it at very low cost? What happened to it?

Mr. GENTRY. We still have the physical properties in our portfolio. And I will point out, if you go on our website, we have got every one of our properties on Google map. You can do a windshield survey of every one of them just at your desk.

HOUSING CHOICE VOUCHER PROGRAMS

What we did, we promised HUD three things when HUD approved this in 2007. Number one is that we would not project-base any of the subsidies. We would allow these families to take the subsidy and walk if they wanted to and choose where they wanted to live. I was not in San Diego when that decision was made in 2007, but I think it was a pretty gutsy decision to make for those properties.

Now, it was made with the realization that our properties were better than much of the typical public housing stock, and I recognize that. And you will see that on that windshield survey. But still, that was a pretty gutsy decision.

The second thing we promised HUD was that we would backfill—and this gets to your question. We would backfill. For every family that moved out, we would backfill with another family below 80 percent of median income, elderly below 50 percent back into those units at a rent that the families could afford to pay, which was pegged at just about what a tax credit rent and just about what a Section 8 rent would be to a landlord in San Diego.

Then third and the most exciting, we told HUD if they would give us the deed to those properties, we would convert those properties. We would convert the equity to debt, and we would create at least another 350 units of affordable housing. In 2010 to 2014, we issued \$95 million in debt on those properties. Then we purchased, either direct and outright or in partnership with private sector players, 810 units of affordable housing with debt paid for by those existing public housing properties.

Now, the silver lining in the cloud of the economic downturn in California was that we were able to pick up properties at the depth of the recession. That helped. But we would have far exceeded the 350 goal we set with HUD regardless. And it was an exhilarating process, and it was a wonderful thing to help accomplish.

But basically what we did was to release the value that was pent up fallow in the ground on those properties and to reuse it. And then we were able to glean from the existing marketplace in a downturn in a countercyclical way to reuse excess properties in a public sector way that are being well used now that prime values are way back up. So it was a wonderful process.

Now, I know people will say that you could not replicate the San Diego model, say, in other more traditional housing authority markets. You mentioned Richmond, Virginia a while ago. I was the CEO down there from 1990 to 1998. A far different set of circumstances. You would not do in Richmond what we did in San

Diego, but you would go through the same decision-making process to figure out what Richmond could do, needed to do if the Richmonders had the same authority to make their own decisions as we had in San Diego.

Senator COLLINS. That is why you argue for more flexibility at the local level in your initial statement.

Mr. GENTRY. It is utterly essential.

And I will point out that, too, if you look at the different programs, no supply-side program is going to get the cost down below the affordability level for any family below about 50, maybe 40 percent of median income. You get down into the extremely low families, let us say, 30 percent or less, they cannot pay enough rent to cover the cost of operations. You have got to have a subsidy to make the property operate in addition to producing it. And that is where a demand-side subsidy like Section 8, like the vouchers program or operating subsidy in public housing, is utterly essential. So if you have got a good balance and marriage of supply-side subsidies to produce the property and then demand-side to help the extremely poor afford to stay there, then you can make it work.

And in my experience, there are only three kinds of subsidies that have ever worked. There is a supply-side subsidy that buys down the cost of the property. There is a demand-side subsidy that helps the consumer pay their way. And sometimes there is an internal subsidy where you get a range of incomes where the relatively higher-income folks pay more than the relatively lower-income. I have never seen anything that is not a variation or a combination of those three. And there is no magic. You have got to have one or some combination of those three to make any affordable housing property work.

Senator COLLINS. Thank you.

Senator Reed.

PROJECT-BASED RENTAL ASSISTANCE

Senator REED. Thank you very much.

Ms. Poethig, we are talking about basically three categories of housing: public housing, then project-based assistance housing, and individual vouchers. Focus for a moment on the project-based.

In my view—and your comment would be appreciated—there are some external benefits to that beyond the housing, particularly with seniors where you have a certain community. You have access to medical care. You have access to transportation, which is much more efficient. And so when we evaluate these place-based vouchers, we have to add in these factors too I would assume. And also, it tends to make the project much more valuable. Is that accurate?

Ms. POETHIG. Thank you, Senator.

As you know, housing is a very important platform, especially for older adults, and 50 percent of project-based rental assistance is actually serving older adults and people with disabilities. So that is an important part of the population that is benefiting from that particular platform.

We have a growing body of evidence that not only demonstrates that it has benefits for the people living in the housing but also saves money, particularly to Medicare. So the particular study that I have been most persuaded by is something called SASH. It is a

model in Vermont that has health coordinators operating on the platform of housing, nurse practitioners who are connecting them to healthcare services not only for the people in that housing but also serving people in rural communities as well. So the housing serves as a platform for other low-income people with healthcare needs in rural communities. And it is essentially creating a net savings to Medicare.

So my concept is how—and this committee has shown such great leadership in the past in partnership with other committees—to imagine the partnerships to look at the convergence or the opportunities between thinking about housing as a platform, particularly for older adults, and the ways in which it could save resources and Medicare as a potential opportunity for investment.

Senator REED. One of the institutional issues around here is that we do housing, that somebody else does Medicare. So if we find savings—you know.

Ms. POETHIG. I know, yes.

Senator REED. That is our problem. Trust me, she will figure it out.

[Laughter.]

Senator REED. I was very impressed with your comments, Mr. Gentry, about the locality issues being so critical. And as you point out, in San Diego, because of local forces, you are moving forward with your concepts. But up in Oakland, they have seen rents rise so high that the vouchers are just—yes, I have got a piece of paper, but I do not have a place to live. They are actually going back into the public housing issue. Is that more widespread than just Oakland?

Mr. GENTRY. Well, actually they are not going back into public housing. What they are doing is project-based—

Senator REED. Project-based.

Mr. GENTRY. But that is where the genius of the voucher is so useful. It is flexible. You can use it for project-basing. You can use it for sponsor-basing, meaning a third party tells you who you can issue the voucher to. Or you can use it as a classic finders keepers utilizing the marketplace. And you can vary it based on what the marketplace needs if you have the good sense and the courage to make your own decisions, then to be accountable for it.

You can also use the voucher for special purposes. I will point out, there are a lot of nice things about living in San Diego, but one of San Diego's particular problems is the homelessness problem. We have got, not on a per capita basis but in whole numbers, the fourth worst problem in the country behind New York City, L.A., Seattle, and then us. You know, you are not going to freeze to death on the streets in the wintertime, such as the winter is in San Diego. And we have got a huge problem there.

MOVING TO WORK PROGRAM

We have targeted much of our Section 8 product to dealing with the homeless, and we have put on the street—and I reference this in my testimony—2 years ago November a program called Housing First San Diego where we have a multi-pronged approach to dealing with the homelessness problem using the vouchers as a major part of our approach in two ways. One, the subsidy itself to help

people live in the private marketplace, and secondly, where we have been able to realize efficiencies and savings, because we are a Moving to Work agency, we have invested that back in property on the supply side. We can take a demand-side subsidy, repurpose it, use it on a supply side too, as we need to, to accommodate our marketplace and our needs and problems.

Two days ago, we dedicated the old Hotel Churchill, which is a 102-year-old hotel that we have rehabilitated in an historic preservation way. This housing is now housing 72 formerly homeless folks in single-room residency fashion, 56 of whom are veterans. We would not have been able to do that without, number one, vouchers and, number two, the Moving to Work status. So I think it is the flexibility of the program and then the flexibility within that of our organization through the MTW program together are just huge in allowing us to solve San Diego problems in San Diego ways.

Senator REED. Thank you very much.

Senator COLLINS. Thank you, Senator.

It is my understanding that Senator Cassidy is going next, and then we will come to Senator Boozman.

VOUCHER PROGRAMS

Senator CASSIDY. Dr. Olsen, again, I am trying to follow what you all are saying. I thought I gathered what you said earlier that a voucher is more successful in expanding housing stock, if you will, the demand-side subsidy, than the supply-side subsidy.

Dr. OLSEN. That is what the study shows, yes.

Senator CASSIDY. But it does seem from what we have learned from San Diego in that comment is that if you are in a really high-value real estate, that you really do need a supply-side subsidy if you are going to make something affordable.

Dr. OLSEN. Yes. I do not agree with that. And actually the way the voucher program works is the subsidy is much higher in the most expensive market.

Senator CASSIDY. Well, let me ask because Mr. Gentry mentioned in Oakland and the Bay area that really the program is falling apart I gather because rents are so high. And then he mentioned his own place. There is a tension. Sure, we can move somebody up to a higher place, but then we serve fewer families sort of thing.

Dr. OLSEN. I do not understand that. The payment standard in different places is a percentile of the rent distribution. It is basically median rent. So in places where median rent is high, the subsidy is very large. The only sense I can make of it is the subsidy level is the same throughout an entire metro area. And so there can be parts of a metro area where the rents are so high that people with vouchers cannot live there. But I don't know whether that would apply to the entire Oakland area. The generosity of the voucher subsidy is much greater in San Diego and in Oakland than it is in Charlottesville, for example.

Senator CASSIDY. Mr. Gentry, any kind of comment?

Mr. GENTRY. Just that grand solutions do not always fit particular issues and problems, and there has to be a flexibility. In a country as big and large as this one is with all the variations from a Charlottesville—and I have lived in Virginia. Charlottesville is a

wonderful place—the difference from a Charlottesville to a Chicago, to a San Diego are immense. And I think you have got to have some local flexibility, some local decision-making.

And I think the thing I would disagree on is that it is not enough just to be able to help people pay their rent. You have got to also ensure that people in the future will be able to pay the rent, and that involves making the proper kinds of investments in properties. Just as it is typically to a family's benefit to become a homeowner at some time rather than a renter, at some point in time localities need to also make sure they own enough properties to guard against the kinds of problems that Oakland is running into.

I will point out that from my understanding of the Oakland situation, it is not that the housing authority there is using the Section 8 subsidy on its own properties. It is using the subsidy to encourage private sector individuals to get involved but in a project-based, place-based way because that is what the local marketplace requires rather than a classic finders keepers.

Senator CASSIDY. Let me ask you one more thing. I once heard a criticism of Section 8 housing that it establishes a rather steep marginal tax rate. As someone earns more money, they get less for their voucher, and in a sense it pays them not to earn more money. You could add other such benefits, and somebody told me that in his State, the beginning job would have to be \$55,000 plus medical benefits to account for everything someone could receive by not working but receiving all this.

Ms. Poethig, I see you nodding your head. Do you mind commenting on that?

Ms. POETHIG. Certainly, and thank you, Senator.

So HUD has commissioned a study, a rent reform study, that is looking at these issues related to having a different rent structure such that you would not create a disincentive for people to increase their—

Senator CASSIDY. Implicitly there currently is and they are trying to modify it.

JOBS PLUS DEMONSTRATION

Ms. POETHIG. They are trying to look at models for modification for doing that. We know in other important demonstrations, the Jobs Plus demonstration in particular that did create a different incentive, it did not essentially disincentivize someone to earn more. We saw a benefit not only to increase earnings for that particular person but also longer job retention. So we hope to see some of the same kinds of results in increasing self-sufficiency by modifying—

Senator CASSIDY. Let me go because I am almost out of time.

Dr. Olsen.

SECTION 8 AND WORK DISINCENTIVES

Dr. OLSEN. If I could just comment on that, sir. Actually this is a feature of each of the major types of housing assistance. It is true in public housing, other HUD project-based assistance, and vouchers. The more you earn, the less the subsidy you get. You lose 30 cents for every additional dollar you earn.

It is also a feature of other major welfare programs such as TANF and Food Stamps. The evidence indicates that these programs have work disincentive effects, just as you mentioned.

Senator CASSIDY. Okay. Well, I am out of time. I yield back. Maybe I am not out of time.

[Laughter.]

Senator COLLINS. Thank you.

Senator BOOZMAN.

Senator BOOZMAN. Thank you very much.

RETURN ON INVESTMENT

Dr. Olsen, I think we would all agree that finding and identifying ways to provide flexibility and better return on investment for Federal dollars is certainly important when it comes to Federal programs, including those administered by HUD.

What do you believe are the biggest problems to return on investment of Federal dollars, and where would be a much needed area to provide flexibility within existing programs?

Dr. OLSEN. I think that the biggest opportunities for getting more bang for the buck is to phase out project-based assistance, and my views on that are based on evidence on the cost-effectiveness of the major HUD programs of project-based assistance, public housing, the Section 8 New Construction program, and Section 236, compared with housing vouchers. So I think we need to work our way out of those programs and not commit money to additional programs of that type.

HOMELESSNESS

Senator BOOZMAN. Thank you.

Mr. Gentry, homelessness is neither a rural or urban issue. It is a national issue.

What lessons can we learn from your experiences of the Housing First model when it comes to addressing the issue of homelessness in America?

Mr. GENTRY. The lesson I think is getting the proper balance among what are basically three types of homeless housing systems.

One is emergency and shelter housing, which the Housing Commission does administer on behalf of the City of San Diego, and those are shelter beds for those in immediate need.

Second is the need for some transitional housing, which typically also is a congregate setting where individuals and families can get some of their needs attended to while they are getting ready for living in the marketplace.

The third, though—and this is what has drawn a lot of attention lately and I think what we are moving toward—is the Housing First model, which means you help people get a permanent structured live-in, a house, an apartment, whatever you want to call it where it is an individual family occupant, not congregate housing, and then using that as the basis for attending to the other problems which have helped to make them homeless.

I would contend that there are basically three types of causes for homelessness as well.

One is the intersection of mental health and substance abuse issues, which has particularly gotten troublesome over the years

with the demise of some of the old large mental hospitals that used to be in existence in every State and pretty much are gone now. And I think there is a mental health crisis in this country.

Second is that particularly with the economic downturn or the Great Recession, we saw families who had no other issue other than perhaps the lack of an extended family and short-term economic problems, and a rapid re-housing approach helped them, which is short-term assistance.

And then you have a third one that is not always understood or talked about much, but it typically applies heavily for women and children. And that is domestic abuse and needing a place to land and to resettle there.

So I think, again, there are no grand solutions, but I think if you look at a Housing First model as a basis which you want to get everybody to and then you go through some of the other intermediary steps and on occasion you get to recognizing there are different causes for different families and individuals, you can work out solutions.

HOW TO IMPROVE HUD

Senator BOOZMAN. Very good.

Really for all of the panel, what I would like to know is if you had to assign a grade, if you had to critique HUD's efforts to reduce poverty through its housing policies, what would you say it would be? Dr. Olsen.

Dr. OLSEN. It would not be a high one, but I am mulling this over. I mean, on the one hand, you have the housing voucher program, which I think serves a lot of people and is a highly cost-effective program. So that is a big plus. But on the other hand, they administer programs that are highly cost-ineffective.

Those programs are declining within HUD. The number of public housing units is going down. The number of units in privately owned HUD projects is going down. The low-income housing tax credit is the big growth part of the system. So in some sense, I suppose HUD's performance is improving. Let us put it that way.

Senator BOOZMAN. Yes, ma'am.

Ms. POETHIG. So I think I would agree. HUD's performance has been improving, but I think where it could really accelerate efforts are some of the administrative reforms that would enable the voucher program in particular to live up to expectations, which it is not currently doing if we imagine it as a mobility to opportunity strategy. So I think more can be done to ensure that it is offering true choice and opportunity.

At the same time, I think there is more we can do to be flexible in terms of this concept that Mr. Gentry and I have been talking about, the subsidy contracts, being able to move them, make them more flexible to be matched to some other capital programs like the low-income housing tax credit to make sure that we have opportunities for extremely low-income households.

My one worry is that there is discrimination against voucher holders in many, many markets, and the ability to protect them is a local policy and that is not evenly distributed across the country. And so we have not talked about that discrimination today, and I

think that is a major factor that really dampens the success of the program if we imagine vouchering out.

Senator BOOZMAN. Thank you.

Dr. OLSEN. Could I just follow up?

Mr. GENTRY. I would say that HUD is almost never—I have got a lot of friends at HUD. So they can take this as they hear it.

You never get much creativity out of HUD. It is not the nature of a bureaucracy to be creative or to change its way of doing business.

But HUD does do what you all tell them to do. And I would commend you all for extending and expanding the Moving to Work program last December. That would never have happened waiting for HUD to make a decision. I will not get into that. But the fact that you all required them to do it I think was remarkable, and I think probably the creativity and the direction will come from here. It will not come from over there. And I would make every housing agency in the country, frankly, that was not troubled a Moving to Work agency, give them the ability make their own decisions and to be accountable for the results. I think you will see some differences out there.

Senator COLLINS. Dr. Olsen, I know you wanted to jump in.

Dr. OLSEN. Thank you.

Senator COLLINS. You are welcome.

Dr. OLSEN. So I just wanted to support something Erika just said. A very important initiative within the voucher program is the small area fair market rents initiative. Under the current program, the subsidy is the same no matter where you live in a metro area, whether it is the most expensive, the least expensive. So, of course, voucher recipients do not live in the most expensive.

There is the recent study by Raj Chetty and others that estimates the advantages to children of growing up in a neighborhood with a lower poverty rate. I have read that study carefully, and it is an excellent study.

What the small area fair market rents does is they lower the subsidy in the areas with the highest poverty rates and increase the subsidy in areas with the lowest. So they create a financial incentive for people to live in lower-poverty areas. This is actually in use in Dallas. It is part of the result of some litigation. HUD has proposed a regulation to expand it. If you want to get low-income children into lower-poverty neighborhoods, I think this is an excellent idea. It illustrates the flexibility of the voucher program for achieving the sorts of things you want to achieve.

Senator COLLINS. Thank you very much.

I want to thank all of our witnesses today. You greatly enhanced our understanding of the challenges that we face. We want to make sure that as we look at that 84 percent of HUD's budget, that we are serving as many vulnerable families as we possibly can. I think we have to look at new models and new ways and what is going on at the local level and at the State level to see if we can stretch those dollars further and get better results. That is why we wanted to have this oversight hearing today. We very much appreciate your being with us and sharing your views.

The hearing record will remain open until next Friday, September 30th. So you may receive some additional questions for the

record from members of the committee, including those who were unable to be with us today.

SUBCOMMITTEE RECESS

I want to thank the staff also for their hard work on this issue. I know I learned a great deal from this hearing.

I want to thank the ranking member also for his usual thorough and excellent participation. And thank you, Senator Boozman, for joining us and Senator Cassidy and Senator Daines who were here earlier.

This hearing is now adjourned.

[Whereupon, at 11:55 a.m., Wednesday, September 21, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

MATERIAL SUBMITTED SUBSEQUENT TO THE HEARING

[CLERK'S NOTE.—The following outside witness testimonies were received subsequent to the hearing for inclusion in the record.]

PREPARED STATEMENT OF THE AFFORDABLE RENTAL HOUSING ACTION

On behalf of the Affordable Rental Housing ACTION (A Call To Invest in Our Neighborhoods) Campaign—a national, grassroots coalition of over 1,300 organizations and businesses dedicated to creating and preserving affordable homes for low-income families using the Low-Income Housing Tax Credit (Housing Credit)—we appreciate the opportunity to submit comments to the Senate Appropriations Subcommittee on Transportation, Housing and Urban Development, and Related Agencies on the occasion of its hearing on Housing Vulnerable Families and Individuals. A full list of ACTION Campaign members is attached.

A PROVEN TOOL TO ADDRESS A VAST AND GROWING NEED

The Housing Credit is our Nation's most successful tool for encouraging private investment in the production and preservation of affordable rental housing. Since 1986, the Housing Credit has financed nearly 3 million apartments, providing roughly 6.7 million low-income families, seniors, veterans, people with disabilities, and other vulnerable populations with access to homes they can afford.

Though the Housing Credit has provided affordable homes for millions of low-income households, the unmet need for affordable rental housing continues to far outstrip the available resources. An unprecedented 11.4 million renter households—more than one in four of all renters in the U.S.—spend more than half of their monthly income on rent, leaving too little for other expenses like food, medical bills and transportation.

Meanwhile, we continue to lose affordable housing from our Nation's stock. Nearly 13 percent of the Nation's supply of low-income housing has been permanently lost over the past 15 years. Over the next decade, the demand for affordable housing will become even greater as 400,000 new households enter the rental housing market each year, many of whom will be low-income. According to a recent study by Harvard University's Joint Center for Housing Studies and Enterprise Community Partners, the number of renter households who pay more than half of their income towards rent could grow to nearly 15 million by 2025.

A MODEL PUBLIC-PRIVATE PARTNERSHIP

For 30 years, the Housing Credit has been a model public-private partnership program, bringing to bear market forces, State-level administration and more than \$100 billion in private sector resources. Under the program, private sector investors provide upfront equity capital into a property in exchange for a credit against their tax liability in future years. Credits can be claimed only after properties are built and occupied by income-eligible residents at affordable rents. This unique structure transfers the real estate risk from the taxpayer to the private sector investor.

The Housing Credit also benefits from State-level administration, which reflects local priorities. Each State determines how to allocate Housing Credits to respond to specific local needs, directing resources where they are needed most. State allocating agencies also oversee a rigorous approval process for these developments and monitor properties for compliance with program rules after their completion.

Each State is required by the tax code to provide only enough subsidy to ensure financial feasibility, and underwrite Housing Credit properties at three different stages of the development process to ensure they provide no more Housing Credit than necessary to each development.

ACCOUNTABILITY THROUGH THE TAX CODE

In the rare event that a property falls out of compliance anytime during the first 15 years after it is placed in service, the Internal Revenue Service is able to recapture tax credits from the investor. Therefore, it is in the interest of the private sector investors to ensure that properties adhere to all program rules, including income eligibility, rent limits and high quality standards. This rigorous private sector oversight is a hallmark of the program, and has contributed to its unparalleled record of achievement. In fact, only 0.62 percent of all properties during the Housing Cred-

it's 30-year history have gone into foreclosure, a record far better than any other real estate class.

INCENTIVE TO ADDRESS A MARKET FAILURE

Developing new affordable homes for the growing population of cost-burdened low-income renters is not feasible without the Housing Credit, since the rents that low-income households can afford are not high enough to cover the costs of building and maintaining properties. According to Harvard University's Joint Center for Housing Studies (JCHS), to develop new apartments affordable to renter households working full-time and earning the minimum wage without the Housing Credit, construction costs would have to be reduced by 72 percent of the current construction cost average—making the homes either substandard or financially infeasible.

COMPLEMENT TO OTHER HOUSING PROGRAMS

Congress designed the Housing Credit as a project-based capital funding source for the production and preservation of affordable housing. As such, the Credit plays a different role in the effort to meet the Nation's affordable housing needs than tenant-based rental assistance programs, such as the Housing Choice Voucher (voucher) program, play. The Housing Credit increases the supply of affordable housing, while vouchers make existing housing more affordable to low-income households.

Vouchers alone cannot address several challenges for affordable rental housing, including recapitalizing and preserving aging properties, revitalizing low-income communities, expanding supply in tight markets, producing housing for households with special needs, and building housing near areas experiencing job growth. Furthermore, absent the Housing Credit program, the cost of vouchers would almost certainly rise significantly, as voucher holders living in Housing Credit properties would instead need to find market-rate apartments.

Conversely, without rental assistance, it can be very difficult to provide even Housing Credit housing at rents affordable to the lowest-income households. In practice, the Housing Credit and vouchers complement each other, and are often used together to meet the needs of extremely low-income households.

In addition, the Housing Credit is a central component of HUD's Rental Assistance Demonstration (RAD), a public housing revitalization initiative that Congress has recently expanded threefold from its original authorization. To date, the Housing Credit has provided approximately 40 percent of the financing being used to recapitalize over 180,000 units of public housing under RAD, underscoring the importance of the Housing Credit in preserving federally assisted properties for the long term in the absence of sufficient Federal appropriations for public housing.

SUPPORT THE AFFORDABLE HOUSING CREDIT IMPROVEMENT ACT

Though the need for Housing Credit-financed housing has long vastly exceeded its supply, Congress has not increased Housing Credit authority in 16 years. To make a meaningful dent in the affordable housing supply gap, we urge Congress to pass the Affordable Housing Credit Improvement Act, sponsored by Senator Maria Cantwell (D-WA) and Senate Finance Committee Chairman Orrin Hatch (R-UT), which would increase Housing Credit authority by 50 percent. While the bill is not under the jurisdiction of this Subcommittee, we encourage all Subcommittee members to join Subcommittee Chairwoman Susan Collins (R-ME), Subcommittee member Senator Bill Cassidy (R-LA), and full Committee members Senators Patrick Leahy (D-VT), Lisa Murkowski (R-AK), and Jeff Merkley (D-OR) as cosponsors of the bill.

For the millions of families paying more than half of their income towards housing—choosing between paying the rent or their medical bills, making repairs to their cars, or enrolling in job training classes—protecting and expanding the Housing Credit is critical.

[This statement was submitted by Barbara Thompson, Executive Director, National Council of State Housing Agencies, ACTION Co-Chair, and Scott Hoekman, Senior Vice President & Chief Credit Officer, Enterprise Community Partners, ACTION Co-Chair.]

ACTION CAMPAIGN MEMBERS

Co-Chairs

National Council of State Housing
Agencies
Enterprise Community Partners

Steering Committee Members

Affordable Housing Tax Credit Coalition
Council of Affordable and Rural Housing
Council of Large Public Housing
Authorities
Corporation for Supportive Housing
(CSH)
Housing Advisory Group
Housing Partnership Network
LeadingAge
Local Initiatives Support Corporation
National Assoc. of Affordable Housing
Lenders
National Assoc. of Home Builders
National Assoc. of Housing &
Redevelopment Officials
National Assoc. of Realtors
National Assoc. of State & Local Equity
Funds
National Equity Fund
National Housing and Rehabilitation
Association
National Housing Conference
National Housing Trust
National Low Income Housing Coalition
National Multifamily Housing Council
Stewards of Affordable Housing for the
Future
Volunteers of America

National/Regional

Affordable Housing Investors Council
Alliant Capital
Apartment Realty Advisors (ARA)
Balfour Beatty Construction
Ballard Spahr, LLP
Berkadia
Bryan Cave, LLP
Center for American Progress Action
Fund
Centerline Capital Group
Certified Commercial Investment
Member Association
Cinnaire
City Real Estate Advisors
CohnReznick
The Community Builders, Inc.
Council of Independent State Housing
Associations
Council of State Community
Development Agencies
Equity Residential
Federation of Appalachian Housing
Enterprises, Inc.
Habitat for Humanity International
Holland & Knight
Housing Assistance Council
Liz Bramlet Consulting
Klein Hornig LLP
Housing Trust of America

Hudson Housing Capital
Institute of Real Estate Management
Low Income Investment Fund
McGladrey LLP
Mercy Housing, Inc.
Meridian Investments
Michaels Development Company
Midwest Housing Equity Group, Inc.
Mortgage Bankers Association
National Affordable Housing
Management Association
National Alliance of Comm. Econ. Dev.
Associations
National Apartment Association
National Assoc. of Local Housing
Finance Agencies
National Assoc. for County Community
Economic Dev.
National Community Development
Association
National Council on Agricultural Life
and Labor
National Development Council
National Foundation of Affordable
Housing Solutions
National Housing Law Project
National Leased Housing Association
National NeighborWorks Association
National Resources Defense Council
National Trust Community Investment
Corporation
NDC Corporate Equity Fund, LP.
The NHP Foundation
Nixon Peabody LLP
Novogradac & Company LLP
Pacific West Communities, Inc.
PIRHL
PNC Real Estate
Preservation Management Inc.
Prudential Affordable Mortgage
Company
Rabobank
RBC Capital Markets—Tax Credit
Equity Group
Recap Real Estate Advisors
Reno & Cavanaugh, PLLC
Pillsbury Winthrop Shaw Pittman, LLC
Selfhelp Community Services
Smart Growth America
Southeastern Affordable Housing
Management Assoc.
Squire Sanders
TAG Associates, Inc.
Tax Credit Group of Marcus & Millichap
TCAM Asset Management
Urban Institute
U.S. Green Building Council
U.S. Vets Initiative
Vitus Group
WNC & Associates, Inc.
The Woda Group, LLC

Alabama

Alabama Council for Affordable Rural
Housing

Arbour Valley Development
 Arlington Properties, Inc.
 The Bennett Group
 City of Mobile Community Planning and
 Development
 Development Services Inc.
 Drake Law Firm
 Highland Commercial Mortgage, LLC
 Ledic Realty Company
 Lighthouse CDC
 Morrow Companies
 Opelika Housing Authority
 RSM US, LLP
 South East Alabama Self-Help
 Association, Inc.
 Tidwell Group, LLC

Alaska

Alaska Coalition on Housing and
 Homelessness
 Catholic Social Services
 Cook Inlet Housing Authority
 The Easter Group
 The Leeshore Center
 Love INC of the Kinai Peninsula
 NeighborWorks Alaska
 Sitka Community Development
 Corporation
 Statewide Independent Living Council of
 Alaska
 United Way of Anchorage

Arizona

A New Leaf, Inc.
 Arizona Housing Alliance
 Capitol Mall Association
 Chicanos Por La Causa
 City of Yuma
 Comité de Bien Estar
 Corporate Social Responsibility
 Foundation for Senior Living
 Guadalupe Community Development
 Corp.
 Law Offices of William D. Black
 Milestone Housing Development Corp.
 Morton Consultant Services
 Native American Connections
 Pima County CDNC
 PPEP Microbusiness & Housing
 Development Corp.
 Surrano Law Offices
 Tonalea Chapter
 UMOM New Day Centers
 WESCAP Investments, Inc.

Arkansas

Affordable Housing Association of
 Arkansas
 Arkansas Coalition of Housing and
 Neighborhood-Growth for
 Empowerment (ACHANGE)
 Arkansas NAHRO
 Boys, Girls, Adults Community
 Development Center
 Des Arc Housing Authority
 Housing Authority of Hot Springs
 Housing Authority of Star City
 Jonesboro Housing Authority

Judsonia Housing Authority
 Mississippi County Public Facilities
 Board
 Northwest Regional Housing Authority
 PDC Companies
 RichSmith Development, LLC
 Siloam Springs Housing Authority
 Texarkana Arkansas Housing Authority
 White River Regional Housing Authority

California

A Community of Friends
 Affirmed Housing Group
 Affordable Housing Associates
 AMCAL Multi-Housing, Inc.
 Beacon Communities
 Bear River Tribe
 Belle Haven Community Foundation
 Bocarsly Emden Cowan Esmail & Arndt,
 LLP
 BRIDGE Housing
 Burbank Housing Development
 Corporation
 Cabrillo Economic Development
 Corporation
 California Coalition for Rural Housing
 California Council of Affordable Housing
 California Dept. Housing & Community
 Development
 California Housing Consortium
 Candeur Group, LLC
 Century Housing Corporation
 California Housing Partnership
 Corporation
 Casa de Redwood
 Charities Housing
 Chelsea Investment Corporation
 Chinatown Community Development
 Center
 City of Oxnard Affordable Housing &
 Rehab Division
 Clark Realty Management
 Community Build
 Community Economics, Inc.
 Community Housing Assistance
 Program, Inc.
 Community Housing Improvement
 Program [CHIP]
 Community HousingWorks
 Community Revitalization and
 Development Corp.
 County of San Bernardino
 Curtom Building & Development
 Desert Manna
 EAH Housing (also listed in Hawaii)
 East Bay Asian Local Development
 Corporation
 East Bay Center for the Performing Arts
 East LA Community Corporation
 East Oakland Community Development
 Corporation
 Eden Housing, Inc.
 Episcopal Community Services of San
 Francisco
 Fresno Economic Opportunities
 Commission
 Gar-Mar Associates

- Habitat for Humanity of Greater Los Angeles
 Highridge Costa Housing Partners, LLC
 Housing Authority of San Luis Obispo [HASLO]
 Housing Authority of the County of Monterey
 Housing Authority of the County of Santa Barbara
 Housing Authority of the County of Tulare
 Housing California
 Housing On Merit
 Housing Resource Connection
 Hunt Companies, Inc.
 Innovative Housing Opportunities
 Jamboree Housing Corporation
 The Kennedy Commission
 LifeSTEPS
 Laurin Associates
 LeadingAge California
 LINC Housing
 Little Tokyo Service Center CDC
 M.E. Shay & Co.
 Mentis Mental Health Services
 Merritt Community Capital Corporation
 Meta Housing Corporation
 MidPen Housing Corp.
 Mutual Housing California
 Napa Emergency Women's Services
 National Community Renaissance
 National CORE
 Neighborhood Partnership Housing Services
 NeighborWorks Orange County
 Non-Profit Housing Association of Northern California
 Opportune Companies
 Pacific Meadows Senior Housing
 Palm Communities
 PAH Community
 PAHC Management & Services Corporation
 PATH Ventures
 People Self Help Housing
 Peterson & Associates Affordable Housing Connections
 Related California
 Resources for Community Development
 Retirement Housing Foundation
 Riverside Charitable
 Rural Community Assistance Corporation (RCAC)
 Sacramento Housing Alliance
 San Diego Housing Federation
 San Fernando Valley Homeless Coalition
 Self-Help Enterprises
 Southern California Association of Non-Profit Housing
 SRO Housing Corporation
 Sun Country Builders
 Thomas Safran & Associates
 TJ Bly Company, LLC
 TOWNSPEOPLE
 Transition House
 TWG Architects, Inc.
 Urban Housing Communities, LLC
- The Vecino Group
 Wakeland Housing and Development Corporation
 Wasatch Advantage Group, LLC
 The Watershed Center
 Western Community Housing, Inc.
 Women Organizing Resources, Knowledge and Service
 Yolo County Housing
- Colorado*
 Adams County Housing Authority
 Archway Housing & Services
 Aurora Housing Authority
 The Burgwyn Co., LLC
 CARE Housing Services
 Cathedral Development Group, Inc.
 Community Resources and Housing Development Corp.
 Community Restoration Partners, LLC
 Element Properties
 Fort Collins Housing Authority
 Funding Partners
 Grand Junction Housing Authority
 Homeward 2020
 Housing Colorado
 Julesburg Housing Authority
 Loveland Housing Authority
 Medici Communities, LLC
 Metro West Housing Solutions
 Monroe Group Ltd.
 RCH Jones Consulting
 Rocky Mountain Communities
 Ross Management Group
 S.B. Clark Companies
 San Miguel Regional Housing Authority
 SERVE 6.8
 South Metro Housing Options
 Steele Properties, LLC
 Urban Land Conservancy
 Urban Residential Partners
 Vos Consulting
 Wolf Family I, Inc.
 Zocalo Community Development
- Connecticut*
 The Carabetta Companies
 Connecticut Housing Coalition
 Housing Authority of New Haven
 Mutual Housing Assoc. of Southwestern Connecticut
 New Neighborhoods, Inc.
 Norwalk Housing Authority
 Urban Initiatives
 Vesta Corporation
- Delaware*
 Delaware Community Investment Corporation
 Delaware Housing Coalition
 Delaware Valley Development Company
 Leon N. Weiner & Associates, Inc.
 NCALL Research, Inc.
 Woodlawn Trustees, Inc.
- District of Columbia*
 Affordable Housing Developers Council
 Audubon Enterprises

Coalition for Nonprofit Housing &
Community Dev.
CSG Urban Partners
Housing Assoc. of Nonprofit Developers
Institute for Responsible Housing
Preservation
Jubilee Housing, Inc.
Manna Inc.
Montgomery Housing Partnership
Somerset Development Company
Transitional Housing Corporation

Florida

Ability Housing
Agorazo Development, Inc.
AmeriNational
Arrington Financial Capital, LLC
The Auburn Group
Beneficial Communities
Biscayne Housing Group
Blue Sky Communities, LLC
Broad and Cassel
Carlisle Development Group
Carrfour Supportive Housing
Centennial Management
Coalition of Affordable Housing
Providers
Community Realty Agency &
Information Group
Delray Beach Housing Authority
Dukes Construction Company
Florida Alliance of CDCs
Florida Council for Affordable and Rural
Housing
Florida Supportive Housing Coalition
Fort Lauderdale Community Center
The Gatehouse Group, Inc.
Global Development Initiatives, LLC
Green Mills
Housing Authority of Pompano Beach
Housing Finance Authority of Palm
Beach County
Housing Trust Group, LLC
Innerprise
JPM Development, LLC
Kipling Capital, LP
Kiss & Company, Inc.
Landmark Companies, Inc.
Lee County Housing Finance Authority
MCJ Associates, LLC
Norfolk, LLC
Norstar Development USA
The NRP Group
The NuRock Companies
Orange State Construction, Inc.
Palm Beach County Housing Authority
Picerne Development Corp of Florida
Pinellas County Housing Authority
Pinnacle Housing Group, LLC
Raymond James Tax Credit Funds, Inc.
Related Urban
The Richman Group of Florida, Inc.
Roundstone Development, LLC
Royal American
Soho Advisory Partners LLC
South Florida Community Development
Corporation

Southport Financial Services, Inc.
SPECTRA
Tacolcy Economic Development Corp.
Tampa Housing Authority
Vestcor Development Corp, Inc.
Victory Fields, LLC
Wendover Housing Partners, Inc.
West Palm Beach Housing Authority

Georgia

Affordable Housing America, Inc.
Alliance Fund Advisors
Alliance Fund Management
Ambling Management Company
American Covenant Senior Housing
Foundation, Inc.
Athens Land Trust
Atlanta Neighborhood Development
Partnership
The Benoit Group
The Braden Group
Charis Community Housing, Inc.
Coleman Talley LLP
Cordele Housing Authority
Delmar Realty Advisors
Georgia Affordable Housing Coalition
The Integral Group
Invest Atlanta
JBH Financial Brokerage & Associates
LLC
Landbridge Development, LLC
Mansermer Inc.
Marietta Housing Authority
Mize & Mize
ORION Real Estate Services, Inc.
Paces Foundation
Partnership Housing Affordable to
Society Everywhere
Pittsburgh Community Improvement
Association, Inc.
Project Interconnections, Inc.
Purpose Built Communities
Rea Ventures Group, LLC
Resource Housing Group
Sprague and Rosenberger
State Tax Credit Exchange
SUMMECH CDC
Tapestry Development Group
TBG Residential
Triumph Management Group, LLC

Hawaii

EAH Housing (also listed in California)
Hawaii Housing Finance, LLC
Hawaii Workforce Development Council
Housing Hawaii
Management Specialists Co.

Idaho

Community Council of Idaho, Inc.
Community Development Incorporated
HOPE Development, LLC
The Housing Company
New Beginnings Housing, LLC
Northwest Associates
Northwest Real Estate Capital Corp.
The Pacific Companies
Somerset Pacific

Thomas Development Co.

Illinois

Affordable Housing Investment
Brokerage
Applegate & Thorne-Thomsen, PC
Bickerdike Redevelopment Corporation
Brinshore Development, LLC
Chicago Community Development
Corporation
Chicago Rehab Network
City of Chicago
Consecre Housing Network
Cook County Housing Authority
FLS Group, LLC
Full Circle Communities, Inc.
General Capital Management Inc.
Hooker DeJong Architects, Inc.
Housing Action Illinois
Housing Authority of the County of
DeKalb
Illinois Housing Council
JP Morgan
Laborers' Home Development Corp.
Lake County Housing Authority
Lightengale Group
Madison County Housing Authority
MB Financial Bank
Metroplex, Inc.
North Chicago Housing Authority
Peoria Citizens Committee for Economic
Opportunity, Inc.
Perry Group, Ltd.
Pike County Housing Authority
The Renaissance Companies
The Resurrection Project
SE Clark & Assoc. Inc.
Springfield Housing Authority
Valerie S. Kretchmer Associates, Inc.
Winnebago County Housing Authority

Indiana

Affordable Housing Association of
Indiana
Affordable Housing Corporation
Biggs TC Development, LLC
Bingham Greenebaum Doll LLP
Brown County Career Resource Center
Community Action of Greater
Indianapolis, Inc.
Dauby, O'Connor & Zaleski, LLC
The Englewood Group
Fort Wayne Housing Authority
God's Helping Hand
Hamilton County Area Neighborhood
Development, Inc.
Herman & Kittle Properties, Inc.
IAB Financial Bank
Indiana Affordable Housing Council
Indiana Association for Community
Economic
Development
Indiana Health Centers Inc.
KCG Development
Keller Development, Inc.
Milestone Ventures, Inc.
Neighborhood Development Associates,
LLC

New Albany Housing Authority
New Generation Management, Inc.
NSP Consultants, LLC
Paragus, LLC
Pedcor Companies
Pioneer Development Services, Inc.
TWG Development
Valenti Development, LLC
Westside Community Development Corp.
Wooden McLaughlin

Iowa

Affordable Housing Network, Inc.
Anawim Housing
AEGON USA Realty Advisors, LLC
Barnes Realty
Burns & Burns, LC
Community Housing Initiatives, Inc.
Fort Madison Housing Authority
J. Development Company
Hatch Development Group
Home Builders Association of Iowa
Perennial Property Management
Polk County Housing Trust Fund
Simonson & Associates Architects, LLC

Kansas

10up
Cohen-Esrey Real Estate Services, LLC
Homestead Affordable Housing, Inc.
Housing Opportunities, Inc.
JC Builders, Inc.
Kansas City Equity Fund, LLC (also
listed in Missouri)
Kansas Housing Resources Corporation
Kim Wilson Holding Inc.
Marsh & Company, P.A.
Mennonite Housing Rehabilitation
Services, Inc.
Overland Property Group, LLC
Prairie Fire Development Group (also
listed in Missouri)
Topeka Housing Authority
Vintage Construction, LLC

Kentucky

AU Associates, Inc.
FAHE Capital Corporation
Family Scholar House
First World Architects Studio
Homeless and Housing Coalition of
Kentucky
HOPE of Kentucky, LLC
Housing Partnership, Inc.
Kentucky Housing Corporation
KY Senior Citizens Apartments
LDG Development, LLC
Lexington Community Land Trust
Marian Development Group, LLC

Louisiana

Bauer Compliance & Consulting
Brownstone Affordable Housing Ltd.
Centerpointe Regional Housing
Development, LLC
Fitness & Praise Youth Development,
Inc.
Greater New Orleans Housing Alliance

Gulf Coast Housing Partnership
 Harmony Neighborhood Development
 Houma Terrebonne Housing Authority
 Housing Authority of the City of
 Shreveport
 Louisiana Assoc. of Affordable Housing
 Providers
 Louisiana Community Reinvestment
 Coalition
 Louisiana Housing Council
 Mt. Pleasant Community Development
 Corporation, Inc.
 Neville Development
 Providence Community Housing
 Rural Rental Housing Assoc. of
 Louisiana, Inc.
 Standard Enterprises, Inc.
 Statewide Louisiana Community
 Reinvestment Coalition

Maine

Auburn Housing Authority
 Avesta Housing
 Coastal Enterprises, Inc.
 Community Housing of Maine
 Developers Collaborative
 Freeport Housing Trust
 Maine Affordable Housing Coalition
 Maine Workforce Housing, LLC
 Northern New England Housing
 Investment Fund
 Penquis Housing, Inc.
 Portland Housing Development
 Corporation
 South Portland Housing Authority
 Westbrook Housing
 The Wishcamper Companies, Inc.

Maryland

Bocarsly Emden Cowan Esmail & Arndt,
 LLP
 Chesapeake Community Advisors, Inc.
 Comprehensive Hsg. Assistance, Inc.
 (CHAI) Baltimore
 Enterprise Homes
 Garrett County Community Action
 Committee
 Green Street Housing
 Homes for America
 The House of Easterling
 Housing Assoc. of Nonprofit Developers
 Howard County Housing
 HTA Development, LLC
 Maryland Affordable Housing Coalition
 Maryland Asset Building and Cmty.
 Development Net.
 Maryland Association of Housing and
 Development Agencies
 Montgomery Housing Partnership
 NeighborWorks Capital
 Riverside Advisors LLC
 Roots of Mankind Corp.
 The Shelter Group
 T.M. Associates, Inc.
 Victory Housing, Inc.
 WBC Community Development
 Corporation

Massachusetts

Alliance of Cambridge Tenants
 Asian Community Development
 Corporation
 B'nai B'rith Housing
 Beacon Hill Capital LLC
 Boston Capital
 Boston Financial Investment
 Management
 Boston Housing Authority Resident
 Advisory Board
 Candeur Group
 Capstone Communities LLC
 Carlisle Tax Credit Advisors
 Citizens' Housing and Planning
 Association
 Clocktower Tax Credit Investments, LLC
 Codman Square Neighborhood
 Development Corp.
 Community Economic Development
 Assistance Corp.
 Connolly and Partners, LLC
 David Koven Consulting
 Dorchester Bay Economic Development
 Corporation
 Edwards Wildman Palmer LLP
 First Financial Management Corporation
 Housing Corporation of Arlington
 Homeowners Rehab, Inc.
 Housing Management Resources
 Jamaica Plain Neighborhood
 Development Corporation
 Jewish Alliance for Law and Social
 Action
 Kevin P. Martin & Associates, PC
 KPM
 Madison Park Development Corporation
 Massachusetts Assoc. of Community
 Dev. Corporations
 Massachusetts Housing Investment
 Corporation
 Michel Associates
 NeighborWorks Southern Mass
 New England Housing Network
 North Shore Community Development
 Coalition
 Norwood Housing Authority
 Peabody Properties, Inc.
 Preservation of Affordable Housing, Inc.
 Strategic Tax Credit Investments, LLC
 Tenants' Development Corporation
 VIET-AID
 WinnDevelopment
 Women's Inst. for Housing & Economic
 Development

Michigan

Community Economic Development
 Assoc. of Michigan
 Disability Advocates of Kent County
 Ginosko Development Company
 Housing Resources, Inc.
 Inner City Christian Federation
 Kalamazoo Eastside Neighborhood
 Association
 Lapeer Housing Commission
 Livonia Housing Commission

Michigan Community Action
Michigan Disability Housing Work
Group
Michigan Housing Council
MORC Home Care
Neighborhood Service Organization
Occupancy Solutions, LLC
Ojibway Development, LLC
Plante Moran
Werth Development LLC
Ypsilanti Housing Commission

Minnesota

13th Ave
Aeon
Alliance Housing Inc.
Artspace Projects, Inc.
Augusta Ventures, LLC
Aurora St. Anthony Neighborhood
Development Corp.
Avenues for Homeless Youth
Center City Housing Corp.
CommonBond Communities
Diversified Equities Corporation
D.W. Jones, Inc.
Dominium Development and
Acquisitions, LLC
Greater Minnesota Housing Fund
Hope Community Inc.
Housing Preservation Project
Mahoney Ulbrich Christensen Russ P.A.
MetroPlains, LLC
The Metropolitan Consortium of Cmty.
Developers
Midwest Minnesota CDC
Minnesota Housing Partnership
One Roof Community Housing
Podawiltz Development Corporation
Project for Pride in Living
Real Estate Equities, Inc.
Sand Companies, Inc.
The Schuett Companies
SCI Associates, LLC
Southwest Minnesota Housing
Partnership
Three Rivers Community Action
Urban Homeworks

Mississippi

Adams Construction
Greater Greenville Housing
Hope Enterprise Corporation
Hughes Spellings
Lenton Development
Mercy Housing and Human
Development
Mid-South Housing Foundation
Mississippi Assoc. of Affordable Housing
Providers
The Park Companies
Rosedale Corporation
Ross & Yerger
SECDE Ventures, LLC
South MS Housing & Development
Corporation
Tunica County CDC
Winters Construction, LLC

Missouri

Affordable Equity Partners
Affordable Housing Commission
Boonville Housing Authority
Brunswick Housing Authority
Builders Development Corporation
Hamilton Properties Corporation
Hannibal Housing Authority
Housing Authority of Joplin, MO
Housing Authority of the City of
Jefferson
Independence Housing Authority
Ivanhoe Neighborhood Council
Kansas City Equity Fund, LLC (also
listed in Kansas)
Lee's Summit Housing Authority
Marceline Housing Authority
MarksNelson, LLC
McCormack Baron Salazar
Missouri Workforce Housing Association
Peter & Paul Community Services
Prairie Fire Development Group (also
listed in Kansas)
Slezak House
St. Louis Equity Fund, Inc.
RubinBrown LLP
Travois, Inc.
Twain Financial Partners
Wilhoit Properties Inc.
Zimmerman Properties, LLC

Montana

Bullhook Community Health Center GL
Development LLC
Great Falls Housing Authority
Housing Authority of Billings
Housing Solutions, LLC
Lee and Co, PC
Missoula Housing Authority
Mountain Plains Equity Corporation
Summit Management Group, Inc.
Rocky Mountain Development Council

Nebraska

Cairo Housing Authority
Cambridge Housing Authority
Cirrus House Inc.
Columbus Housing Authority
Cornerstone Associates, LLC
Excel Development Group
Fremont Housing Authority
Holy Name Housing Corporation
Horizon Bank
Housing Partners of Western Nebraska
Lincoln Housing Authority
McCook Housing Agency
Nebraska City Area Economic
Development Corp.
Nebraska Housing Developers
Association
North Omaha Foundation
Oakland Housing Authority
Omaha Economic Development Corp.
Omaha Housing Authority
Ord Housing Authority
RMR Group
Schuyler Housing Agency

Seldin Company
 Sunrise View Housing Authority
 Urban Housing Partners, LLC

Nevada

Clark County Cmty. Resources
 Management Division
 George Gekakis, Inc.
 Mueller, Hinds, & Associates, CHTD
 Neighborhood Housing Services of
 Southern Nevada
 Nevada Council of Affordable and Rural
 Housing
 Nevada HAND
 Nevada Rural Housing Authority
 Silver Sage Manor, Inc.
 Silver State Housing

New Hampshire

AHEAD, Inc.
 CATCH Neighborhood Housing
 Concord Coalition to End Homelessness
 Families in Transition
 Housing Action NH
 Laconia Area Community Land Trust
 NeighborWorks of Greater Manchester
 New Hampshire Public Health
 Association
 Newmarket Housing Authority
 NH Coalition to End Homelessness
 NH Community Loan Fund
 Tri-County CAP
 USIS, LLC

New Jersey

Advocates for Peace & Social Justice
 Alliance for Betterment of Citizens with
 Disabilities
 Diocesan Housing Services Corporation
 of the Diocese
 of Camden
 Hoboken Housing Authority
 Housing and Community Development
 Network of NJ
 Housing Authority of Gloucester County
 The Ingerman Group
 Jewish Community Housing Corp. of
 Metropolitan NJ
 MaGrann Associates
 MEND, Inc.
 Mercer Alliance to End Homelessness
 The Metro Company
 Monarch Housing Associates
 New Community Corporation
 New Jersey Apartment Association
 New Jersey Community Development
 Corporation
 New Jersey Housing and Mortgage
 Finance Agency
 North Haledon Affordable Housing
 Project Freedom, Inc.
 PV Community Development
 Corporation
 Tabor House
 The Michaels Organization
 Valley National Bank

New Mexico

City of Las Cruces
 Housing Trust of Santa Fe
 JL Gray Company
 New Mexico Coalition to End
 Homelessness
 YES Housing, Inc.
 Santa Fe Civic Housing Authority
 Sawmill Community Land Trust
 Tierra del Sol Housing Corporation

New York

3D Development Group, LLC
 42 Equity Partners, LLC
 Arbor Housing Development
 Asian Americans for Equality
 Association for Energy Affordability Inc.
 Belmont Housing Resources for WNY,
 Inc.
 Benchmark Title Agency, LLC
 Berkley Point
 Blueprint Properties
 The Bridge
 Broadway-Filmore NHS
 Central New York Citizens in Action,
 Inc.
 Citizens Against Recidivism, Inc.
 Community Access Inc.
 Community Action Organization of Erie
 County, Inc.
 Community Development Corp. of Long
 Island, Inc.
 Community Development Trust
 Community League of the Heights
 Conifer Realty, LLC
 Curtis + Ginsberg Architects LLP
 East Hampton Housing Authority
 Edgemere Development
 Evergreen Health Services
 Ewing Planning Services
 First Sterling
 Forsyth Street Advisors LLC
 Fecteau PLLC
 Fordham Bedford Housing Corporation
 Geneva Housing Authority
 Greater Rochester Housing Partnership
 HANAC, Inc.
 Harlem Congregations for Community
 Improvement Inc.
 Hour Children
 Housing Visions
 The Hudson Companies, Inc.
 Humand Development Services of
 Westchester
 Ibero-American Development
 Corporation
 The Institute for Human Services, Inc.
 Ithaca Housing Authority
 Ithaca Neighborhood Housing Services
 Lemle & Wolff, Inc.
 Lott Community Development
 Corporation
 Lower East Side Coalition Housing
 Development, Inc.
 Neighborhood Housing Services of New
 York City

Neighborhood Preservation Coalition of
 New York State
 New Destiny Housing Corporation
 New York Housing Conference
 New York State Association for
 Affordable Housing
 Northeast Brooklyn Housing
 Development Corporation
 Ocean Bay Community Development
 Corporation
 Oxford Consulting Inc.
 PathStone
 Property Resources Corporation
 Providence Housing Development Corp.
 R4 Capital, LLC
 Regan Development Corporation
 Rochester's Cornerstone Group, Ltd.
 Royal Realty Development, Inc.
 Rural Ulster Preservation Company
 RUPCO
 SFDS Development Corp.
 Sobro
 Southern Tier Environments for Living
 Supportive Housing Network of New
 York
 Tenderloin Neighborhood Development
 Corporation
 Transamerica Equities, LLC
 Triboro Real Estate Development, Inc.
 Urbecon LLC
 West Harlem Group Assistance, Inc.
 White Plains Housing Authority

North Carolina

The Affordable Housing Group of North
 Carolina, Inc.
 Affordable Housing Management, Inc.
 Blue 22 Development
 Brock Ventures, Inc.
 CAHEC
 Carolina Bank
 Carolinas Council of Affordable Housing
 Charlotte Mecklenburg Housing
 Partnership
 Community Investment Corporation of
 the Carolinas
 Community Management Corporation
 DHIC, Inc.
 Dixon Hughes Goodman LLP
 Eagan Partners, LLC
 East Carolina Community Development,
 Inc.
 The Housing Assistance Corporation
 KRP Investments, LLC
 North Carolina Housing Coalition
 Partners Ending Homelessness
 Partnership Property Management
 Pressly Development Company, Inc.
 Reliance Housing Foundation
 United Developers, Inc.
 Weaver-Kirkland Housing, LLC
 Weaver Cooke Construction
 William S. Robinson & Associates, Inc.
 Wilson Community Improvement
 Association [WCIA]
 Workforce Homestead, Inc.

North Dakota

Beyond Shelter, Inc.
 Fargo Housing & Redevelopment
 Authority
 Grand Forks Housing Authority
 Lutheran Social Services of North
 Dakota
 North Dakota Coalition for the Homeless
 Turtle Mountain Housing Authority

Ohio

The ABCD, Inc.
 ABCAP
 Affordable Housing Partners, Inc.
 Arch City Development
 Bethel Development
 Burten, Bell, Carr Development, Inc.
 CDA Flaherty Consulting
 Center for Closing the Health Gap
 Clark, Schaefer, Hackett & Co.
 Cleveland City Council
 Cleveland Housing Network
 Cleveland Neighborhood Progress
 Cleveland State University
 Coalition on Homelessness and Housing
 in Ohio
 Columbus Housing Partnership
 Community Action Commission of
 Fayette County
 Community Action Organization of
 Delaware, Madison,
 and Union Counties, Inc.
 Cornerstone Corporation for Shared
 Equity
 Detroit Shoreway Community
 Development Org.
 EDEN, Inc.
 Episcopal Retirement Homes Affordable
 Living
 Fairfield Homes, Inc.
 Famicos Foundation
 Friendship New Vision, Inc.
 GL Housing Group
 Grey Area Consultants, LLC
 Housing Services Alliance
 James A. Saad, LLC
 Jones Walker LLP
 Karen A. Graham Consulting, LLC
 Karen H. Bauernschmidt Co., LPA
 LIHTC Working Group
 Miller-Valentine Group
 Mt. Auburn Good Housing Foundation
 MV Residential Development LLC
 National Affordable Housing Trust
 National Church Residences
 Neighborhood Development Services
 Neighborhood Housing Services of
 Greater Cleveland
 Ohio Capital Corporation for Housing
 Ohio CDC Association
 Ohio Housing Council
 Ohio Housing Finance Agency
 Rental Partnerships
 Royal Bank of Canada
 Settlement Star Services, LLC
 Slavic Village Development
 Star Title Agency, LLC

Toledo Fair Housing Center
 The Uptown Association, Inc.
 United Way of Greater Cincinnati
 The Wallick Companies
 WSOS Community Action Commission

Oklahoma

Belmont Development Company, LLC
 Blackledge Architects
 Catholic Charities of the Archdiocese of
 Oklahoma City
 C.H.A.R.M.E.D.
 City Care, Inc.
 CMA Strategies
 Dobson Mortgage Corp.
 Elk City Housing Authority
 Liberty Realty Capital Group
 LIFE Senior Services
 LW Development, LLC
 Metro First Realty
 Mountain View Housing Authority
 Oklahoma City Metro Assoc. of
 REALTORS
 Oklahoma Coalition for Affordable
 Housing
 Oklahoma Housing Finance Agency
 Oklahoma Investment Realty, Inc.
 ORO Development Corporation
 Progressive Independence
 REI Oklahoma
 Resco Enterprises, LLC
 Spradling, Kennedy & McPhail, LLP
 Sunview Homes

Oregon

Bienestar Oregon
 CASA of Oregon
 Cascade Management
 Grounded Solutions Network
 Housing Authority of Jackson County
 Housing Authority of Yamhill County
 Lincoln Community Land Trust
 Mid-Columbia Housing Authority
 Network for Oregon Affordable Housing
 Northwest Housing Alternatives
 Oregon Opportunity Network
 REACH Community Development, Inc.
 ROSE Community Development
 Corporation
 United Fund Advisors
 West Valley Housing Authority

Pennsylvania

Allentown Housing Authority
 A.M. Rodriguez Associates, Inc.
 BCM Affordable Housing
 Community Action Commission
 Community Action Committee of the
 Lehigh Valley, Inc.
 Community First Fund
 Cornerstone Community Partners
 Fayette County Community Action
 Agency, Inc.
 Franklin County Housing Authority
 HDC MidAtlantic
 The Hickman
 Housing Alliance of Pennsylvania
 Housing Authority of the City of Erie

Housing Authority of the County of
 Beaver
 Housing Development Corporation
 MidAtlantic
 Kelly & Close Engineers
 NCCDC
 New Kensington CDC
 Pathways to Housing PA
 Pennrose Properties
 Pennsylvania Association of Housing &
 Redevelopment Agencies
 Pennsylvania Developers Council
 Pennsylvania Housing Finance Agency
 Philadelphia Association of CDCs
 Philadelphia Housing Authority
 Presbyterian Senior Living
 Quality Community Health Care, Inc.
 Ralph A. Falbo, Inc.
 The Reinvestment Fund
 S&A Homes
 SEDA-COG Housing Development Corp.
 United Neighborhood Centers
 United Neighborhood Community
 Development Corporation
 West Market Management
 WRT Design
 York Housing Authority

Puerto Rico

Advancer Local Development
 ERS Consulting Group, LLC
 Fernando L Sumaza & Company
 La Fundacion del Perpetuo Socorro
 One Stop Career Center of Puerto Rico,
 Inc.

Rhode Island

Amos House
 Barbara Sokoloff Associates
 Church Community Housing Corp.
 Coventry Housing Authority
 Dimeo Properties
 EastBay Community Development Corp.
 House of Hope CDC
 HOUSING ACTION Coalition of Rhode
 Island
 NeighborWorks Blackstone River Valley
 Newport Housing Authority
 Olneyville Housing Corporation
 Omni Development Corporation
 Pawtucket Central Falls Development
 Property Advisory Group
 Rhode Island Housing
 Roger Williams University
 SWAP Inc.
 Valley Affordable Housing Corp.

South Carolina

AMCS Inc.
 Connelly Builders, Inc.
 CPR Partners
 Credit Capital, LLC
 Douglas Development
 Howell Linkous and Nettles, LLC
 Humanities Foundation
 Landmark Property Management
 SC Community Loan Fund

Southern Development Management
Company Inc.

South Dakota

Aberdeen Housing Authority
Dakota Nation Community Development
Corporation
Dakota Resources
Development for the Disabled Inc.
GROW South Dakota
Lloyd Companies
Murray Properties, LLC
NeighborWorks Dakota Homes
Resources
Oti Kaga, Inc.

Tennessee

Alco Management, Inc.
Bluff City Community Development
Corporation
Elmington Property Management
Good Neighbor Foundation
Huber & Lamb Appraisal Group
Jackson Housing Authority
Knoxville's Community Development
Corporation
Lexington Housing Authority
LHP Development, LLC
Metropolitan Development & Housing
Agency
Pennrose Properties
Volunteer Management and
Development Company

Texas

Alden Torch Financial, LLC
Anderson Development & Construction,
LLC
Anson Housing Authority
Austin Community Design &
Development Center
Banyan Residential
B.E. Boyd Consultant Group
Builders of Hope CDC
Call to Action Homeless Veterans
Center for Faith & Health Initiatives
Conine Residential Group
Crowell Housing Authority
Delphi Affordable Housing Group, Inc.
Edinburg Housing Authority
Flores Residential, LLC
Fort Worth Housing Authority
Foundation Communities
Georgetown Housing Authority
Granger Housing Authority
Greenville Housing Authority
Gregory Housing Authority
Hidalgo County Housing Authority
Housing Authority of El Paso
Housing Authority of the City of Alamo
Housing Lab by BETCO
Joe Lopez Law Firm
Levelland Housing Authority
Lockhart Housing Authority
Locke Lord LLP
Maupin Development
MWS Real Estate Services
Mount Pleasant Housing Authority

Nortex Housing Finance Commission
Red Stone Equity Partners
Robert T. Pittenger CPA, PC
Rogers Housing Authority
Rural Rental Housing Assoc. of Texas,
Inc.
San Antonio Alternative Housing
Corporation
San Antonio Housing Authority
Spearman Housing Authority
StoneLeaf Companies
Texas Affiliation of Affordable Housing
Providers
Texas NAHRO
UAH Property Management, Inc.

Utah

Adams Construction & Management
Community Development Corp. of Utah
Crossroads Urban Center, LLC
Davis Community Housing Authority
Horizon Development and Management
Housing Authority of Salt Lake City
Housing Authority of the County of Salt
Lake
Housing Authority of Utah County
Housing Management and Development
Corporation
Mountainlands Community Housing
Trust
Neighborhood Nonprofit Housing
Corporation
NeighborWorks Salt Lake
Self-Help Homes
Taylor Springs Apartments
Tooele County Housing Authority
TURN Community Services, Inc.
Utah Community Reinvestment
Corporation
Utah Housing Corporation
Utah NAHRO
Utah Nonprofit Housing Corp.
Valley Behavioral Health
Weber Housing Authority

Vermont

Addison County Community Trust, Inc.
Burlington Associates
Cathedral Square Corporation
Central Vermont Community Land Trust
Champlain Housing Trust
Disability Rights Vermont
Housing Trust of Rutland County, Inc.
Housing Vermont
Lamoille Housing Partnership
Vermont Affordable Housing Coalition
Vermont Center for Independent Living
Vermont Housing and Conservation
Board
Vermont Housing Finance Agency
Vermont State Housing Authority

Virginia

AHC, Inc.
Alexandria Housing Development
Corporation
Alexandria Redevelopment and Housing
Authority

Alliance for Housing Solutions
 Arlington Partnership for Affordable Housing
 Better Housing Coalition
 Chesapeake RHA
 Community Housing Partners
 Hampton Redevelopment and Housing Authority
 Harrisonburg Redevelopment and Housing Authority
 The Haven, Inc.
 Hopewell Redevelopment and Housing Authority
 Housing Assoc. of Nonprofit Developers
 Linden Capital LLC
 MichiHamlett Attorneys at Law
 Newport News Redevelopment & Housing Authority
 NJR Real Estate Consulting Services, LLC
 Norfolk Redevelopment and Housing Authority
 Northern Virginia Affordable Housing Alliance
 Restoration of Petersburg Community Dev. Corp.
 Southside Outreach Group, Inc.
 Virginia Coalition to End Homelessness
 Virginia Community Development Corporation
 Virginia Housing Coalition
 Virginia Housing Development Authority
 Virginia LISC
 Virginia One Development
 Virginia Supportive Housing
 Wesley Housing Development Corp. of Northern Virginia
Washington
 Ally Community Development
 American Capital Group
 Barrientos LLC
 Beacon Development Group
 Bellingham/Whatcom County Housing Authorities
 Bellwether Housing
 Betsy Lieberman Consulting LLC
 Bremerton Housing Authority
 Campion Advocacy Fund
 Capitol Hill Housing Foundation
 Cascade Affordable Housing
 Catholic Charities Housing Services
 Diocese of Yakima
 City of Seattle Office of Housing
 Columbia Gorge Housing Authority
 Colville Indian Housing Authority
 Community Center for Education Results
 Community Frameworks
 Compass Health
 Compass Housing Alliance
 Downtown Emergency Service Center (DESC)
 El Centro de la Raza
 Enterprise Community Partners Pacific Northwest
 Homestead CLT
 HomeStreet Bank
 Housing Authority of Grant County
 Housing Authority of Kennewick
 Housing Consortium of Everett & Snohomish County
 Housing Dev. Consortium of Seattle-King County
 Housing Hope
 Housing Kitsap
 Impact Capital
 InterIm Community Development Association
 Imagine Housing
 King County Housing Authority
 LeadingAge Washington
 Longview Housing Authority
 Low Income Housing Institute
 Makah Tribe
 Mark Flynn Consulting, LLC
 Mayor of Seattle Ed Murray
 McLoughlin & Associates
 Mercy Housing Northwest
 Northwest Youth Services
 Office of Rural and Farmworker Housing
 OPAL Community Land Trust
 Pacifica Law Group, LLP
 Parkview Services
 Paul Schissler Associates
 Plymouth Housing Group
 Rafn Company
 Renton Housing Authority
 Seattle Chinatown International District Preservation
 and Development Authority (SCIDpda)
 The Seattle Foundation
 Seattle Housing Authority
 Seattle/King County Coalition on Homelessness
 SEC Affordable Housing
 Security Properties
 Senior Services
 Senior Services of Snohomish County
 Shelter Resources, Inc.
 SMR Architects
 Solid Ground
 Spokane Community Housing Association
 Spokane Housing Ventures
 Spokane Low Income Housing Consortium
 Spokane Neighborhood Action Partners (SNAP)
 The Summit Group
 Tacoma Housing Authority
 TPC Affordable Housing Consortium
 United Marketing, Inc.
 Upper Valley MEND
 Walla Walla Housing Authority
 Washington Community Reinvestment Association
 The Washington Low Income Housing Alliance
 Washington State Housing Finance Commission
 Watson & McDonnell
 Yesler Community Collaborative
 YMCA of the Inland Northwest

YWCA Seattle	Center for Resilient Cities
West Virginia	Community First Inc.
Central Appalachia Empowerment Zone	Elizabeth Moreland Consulting, Inc.
of West Virginia	Gorman & Company
Chaplin Construction, Inc.	Hirsch Group, LLC
Coalfield Development Corporation	Horizon Development Group, Inc.
CommunityWorks in West Virginia, Inc.	Inner City Redevelopment Corporation
Innovation, LLC	Journey House
Keyser Housing Authority	Layton Boulevard West Neighbors, Inc.
Recovery Point of Charleston	Oshkosh Housing Authority
RedClay Development of West Virginia	Riverworks Development Corporation
Religious Coalition for Community	Salous Inc.
Renewal	SVA Certified Public Accountants, S.C.
Vandalia Heritage Foundation	The TheoPRO Group
West Virginia Community Builders, LLC	Wisconsin Council for Affordable and
Wisconsin	Rural Housing
Astar Capital Management	Wisconsin Housing Preservation Corp.
Baker Tilly Virchow Krause, LLP	Wyoming
Bear Development	Volunteers of America Northern Rockies
Cardinal Capital Management	Wyoming Housing Network

PREPARED STATEMENT OF DIANE YENTEL, PRESIDENT AND CEO OF THE NATIONAL
LOW INCOME HOUSING COALITION

On behalf of the National Low Income Housing Coalition (NLIHC), I want to thank this committee for the opportunity to submit a statement for the record regarding the hearing, “Housing Vulnerable Families and Individuals: Is There a Better Way?” Given the growing affordable housing crisis—especially among families with extremely low-incomes—I applaud members of this committee for looking seriously at reforms to reduce costs and serve more families in need. Bold action to improve and expand current Federal housing programs is clearly needed.

NLIHC is dedicated solely to achieving socially just public policy that assures people with the lowest incomes in the United States have affordable and decent homes. Our members include State and local housing coalitions, residents of public and assisted housing, nonprofit housing providers, homeless service providers, fair housing organizations, researchers, public housing agencies, private developers and property owners, local and State government agencies, faith-based organizations, and concerned citizens. While our members include the spectrum of housing interests, we do not represent any segment of the housing industry. Rather, we focus on what is in the best interests of people who receive and those who are in need of Federal housing assistance, especially extremely low-income people.

NO SILVER-BULLET SOLUTION

Today, the affordable housing crisis continues to reach new heights. Rents are rising, wages are flat, and more people are renting their homes than ever before. Yet, the supply of affordable housing has not kept pace. As a result, record-breaking numbers of families cannot afford a decent place to call home. Every State and every community is impacted.

The greatest need for affordable housing is primarily concentrated among extremely low-income renters who earn no more than 30 percent of their area median income (AMI). NLIHC’s recent report, *The Gap: The Affordable Housing Gap Analysis 2016*, found that there is a shortage of 7.2 million affordable and available rental homes for the Nation’s 10.4 million extremely low-income renters. This means that just three out of 10 extremely low-income families are able to find an affordable place to call home. As a result, three out of four extremely low-income families are severely cost-burdened, spending more than half of their income on rent and utilities. These families are often forced to make difficult choices between paying rent and buying groceries or visiting their doctor. In worst cases, they become homeless.

Moreover, NLIHC’s *Out of Reach* report shows the difference between wages and the price of housing in every State and county. It also estimates the hourly wage that a full-time worker needs to earn in order to afford a modest, two-bedroom apartment. In 2016, the national Housing Wage was \$20.30 per hour. A minimum wage worker would need to work 112 hours a week—or 2.8 full-time jobs—just to afford their apartment. While the housing wage changes from State to State and

county to county, there is no jurisdiction where a full-time worker earning the prevailing minimum wage can afford a modest, two-bedroom apartment.

Housing challenges differ from community to community; there is no silver bullet solution. Congress and the administration must use every tool available to solve the problem. A comprehensive set of solutions to end housing insecurity in America includes: preserving and rehabilitating our Nation's existing affordable housing stock; increasing investment in the production of affordable housing for the lowest-income people; and expanding rental assistance.

THE IMPORTANCE OF PUBLIC HOUSING

Public housing is home to more than 1.1 million households and plays a critical role in providing safe, decent housing to families with the greatest needs. The preservation of this important community asset must be a part of any strategy to end housing insecurity.

Research shows that the vast majority of the more than 2 million people who live in public housing are satisfied overall with their homes, even though they rightfully push for solutions to maintenance and management issues. Most residents do not want to see public housing end; they want to see it improved and expanded.

In fact, far more people are trying to get into public housing than leave it. In NLIHC's forthcoming report, we found that the average waitlist for public housing is about 9 months. Among the largest public housing authorities (PHAs), the waitlist is longer than 2 years. In many cities, the waiting list is so long that has been closed for years.

Converting public housing into housing vouchers would result in a significant loss to the Federal Government and local communities. The Federal Government has already invested significant resources to develop, maintain, and operate public housing. Communities will lose an important asset—and the Federal Government will lose all of this investment—if Congress were to eliminate public housing.

SECTION 8 HOUSING CHOICE VOUCHERS

Housing Choice Vouchers (HCV) are a proven tool in reducing homelessness and housing insecurity, as well as helping families climb the economic ladder. Housing vouchers help people with the lowest incomes afford housing in the private housing market by paying landlords the difference between what a household can afford to pay in rent and the rent itself, up to a reasonable amount. Administered by the U.S. Department of Housing and Urban Development (HUD), housing vouchers comprise the agency's largest rental assistance program, assisting more than 2.2 million households.

Groundbreaking research by Harvard economist Raj Chetty offers persuasive evidence on the impact of housing vouchers on upward mobility. Using new tax data, Chetty and his colleagues assessed the longer-term outcomes for children who moved at a younger age as part of the HUD's Moving to Opportunity demonstration. Chetty's study found that children who were younger than 13 when their family moved to a lower-poverty neighborhood saw adult earnings increased by approximately 31 percent. Children who were younger than 13 when they moved also lived in better neighborhoods as adults and were less likely to be single parents.

Given the voucher program's effectiveness, Congress should not only expand housing vouchers to more families in need, but also work towards improving the program's effectiveness in serving low-income families. While housing vouchers offer families the prospect of moving to areas of opportunity, barriers to mobility prevent many from doing so. Many private-sector landlords refuse to accept housing vouchers—whether because of the administrative costs, because vouchers do not cover the full cost of rent in high-cost areas, or outright discrimination. In cases where the utility of housing vouchers is limited, public housing plays a critical role in addressing the housing needs of low-income families.

Converting Project-Based Rental Assistance to Vouchers Would Increase, Not Alleviate, the Affordable Housing Crisis

Due to the low budget caps required by the Budget Control Act, this Committee faces a very difficult task of finding the resources necessary just to maintain current rental assistance contracts and program levels. Since 2011, spending caps have only made it more difficult for extremely low-income seniors, people with disabilities, families with children, and people experiencing homelessness to access safe, decent, and affordable housing.

For that reason, the Campaign for Housing and Community Development Funding (CHCDF), a coalition led by NLIHC with the support of 75 national and regional organizations, has worked to work to help lift the low spending caps, prevent across-

the-board sequestration cuts, and ensure the highest allocation of resources possible to support affordable housing and community development.

NLIHC also serves on the Steering Committee of NDD United, a coalition that works across industry sectors—from housing and infrastructure to education and the environment to healthcare and public safety—to advocate for non-defense discretionary spending, including funding for the U.S. Department of Housing and Urban Development (HUD) and Agriculture (USDA) Rural Housing Service.

Even within these budget constraints, we encourage this Committee to prioritize protecting and preserving existing affordable housing resources, like public housing.

While expanding housing vouchers to many more families is an important part of the solution, it alone cannot fully address the scope of the housing crisis. Additional tools are necessary to address other challenges, including the need to recapitalize and preserve aging properties, revitalize distressed communities, provide housing options for low-income families in tight or gentrifying markets and produce accessible housing for families with disabilities and special needs. Addressing these gaps in the rental housing market requires an investment in bricks and mortar—through the expansion and improvement of the Low-Income Housing Tax Credit (Housing Credit), national Housing Trust Fund (HTF), and HOME Investment Partnerships (HOME) program—as well as the preservation of public housing and the existing affordable housing stock.

POLICY RECOMMENDATIONS

To reduce costs and improve program delivery, NLIHC recommends consolidating PHA's administration of housing vouchers, funding a mobility counseling pilot program, and encouraging HUD to adopt small area fair market rents (SAFMRs) with tenant protections.

Consolidate PHA's Administration of Housing Vouchers

Currently, 2,400 PHAs administer the Nation's two million housing vouchers. Of these agencies, 58 percent administer fewer than 400 vouchers. These small housing agencies exist in rural, suburban, and urban markets. There are 558 housing agencies administering vouchers in the Nation's 49 most populated metro areas.

Consolidation of the administration of vouchers would result in administrative cost savings, bring significant benefits to families with housing vouchers and those in need of housing vouchers, and reduce HUD's oversight costs.

According to HUD's Housing Choice Voucher Program Administrative Fee Study, issued in April 2015, large housing voucher programs have lower costs than smaller programs. Cost estimates for the 130 small housing voucher programs studied show an inverse pattern of costs per unit, decreasing steadily with the increase in the number of vouchers under lease.

Under the current system of multiple housing authorities in a single housing market, a household seeking a voucher has to apply to several different agencies to maximize their chances of successfully competing for a voucher. For example, an eligible household in the Washington, D.C. housing market would have to submit separate applications to the District of Columbia Housing Authority, the Housing Opportunities Commission of Montgomery County, the Housing Authority of Prince George's County, the Alexandria Housing and Redevelopment Authority, the Fairfax County Redevelopment and Housing Authority, and the Arlington County Department of Human Services, not to mention additional housing agencies in outer ring suburbs from which people commute to and from jobs in the D.C. metro area.

It is obvious how time consuming and frustrating this would be for families seeking a housing voucher. It is also costly for a housing authority to process an application—a cost that is compounded when several housing authorities are processing applications from the same household. Under the current system, it is impossible to know what the true demand for vouchers is because the same household can be on multiple waiting lists.

Even if a household is lucky enough to rise to the top of a waiting list and receive a housing voucher, they may face significant barriers in using the voucher. Housing markets do not recognize jurisdictional boundaries. If a new voucher holder received their voucher in one jurisdiction, but found their preferred housing in the next jurisdiction, the household would have to go through the cumbersome process of "porting" their voucher from one administering agency to another.

This process can reduce significantly the chances of successfully executing a lease and moving to the new home.

Consolidation of an area's vouchers into a single administering entity with a single waiting list, either with a new entity or one of the existing housing agencies, would significantly streamline the voucher process for households, the administering agencies, and the landlords on whose participation the program's success depends.

Regional administration of vouchers would also result in providing voucher holders with greater choice in where they can use their vouchers. Federal policy changes to require the consolidation of voucher administration would provide people more freedom to choose where they want to live with a voucher, including moving to low-poverty neighborhoods.

One example of a consolidated housing agency is the Southern Nevada Regional Housing Authority (SNRHA), which is the successor to the Housing Authorities of Las Vegas, North Las Vegas, and Clark County. According to the SNRHA's website, "Now, all of that expertise is under one roof and we hope to serve you much more efficiently." The SNRHA administers 10,094 housing choice vouchers.

The statute currently permits voucher administration consortia, but many housing authorities are reluctant to give up their authority. Congress should enact legislation that provides incentives—or preferably mandates—for consolidation and regional administration.

Fund a Mobility Counseling Pilot Program Proposed by the Administration

Congress should support funding for a mobility counseling pilot program that was proposed in the President's fiscal year 2017 budget request. Through this 3-year demonstration, HUD and PHAs will be able to develop new models for improving voucher mobility. Under the demonstration, PHAs in about 10 regions would provide counseling to help HUD-assisted families move to areas of opportunity. PHAs could use demonstration funds to improve collaboration between agencies and align policies and administrative systems. Funds could also be used to better recruit landlords and other activities that promote greater voucher mobility and housing choice. The proposal also includes a research component to study what strategies proved most cost-effective.

The Senate's fiscal year 2017 Transportation-HUD (THUD) spending bill includes \$11 million to fund the demonstration and an additional \$3 million for evaluation. The House THUD bill does not include similar funding.

Encourage HUD to Adopt Small Area Fair Market Rents (SAFMRs) With Tenant Protections

For several years, NLIHC has advocated for SAFMRs as one means to help expand affordable housing choice for voucher households. SAFMRs have the potential to augment the value of a voucher and thus enhance the ability of a household to use their voucher in more neighborhoods, particularly areas of higher opportunity.

SAFMRs reflect rents based on U.S. Postal ZIP Codes, while traditional FMRs reflect a single rent standard for an entire metropolitan region. By providing voucher payment standards that are more in line with neighborhood-scale rental markets, SAFMRs aim to provide relatively higher subsidies in neighborhoods with higher rents and greater opportunities and lower subsidies in neighborhoods with lower rents and higher concentrations of voucher holders.

HUD recently issued a proposed rule that would use a formula to select a limited number of metropolitan areas that would be required to use SAFMRs. While NLIHC supports changes to the voucher regulations that enable households to use vouchers in areas of higher opportunity, HUD must ensure that the final rule prevents adverse impacts on households currently relying on vouchers.

We are concerned about the potential harm that a transition to SAFMRs could cause voucher holders currently living in low-cost ZIP codes where the SAFMR is likely to be lower than the metropolitan FMR. This could result in a lower voucher payment standard, one that is below current rents to which landlords are accustomed. If a landlord does not lower the rent when the voucher payment standard declines—which is likely—residents would have to pay more for rent and may become cost-burdened or severely cost-burdened.

Analysis by the National Housing Law Project reveals that if current voucher households are not held harmless, 78 percent (435,000 households) would likely suffer the impact of reduced payment standards in the 31 areas that meet HUD's SAFMR criteria. Consequently, we recommend that the final rule categorically exempt current voucher households from any reduction in the payment standard as a result of the transition to SAFMRs.

Moreover, we are concerned many landlords may stop accepting vouchers where payment standards in low-rent neighborhoods decline sharply, adversely impacting households currently relying on vouchers as well as future voucher recipients. In some tight rental markets, landlords may be able to obtain the rents they want without vouchers and without having to comply with voucher program requirements. This is particularly true in gentrifying areas.

In order to prevent landlords from exiting the voucher program and thereby reduce the stock available to future and current voucher households, NLIHC rec-

ommended to HUD that its final rule incrementally limit how far SAFMRs could fall below current metropolitan FMRs. NLIHC proposed that for the first year of implementation, SAFMRs be set no lower than 95 percent of the metropolitan FMR, no lower than 90 percent the second year, and so on in 5 percent increments.

We also believe that HUD's proposed rule does not account for tight rental markets. Several of the metropolitan areas on the list of 31 that would be required to comply have very low vacancy rates, little rental turnover, high and rapidly rising rents, and low growth in the rental stock. As a result, there is little or no opportunity for mobility for renters in general and for voucher households in particular. Voucher households often have to return their vouchers unused because they cannot find a place to rent. In higher opportunity neighborhoods where vacancies are scarce, voucher households encounter strong competition from those without vouchers. Therefore, NLIHC recommends that any metropolitan area with a vacancy rate of 5 percent or less not be required to comply with the SAFMR rule.

AN ALTERNATIVE APPROACH TO INCREASE NEEDED INVESTMENTS

While Federal investments in housing have a proven track record of reducing homelessness and housing insecurity, these investments are sorely underfunded. As a result, just one in four families that are eligible for housing assistance get the help they need. For our Nation to fully address the affordable housing crisis, we must identify and allocate resources to increase investment in proven solutions.

Congress can make the investments needed to end homelessness and housing insecurity without adding costs to the Federal Government through reform of the Mortgage Interest Deduction. Each year, the Federal Government spends more to subsidize the homes of 7 million high-income households through the Mortgage Interest Deduction—most of whom would be stably housed without the government's support—than it does to assist the poorest 55 million families. In fact, \$8 out of every \$10 under the Mortgage Interest Deduction goes to families making more than \$100,000 a year; \$4 out of every \$10 goes to families making more than \$200,000.

Specifically, Congress should reduce the size of a mortgage eligible for the tax break from \$1 million to the first \$500,000—impacting fewer than 5 percent of mortgage holders nationally—convert the deduction into a nonrefundable capped credit and reinvest the significant savings into programs that serve families with the greatest, clearest housing needs. These changes would result in 15 million low-income homeowners who currently get no benefit from the Mortgage Interest Deduction to receive a much-needed tax break, as well as \$220 billion in savings over 10 years to be reinvested in effective housing programs, including Housing Choice Vouchers, public housing, and the national Housing Trust Fund (HTF).

The HTF is a dedicated, targeted resource that provides States with revenue to build, preserve, and rehabilitate housing that is affordable for extremely and very low-income households. This year, the HTF provided its first \$174 million in allocations to States. NLIHC and our State and local partners look forward to working with Congress to expand the HTF, including through housing finance reform and reform of the Mortgage Interest Deduction.

Thank you again for this opportunity for NLIHC to share our views on how to improve the way we provide and administer affordable housing in our country. If you have additional questions, please contact Public Policy Director Sarah Mickelson at smickelson@nlihc.org.

**TRANSPORTATION AND HOUSING AND URBAN
DEVELOPMENT, AND RELATED AGENCIES
APPROPRIATIONS FOR FISCAL YEAR 2017**

WEDNESDAY, NOVEMBER 16, 2016

U.S. SENATE,
SUBCOMMITTEE ON THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:20 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Susan Collins, (chairman) presiding.
Present: Senators Collins, Cassidy, Daines, Reed, and Murphy.

**THE AUTOMATED AND SELF-DRIVING VEHICLE REVOLUTION:
WHAT IS THE ROLE OF GOVERNMENT?**

OPENING STATEMENT OF SENATOR SUSAN M. COLLINS

Senator COLLINS. This hearing will come to order.

Good afternoon. I'm pleased to be joined today by our ranking member, Senator Jack Reed, and by Senator Cassidy and others who will be joining us, as we hold this hearing to examine the role of government in enhancing roadway safety through the careful deployment of automated and self-driving vehicles, which could revolutionize our transportation system.

I also welcome our panel of witnesses. We are joined today by Mark Rosekind, the Administrator of the National Highway Traffic Safety Administration; Deborah Hersman, the President and CEO of the National Safety Council; Paul Brubaker, the President and CEO of the Alliance for Transportation Innovation; and Dr. Nidhi Kalra, the Senior Information Scientist at the RAND Corporation. I look forward to hearing from each of you.

The potential of the new technology that we're examining today is exciting, cars that drive themselves and avoid accidents, seniors and disabled individuals able to retain or gain their ability to get around town. At first, it sounds like science fiction or an advance far, far off into the future. But this technology is being tested and perfected right now, and it could save thousands of lives.

According to the most recent statistics from the National Highway Traffic Safety Administration, more than 35,000 lives were lost in crashes on U.S. roadways in the year 2015. Preliminary estimates indicate a 10 percent increase in the first half of 2016. It is important to highlight that 94 percent of these crashes are the result of human factors or, simply put, driver error such as distracted driving—sometimes caused by hands-free technology—impaired

driving, and speeding. These crashes are preventable, and we should be doing everything we can to eliminate them.

The testing and safe deployment of automated vehicle technologies has the potential to reduce substantially the number of driver-related crashes and fatalities. Let me emphasize that point: if this technology were to be perfected, automated vehicles could eliminate many of the crashes on our Nation's roadways and save thousands of lives each year.

While fully self-driving autonomous vehicles are still years away from being available to the general public, many new vehicles already have driver-assisted features such as automatic emergency breaking, rearview cameras, my personal favorite, and lane-keep assist systems. These technologies are already making a difference, saving lives and reducing injuries.

In addition to improving safety, self-driving vehicles can provide mobility options to our seniors and disabled people, particularly those living in rural communities like my State of Maine, where many of our older drivers currently do not have an easy way to get to the doctor or to the grocery store. Public transportation is non-existent in much of Maine, and taxi service is very limited in rural areas. Seniors who can no longer drive often have very few options.

A self-driving car, or even one with limited automated features, could help seniors feel more secure driving at night and could help those who currently must rely on others to get around, to maintain their independence. A recent survey of drivers over the age of 50 showed that almost 80 percent of those who plan to buy a car within the next 2 years will be seeking automated features such as blind spot warning, crash mitigation, and lane departure warning systems. Yet many consumers remain wary of purchasing a fully autonomous vehicle anytime soon. I know that the RAND Corporation has done a lot of work in the area of the potential benefits of automated technologies for our seniors.

To help accelerate the safe testing and development of autonomous vehicles, the Department of Transportation released its "Federal Automated Vehicles Policy" on September 20th, which includes vehicle performance guidance, model state policy, an assessment of current regulatory tools, and a discussion of future regulatory tools that Congress may want to consider.

While this was an important first step, it is clear that the DOT's guidance document needs further refinement to help ensure that automakers are able to bring the safety and mobility benefits of autonomous vehicles into the marketplace without unnecessary government regulations. I am particularly interested in hearing from our witnesses today on what improvements can be made to these guidelines.

Automobile manufacturers face a number of roadblocks integrating autonomous vehicles onto our Nation's highways. Some have called on the Administration to put the brakes on autonomous vehicle deployment by imposing onerous requirements through a rulemaking process which could take several years to finalize, and my fear is that that would stifle innovation in the meantime.

We must recognize that automated vehicle technology is advancing faster than government agencies can act, and in this instance impeding the advancement of technology may prevent us from sav-

ing lives. On the other hand, we also know that there have been some problems with the automated technology that has increased the incidence of distracted driving and perhaps led to additional accidents. The Department's guidance provides a more effective voluntary 15-point safety assessment that incentivizes automakers to certify that they have addressed all relevant issues ranging from cybersecurity to human-machine interface to ethical considerations.

Another challenge facing autonomous vehicles is the vast number of State and local governments that are seeking to regulate this technology. Unlike vehicle safety, which is governed by Federal law, the safety and licensing of drivers are under the jurisdiction of State governments. While the Department's guidance deters States from interfering with Federal vehicle safety standards, one topic we will explore is whether or not DOT's approach also has the effect of encouraging State governments to set prohibitive requirements related to testing, licensing, and registration for automated vehicle testing.

Given the public's keen interest in self-driving and automated vehicles, it is important for State governments to take a balanced approach in allowing the research, development, safe testing, and deployment of such vehicles. However, I would note that one serious accident, such as occurred in Florida, can cause great mistrust of this new technology, and that could lead to greater State restrictions on testing and deployment. It is particularly important that DOT work with automotive manufacturers, suppliers, and technology companies, as well as with the commercial end users of automated vehicles, to ensure that they are operating with an abundance of caution to avoid excessive government intervention that could interfere with the timely development of technologies that truly could save thousands of lives.

[The statement follows:]

PREPARED STATEMENT OF SENATOR SUSAN M. COLLINS

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While this was an important first step, it is clear that D.O.T.'s guidance document needs further refinement to help ensure that automakers are able to bring the safety and mobility benefits of autonomous vehicles into the marketplace without unnecessary government regulations. I am particularly interested in hearing from all of our witnesses today on what improvements can be made to these guidelines.

Automobile manufacturers face a number of roadblocks integrating autonomous vehicles onto our Nation's roadways. Some have called on the Administration to put the brakes on autonomous vehicle deployment by imposing onerous requirements through a rulemaking process, which could take several years to finalize, stifling innovation in the meantime.

We must recognize that automated vehicle technology is advancing faster than government agencies can act, and in this instance, impeding the advancement of technology may prevent us from saving lives. The Department's guidance provides a more effective voluntary 15-point "safety assessment" that incentivizes automakers to certify they have addressed all relevant issues ranging from cybersecurity, to human-machine interface, to ethical considerations.

Another challenge facing autonomous vehicles is the vast number of State and local governments that are seeking to regulate this technology. Unlike vehicle safety, which is governed by Federal law, the safety and licensing of drivers are under the jurisdiction of State governments. While the Department's guidance deters States from interfering with Federal vehicle safety standards, one topic we will explore is whether or not D.O.T.'s approach also has the effect of encouraging State and local governments to set prohibitive requirements related to testing, licensing, and registration for automated vehicle testing.

Given the public's keen interest in automated and self-driving vehicles, it is important for State and local governments to take a balanced approach in allowing the research, development, safe testing, and deployment of automated vehicles. However, one serious accident, such as occurred in Florida, can cause mistrust of this new technology, and that could lead to greater local restrictions on testing and deployment. It is particularly important that D.O.T. work with automotive manufacturers, suppliers, and technology companies, as well as the commercial end users of automated vehicles, to ensure they are operating with an abundance of caution to avoid excessive government intervention.

With that, let me call upon my colleague and friend Senator Reed, the ranking member, for his opening statement.

Senator COLLINS. With that, let me call upon my colleague and friend from Rhode Island, Senator Reed, the ranking member, for his opening statement.

STATEMENT OF SENATOR JACK REED

Senator REED. Thank you very much, Chairman Collins, for your leadership on so many issues, but particularly for holding this very important hearing on the future of self-driving vehicles. Let me join you in welcoming our witnesses. Thank you for your service and your expertise.

Automated and self-driving vehicles are not yet common on our roads, but autonomous driving and safety features such as automatic emergency brakes and parking assist have been introduced gradually over the last several years. Manufacturers and innovators are now poised to take transformative leaps in the development, integration, and adoption of these technologies, and what was once novel is at the brink of becoming commonplace.

As with any change, it brings opportunity as well as risk and anxiety. Particularly for the millions of Americans who earn a living as American commercial drivers, that is a significant issue that we should address. What remains unanswered is how this transportation revolution will evolve and what steps regulators and industry should take to foster and harness the positive aspects of this new technology.

Today auto manufacturers, ride sharing companies, and other investors are funding research and development on driverless vehicles. They are also launching pilot programs to gather data and introduce consumers to different forms of the technology. Uber is allowing customers in Pittsburgh to share rides in self-driving cars. Otto, which is a self-driving bus and truck company owned by Uber, autonomously delivered commercial goods just last month. Tesla is collecting millions of miles of data from its semi-autonomous vehicles and announced that it will potentially make a full autonomous vehicle starting next year. Google has been designing and testing cars with no human driver for several years in California. And GM and Lyft have partnered to build an autonomous fleet that will be available for ride sharing.

These companies are all using different strategies to achieve seemingly different goals. Some seek to provide efficient, accessible, and cost-effective transportation similar to Transit. Others want to improve freight transportation through fleets of autonomous trucks that can save gas and operator on the clock. What is clear is that technology is fundamentally changing vehicles as we know them.

This innovation has the potential to dramatically improve highway safety, as well as expand mobility access for thousands of people, as the Chairman spoke about, seniors particularly. And it also has safety features which, as the Chairman commented on, are significant. In 2015, more than 35,000 people died in crashes on the Nation's highways. The number represents an 8 percent increase from the previous year and marked the deadliest year on record since 2008. These vehicles might help immensely in that regard. NHTSA (National Highway Traffic Safety Administration) found that 94 percent of those deaths were the result of human error, so autonomous vehicles could be a real game changer in this regard.

We have a responsibility to fulfill this technology's promise and foster American innovation. But we also must be cognizant of the consequences of these technologies for the shifts in the American

economy and effects on the American worker. Self-driving cars and trucks will certainly demand new kinds of jobs and skills, but these jobs may be in different sectors of the economy. For millions of Americans, particularly those without a college degree or advanced training, driving a bus, a cab, or a truck can provide a decent income. In fact, for many, it is the ticket to the middle class.

In the latest year of data available from the Bureau of Labor Statistics, there are more than 4 million workers in the United States employed as drivers of trucks, taxis, chauffeurs or delivery vehicles. All of these are potentially in a space where they could be replaced by an autonomous vehicle. So we have to make sure that this technology not only enables better productivity but that it doesn't disqualify millions, literally, of Americans from good, solid jobs.

We need to think through this policy very thoughtfully. This is a broader conversation not involving just the technologies but the Department of Labor, policymakers from a huge swath of the government, so that we get it right, and we get it right for the American workers as well as for the technology interest.

Our regulatory agencies—and the Chairman has made the point that it's not just Federal but its State and local—have to be harmonized. We have to do this thoughtfully, and that is why, again, I commend the Chairman for calling this hearing today.

NHTSA—thank you—recently released a guidance document for comment with the intent of promoting technological advancement and preventing a patchwork of State regulations. So thank you, Administrator Rosekind, for that work.

There are many questions. When will NHTSA initiate a formal rulemaking on self-driving vehicles? When and how will the Federal motor vehicle safety standards be updated? How much data does NHTSA want to collect from industry and consumers, and how will it protect that data from cyber threats?

We know industry will continue to innovate, deploy, and develop these technologies at a faster pace than government can respond, and this will present a challenge. We have to recognize this up front.

But again, let me thank you, all of our witnesses for participating in our hearing today. I apologize for my Rhode Island accent. Other than that, I look forward to the testimony. Thank you.

Senator COLLINS. Thank you very much, Senator Reed.

I am going to put all of the witnesses' impressive bios into the record so that we can proceed with the testimony since I mentioned all of you in my opening statement.

We will start with the Administrator of the National Highway Traffic Safety Administration, known as NHTSA, the Honorable Mark Rosekind.

STATEMENT OF THE HON. MARK ROSEKIND, ADMINISTRATOR, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Mr. ROSEKIND. Thank you, Chairman Collins, Ranking Member Reed, other members of the committee. I really appreciate you holding this hearing today and for the opportunity to testify.

At NHTSA, our mission is to save lives on America's roadways. For 50 years, we have carried out that mission by writing and en-

forcing strong regulations to make vehicles safer, fighting against drunk-driving, building a national consensus about seatbelt use, and so many other efforts that have saved hundreds of thousands of lives on America's roads.

But we have far more work to do, and that work can be measured by some alarming numbers that all of you cited already. In 2015, we lost 35,092 people on our public roads. At NHTSA, we know those are not just numbers. Those are mothers and fathers, brothers and sisters, colleagues, co-workers, friends. And the problem is that it's all getting worse.

Last month we announced that roadway fatalities in the first half of this year are up over 10 percent, and it is against this backdrop that the Department of Transportation, under the leadership of Secretary Anthony Foxx, has been working so hard on our efforts to accelerate the safe deployment of automated vehicle technologies, because while automated vehicles carry enormous potential to transform mobility and reshape our transportation system, it is truly their awesome potential to revolutionize roadway safety that has all of us so motivated.

And there is one more number that helps us explain why, and that number is 94. That's the percentage of crashes that can be tied back to human choice or error. That's a choice to speed or drive drunk, send a text message from behind the wheel, or misjudge the stopping distance. That 94 percent represents the untold potential of automated vehicle technologies.

We envision a future where advanced technologies not only help reduce crashes but a world with fully self-driving cars that hold the potential to eliminate traffic fatalities altogether.

The Federal Automated Vehicles Policy, which the Department issued on September 20th, is the world's first comprehensive government action to guide the safe and efficient development and deployment of these technologies.

The policy covers four areas: one, vehicle performance guidance for automakers, tech companies, researchers, and other developers, testers, and deployers of automated vehicle technologies; two, a model state policy to build a consistent national framework for the testing and operation of automated vehicles; three, an exploration of the use of our current regulatory tools that can be used to advance these technologies; and four, a discussion of possible new tools that the Federal Government may need to promote the safe deployment of advanced technologies as the industry continues to develop.

I'd like to share just for a few moments a little bit about our approach.

For 50 years, our traditional approach at NHTSA has largely been reactive. NHTSA prescribes safety standards and then responds to problems as they arise. A traditional method of regulating these new technologies would be to engage solely in the rule-making process, writing new regulations that prescribe specific standards and typically take years to take effect. Our view is that approach would be slow, it would stymie innovation and would stall the introduction of these technologies.

Our policy takes a very different path, built on proactive safety which will better serve both safety and innovation. This policy al-

lows us to work with automakers and developers on the front end, to ensure there are sound approaches to safety throughout the entire development process. This is a new approach, and it's going to take some adjustment for everyone involved.

But we are confident that it will help us accomplish two goals: first, to make sure that new technologies are deployed safely; and second, to make sure that we don't get in the way of innovation. Our approach is non-prescriptive. It does not tell developers how they must provide safety but instead it builds a transparent and proactive approach to ensure that they are properly addressing the critical safety areas.

But that future is not without threats. As President Obama wrote when announcing the policy, quote, "The quickest way to slam the brakes on innovation is for the public to lose confidence in the safety of new technologies. Both government and industry have a responsibility to make sure that doesn't happen."

It is our view that the best way that we can build that public confidence is by working together, showing the public that the government is on the side of innovation, and that the industry is on the side of safety.

I submit the balance of my statement for the record, and I look forward to taking your questions. Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. MARK ROSEKIND

Chairman Collins, Ranking Member Reed, and Members of the Committee: Thank you for holding this hearing and inviting me to testify. My name is Mark Rosekind, and I am the Administrator of the National Highway Traffic Safety Administration, or NHTSA.

At NHTSA, our mission is to save lives on America's roadways. For 50 years, we have carried out that mission by writing and enforcing strong regulations to make vehicles safer, fighting against drunk driving, building a national consensus about seatbelt use, and so many other efforts that have saved hundreds of thousands of Americans.

But we have far more work to do. And that work can be measured by some alarming numbers.

In 2015, we lost 35,092 people on our public roads. At NHTSA, we know that is not just a number. Every one of those is a mother or father, a son or daughter, a coworker, a friend. In the United States, we lose the equivalent of a fully-loaded 747 on our roadways every single week.

And the problem is getting worse. Last month we announced that roadway fatalities in the first half of this year are up over 10 percent.

It is against this backdrop that the Department of Transportation, under the leadership of Secretary Anthony Foxx, has been working so hard on our efforts to accelerate the safe deployment of automated vehicle technologies.

Because while automated vehicles carry enormous potential to transform mobility, reshape our transportation system and transform our economy, it is their awesome potential to revolutionize roadway safety that has us so motivated.

And there is one more number that helps explain why. That number is 94. That is the percentage of crashes that can be tied back to a human choice or error. That's a choice to speed or drive drunk, to send a text message from behind the wheel or misjudge the stopping distance.

And that 94 percent figure represents the untold potential of automated vehicle technologies. We envision a future where advanced technologies not only help reduce crashes, but also make possible a world in which fully self-driving cars hold the potential to eliminate traffic fatalities altogether.

The Department of Transportation views this moment as the cusp of a new technological revolution that may transform roadway safety forever.

The Federal Automated Vehicles Policy, which the Department and NHTSA issued in mid-September, is the world's first comprehensive government action to

guide the safe and efficient development and deployment of these technologies. Today, I will discuss that Policy, how we developed it, and where we are going next.

In January of this year, Secretary Foxx made two important announcements.

First, he announced that President Obama was making a \$3.9 billion budget request for automated vehicles research. This is a major commitment from the Administration to advance this technology, and DOT continues to strongly support this request.

Second, he directed NHTSA to write a new policy covering four areas: One, vehicle performance guidance for automakers, tech companies, researchers and other developers and testers of automated vehicle technologies. Two, a model State policy to build a consistent national framework for the testing and operation of automated vehicles. Three, an exploration of the use of our current regulatory tools that can be used to advance these technologies. And four, a discussion of possible new tools that the Federal Government may need to promote the safe deployment of advanced technologies as the industry continues to develop.

Over the subsequent 9 months, NHTSA hit the road, traveling to discuss automated vehicles with industry, academics, State governments, safety and mobility advocates, and the public. This Policy is the product of that significant input.

Before discussing the individual components, I would like to share a few thoughts about our approach.

First it is important to understand our traditional approach to regulating motor vehicles. For 50 years, our approach has largely been reactive. NHTSA has prescribed safety standards, and then responded to problems as they arise.

A traditional approach to regulating these new technologies would be to engage solely in rulemaking process, writing new regulations that prescribe specific standards. Our view is that approach would stymie innovation and stall the introduction of these technologies.

It would also be a long process. Rulemakings, and the research necessary to support them, take years, meaning that any rule we might offer today would likely be woefully out-of-date by the time it took effect, given the pace of technological development in this space. Let me be clear that using the notice-and-comment rulemaking process to establish new standards will absolutely play an important role as this technology matures and is adopted. But it is not the only tool in our bag, and we have created an innovative approach that will better serve both safety and innovation in the immediate term.

Our Policy represents a continuation of the new proactive safety approach that we have built at NHTSA under the leadership of Secretary Foxx. This Policy allows NHTSA to work with automakers and developers on the front end, to ensure that sound approaches to safety are followed throughout the entire design and development process. This is a new approach, and it's going to take some adjustment for everyone involved. But we are confident that it will help us accomplish two goals: first, to make sure that new technologies are deployed safely; and second, to make sure we don't get in the way of innovation.

As the Federal regulator with the responsibility of ensuring vehicles are as safe as they can possibly be, we play an important role on behalf of the American public to ensure that vehicle technologies do not present safety threats.

At the same time, we recognize the great lifesaving potential of these new technologies, and want to do everything we can to make sure that potential is fully realized and that they are deployed as quickly as possible to save as many lives as we can.

Some people have talked about safety and vehicle automation as on the opposite ends of a spectrum, as if there were a trade-off between safety and innovation. But at the Department of Transportation, we view our role as promoting safety innovation. Our Policy is designed to promote the safe and expeditious deployment of new technologies that have the potential to reduce crashes and save lives.

Our approach is not prescriptive. It does not tell developers how they must provide safety, but instead it builds a transparent and proactive approach to ensure that they are properly addressing the critical safety areas.

Finally, I want to be clear that while this Policy establishes an important framework for the development and deployment of automated vehicles, it is not the final word. In our view, this Policy is the right tool at the right time. It answers a call from industry, State and local governments, safety and mobility advocates and many others to lay a clear path forward for the safe deployment of automated vehicles and technologies.

But we intend this Policy to evolve over time. That evolution will be based on comments we receive from the public, our own experience in implementing it over the coming months and years, and, perhaps most importantly, based on the rapid

evolution of the technology itself. We have designed this Policy to be nimble and flexible, to allow us to stay at the leading edge of this revolution.

Before I discuss each component of the Policy, allow me to say a few words on definitions.

First, it is important to note that with this Policy, we are officially adopting the SAE International levels of automation, ranging from zero to five. The primary focus of the Policy overall is on what we refer to as “highly automated vehicles”, or HAVs. Those are vehicles at levels three through five on the SAE level scale, or vehicles that—at least in some circumstances—take over full control of the driving task. A portion of the first section of the Policy also applies to Level 2 vehicle systems, which include advanced driver-assistance systems already on the road today.

The Policy covers all automated vehicles that are designed to operate on public roads. That includes personal light vehicles, as well as heavy trucks. It even includes vehicles that might be designed to not carry passengers at all.

Finally, I note that most of the Policy is effective immediately. We expect that developers and manufacturers of AV technologies will use the Policy to guide their safety approach. Some portions of the Policy—notably the Safety Assessment Letter in the Vehicle Performance Guidance—will become effective following a Paperwork Reduction Act process that we expect to be completed within the next few months.⁴

Vehicle Performance Guidance for Automated Vehicles

The first section is the Vehicle Performance Guidance for Automated Vehicles. This is guidance for manufacturers, developers and other organizations involved in the development of automated vehicles. The heart of the Guidance is a 15 point “Safety Assessment” that spells out the critical safety areas that developers should address for the safe design, development, testing and deployment of highly automated vehicles prior to the sale or operation of such vehicles on public roads.

The Safety Assessment covers areas such as the operational design domain—essentially the where and when an AV is designed to operate automatically—fallback conditions, cybersecurity, privacy, and the human-machine interface.

We identified these areas through our extensive consultations with industry, academia and advocates as the critical safety issues that must be addressed to ensure that automated technologies are safe.

Critically, the Guidance does not specify how AV developers are intended to address the areas. Instead, the Guidance asks developers to document their own processes and then provide NHTSA with a Safety Assessment letter in which they explain their approach. This process is expected to yield a variety of different approaches for every one of the areas. That is intentional, and is one of the ways that we are preserving and promoting the innovation process. Government does not have all the answers, and our view is that the more approaches that innovators take to solving these problems, the more likely we are to find the best way.

Model State Policy

The second section is the Model State Policy. For the last 50 years, there has been a fairly clear division of responsibility between the Federal Government and the States for the oversight and regulation of motor vehicles. Generally speaking, it has been the Federal Government’s responsibility to regulate motor vehicles and equipment safety, while the States have regulated drivers and traffic laws.

That division of responsibility may be less clear in a highly automated vehicle world where increasingly the vehicle’s automated systems become the driver.

The Model State Policy delineates the Federal and State roles for the regulation of these vehicles, and it outlines the approach we recommend to States as they consider the regulation of testing and operation of automated vehicles on their public roads. Our goal is to build a consistent national framework for the development and deployment of automated vehicles, so that users can take their vehicles across State lines as they can today, and so that developers are building toward a single set of standards, rather than 50.

The Model State Policy confirms that States retain their traditional responsibilities for vehicle licensing and registration, traffic laws and enforcement, and motor vehicle insurance and liability regimes. At the same time, the Policy reaffirms that the Federal Government will continue to be responsible for the oversight of vehicle safety and design, including automated features.

The Policy was developed in close coordination with the American Association of Motor Vehicle Administrators (AAMVA), individual States and other stakeholders. It suggests recommended areas for States to consider in the development of their own regulations, including testing regimes and registration. It also identifies a number of areas that need to be further discussed and developed, including how law enforcement will interact with highly automated vehicles, and the development of a

consistent approach to insurance and liability challenges. We also note in the Policy that States do not have to take any action at all.

NHTSA's Current Regulatory Tools

The third section addresses NHTSA's Current Regulatory Tools. This section discusses how NHTSA will use the tools currently at its disposal to promote and expedite the safe development and deployment of highly automated vehicles.

The first of those tools discussed is our interpretation authority. The current Federal Motor Vehicle Safety Standards generally do not contemplate automated vehicle technologies. Therefore, it can sometimes be unclear how those standards apply to advanced technologies. In this section, we lay out the process by which developers of AV technologies can submit interpretation requests to the agency to determine whether and how their technologies conform with the standards. The agency also commits to a greatly expedited process for reviewing these interpretation requests. On simple safety-related interpretation requests, we commit to providing answers within 60 days. Compared to historical norms, that is lightning speed.

The second tool discussed is our exemption authority. Congress has granted NHTSA the authority to provide exemptions to manufacturers to deploy vehicles that do not conform to the Federal Motor Vehicle Safety Standards. While these exemptions are admittedly limited—to 2,500 vehicles for each of 2 years—the Agency views this tool as an important way of enabling a manufacturer to put a test fleet on the road to gather critical safety data and improve its technologies. The Policy similarly commits to an expedited process on simple safety-related exemptions, providing an answer within 6 months from the application.

The Agency's broadest power is its ability to write new safety standards. While this tool tends to take the longest amount of time—usually a period of years—it is the method that will ultimately allow for the large-scale deployment of nontraditional vehicle designs and equipment under consistent, broadly applicable standards. In addition, to the extent that performance-based standards are adopted, this tool has the potential to allow for technological innovation while maintaining safety.

In this section, we also highlight that the Agency retains its broad defects and enforcement authority. We use that authority to investigate any unreasonable risks to safety, and to recall unsafe vehicles from the road. The same day NHTSA issued the Policy, we also issued an Enforcement Guidance Bulletin that makes clear that the Agency's traditional enforcement authorities extend to advanced vehicle technologies.

Modern Regulatory Tools

The fourth and final section of the Policy discusses Modern Regulatory Tools, identifying 12 potential new tools, authorities and resources that could aid the safe deployment of new lifesaving technologies and enable the Agency to be more nimble and flexible.

Today's governing statutes and regulations were developed before highly automated vehicles were even a remote notion. For that reason, current authorities and tools alone may not be sufficient to ensure that highly automated vehicles are introduced safely, and to realize their full safety promise. This challenge requires NHTSA to examine whether the ways in which the Agency has addressed safety for the last several decades should be expanded and supplemented.

The new tools identified in this section include premarket approval, expanded exemption authority, imminent hazard authority, new research and hiring tools, and others that may better equip the Agency in the future as more technologies move from the lab to the road. These tools are offered for consideration by policymakers, industry, advocates and the public as we move forward.

One thing we know for certain is that the agency will need additional resources as this technology develops and is adopted. I have great confidence in the NHTSA team's expertise and ability. But it is undeniable that as more automakers move technology from the lab to the test track to the road, we will need to make sure our Agency is properly resourced to maintain pace.

We continue to support the President's budget request for more research dollars, and are committed to working with you in the coming months and years to identify what resources—both in personnel and research funding—will be necessary to achieve our mission.

Next Steps

Finally, with respect to the Policy, I would like to highlight once again that we fully intend this Policy to be the first iteration of many to come. The Policy is effective now, and will continue to evolve based on feedback and our experience implementing it, and, most importantly, to keep pace with innovation. To that end, each

section of the Policy highlights a series of next steps that we will take to implement and improve the Policy over time.

The first is our solicitation of public input. We are doing that through an open comment period that is open now through November 22nd. NHTSA is also hosting a series of public workshops that began earlier this month on different sections of the Policy. I will note here that the full Policy, additional materials, and the portal for public comments can be found at www.nhtsa.gov/AV.

Over the coming months we will be engaging experts to review the Policy, issuing further guidance on the Safety Assessment letter, and engaging stakeholders across the spectrum to help flesh out other areas of the Policy. For example, we will work with law enforcement organizations to further the conversation about how AVs will interact with the police, and work with industry to build the framework for the data sharing discussed in the Vehicle Performance Guidance. We are also engaged with other operating modes throughout the Department of Transportation, recognizing the roles and responsibilities they play with respect to public transit, commercial freight operations, and the highway system on which automated vehicles will operate.

We do not pretend to have answered every question in this Policy, and we will continue the conversation with the public about the best ways to develop and improve our Policy as we learn more. To that end, the Department of Transportation has committed to reviewing and updating the Policy annually.

As I conclude, I want to say a few words about the importance of the present moment in history. We have an industry that is rapidly developing innovative new technologies. And we have a government that is inspired and excited about the future of this technology.

But that future is not without threats. Bad actors or bad incidents could threaten to derail our collective efforts.

I want to close with the words President Obama used when he announced our new Policy in an op-ed in the Pittsburgh Post-Gazette. He wrote, "There are always those who argue that government should stay out of free enterprise entirely, but I think most Americans would agree we still need rules to keep our air and water clean, and our food and medicine safe. That's the general principle here. What's more, the quickest way to slam the brakes on innovation is for the public to lose confidence in the safety of new technologies. Both government and industry have a responsibility to make sure that doesn't happen."

It is our strong view that the best way we can build that public confidence is by working together, showing the public that the government is on the side of innovation and the industry is on the side of safety. We encourage you to join with us as we continue to develop this Policy and show the American public that their safety is the highest priority for all of us.

Thank you.

Senator COLLINS. Thank you very much.

Ms. Hersman.

STATEMENT OF HON. DEBORAH HERSMAN, PRESIDENT AND CEO, NATIONAL SAFETY COUNCIL

Ms. HERSMAN. Chairman Collins, Senator Reed, thank you for having me today. I'd like to acknowledge my board chair, Mr. John Surma, who is here with me in the audience today.

Today we have millions of drivers behind the wheel, we spend millions of dollars on education and enforcement campaigns, but we still lose tens of thousands of people on our roadways and experience billions of dollars in economic losses as a result of highway crashes. In spite of safer vehicle designs and record-setting seatbelt use rates across the Nation, operating a motor vehicle remains one of the deadliest things that we do every day.

Compared to other high-income countries, the United States' death rate is more than double our counterparts, and it's not because we don't have automated vehicles. It's because we aren't willing to do the hard things that we know will save lives.

Three to five thousand lives per year would be saved if everyone buckled up. Ten thousand lives would be saved if nobody drove

drunk. Just three technologies that are available on cars today—automatic emergency braking, lane departure warning, and blind spot detection—if these were all standard equipment on cars, 10,000 lives could be saved.

The AV policy begins an important discussion, and we applaud NHTSA and DOT for issuing it. Federal leadership on motor vehicle safety is necessary because we can only have one level of safety when it comes to our stakeholders and our constituents. Your constituents need to be confident that vehicles are safe regardless of where they reside. Manufacturers need certainty in order to invest in design and production, and States do not possess the expertise or the resources to replicate design, testing, and reporting programs.

Further, a patchwork of requirements will result in confusion for consumers and increased costs for manufacturers and operators attempting to comply with myriad requirements.

Finally, the absence of a safe, workable standard will drive development and testing and deployment overseas, resulting in the flight of innovation from the United States and the jobs that accompany it to locations outside of our borders.

NSC fully believes that automated vehicles have the potential to save lives and prevent injuries, but here are several key issues that we recommend that policymakers consider.

Delayed integration into the fleet. It will be a long time before highly automated vehicles replace our current fleet. How do we ensure rapid acceptance and adoption of lifesaving technologies that are available today? Electronic stability control paints the picture of the headwinds that we're facing.

DSRC—also known as V2V, V2I, and V2X—complementary technology must be taken into account. We need a belt-and-suspenders approach when it comes to highway safety.

Data sharing in a post-crash event. My experience at the NTSB taught me that we must rely on the data for truths. If you can't access it, you won't learn the lessons.

De-identified data. The automotive industry must figure out how to balance privacy and proprietary concerns against the predictive value of big data. Too many lives are at stake. Cooperation will help us unravel unintended consequences and identify new failure modes.

Consumer education. Today, 40 percent of consumers are startled by the way that their car has behaved. We will not realize the full benefit of technology if we don't keep human beings in the loop.

Lack of common taxonomy and standards. Today, manufacturers have multiple names and different performance expectations for similar systems. Shouldn't all AEB systems prevent collisions?

NHTSA resources. We cannot ask NHTSA to do more with less. Automated vehicles will require more evaluation, more testing, and more expertise than NHTSA possesses today.

Although we can imagine a future with automated vehicles, the transition from Level 1 to Level 5 will be messy as we deal with predictable human-machine issues. We cannot afford to ignore the carnage on our roadways that is a national epidemic. Efforts like Road to Zero will decrease fatalities today, tomorrow, and in the future if we embrace proven counter-measures and accelerate deploy-

ment of effective ADAS technologies and highly automated vehicles.

The National Safety Council appreciates the committee's leadership. If safety for the traveling public is the ultimate goal, advanced technology provides the most promising opportunity to achieve that outcome and will go a long way toward eliminating preventable deaths in our lifetime. Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. DEBORAH A.P. HERSMAN

Chairman Collins, Ranking Member Reed and other members of the subcommittee, thank you for inviting me to testify before you today. The National Safety Council (NSC) is a 100-year-old nonprofit with a vision to end preventable deaths in our lifetime at work, in homes and communities and on the road through leadership, research, education and advocacy. Our more than 13,500 member companies represent employees at more than 50,000 U.S. worksites. For decades we have advocated for safer cars, safer drivers and a more forgiving environment in and around vehicles. We have led large scale public education campaigns on the importance of seatbelts and airbags, eliminating distracted driving, and helping consumers understand the technologies in their vehicles to reduce deaths and injuries on our roadways. We also educate close to 1.3 million drivers a year in Defensive Driving courses.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION AUTOMATED VEHICLES POLICY

The rapid pace of technological advancement means that regulators are hard-pressed to keep ahead of industry as manufacturers offer systems unheard of just a decade ago. However, NSC believes there are appropriate and necessary roles for both innovation by manufacturers and regulation by officials charged with ensuring public safety. The NHTSA (National Highway Traffic Safety Administration) Federal Automated Vehicles Policy (AV policy) is a step in the right direction. It provides a framework in which manufacturers can work and States can establish appropriate enforcement and oversight, while underscoring NHTSA safety authority and recognizing the need for additional tools to keep pace in this fast-moving environment. It also provides guidance for more uniform Federal oversight rather than a potential patchwork of regulations by the States.

Federal leadership on motor vehicle safety is necessary because there should only be ONE LEVEL OF SAFETY. Consumers need confidence in vehicles regardless of where they reside; manufacturers need certainty in order to invest in design and production, and States do not possess the expertise and the resources to replicate design, testing and reporting programs. Further, a patchwork of requirements will result in confusion for consumers and increased cost for manufacturers and operators attempting to comply with a myriad of requirements. Finally, the absence of a safe, workable standard will drive development, testing and deployment overseas, resulting in the flight of innovation and the jobs that accompany it to locations outside of the U.S.

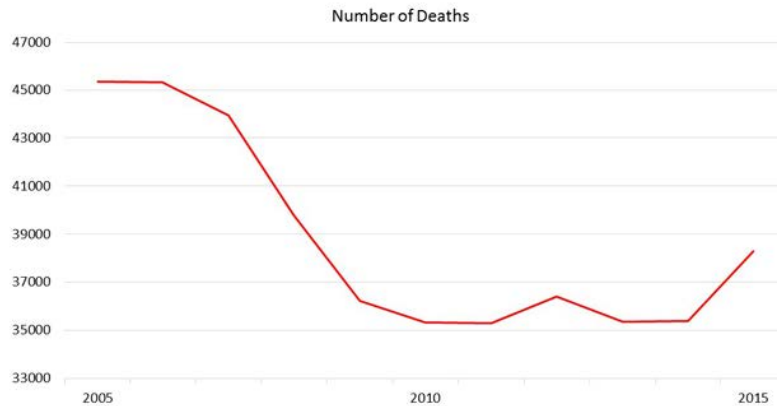
THE LIFESAVING POTENTIAL OF ADVANCED TECHNOLOGY

NSC believes advanced vehicle technology, up to and including fully automated vehicles, can provide many benefits to society. The most important contribution will be the potential to greatly reduce the number of fatal crashes on our roadways, which are increasing. Every day we lose approximately 100 people in motor vehicles crashes, and every year more than 4 million people are injured. Beyond the human toll, these deaths and injuries cost society over \$379 billion, including productivity losses, medical expenses, motor vehicle property damages and employer costs.¹

NSC data reveal that the 19,100 roadway fatalities during the first 6 months of 2016 are 9 percent higher than the same period last year and 18 percent higher than the same period 2 years ago. If we are to make a meaningful change in this trend, there must be a sense of urgency coupled with large, near term gains to save lives on our roadways.

¹ Injury Facts 2016.

MOTOR VEHICLE DEATHS ON THE RISE



SOURCE: NSC analysis of National Center for Health Statistics (NCHS) mortality data and NSC estimate for 2016.

While the absolute numbers of fatalities change from year to year, many of the same behavioral problems remain persistent and have been represented in the data for decades. For example, in 2014:

9,967 people were killed in alcohol-impaired driving crashes²

3,179 people were killed in distraction related crashes³

9,385 people were killed while unrestrained.⁴

NHTSA estimates that 94 percent of all fatal crashes have an element of human error. Therefore, if we are to eliminate or reduce the number of fatalities on our roadways, advances in vehicle technology must be part of the solution. However, it will likely be decades before we have meaningful fleet penetration of fully automated vehicles.

Last month, the NSC and the National Transportation Safety Board (NTSB) hosted a full day event with dozens of expert panelists focused on Reaching Zero Crashes: A dialogue on the Role of Advanced Driver Assistance Systems (ADAS).⁵ While there is a great deal of excitement about highly automated vehicles (HAVs), automated vehicles and their potential to save lives, it is important to recognize that many legacy technologies represent the building blocks for fully automated vehicles. Greater consumer acceptance of the dozens of safety technologies that are available today would lead to more rapid adoption of them, saving lives and preventing injuries.

As an example, Electronic Stability Control (ESC) is a technology that uses automatic computer controlled braking of individual wheels to help the driver maintain control in risky driving scenarios. ESC primarily mitigates single vehicle, loss of control crashes in which drivers would run off the road. For passenger cars as well as light trucks and vans, it is estimated that ESC systems have saved more than 4,100 lives during the 5-year period from 2010 to 2014, but incorporation into vehicles on the road remains slow.⁶ The following charts from the Highway Data Loss Institute (HDLI) reveal how slowly ADAS technologies are achieving penetration in the U.S. fleet due to normal turnover of inventory—with the average age of cars in the U.S. fleet being 11.5 years old.⁷ Electronic stability control has been available for decades and was mandated on all new passenger cars by the 2012 model year, but in 2015 only 40 percent of registered vehicles were equipped with ESC. Despite

² <https://crashstats.nhtsa.dot.gov/Api/Public/Publication/812231>.

³ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812260>.

⁴ <https://crashstats.nhtsa.dot.gov/Api/Public/Publication/812246>.

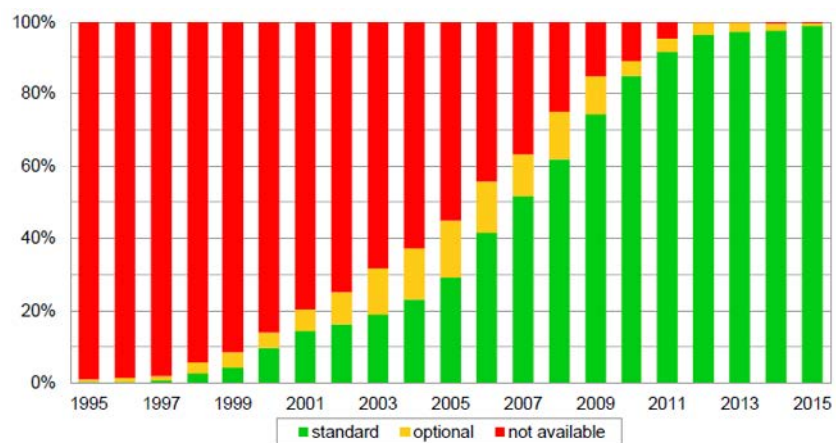
⁵ http://www.nts.gov/news/events/Pages/2016_dte_RT_agenda.aspx.

⁶ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812277>.

⁷ http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/html/table_01_26.html_mfd.

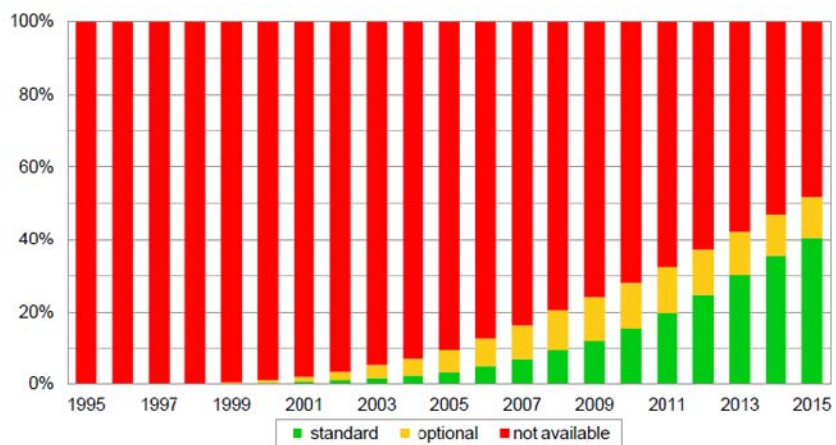
a clear life-saving benefit, full fleet penetration of this technology is not predicted until the 2040s.⁸

NEW VEHICLE SERIES WITH ELECTRONIC STABILITY CONTROL BY MODEL YEAR



SOURCE: HLDI.

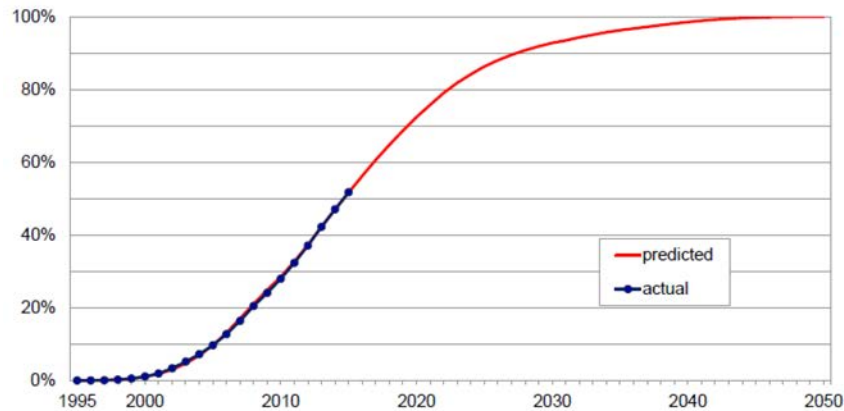
REGISTERED VEHICLES WITH ELECTRONIC STABILITY CONTROL BY CALENDAR YEAR



SOURCE: HLDI.

⁸ http://www.nts.gov/news/events/Documents/2016_dte_RT_p1_p3_moore.pdf.

REGISTERED VEHICLES WITH AVAILABLE ESC, ACTUAL AND PREDICTED



SOURCE: HLDI.

ADAS already operate on the roadways today, but more could be done to encourage greater fleet penetration. Features like lane departure warning systems, blind spot monitoring, adaptive cruise control and others help to prevent or mitigate crashes. The cost of these technologies is declining and their impact is measurable. According to the Insurance Institute for Highway Safety (IIHS), if four current technologies—forward collision warning/mitigation, lane departure warning/prevention, side view assist/blind spot monitoring, and adaptive headlights—were deployed in all passenger vehicles, they could prevent or mitigate as many as 1.86 million crashes and save more than 10,000 lives per year.⁹ However, front crash prevention, commonly referred to as automatic emergency braking, which was an option in about half new 2015 model year cars, was in only 8 percent of registered cars in 2015.¹⁰

CRASHES RELEVANT TO 4 CRASH AVOIDANCE SYSTEMS FARS AND GES, 2004–2008

	all	injury	fatal
front crash prevention	1,165,000	66,000	879
lane departure prevention	179,000	37,000	7,529
side view assist	395,000	20,000	393
adaptive headlights	142,000	29,000	2,484
total unique crashes	1,866,000	149,000	10,238

SOURCE: Insurance Institute for Highway Safety.

Similar conclusions were reached in a July 2016, Carnegie Mellon study which stated that just three technologies—forward collision warning, lane departure warn-

⁹ <http://dx.doi.org/10.1016/j.aap.2010.10.020>.

¹⁰ http://www.nts.gov/news/events/Documents/2016_dte_RT_p1_p3_moore.pdf.

ing and blind spot monitoring—could have prevented or reduced as many as 1.3 million crashes annually and over 10,000 fatal crashes.¹¹ This study further found that almost one quarter of all crashes could be affected by these crash avoidance systems, but only 2 percent of 2013 model year cars included these systems as standard.

While many of these technologies are available on higher value cars or as part of an upgraded technology package today, they are not standard equipment on all makes and models. Safety should not be just for those who can afford it, especially for technologies that will result in thousands of lives saved every year. The Carnegie Mellon study estimated that if all light-duty vehicles were equipped with the three technologies, they would provide a lower bound annual benefit of about \$18 billion. With 2015 pricing, it would cost about \$13 billion to equip all light-duty vehicles with the three technologies, resulting in an annual net benefit of about \$4 billion or a \$20 per vehicle net benefit. By assuming all relevant crashes are avoided, the total upper bound annual net benefit from all three technologies combined is about \$202 billion or an \$861 per vehicle net benefit, at current technology costs.

NSC recognizes and applauds the voluntary commitment made earlier this year by 20 automakers to include automatic emergency braking (AEB) on all vehicles sold in the U.S. by 2022. Toyota has already committed to beat this date by several years. Given the slow turnover of the fleet, we encourage other manufacturers to view the 2022 date as a finish line rather than a starting point and accelerate the roll out of AEB and other lifesaving technologies.

Whether mandated or optional, in many cases these systems can perform driving tasks more predictably, more conservatively and more safely than a human driver, and may act without driver input if a driver is distracted, impaired or incapacitated. However, because there are no minimum standards for many of these technologies, legitimate questions about their effectiveness remain. The line between ADAS and highly automated vehicles may be blurred, as we have progressed far down the path of advanced features with few questions and widespread acceptance of semi-automated features.

DEDICATED SHORT RANGE COMMUNICATION

Another component of ADAS and automated vehicle systems is dedicated short range communication (DSRC), which would allow vehicles to communicate over dedicated spectrum bands with each other, pedestrians, and infrastructure to prevent collisions. This technology, often referred to as V2V (vehicle-to-vehicle), V2I (vehicle-to-infrastructure), V2P (vehicle-to-pedestrian), or V2X (vehicle-to-everything), is pending a rulemaking decision by NHTSA to establish performance standards. NSC encourages NHTSA to release this standard soon so that implementation of V2X can be more widespread.

DSRC can create redundant safety systems in motor vehicles. In other modes of transportation, fail-safe designs can support operator error, but in highway vehicles that task has fallen solely on drivers. DSRC would allow a vehicle to communicate with a red light to compensate for a fatigued driver, stop a car to prevent a collision with a pedestrian if a driver fails to detect him or her, and prevent or mitigate collisions between vehicles equipped with DSRC. DSRC has been deployed by some manufacturers, but NSC believes it is an important option in a safe systems approach to the design of HAVs and anticipates it will be more widely deployed if there is more regulatory certainty.

EDUCATION AND TRAINING

One component in the AV policy that should be a requirement moving forward is the incorporation of driver education and training about new safety technologies. With nearly 17.4 million new passenger cars and trucks sold in 2015,¹² understanding the technology on these vehicles is necessary, yet a University of Iowa survey found that 40 percent of respondents reported they had experienced a situation in which their vehicle acted in an unexpected way.¹³ When this occurs in a real-life driving situation, among multiple drivers, it can lead to disastrous outcomes.

The National Safety Council and our research partners at the University of Iowa are focused on educating consumers about in-vehicle safety technology through our

¹¹ <http://dx.doi.org/10.1016/j.aap.2016.06.017>.

¹² <http://www.autoalliance.org/auto-marketplace/sales-data>.

¹³ University of Iowa. National Consumer Survey of Driving Safety Technologies. July 30, 2015. Accessible at http://ppc.uiowa.edu/sites/default/files/national_consumer_survey_technical_report_final_8.7.15.pdf.

MyCarDoesWhat campaign.¹⁴ This brand agnostic education campaign informs drivers about how safety technologies work, how to best interact with them, and how to identify situations when the technology may not perform optimally and should not be relied upon. Because of the need for continued human involvement in the operation of many of these features, the campaign tagline is You are your car's best safety feature.

Visitors to MyCarDoesWhat.org realize improvement in general knowledge and accurate comprehension of vehicle safety features. Drivers cannot effectively use these life-saving technologies if they do not understand both their functions and limitations. The AV policy proposes that this education be delivered in multiple ways, including computer based, hands-on and virtual reality training, and other innovative approaches. The MyCarDoesWhat education campaign follows that approach, and is developing virtual reality modules for release early next year. Further, we recommend ongoing evaluation to determine the effectiveness of the various messages, methods of delivery and media so they can be improved over time.

STANDARDIZED NOMENCLATURE AND PERFORMANCE OUTCOMES

Another way to reduce consumer confusion is to standardize the nomenclature or taxonomy for advanced technologies. NSC, the State of California, and Consumer Reports have recommended that, at the very least, systems that are not completely automated or Level 5 should not be described as such. ADAS, with emphasis on driver assist, represents the vehicles being sold today and requires drivers to remain fully engaged in the driving task. That fact is often lost in marketing, media reports and consumer expectations. Labeling a motor vehicle as "autonomous" today, or even using terms such as "autopilot", only confuses consumers and can contribute to losses of situational awareness around the driving task.

By establishing standard nomenclature and establishing clear performance outcomes, consumers will better understand what they should expect from these technologies. For example, vehicles marketed as having AEB will not necessarily come to a complete stop before a collision.¹⁵ Some AEB systems only operate at higher speeds, and some are designed to slow rather than stop prior to a collision. These nuances may not be easily understood by consumers. IIHS reports that systems with a warning only, but no automatic corrective action, reduce frontal crash rates by about 25 percent, but vehicles with automatic braking reduce crashes by more than 40 percent. Vehicles with a warning and automatic braking reduce crash rates by about 50 percent. Establishing a standardized, results-based, understandable definition of AEB and other ADAS technologies would benefit consumers, manufacturers, and dealers, as well as organizations that evaluate vehicles for their safety benefits.

Finally, the New Car Assessment Program (NCAP) program has operated for nearly 40 years with a goal of testing vehicle safety systems and educating consumers about them. Practically, it has created a mechanism to allow consumers to evaluate vehicles on safety systems. NSC supports NCAP and believes it is an important program to improve the safety of the motor vehicle fleet. Standardized nomenclature and performance outcomes will ensure NCAP can more effectively compare vehicle safety systems between manufacturers, and even between a manufacturer's own models.

DATA PROTECTION AND SHARING

The National Safety Council is very bullish on ADAS, and eventually fully automated vehicles, because we know when implemented safely and properly, they will help us realize huge gains in reducing roadway fatalities. But a minimum requirement, if we are to realize the life-saving benefits, will be ensuring that we have reliable event data recorders that produce data in a standardized format that is downloadable for investigators, law enforcement, State highway safety offices, insurers and other relevant stakeholders. Following a crash, we must be able to answer simple questions like whether the vehicle systems or the human driver had control of the car, if and how the vehicle was communicating with the driver, and if all systems were working as designed.

The AV policy details the importance of data collection as these technologies begin to be tested in real-world scenarios. Understanding the circumstances and causes surrounding malfunctions, including at lower levels of automation, will help make this technology stronger and safer, and ensure failures are less likely to occur as technology evolves. This will be especially important in assuring consumers of the

¹⁴ www.mycardoeswhat.org.

¹⁵ [Http://www.nsc.org/learn/safety-knowledge/Pages/Driver-Assist-Technologies.aspx](http://www.nsc.org/learn/safety-knowledge/Pages/Driver-Assist-Technologies.aspx).

reliability of ADAS and automated technology. As the former Chairman of the NTSB, I believe that minimum parameters should be set for data preservation, standardization of formats, ease of access for post-crash evaluation, and establishment of privacy protections early in the process. Data-sharing programs require greater maturity and a strong safety culture committed to continuous improvement.

Event data recorders (EDRs) are widely used throughout the automotive industry in vehicles of all shapes and sizes, yielding valuable data in crash reconstruction efforts. Similar devices are used in other modes of transportation as well. Amtrak utilizes event data recorders that automatically transmit data from locomotive recorders to a control center when an event occurs. In the aviation industry, crash-hardened “black box” data recorders store thousands of parameters of data. Much of this information is collected after normal flights and analyzed by the operator to learn about and improve operations, and in the case of an incident, the data is invaluable to investigators to determine what occurred. The same could be true for motor vehicles.

Missing from the policy, however, is clarification on whether lower-level systems (below Level 3) should be subject to the same data collection guidelines. The current event data recorder standards do not require the majority of Levels 1 and 2 safety systems’ sensors be tracked.¹⁶ This lack of information limits real world data availability that could guide the future development of these technologies to make them safer. Currently, there is no easy way for manufacturers, law enforcement, investigators or vehicle owners to understand whether deployed systems were active during a crash, whether they malfunctioned, or whether they helped mitigate damage or injury or returned the car to a safe state in event of a malfunction.

Information sharing is included in the AV policy. However, the policy fails to mention the public health argument for collecting data from electronic devices in the car in the event of a crash. Acquiring an understanding of what happens when systems perform as intended, fail as expected, or fail in unexpected ways will yield valuable information for manufacturers—some of whom have common suppliers. Further, in-service data, as well as near miss and post-crash information sharing, can help civil engineers and planners design better and safer roadways, as well as help safety and health professionals design better interventions to discourage risky driving or affect the behaviors of other roadway users.

De-identified data sharing has been in existence in the aviation industry for many years and proven highly successful. The Aviation Safety Information Analysis and Sharing (ASIAS) system allows for sharing of de-identified data across the aviation industry, making it possible for the industry to identify trends and act on them. Analysis of de-identified data will provide windows in to leading indicators in the motor vehicle industry. Leading indicators are “proactive, preventative and predictive measures that monitor and provide current information about the effective performance, activities and processes of a . . . system that drive the identification and eliminate or control of risks.”¹⁷ The NSC Campbell Institute, a leader in workplace safety, health and sustainability, states that tracking leading indicators allows world-class safety organizations to make further improvements to their safety records.¹⁸

The AV policy also suggests that auto manufacturers use EDRs to gain a better understanding of how human operators engage with advanced technology. This knowledge will allow manufacturers to be nimbler and make adjustments in near real time for some systems based on what is actually occurring in the driver’s seat, rather than making changes based on assumptions and estimations that must be accommodated in a later model year. Collecting and sharing de-identified data about near misses and other relevant problems could also help by aggregating useful information for the automotive industry, allowing them to take proactive steps based on leading indicators rather than waiting for a crash or a series of crashes to occur. Finally, this data would be useful to researchers and the safety community in analyzing the safety benefits—and potential drawbacks—of these technologies as they continue to mature.

While there are competing priorities regarding protecting personal privacy and proprietary systems or designs, NSC believes that safety should be the ultimate priority, and that other concerns need to be accommodated to prioritize safety. NHTSA should facilitate data sharing as widely as possible and require that manufacturers

¹⁶ 49 CFR 563.

¹⁷ <http://www.thecampbellinstitute.org/file/download.php?id=20130925358263a8956de938e7c00a2bbbb8413d>.

¹⁸ <http://www.thecampbellinstitute.org/file/download.php?id=2015092336b107f72d10a379134af9249d3457ab>.

provide accessible, standardized data to law enforcement, State highway safety offices, investigators, insurers, and/or other relevant stakeholders.

AMERICAN NATIONAL STANDARDS INSTITUTE STANDARD

As important as it is for the average consumer to know and understand the ADAS and automated technology, there is also work to be done on this issue as it relates to the technology and its rollout to commercial fleets. As such, NSC is taking a leading role working with the American Society of Safety Engineers (ASSE) and a wide array of experts in the automotive industry, technology sector, academia and fleet management, to develop an ANSI (American National Standards Institute) standard to address policies, procedures and management processes that will assist in the control of risks and exposures associated with the operation of autonomous fleet vehicles on public thoroughfares.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION RESOURCES AND OVERSIGHT IN THE MIDST OF CHANGING TECHNOLOGY

In response to reports of repeated incidents of unintended acceleration in Toyota vehicles in 2009–2010, the National Research Council Transportation Research Board conducted an investigation into whether NHTSA (National Highway Traffic Safety Administration) had reached the correct conclusion in its own investigation, as well as to produce advice on how to best handle future issues involving the safe performance of vehicle electronics. This research resulted in a report, released on January 18, 2012.¹⁹

The Research Council found that while NHTSA's decision to close its investigation was justified, it was "troubling that NHTSA could not convincingly address public concerns about the safety of automotive electronics." More specifically, the Research Council stated that "to respond effectively and confidently to claims of defects in the more complex electronic systems . . . NHTSA will require additional specialized technical expertise." While they acknowledged it was unrealistic to expect NHTSA to hire and maintain these specialized personnel in a constantly evolving field, they made a specific recommendation that NHTSA establish a standing technical advisory panel with members representing a wide array of technical expertise central to the design, development, and safety assurance of automotive electronics systems.

With technology advancing as quickly as it is, it is difficult to keep up with advances without appropriate resources. Last year, NSC supported the administration's NHTSA funding request of \$1.1813 billion, which included \$200 million for the Autonomous Vehicle Development program. We encourage this Committee and Congress to fully fund NHTSA, including requested investments in programs that will support the development of ADAS and HAVs. We also recommend that NHTSA consider how to best take advantage of existing knowledge by establishing an advisory committee or similar mechanism to engage experts in the field of advanced technology and automotive electronic systems.

ROAD TO ZERO

On October 5, NSC, NHSTA, the Federal Highway Administration (FHWA), and the Federal Motor Carrier Safety Administration (FMCSA) announced the Road to Zero (RTZ) Coalition. RTZ is a partnership initiative focused on dramatic reductions in roadway fatalities. Over 80 public and private organizations attended the announcement to learn more about committing to a shared vision of zero fatalities on our roadways. The first meeting of the coalition will be on December 15.

The purpose of the Road to Zero Coalition is to (1) encourage and facilitate widespread implementation of countermeasures to reduce motor vehicle crash deaths in the near term; (2) develop a scenario-based vision for zero U.S. traffic deaths in the future; and (3) provide a roadmap for policymakers and stakeholders to eliminate traffic deaths.

NSC is joined on the Steering Group for the Road to Zero Coalition by the following organizations: Advocates for Highway and Auto Safety, American Association of Motor Vehicle Administrators (AAMVA), American Association of State Highway and Transportation Officials (AASHTO), Commercial Vehicle Safety Alliance (CVSA), Governors Highway Safety Association (GHSA), Institute of Transportation Engineers (ITE), Insurance Institute for Highway Safety (IIHS), Intelligent Car Coalition, International Association of Chiefs of Police (IACP), Mothers Against Drunk Driving (MADD), National Association of State Emergency Medical Services Offi-

¹⁹ <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=13342>.

cials (NASEMSO), National Association of City Transportation Officials (NACTO), National Association of County Engineers (NACE), and the Vision Zero Network.

On behalf of the Coalition, the NSC will administer a grant program to support national non-profit organizations committed to roadway safety programs that address the overlaps and gaps between roadway users, vehicles and infrastructure. In addition, the Coalition will look at engaging others in near term solutions and countermeasures to reduce the death toll on our roadways. Finally, we will also provide critical input for the development of a future community scenario with zero traffic fatalities—an effort to look at the measures, programs and technologies will be necessary to reach zero highway fatalities in 30 years and work back from there. NHTSA, FHWA, FMCSA, and NSC are sponsoring the development of the scenario-based vision for zero traffic deaths in the U.S. in a 30-year timeframe, and the RAND Corporation has been retained to produce the scenario over the next 12–18 months. I look forward to briefing this Committee and others in Congress on the results of these activities and the efforts of the Coalition to reach zero deaths on our roadways.

CONCLUSION

Today, we have millions of drivers behind the wheel, spend millions of dollars on education and enforcement campaigns, and still recognize billions in economic losses as a result of crashes. In spite of safer vehicle designs and record-setting seat belt use rates across the Nation, operating a motor vehicle remains one of the deadliest things we do on a daily basis.

NSC believes fully automated vehicles have the potential to save lives and prevent injuries, but—as outlined above—there are several key issues that policy-makers must address. The AV policy begins this discussion, and we applaud NHTSA and DOT for issuing it.

It will be a long time before HAVs replace our current fleet. The transition will likely be messy as we deal with a complex and ever-changing Human-Machine interface. There will be an evolution of the existing technologies and perhaps a revolution when it comes to new and different technologies. We need to be prepared for unanticipated consequences and new failure modes.

Although we can imagine a future with automated vehicles, it will be a long and winding road to get to the destination of zero fatalities as a result of HAVs. We cannot afford to ignore the carnage on our highways that is a national epidemic today. The U.S. trails other industrialized countries in addressing highway deaths. Efforts like Road to Zero will decrease fatalities today, tomorrow, and in the future if we embrace proven countermeasures and accelerate deployment of effective ADAS technologies.

NSC appreciates this Committee's leadership on vehicle technology and safe roadway transportation. If safety for the traveling public is the ultimate goal, advanced technology provides the most promising opportunity to achieve that outcome, and will go a long way toward reaching the goal of eliminating preventable deaths in our lifetime.

Senator COLLINS. Thank you very much, Ms. Hersman.
Mr. Brubaker.

STATEMENT OF HON. PAUL BRUBAKER, PRESIDENT AND CEO, THE ALLIANCE FOR TRANSPORTATION INNOVATION

Mr. BRUBAKER. Chairman Collins, Ranking Member Reed, and members of the subcommittee, on behalf of the Alliance for Transportation Innovation, I would like to thank you for the opportunity to share our views on the role of government in integrating autonomous vehicles onto our Nation's roads.

The safety and social benefits that can be achieved by replacing human drivers with modern sensors and computers are too profound not to be encouraged through government policy. Yet regulation has failed to keep pace with innovation, and we see evidence of a significant gap in understanding of these technologies within all levels of government. It's a gap that must be bridged so regulators can better understand when it's best to lead, follow, or move out of the way.

We believe the Administration's recently released AV policy is a good first step in opening communication channels that can help to bridge this gap. We will formally be commenting on this policy by the end of the week.

But despite this disconnect industry and innovators are still working hard to integrate the development and deployment of autonomous systems and are investing billions of dollars with safety top of mind. These technologies are already being tested on our roads. In fact, just 3 weeks ago we saw the first commercial delivery of a truckload of beer delivered by a self-driving tractor trailer. Shortly, some in the auto industry will be prepared to offer full self-driving capability to the public, and government leaders must ensure that our current regulatory approaches do not constrain the development of these technologies. Lives depend on it.

To put a fine point on the subject, human drivers are simply killers. Errors in human judgment while at the controls of motor vehicles account for more than 90 percent of the car crashes that last year killed over 34,000 people in the United States and claimed 1.3 million lives around the globe.

Computers don't get tired. They don't text. They don't drink and drive, and they don't get road rage. Networks, sensors, maps, computing, artificial intelligence, machine learning, and vehicle controls work in concert to detect objects, analyze probabilities, consider options, make decisions, and take actions, all at the speed of light, and all with significantly greater reliability and efficiency than humans.

This capability is improving rapidly, and government needs to keep pace or risk undermining the promise of tomorrow by applying the regulations of yesteryear. Government cannot simply allow itself to be the obstacle to saving lives.

We hear a lot about these 34,000 fatal crashes and the fact that 94 percent of them are caused by human error. But the problem with statistics is they numb us with the fact that we're talking about people, individual parents, siblings, sons and daughters who are suddenly and cruelly taken away from us. Sons like Leo Vagias—and his father Teddy is right here behind me—and his best friend Sam Cali were killed in a very preventable car crash just this past June in New Jersey in a scenario that gets repeated too often and claims 96 lives a day. It needs to stop, and we have a collective obligation—industry, government, and citizens—to accelerate the development, testing and deployment of life-saving self-driving technologies.

But this journey to self-driving is complex, and integrating these technologies onto our Nation's highways will require unprecedented coordination and cooperation among industry, government, and citizens. We must win over a skeptical public by demonstrating that the underlying technologies are effective, safe and secure, and because these vehicles are going to operate on our public roadways, we've got to ensure that government encourages their safe and responsible deployment. Legal liability insurance issues must be addressed, and economic impacts and potential social disruption must be understood.

Given these complexities, ATI21.org believes that only executive leadership with Congress on this issue will provide the necessary

national vision, goals, and direction required across all sectors of our economy. That is why we recently published our National Strategic Framework to Accelerate Life-Saving Self-Driving Vehicles. We designed this document to develop a pathway to successful integration of autonomous vehicles into America's transportation system.

[The document link follows:]

[Http://www.ati21.org/wp-content/uploads/2016/10/Final-ATI-Strategy-Document.pdf](http://www.ati21.org/wp-content/uploads/2016/10/Final-ATI-Strategy-Document.pdf).

One area of emphasis in that framework is data. We believe that data is the key to speeding the safe deployment of these technologies. That's why we're recommending the creation of a National Self-Driving Data Repository. We envision that this is a highly secured, trusted, opt-in data repository with a number of positive incentives that can be leveraged in a way to encourage participation, incentives like indemnification, and rapid regulatory approvals. Such a repository will help us better understand the level of safety and performance, as well as enable us to identify real and emerging potential issues, and inform regulators, industry and the public based on near real-time data.

We have shared this national framework with the subcommittee and with the Trump transition team, and we're available to discuss this in detail.

[The article link follows:]

https://www.washingtonpost.com/local/trafficandcommuting/the-next-president-should-make-driverless-cars-a-white-house-priority-group-says/2016/10/20/6c548212-9636-11e6-bc79-af1cd3d2984b_story.html?utm_term=.3299c046b7aa.

The convergence of technology and transportation has the potential to dramatically improve the safe and efficient movement of people and goods. Over the next few years the Trump Administration and Congress will have an unprecedented opportunity to lead a cooperative effort between industry, government, and the public that holds the promise of saving lives. We look forward to working with you to advance this agenda. Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. PAUL R. BRUBAKER

Chairman Collins, Ranking Member Reed, and Members of the Subcommittee, on behalf of the Alliance for Transportation Innovation (ATI21.org), I would like to thank you for the opportunity to share our views on integrating autonomous vehicles onto our Nation's roads.

ATI21.org is a not-for-profit created to accelerate the deployment of technologies and innovation that can dramatically improve the safe and efficient movement of people and goods. Our members are associations, companies, and government and academic entities, as well as individuals who are dedicated to our mission.

The need to accelerate the path to self-driving is not only critical to our country's economic future, but also our technological standing in the world. The potential safety and social benefits are enormous, and we are on the cusp of reliably and safely replacing human drivers with technology enabled mobility platforms—self-driving vehicles—that will transform how we move people and goods.

Accelerating development and deployment of self-driving vehicles holds the promise of saving tens of thousands of lives every year, reducing crash-related injuries, and fundamentally transforming personal mobility. As soon as we achieve full self-driving, distracted and drunk driving will no longer claim lives; adult children will not have to have the conversation with aging parents about taking away their car keys; the poor will have access to much more convenient and affordable transportation; and the physically and developmentally disabled, including my soon to be adult son on the autism spectrum, will have access to transportation options. There

is no doubt that safe, affordable, accessible, and convenient transportation is critical for everyone's quality of life.

While the technologies to enable self-driving are being rapidly developed, the desire to get these capabilities to market are highlighting profound shortcomings in our national approach to regulation. Specifically, the regulatory process is simply not keeping up with the pace of innovation. While this is not unique to self-driving, the rapid development of autonomous vehicles presents us with an opportunity to revisit our regulatory approach and offer reforms that are more suitable to the digital age. It is imperative. In this case the cost of delay is measured in lost members of our families, of pain and suffering, and the denial of economic, health and social opportunity for the elderly, disabled and the impoverished.

That said, in the Obama Administration, Transportation Secretary Anthony Foxx and Administrator Mark Rosekind of the National Highway Traffic Safety Administration (NHTSA) get it. It is clear that the administration has a profound understanding of the critical technologies that have rapidly developed during the President's tenure and have laid the groundwork for the next administration to propel us into the self-driving future. The path will not be easy. There are considerable and complex cultural and regulatory barriers that must be overcome, and industry, researchers, the public, and government at all levels will need to engage and collaborate.

In late September the Department of Transportation issued its much anticipated autonomous vehicle (AV) policy guidance in what we believe represented a well-intentioned and thoughtful first-step toward ensuring that the Department, and NHTSA specifically, is heading toward a more responsive regulatory approach that is more suitable for accelerating the safe deployment of highly autonomous vehicles on our Nation's roads.

While these initial guidelines are not perfect, AT21.org believes the Department of Transportation should be commended for recognizing a number of critical issues that must become priorities for industry and government to safely deploy autonomous vehicles. We also commend the Department for its clear willingness to engage with both the traditional auto industry and technology sectors. We believe such an open and productive dialogue with all interested parties is the first step to evolving toward a much more responsive and effective regulatory framework than the existing model.

Specifically, there are several positive provisions included in this initial version of the AV policy. First, the Department's 15-point safety assessment covers all the major key areas that are critical to the safe design of highly autonomous vehicles. Second, the Department rightfully asserted its appropriate and exclusive role as the Nation's vehicle safety regulator and offered a model policy that can help guide States in formulating appropriate regulatory frameworks. Lastly, the Department was quite clear that it intended this process to be iterative and recognized the need to evolve and even adopt new regulatory models that could keep pace with the innovation cycle. We believe these are all excellent first steps in developing an appropriate regulatory framework.

There are however two sections of the AV Policy document that gave us pause. Specifically, the section on the use of existing regulatory tools and the examples given as possible future regulatory approaches is no better and potentially worse than the existing tools.

Although the policy includes language about revising and streamlining processes related to interpretations and waivers, we believe the underlying Federal Motor Vehicle Safety Standards (FMVSS), while arguably effective for traditional motor vehicle design approval, will prove to be an unworkable foundation for accelerating the design and deployment of highly autonomous vehicles. As was highlighted in the March 2016 report by the Volpe National Transportation Research Center, there are considerable challenges in applying these standards to SAE level 4 and 5 autonomous vehicles.^{1,2} For example, the FMVSS makes more than 250 individual references to human drivers, and eliminating traditional design features such as steering wheels and pedals, which can be anticipated in level 4 and 5 vehicles, would violate roughly a third of the standards and half of the Series 100 crash avoidance requirements.

¹John A. Volpe National Transportation Systems Center, Review of Federal Motor Vehicle Safety Standards (FMVSS) for Automated Vehicles, Preliminary Report-March 2016, prepared for the Intelligent Transportation Systems Joint Program Office, NHTSA.

²Levels of driving automation are defined in the SAE International Standard J3016. It identifies six levels of driving automation from "no automation" (0) to "full automation" (5), with level 4 being "high" and Level 5 being "full."

While we commend the Department for beginning what we believe is a long overdue conversation on the need to create a much more responsive and timely regulatory approach, we believe the examples offered such as pre-approval of designs based on the FAA model or the FDA medical device approach are neither particularly efficient nor applicable or fitting.

Data is the key to reforming the regulatory process in a manner that will allow the creation of a regulatory approach that is rapid, efficient, and effective. Specifically, a central repository for collecting, storing, and analyzing all operational and testing data from across the industry is necessary to create a responsive regulatory environment. Neither the NHTSA nor any existing industry group is positioned to perform this task. Consequently, we are recommending the establishment of an independent, federally chartered organization to securely and confidentially collect and analyze all operational and test data from across industry that will include simulation data. By collecting real-time data and applying modern analytical methods, we are confident that, if properly established, this organization can rapidly inform industry and NHTSA of real and potential issues. We recommend that this effort be funded from existing dollars. We would be happy to consult with the Subcommittee on the specific details of this recommendation.

The second area we would like to highlight in our testimony this morning is our call for a National Strategic Framework to Advance Life-Saving Self-Driving Vehicles. We created this document calling for presidential level leadership on self-driving.

Accelerating the path to self-driving is an enormously complex undertaking that will go beyond the responsibility of the U.S. Department of Transportation. While there are major roles and policy levers that both the Federal Government as a whole and U.S. Department of Transportation can take to accelerate deployment and ensure that only safe vehicles make it to market, it is critical that all levels of government work together, that industry and the research community continues to drive innovation and has a path to market, and perhaps most importantly that citizens are informed, engaged and welcoming of what will prove to be a major cultural shift.

Not unlike past transitions to transportation-related innovation, success will depend on high levels of cooperation and engagement across government, industry, and the public. This was true of steamships, railroads, motor vehicles and aviation. The disruptive transition to self-driving will require similar coordination, cooperation, and support.

As is true with all disruptive innovation throughout history, we can expect to experience both positive and negative effects as we begin integrating autonomous vehicles onto the Nation's roads. It is critical that we thoughtfully consider the obvious consequences, both good and bad, that will undoubtedly arise from our transition from what we refer to as the "crash economy" to a new mobility paradigm.

As I mentioned earlier, the major reason for making this transition is to save lives and reduce injuries. Last year, over 35,000 Americans died in car crashes. This year that number is expected to climb and may exceed 40,000. Millions more are injured including many with life-changing debilitating injuries. We know that crashes cost the U.S. economy almost \$1 trillion annually. Let us be clear, we would not tolerate such cost and carnage in any other mode of transportation, and now, the tools are arriving to make these tragedies preventable.

Autonomous features and ultimately self-driving vehicles hold promise to dramatically reduce fatalities and injuries as NHTSA estimates that more than 94 percent of these crashes are the result of human error. We simply should not allow more than 90 of our fellow citizens to die every day when we can create the conditions to prevent it. The sooner we fully integrate autonomous vehicles onto our highways, the sooner we will realize a dramatic reduction in the number of preventable fatalities and injuries.

Getting this transition right will not be easy. Moving from the crash economy to a dramatically safer, accessible, affordable, and convenient mobility paradigm is a complex undertaking requiring unprecedented cooperation and coordination among industry, associations, and research and government institutions at all levels.

We believe such an effort will require presidential leadership and that the incoming administration and Congress should work in concert to create the conditions necessary to accelerate the development, testing, and deployment of these capabilities as well as proactively address some of the anticipated consequences of transition.

At AT121.org, we announced the publication of our initial framework for accelerating the deployment of self-driving vehicles last month. The framework is not a prescriptive list of recommended actions but rather an outline of key challenges areas that must be addressed in order to accelerate the integration of autonomous vehicles on our Nation's highways.

Between now and Inauguration Day, we will be soliciting reaction to the challenge areas and hosting a series of expert panels to explore and produce recommendations on each challenge area. We intend to update the framework based on panel input and host a final review and input session for the entire document on January 4th with the Consumer Technology Association in advance of the Consumer Electronics Show.

In short, ATI21.org is calling for a National Strategy to Advance Self-Driving (NSAS) and urging the next president to issue an executive order that would describe the challenges and create a Program Management Office (PMO) within the Office of Science and Technology Policy (OSTP). We recommend funding the activity as a government-wide technology initiative through existing Office of Management and Budget (OMB) authority under a provision in the Clinger-Cohen Act. The PMO would operate under a 4-year charter to collaborate with relevant stakeholders, assemble experts, develop outcome-focused and actionable strategies, and identify funding streams to address each of the challenge areas.

We have identified the following challenge areas:

- Earning public trust
- Increasing confidence in self-driving technology
- Ensuring robust cybersecurity
- Developing standards and regulations that encourage self-driving
- Creating the legal, liability, and insurance framework for accelerating the deployment of self-driving vehicles
- Adopting reasonable data and privacy policies
- Accelerating the transition to a fully self-driving fleet
- Understanding and planning for economic disruption and labor transition

As we say in the framework, accelerating the path to self-driving will not be easy. The incoming president by leading us through this ambitious effort early in the new term can ensure dramatic progress toward creating a new mobility paradigm that will create safe, convenient, resilient, and accessible transportation options to all Americans regardless of their ability, age, or economic condition. ATI21.org believes this is a transportation legacy that we can be proud to leave to future generations.

In the coming months, we look forward to working with the Subcommittee and Congress to work on creating the conditions necessary to speed integration of autonomous vehicles on the Nation's highways.

Thank you. I look forward to answering your questions.

Senator COLLINS. Thank you.

Dr. Kalra.

STATEMENT OF DR. NIDHI KALRA, CO-DIRECTOR, RAND CENTER FOR DECISION MAKING UNDER UNCERTAINTY

Dr. KALRA. Chairman Collins, Ranking Member Reed, members of the subcommittee, thank you for the opportunity to testify today on the future of autonomous vehicles.

My name is Nidhi Kalra, and I'm an Information Scientist at the RAND Corporation. RAND is a non-profit, non-partisan research institution committed to improving public policy through objective research and analysis. I have a Ph.D. in robotics and have been studying autonomous vehicles for 10 years. And in the interest of full disclosure, my spouse is the co-founder of an autonomous vehicle start-up in Silicon Valley, though his work has no bearing on my testimony, or vice-versa.

Now, there are three issues I'd like to discuss today, the safety of autonomous vehicles, their benefits for mobility, and the urgency of addressing distortions in the transportation market so we can harness their benefits and mitigate their drawbacks.

So first let's talk about safety. Will autonomous vehicles be safe before they're allowed on the road for consumer use? We may not know. Real-world driving is currently the only method of demonstrating their safety. But suppose a fleet of autonomous vehicles has a 20 percent lower fatality rate than human drivers. They would have to be driven 5 billion miles to prove it, and a fleet of

test vehicles, 100 test vehicles would have to be driven 225 years to cover this distance. It's impossible if we ever want them on the road for consumer use.

But now let's consider two things. First, Americans as a whole drive more than this every day. We drive 8 billion miles every day. So once autonomous vehicles are widely deployed for consumer use, we may know very quickly how safe they are. And consider that autonomous vehicles will improve over time. So when a human driver makes a mistake, only that person, at best, is able to learn from the experience, but that's not with autonomous vehicles. When one vehicle makes a mistake or has an experience on the road, that information can be used to improve the entire fleet.

So experience may be one of the most important tools for both demonstrating and improving autonomous vehicle safety. So I think an important question is how do we enable autonomous vehicles to get experience while mitigating the safety risks they pose? And I suggest two things—strategic pilot studies and data sharing—that can help.

Pilot studies could start with real-world testing in lower-risk conditions like operating vehicles in well-maintained areas and at low speeds, and then could be expanded as safety is demonstrated.

As for data sharing, developers are already using the experiences of one vehicle to improve their fleet, but data sharing across the industry could mean that the experiences of every vehicle can improve the entire industry.

Second, let's talk about mobility. Autonomous vehicles could improve mobility for millions of Americans who are elderly, young, have disabilities, or live in poverty. But policies may be needed to make them affordable, available, and accessible. Policymakers can incentivize developers to bring these technologies to those markets sooner than they might otherwise, or to integrate them with transit and para-transit. Policymakers may need to work with developers to help make sure they're accessible, meaning that they comply with ADA guidelines and use different forms of payment, for example.

And while the cost of shared autonomous vehicles is expected to be low, policymakers could extend transit and para-transit reduced fares to these other technologies to make them all the more affordable for these vulnerable populations.

Third, let's talk about market distortions. Autonomous vehicles could also significantly affect traffic congestion, energy pollution and land use, maybe for the better, but maybe for the worse. So to harness their benefits and mitigate their drawbacks, policymakers should address the existing distortions in the transportation market that lead to undesirable outcomes and subsidize desirable outcomes.

Now, there are many policy options to address distortions, like strengthening the auto insurance market to encourage safety, implementing congestion pricing to reduce congestion, and offering rebates for fuel-efficient vehicles to reduce pollution.

Now, I can't today give each policy the discussion it warrants, but now is the time to address these distortions, because autonomous vehicles could improve our transportation system tremendously if the right market signals are in place. And there is cur-

rently a window of opportunity to send those new market signals because consumer expectations about autonomous vehicle performance and cost aren't yet set.

So, let me conclude. In the 1990s, we couldn't forecast the impact that the Internet has now had. Similarly, today we can't forecast the impact that autonomous vehicles will have on our future, but we can shape that future, and I would like to leave you with two recommendations.

First, as I noted, widespread experience may be the key to figuring out both how safe autonomous vehicles are and how they get better. So it's important to get them that experience as safely as possible.

And second, correcting market distortions will be critical to encouraging better outcomes for our transportation system and for our society.

Chairman Collins, Ranking Member Reed, and members of the subcommittee, thank you for allowing me to appear before you today, and I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF DR. NIDHI KALRA

Chairman Collins, Ranking Member Reed, and distinguished members of the subcommittee, my name is Nidhi Kalra of the RAND Corporation.¹ Thank you for the opportunity to testify on important emerging opportunities and risks related to autonomous vehicles. Autonomous vehicles have the potential to change transportation profoundly, in the United States and around the world. There is much opportunity for improvement, but also potential for added risks and harms. How autonomous vehicles ultimately shape our future is not foretold; it depends on many technology and policy choices we make today.

Today, I would like to discuss three important questions about the future of autonomous vehicles and how policies can shape it. First, will autonomous vehicles be safe before they are allowed on the road for consumer use? Second, how can autonomous vehicles improve mobility for Americans who currently may have limited mobility? Third, what mechanisms can help realize the benefits and mitigate the drawbacks of autonomous vehicles? I will focus most of my remarks on fully autonomous vehicles—those that can operate without a human driver some or all of the time—rather than on vehicles that require continuous human oversight.

WILL AUTONOMOUS VEHICLES BE SAFE BEFORE THEY ARE ALLOWED ON THE ROAD FOR CONSUMER USE?

In the United States, roughly 32,000 people are killed and more than 2 million are injured in motor vehicle crashes every year.² Although safety has generally improved over the past several decades, 2015 saw 35,000 road fatalities, the largest increase in fatalities in this country in more than 50 years. This occurred partly because Americans drove more and partly because they drove worse.

U.S. motor vehicle crashes as a whole can pose enormous economic and social costs—more than \$800 billion in a single year.³ And more than 90 percent of crashes are caused by human errors,⁴ such as driving too fast and misjudging other drivers' behaviors, as well as alcohol impairment, distraction, and fatigue.

¹The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

²Bureau of Transportation Statistics, Motor Vehicle Safety Data, Table 2-17, Washington, D.C.: Research and Innovative Technology Administration, U.S. Department of Transportation, 2015.

³Lawrence Blincoe, Ted R. Miller, Eduard Zaloshnja, and Bruce A. Lawrence, *The Economic and Societal Impact of Motor Vehicle Crashes 2010 (Revised)*, Washington, D.C.: National Highway Traffic Safety Administration, DOT HS 812 013, 2014, revised May 2015.

⁴National Highway Traffic Safety Administration, *Traffic Safety Facts, A Brief Statistical Summary: Critical Reasons for Crashes Investigated in the National Motor Vehicle Crash Cau-*

Autonomous Vehicles Present Benefits and Risks to Safety

Autonomous vehicles have the potential to significantly mitigate this public safety crisis by eliminating many of the mistakes that human drivers routinely make.⁵ To begin with, autonomous vehicles are never drunk, distracted, or tired; these factors are involved in 41 percent, 10 percent, and 2.5 percent, respectively, of all fatal crashes.⁶ Autonomous vehicles could perform better than human drivers because of better perception (e.g., no blind spots), better decisionmaking (e.g., more-accurate planning of complex driving maneuvers), and better execution (e.g., faster and more-precise control of steering, brakes, and acceleration).

However, autonomous vehicles might not eliminate all crashes. For instance, inclement weather and complex driving environments pose challenges for autonomous vehicles, as well as for human drivers, and autonomous vehicles might perform worse than human drivers in some cases.⁷ There is also the potential for autonomous vehicles to pose new and serious crash risks—for example, crashes resulting from cyber attacks.⁸ Clearly, autonomous vehicles present both enormous potential benefits and potential risks to transportation safety.

When the National Highway Traffic Safety Administration released much-anticipated guidelines intended to outline best practices for autonomous vehicle safety, many looked to that guidance to answer the key question: Will autonomous vehicles be safe? I believe the answer is “maybe.” Answering the question requires considering two issues. First, how should autonomous vehicle safety be measured, and second, what threshold of safety should be required before autonomous vehicles are made publicly available? In essence, what test do autonomous vehicles have to take and what constitutes a passing grade? Both are genuinely open questions, so it is understandable that Federal guidelines have not yet answered them.

There Is No Proven, Feasible Way to Determine Autonomous Vehicle Safety

There are no road tests that could demonstrate how safe an autonomous vehicle is—there are too many conditions and scenarios to test them all. (A road test that a person takes at the Department of Motor Vehicles also does not prove that he or she will be a good driver; rather, the road test determines whether the person can perform a specific set of driving skills under regular traffic situations. While this type of evidence is viewed as adequate for licensing human drivers, it is not generally viewed as adequate for robot drivers.)

A logical alternative is to test-drive autonomous vehicles extensively in real traffic and observe their performance before making them commercially available. Although this is a helpful first step, it is not sufficient to prove safety. Even though the number of crashes, injuries, and fatalities from human drivers is high, the rate of these failures is low in comparison with the number of miles that people drive. Americans drive nearly 3 trillion miles every year.⁹ The 35,092 fatalities and 2.44 million injuries in 2015 correspond to a failure rate of 1.12 fatalities and 78 injuries per 100 million miles driven. Given that current traffic fatalities and injuries are rare events compared with vehicle miles traveled, fully autonomous vehicles would have to be driven hundreds of millions of miles and sometimes hundreds of billions of miles to demonstrate their reliability in terms of fatalities and injuries. Under even aggressive testing assumptions, existing fleets would take tens and sometimes hundreds of years to drive these miles—an impossible proposition if the aim is to

sation Survey, Washington, D.C.: National Center for Statistics and Analysis, U.S. Department of Transportation, DOT HS 812 115, February 2015.

⁵James M. Anderson, Nidhi Kalra, Karlyn D. Stanley, Paul Sorensen, Constantine Samaras, and Oluwatobi A. Oluwatola, *Autonomous Vehicle Technology: A Guide for Policymakers*, Santa Monica, Calif.: RAND Corporation, RR-433-2-RC, 2014; and Daniel J. Fagnant and Kara Kockelman, “Preparing a Nation for Autonomous Vehicles: Opportunities, Barriers and Policy Recommendations,” *Transportation Research Part A: Policy and Practice*, Vol. 77, July 2015, pp. 167–181.

⁶National Highway Traffic Safety Administration, *Traffic Safety Facts: Crash Stats*, Washington, D.C.: National Center for Statistics and Analysis, DOT HS 811 449, March 2011; Bureau of Transportation Statistics, *Occupant and Non-Motorist Fatalities in Crashes by Number of Vehicles and Alcohol Involvement* (Updated July 2014), Table 2–20, Washington, D.C.: U.S. Department of Transportation, 2014; and U.S. Department of Transportation, *Fact Sheet: Enhanced Mobility of Seniors and Individuals with Disabilities* Section 5310, Washington D.C., 2015. This does not mean that 53.5 percent of all fatal crashes are caused by these factors because a crash may involve, but not be strictly caused by, one of these factors, and because more than one of these factors may be involved in a single crash.

⁷Lee Gomes, *Hidden Obstacles for Google’s Self-Driving Cars: Impressive Progress Hides Major Limitations of Google’s Quest for Automated Driving*, Massachusetts Institute of Technology, August 28, 2014.

⁸Anderson et al., 2014.

⁹Bureau of Transportation Statistics, 2015.

demonstrate their performance prior to releasing them on the roads for consumer use.¹⁰ And, in the meantime, human drivers would continue to cause avoidable crashes and enormous harms to people and property.

Developers of this technology and third-party testers need to develop innovative methods of demonstrating safety and reliability. These methods may include but are not limited to accelerated testing,¹¹ virtual testing and simulations,¹² mathematical modeling and analysis,¹³ scenario and behavior testing,¹⁴ and pilot studies,¹⁵ as well as extensive focused testing of hardware and software systems. This is a rapidly growing area of research and development. There are promising ideas but no demonstrated and accepted methods of proving safety. In sum, no one yet knows how autonomous vehicles should be tested. It is therefore reasonable that the current Federal guidelines have not specified a test either.

There Is No Consensus on How Safe Autonomous Vehicles Should Be

The second issue of how safe autonomous vehicles should be is worth considering, even if their degree of safety cannot yet be fully proven. Some will insist that anything short of totally eliminating risk is a safety compromise. They might feel that it is acceptable if humans make mistakes, but not if machines do. But, again, waiting for autonomous vehicles to operate perfectly misses opportunities to save lives because it leaves far-from-perfect human drivers behind the wheel.

It seems sensible that autonomous vehicles should be allowed on America's roads when they are judged safer than the average human driver, allowing more lives to be saved and sooner while still ensuring that autonomous vehicles do not create new risks. An argument can be made that autonomous vehicles could be allowed even when they are not as safe as average human drivers if developers can use early deployment as a way to rapidly improve the vehicles. The vehicles could become at least as good as the average human sooner than they would otherwise, and thus save more lives overall.

The lack of consensus on this point is not a failure of sound thinking. It is not a failure at all, but rather a genuine expression of Americans' different values and beliefs when it comes to humans versus machines. It is therefore reasonable that the Federal guidelines also do not draw a line in the sand.

While these are difficult decisions, our differences in values and beliefs can be informed by thinking not only about safety today but also about the arc of safety in the coming decades. Our discourse on the question of how safe the vehicles need to be focuses on the safety of autonomous vehicles at the time that they are first introduced for consumer use. But this thinking should be expanded to consider the evolution of autonomous vehicle safety over time, not just at the start of vehicle deployment. When a human driver makes a mistake on the road, typically only that individual can learn from that experience to improve his or her driving habits. The other drivers on the road are largely unaffected. This is not the case with autonomous vehicles, which can use experience and learning to improve performance, not just of the individual vehicle but of the entire fleet. This is because, when an algorithm or software is updated and improved for one vehicle, it can be updated for

¹⁰Nidhi Kalra and Susan M. Paddock, *Driving to Safety: How Many Miles of Driving Would It Take to Demonstrate Autonomous Vehicle Reliability?* Santa Monica, Calif.: RAND Corporation, RR-1478-RC, 2016.

¹¹Wayne B. Nelson, *Accelerated Testing: Statistical Models, Test Plans, and Data Analysis*, Hoboken, N.J.: John Wiley & Sons, 2009.

¹²Suren Chen and Feng Chen, "Simulation-Based Assessment of Vehicle Safety Behavior under Hazardous Driving Conditions," *Journal of Transportation Engineering*, Vol. 136, No. 4, 2010, pp. 304–315; Siddhartha Khastgir, Stewart A. Birrell, Gunwant Dhadyalla, and Paul A. Jennings, "Development of a Drive-In Driver-in-the-Loop Fully Immersive Driving Simulator for Virtual Validation of Automotive Systems," paper presented at IEEE 81st Vehicular Technology Conference, Glasgow, Scotland, May 11–14, 2015; and Stephanie Olivares, Nikolaus Rebernik, Arno Eichberger, and Ernst Stadlober, "Virtual Stochastic Testing of Advanced Driver Assistance Systems," in Tim Schulze, Beate Müller, and Gereon Meyer, eds., *Advanced Microsystems for Automotive Applications 2015: Smart Systems for Green and Automated Driving*, New York: Springer, 2015.

¹³Khashayar Hojjati-Emami, Balbir Dhillon, and Kouroush Jenab, "Reliability Prediction for the Vehicles Equipped with Advanced Driver Assistance Systems (ADAS) and Passive Safety Systems (PSS)," *International Journal of Industrial Engineering Computations*, Vol. 3, No. 5, 2012, pp. 731–742; and R. Kianfar, P. Falcone, and J. Fredriksson, "Safety Verification of Automated Driving Systems," *IEEE Intelligent Transportation Systems Magazine*, Vol. 5, No. 4, Winter 2013, pp. 73–86.

¹⁴California Department of Motor Vehicles, *Express Terms Title 13, Division 1, Chapter 1 Article 3.7—Autonomous Vehicles*, 2015; and Michael Sivak, and Brandon Schoettle, *Should We Require Licensing Tests and Graduated Licensing for Self-Driving Vehicles?* University of Michigan: Transportation Research Institute, Technical Report UMTRI-2015-33, 2015.

¹⁵ANWB, *Experiments on Autonomous and Automated Driving: An Overview* 2015, 2015.

all vehicles. For this reason, experience may be one of the most important tools for improving autonomous vehicle safety and, by extension, transportation safety.

Policymakers Can Promote Autonomous Vehicle Safety

This raises an important question: How do we enable autonomous vehicles to improve as quickly as possible while lowering the risks they pose? There are several tactics policymakers could consider to accelerate autonomous vehicles' improvement.

A first step is to conduct real-world but lower-risk pilot studies of autonomous vehicles. Risk can be lowered first by operating autonomous vehicles in conditions in which crashes are less likely. This can include limiting autonomous vehicle pilots to areas with less-complex terrain, to routes that are well maintained and easier to navigate, to nondangerous weather conditions, or to some combination of these controls. It can also include educating communities about safe behavior in and around autonomous vehicles. Furthermore, risk can be lowered by designing and operating vehicles so that when crashes occur, the consequences of the crash to passengers and bystanders are fewer. This could be accomplished by limiting vehicle speed, ensuring that all pilot-study passengers wear seatbelts, and so forth. These strategically limited pilot studies can then be expanded as safe operation of autonomous vehicles is demonstrated.

A second consideration is the role of sharing driving data across the industry and with policymakers. Autonomous vehicle developers already use the experiences of a single vehicle to improve the safety of their individual fleets. This improvement could occur even faster if the experiences of each vehicle in each fleet could be used across all developers to improve the entire industry. There are certainly nontrivial concerns about protecting trade secrets, but these concerns could be addressed and must be balanced with the societal need for safe autonomous vehicle technology.

In sum, it may not be possible to know what the safety risk of autonomous vehicles is, and Americans may not agree on what it should be. All the same, there are ways of lowering that risk that deserve careful consideration.

HOW CAN AUTONOMOUS VEHICLES IMPROVE MOBILITY FOR AMERICANS WHO CURRENTLY MAY HAVE LIMITED MOBILITY?

For almost all Americans, the ability to get around is essential for living a rich, productive, and healthy life: being able to get to a place of work, to visit friends and family, to access healthcare and other services, to participate in civic activities, and to be connected to the external world in all other ways. Even with the increasing ability to interact and transact online, the importance of mobility in today's world remains vital. Despite its importance, many Americans have limited, and sometimes very limited, mobility as a result of advanced age, disabilities, or lack of means. Whatever the reason, limited mobility has significant negative consequences. Autonomous vehicles could help.

Autonomous Vehicles Could Help Many Older Americans Who Face Limited or Declining Mobility

The experiences of older Americans, especially those over 75, are emblematic of the challenges of limited mobility. The number of Americans 65 and older will increase from 48 million in 2015 (15 percent of today's population) to 74 million in 2030 (23 percent of the population). The number of Americans 75 and older will increase from 20 million in 2014 (6 percent of today's population) to 35 million in 2030 (10 percent of the population).¹⁶ Older Americans are living longer and working longer than ever before. The labor force participation of those over 65 is expected to be 21.7 percent in 2024, up from 12.4 percent in 1994.¹⁷

Driving is important to their quality of life. Of adults over 65, 80 percent live in car-dependent areas and 90 percent say they intend to age in place.¹⁸ Eighty-five percent of adults aged 65 to 84 hold licenses, and almost 60 percent of adults over 85 hold licenses.¹⁹

¹⁶ U.S. Census Bureau, Projections of the Population by Sex and Age for the United States: 2015 to 2060 (NP2014-T9), spreadsheet, December 2014. As of November 8, 2016: <http://www.census.gov/population/projections/files/summary/NP2014-T9.xls>.

¹⁷ Bureau of Labor Statistics, "Civilian Labor Force Participation Rate by Age, Gender, Race, and Ethnicity," web page, December 2015. As of November 8, 2016: http://www.bls.gov/emp/ep_table_303.htm.

¹⁸ David Dudley, "The Driverless Car Is (Almost) Here," AARP The Magazine, December 2014/January 2015. As of November 8, 2016: <http://www.aarp.org/home-family/personal-technology/info-2014/google-self-driving-car.html>.

¹⁹ Policy and Governmental Affairs Office of Highway Police Information, "Distribution of Licensed Drivers—2014 By Sex and Percentage in Each Age Group and Relation to Population,"

Driving is risky for many older Americans. A recent study found that, when compared with drivers aged 55 to 64, drivers over 75 were more than 2.5 times as likely to die in a car crash, and drivers over 85 were almost four times as likely.²⁰ This is due both to increased likelihood of getting into crashes and greater vulnerability to injuries.

But giving up driving has risks as well. Driving cessation almost doubles the risk of increased depressive symptoms and is correlated with (though not strictly a cause of) cognitive, social, and physical declines and higher rates of entry into long-term care.²¹

Geography can further affect mobility. Approximately 18 percent of the rural population is 65 years or older, compared with 13.5 percent in non-rural areas.²² Compared with their counterparts in urban areas, older adults in rural areas must take longer trips for healthcare and other services and have fewer alternatives to driving.²³

Autonomous vehicles offer a promising solution. Fully automated vehicles that do not require human intervention would allow many older adults to travel by car, without having to drive. It could increase their mobility, with all of the associated social and economic benefits, while mitigating much of the safety risk. This, in turn, may allow more people to age in place, remaining in their homes for much longer than they might otherwise be able to.

Autonomous Vehicles Could Improve Mobility for Many Others

Older adults are just one group of Americans that could benefit from increased mobility from autonomous vehicles. Many people with disabilities, young people, and people living in poverty face mobility challenges that could be alleviated by autonomous vehicles.

In 2010, 56.7 million individuals (18.7 percent of the population) identified as having a disability.²⁴ Only 65 percent of individuals with disabilities drive, compared with 88 percent of individuals without disabilities.²⁵ In spite of the Americans with Disabilities Act, which mandates that transit authorities operating a fixed route system provide paratransit or a comparable service to individuals with a disability,²⁶ individuals with disabilities often have limited mobility because of a lack of availability or access to services. One survey showed that 12 percent of persons with disabilities reported having a harder time obtaining the transportation they need to be independent, compared with 3 percent of others, the top two reasons being no or limited public transportation (33 percent) and not having a car (26 percent).²⁷

There are also 25 million young Americans between the ages of 12 and 17 who have mobility needs but are not yet old enough to drive or are novice drivers.²⁸ Getting to school and academic enrichment opportunities, social and extracurricular activities, and even first jobs can be a challenge. Many depend on buses (principally to school) or their parents—or forgo travel. For many working parents, there is a trade-off between supporting their own and their children's mobility needs.

web page, U.S. Department of Transportation, September 2014. As of November 8, 2016: <https://www.fhwa.dot.gov/policyinformation/statistics/2014/dl20.cfm>.

²⁰ AAA Foundation for Traffic Safety, "Drivers Over 65 Almost Twice as Likely as Middle-Aged Drivers to Die in Car Crashes, According to AAA Foundation Study," February 18, 2004. As of November 8, 2016: <https://www.aaafoundation.org/sites/default/files/DriversOver65.pdf>.

²¹ Stanford Chihuri, Thelma J. Mielenz, Charles J. DiMaggio, Marian E. Betz, Carolyn DiGuseppi, Vanya C. Jones, and Guohua Li, "Driving Cessation and Health Outcomes in Older Adults," *American Geriatric Society*, Vol. 64, 2016, pp. 332–341.

²² U.S. Census Bureau, "Percent of the Total Population Who Are 65 Years and Over—United States—Urban/Rural and Inside/Outside Metropolitan and Micropolitan Area," *American FactFinder*, 2014. As of November 8, 2016: http://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_5YR/GCT0103.US26

²³ J. E. Burkhardt, A. T. McGavock, C. A. Nelson, and C. G. B. Mitchel, *Improving Public Transit Options for Older Persons Transit Cooperative Research Program*, Washington D.C.: Transport Research Board, 2002.

²⁴ Matthew W. Brault, *Americans with Disabilities: 2010*, U.S. Census Bureau, July 2012.

²⁵ U.S. Department of Transportation, *Freedom to Travel*, Washington D.C.: Bureau of Transportation Statistics, 2003.

²⁶ U.S. Department of Justice, *Information and Technical Assistance on the Americans with Disabilities Act*, 2016.

²⁷ U.S. Department of Transportation, 2003.

²⁸ Federal Interagency Forum on Child and Family Statistics, "POP1 Child Population: Number of Children (in millions) Ages 0–17 in the United States by Age, 1950–2015 and Projected 2016–2050," 2016. As of November 8, 2016: <http://www.childstats.gov/americaschildren/tables/pop1.asp>.

Americans living in poverty also face mobility challenges. About 43.1 million people (13.3 percent of the population) live in poverty.²⁹ This includes older adults and many individuals with disabilities. In 2014, 10 percent of older adults and 28.5 percent of individuals with a disability had a yearly income below the poverty line.³⁰

About 24 percent of households below the poverty line do not own a vehicle, compared with just 2 percent of households with incomes over \$100,000. Individuals living in poverty are about three times as likely to take transit and 1.5 times more likely to walk.³¹ While these are desirable ways to get around for environmental and physical health reasons, they can take much more time and limit travel to destinations that are accessible by these modes. This is important because research shows that access to efficient transportation is important for escaping poverty (via access to education, training, and work) and achieving upward economic mobility.³² In sum, there are millions of Americans with limited mobility, and autonomous vehicles could help them.

Affordability, Availability, and Accessibility Are Keys to Realizing These Benefits

Simply bringing autonomous vehicles to market might not fully solve the mobility challenges Americans face. Autonomous vehicles, like other transportation options, must also be affordable, available, and accessible. Fortunately, autonomous vehicles may have advantages over conventional transit, taxi, or vehicle-sharing services.

For many older adults, individuals with disabilities, and other people living below the poverty line, the costs of a personally owned vehicle are prohibitive. The costs of a privately owned autonomous vehicle are expected to be much higher, particularly initially. Shared autonomous vehicles will be the key to affordability. Shared vehicles are vehicles that are not personally owned but instead are available for many people to use, either on demand or through a reservation system, and are typically pay-per-use. Some estimates suggest that the per-mile cost of using a shared autonomous vehicle service could be 30 percent to 90 percent less than owning a conventional vehicle or using conventional taxis, depending on the nature of the service.³³ In other words, the per-trip costs could be comparable to transit, but with greater convenience and speed.

Second, shared autonomous vehicles must be available where people live. Car-sharing vehicles and taxis are not readily available in most small towns and rural communities because there are too few people to support the services. Furthermore, those who live in poor urban areas are another underserved segment in today's mobility market. Transit may not offer complete solutions, and taxis have historically been scarce because of the low demand compared to wealthier urban areas.³⁴ The lower cost of shared autonomous vehicles may increase the availability in underserved regions where other transportation solutions are limited.

Third, shared autonomous vehicles need to be accessible. This includes vehicle design, websites, and technology interfaces that are consistent with Americans with Disabilities Act and other accessibility standards and guidelines. It also includes implementing diverse payment systems that do not require smart phones or credit cards. Meeting these design goals can be expensive. For example, the National Highway Traffic Safety Administration estimates that the cost of a new vehicle with adaptive equipment (e.g., mechanical hand controls, power transfer seats, and lifts and ramps) can be \$20,000–\$80,000.³⁵ The cost for accessible autonomous vehicles

²⁹ Bernadette D. Proctor, Jessica L. Semega, and Melissa A. Kollar, *Income and Poverty in the United States: 2015*, U.S. Census Bureau, September 2016. As of November 8, 2016: <http://www.census.gov/library/publications/2016/demo/p60-256.html>.

³⁰ C. DeNavas-Walt and B. D. Proctor, *Income and Poverty in the United States: 2014*, Washington D.C.: U.S. Census Bureau, 2015.

³¹ Federal Highway Administration, "Mobility Challenges for Households in Poverty: 2009 National Household Travel Survey," FHWA NHTS Brief, 2014.

³² Raj Chetty and Nathaniel Hendren, "The Impacts of Neighborhoods on Intergenerational Mobility: Childhood Exposure Effects and County-Level Estimates," Harvard University, 2015.

³³ Lawrence D. Burnes, William C. Jordan, and Bonnie A. Scarborough, *Transforming Personal Mobility*, The Earth Institute, Columbia University, January 27, 2013; and Tasha Keeney, "What If Uber Were to Adopt Shared Autonomous Vehicles (SAVs)?" ARK Invest, June 22, 2015.

³⁴ Mark W. Frankena and Paul A. Pautler, *An Economic Analysis of Taxicab Regulation*, Bureau of Economics, No. 1103, May 1984; Nelson Nygaard, *Boston Taxi Consultant Report*, 2013; and Hara Associates Inc., *Best Practices Studies of Taxi Regulation: Taxi User Surveys*, prepared for San Francisco Municipal Transportation Agency, 2013. Today's ride share services may be helping provide better service in these underserved populations (see the Uber-funded study by Rosanna Smart, Brad Rowe, Angela Hawken, Mark Kleiman, Nate Mladenovic, Peter Gehred, and Clarissa Manning, *Faster and Cheaper: How Ride-Sourcing Fills a Gap in Low-Income Los Angeles Neighborhoods*, BOTEK Analysis Corporation, July 2015).

³⁵ National Highway Traffic Safety Administration, *Adapting Motor Vehicles for People with Disabilities*, June 2015.

may be lower because the vehicle only needs to be modified for passenger use; it does not need to be modified to enable driving.

Policymakers Can Promote Affordability, Availability, and Accessibility

All of this suggests that autonomous vehicles may increase mobility for historically underserved populations in a way that is more affordable, available, and accessible than existing transportation options. However, there is a clear and essential role for sound policy in realizing these benefits.

First, policymakers can create incentives for manufacturers to prioritize these markets and reach them sooner than they might otherwise. Incentives can include cost-sharing programs, subsidies, or other financial levers. They can also include partnerships to integrate both public and private shared autonomous vehicles into existing transit and paratransit services so that they are complementary rather than competing. This may involve making payment seamless across modes, providing transfer benefits across modes, and integrating scheduling. Private ride-share services are already working with transit agencies to provide connections to existing transit services, but primarily in urban areas.

Second, policymakers may need to incentivize technology developers to ensure that accessibility for diverse populations is a priority when designing these vehicles. This includes facilitating collaboration between developers, healthcare providers, independent living centers and other facilities, and, most importantly, the users themselves. Participatory design will be key.

Third, while the cost of shared autonomous vehicles is expected to be lower than many alternatives, public assistance may still be warranted. In many regions, seniors and individuals with disabilities ride transit at a discounted rate or even for free. Policies would be needed to extend these discounts to shared autonomous vehicle services.

In sum, autonomous vehicles present an enormous opportunity to improve mobility for millions of Americans who are currently underserved by our existing transportation system. The social, health, and economic benefits could be enormous. Policymakers can play an important and distinct role in prioritizing and enabling the technology so that autonomous vehicles can help democratize America's transportation system.

WHAT MECHANISMS CAN HELP REALIZE THE BENEFITS AND MITIGATE THE DRAWBACKS OF AUTONOMOUS VEHICLES?

In addition to transforming safety and mobility, autonomous vehicles may also shape other areas of transportation, including congestion, energy and pollution, and land use. Some potential impacts will be positive while others will be negative. All of the impacts are complex and difficult to predict, but despite the uncertainty, policymakers can help nudge the free market in the right direction.

The Impacts of Autonomous Vehicles on Congestion

Congestion has enormous societal costs. Travel delays resulting from traffic congestion caused drivers to waste more than 3 billion gallons of fuel and kept travelers stuck in their cars for nearly 7 billion extra hours—42 hours per rush-hour commuter.³⁶ The total cost to the United States was \$960 per commuter, or \$160 billion for the Nation as a whole.

Even if autonomous vehicles had no impact on the incidence of congestion, they could reduce the cost of congestion. If individuals can work in their cars, the cost of the time spent in traffic could be reduced substantially, even if the time itself is not reduced.

Nevertheless, the potential impact of autonomous vehicles on traffic congestion itself could be substantial but is uncertain. Traffic congestion could be significantly reduced because more vehicles can fit on a given stretch of roadway if they are autonomous. In the near term, autonomous vehicle platooning (where cars drive close together to reduce air resistance and increase fuel economy) can enable greater throughput; in the longer term, if a large number of vehicles are autonomous, lanes could be made narrower, creating more usable road space. If autonomous vehicles are much safer, they could significantly reduce crashes, which are a major source of congestion. Shared autonomous vehicles could provide better connections to main transit lines, leading to increases in use.³⁷

³⁶David L. Schrank, Bill Eisele, and Timothy J. Lomax, *The 2015 Urban Mobility Scorecard*, College Station, Tex.: Texas A&M Transportation Institute, 2015.

³⁷Johanna Zmud, Jason Wagner, Richard T. Baker, Ginger Goodin, Maarit Moran, Nidhi Kalra, and Dan Fagnant, *Policy and Planning Actions to Internalize Societal Impacts of CV and*

However, there is a flip side. Because autonomous vehicles will lower the costs of driving by car—by enabling productivity in the vehicle, reducing fuel costs through greater fuel economy, avoiding parking fees, and lowering insurance costs through greater safety—they could also increase the amount of driving. Improvements in mobility for underserved populations would also add to the amount of driving. If people can do the same things from the comfort of their own cars, fewer people might take public transit.³⁸

Accurately predicting the net effect on transportation demand is impossible because of the disruptive nature of autonomous vehicles. Just as we could not predict in 1990 how the Internet would change how and how much we would communicate 20 years later, we cannot confidently predict today how autonomous vehicles will change how and how much we will travel 20 years from now.

The Impacts of Autonomous Vehicles on Energy

Autonomous vehicles could increase fuel efficiency, but the net effect is unclear because they may increase travel demand, which could negate those gains. To the extent that fossil fuels remain the primary source of transportation energy, this would have knock-on effects in foreign oil dependence, air pollution, and greenhouse gas emissions.

The way people operate and maintain vehicles is inefficient. Aggressive driving alone can drop fuel economy by 25 percent, and not using cruise control on highways can drop it another 7 percent.³⁹ Autonomous vehicles can avoid these behaviors and thus reduce fuel consumption. Adding to this, even relatively simple levels of automation can enable platooning.

In the longer term, if autonomous vehicles that crash less are widely used, they could be built lighter, which will further reduce fuel consumption and emissions. Less obviously, fully autonomous vehicles might be able to jump-start alternative transportation fuels. One of the key obstacles to both plug-in electric and hydrogen fuel cells, which have zero tailpipe emissions and can use renewable energy, is the lack of refueling or charging infrastructure. This becomes much less of a problem if cars can drive themselves to refueling or recharging stations because far fewer stations are needed.⁴⁰ One recent study showed that electric shared autonomous vehicles could reduce greenhouse gas emissions in 2030 by 87–94 percent relative to current conventional vehicles and 63–82 percent below projected model year 2030 hybrid vehicles because of decreases in future carbon intensity of electricity, “right sizing” of vehicles, and higher miles traveled per vehicle.⁴¹

On the other hand, passengers may prefer larger autonomous vehicles to allow them to take better advantage of the opportunity to do things other than driving, resulting in lower fuel economy and greater emissions.⁴² And, of course, they may drive more.

The Impacts of Autonomous Vehicles on Land Use

Automobile use has influenced the form and extent of land development in the United States, leading in large part to sprawl (that is, low-density, inefficient land-use patterns).⁴³ The land allocated to automobile infrastructure poses a cost to society: It could otherwise be used for farms, open space, homes, businesses, and other facilities, with associated environmental, economic, and public health effects.⁴⁴

Autonomous vehicles may affect land use in two opposite ways, and both could take place. Commute time and distance are among the key factors households consider in deciding where to live. While areas farther away from central business districts offer many benefits, particularly in housing size and cost, a longer commute may be too costly, both in terms of travel and time costs. However, given the ability

AV Systems in Market Decisions, interim deliverable to the National Cooperative Highway Research Program, Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine, May 2016.

³⁸ Zmud et al., 2016; Anderson et al., 2014.

³⁹ Michael Sivak and Brandon Schoettle, “Eco-Driving: Strategic, Tactical, and Operational Decisions of the Driver That Influence Vehicle Fuel Economy,” *Transport Policy*, Vol. 22, July 2012, pp. 96–99.

⁴⁰ Anderson et al., 2014.

⁴¹ Jeffery B. Greenblatt and Samveg Saxena, “Autonomous Taxis Could Greatly Reduce Greenhouse-Gas Emissions of U.S. Light-Duty Vehicles,” *Nature Climate Change*, Vol. 5, No. 9, 2015, pp. 860–863.

⁴² Anderson et al., 2014.

⁴³ Robert Burchell, George Lowenstein, William R. Dolphin, Catherine C. Galley, Anthony Downs, Samuel Seskin Katherine Gray Still, and Terry Moore, *Costs of Sprawl-2000 TRCP Report 74*, Federal Transit Administration, 2002.

⁴⁴ M. A. Delucchi and J. J. Murphy, “How Large Are Tax Subsidies to Motor-Vehicle Users in the U.S.?” *Transport Policy*, Vol. 15, 2008, pp. 196–208.

to engage in other activities while in an autonomous vehicle, the opportunity cost of transportation declines. This could increase the willingness of households to locate farther away from the urban core, increasing urban sprawl.⁴⁵

On the other hand, autonomous vehicles could also lead to greater density in core urban areas. Driving remains the dominant mode of passenger travel in the United States, even in large cities with good transit options, but the typical automobile is parked for about 95 percent of its lifetime.⁴⁶ As of a decade ago, the total area devoted to parking spaces in major central business districts was, on average, about 31 percent of the district area.⁴⁷ The emergence of autonomous vehicles could sharply reduce the amount of parking needed in core urban areas in several ways. First, after dropping off its passenger or passengers in a downtown location, an autonomous vehicle could pilot itself to a remote lot in a peripheral area, reducing the amount of parking needed in the densest urban areas where land values are highest. Second, as described earlier, autonomous vehicle technology might lead to a new model for urban mobility in the form of driverless taxis. Under such a system, autonomous vehicles would not need to park after every trip; rather, after dropping off one passenger, they would simply travel to pick up the next passenger. Third, the convenience and low cost of such a system might induce many urban dwellers to forgo car ownership, or at least to reduce the number of cars owned. Thus, driverless taxis could reduce the number of parking spaces needed in residential buildings, as well as at commercial centers.⁴⁸ These effects, emphasizing the service character of transportation, could free up substantial amounts of space in urban areas for other valuable uses: homes, businesses, parks, hospitals, and so on.

Driving Externalities May Prevent the Benefits from Being Realized

While the effects of autonomous vehicles are complex, some outcomes are clear wins. If safe autonomous vehicles are developed and used widely and responsibly, the current public safety crisis in the U.S. transportation system could be mitigated. If safe and usable autonomous vehicles are developed, mobility could increase for millions of Americans who currently have limited mobility. In addition, if the potential increase in transportation demand created by autonomous vehicles were mitigated or decoupled from fossil fuels, there could be enormous energy security, public health, and environmental benefits. Related to this, if shared autonomous vehicles are widely available and widely used, this could reduce private vehicle ownership and the need for road infrastructure, allowing repurposing of land to more economically productive uses.⁴⁹

Yet these outcomes may not actually be realized because many benefits accrue to society rather than to either the producers or consumers of autonomous vehicles. Consumers may be unwilling to pay for expensive technology if much of the benefits go to others, and consequently, producers may be less willing to develop them. Thus, there is less incentive for producers and consumers to take actions that would achieve beneficial outcomes.⁵⁰

Safety is a good example of this phenomenon, with significant consequences for autonomous vehicles. When an individual drives unsafely or operates an unsafe vehicle, he not only puts his own well-being at risk but also the well-being of all other road users around him, including pedestrians and bicyclists. However, in our current transportation and legal system, an individual is responsible for only a fraction of the full cost of being unsafe. In many States, motorists are required to carry only \$30,000 (or less) worth of liability insurance—far less than is necessary to compensate someone for a serious injury, much less a loss of life. This leaves a huge gap between the harms that are regularly inflicted by drivers and the amount available for legal recovery. In essence, society subsidizes dangerous vehicles and driving behavior, creating less incentive for safer vehicles and behaviors.

Economists call this an externality. An externality is an effect that one party imposes on another party without compensating them for the effect if it is negative or charging them for it if it is positive.⁵¹ The free market does not allocate resources well in the presence of externalities because the true costs and benefits of actions are distorted.

Consider how the safety externality dampens the market for safe vehicles, including safe autonomous vehicles. First, buyers' incentive to purchase safe autonomous

⁴⁵ Anderson et al., 2014.

⁴⁶ Donald C. Shoup, *The High Cost of Free Parking*, Chicago: Planner's Press, 2005.

⁴⁷ Shoup, 2005.

⁴⁸ Zmud et al., 2016.

⁴⁹ Zmud et al., 2016.

⁵⁰ Zmud et al., 2016.

⁵¹ James M. Buchanan and Wm. Craig Stubblewine, "Externality," *Economica*, Vol. 29, No. 116, 1962, pp. 371–84.

vehicles (which we can expect to be expensive, at least at first) is less than it would be if full social benefits of safe vehicles were reflected in a lower price tag. Second, and related, auto manufacturers' incentives to create as-safe-as-possible autonomous vehicles are less than they should be, because safety is undervalued in the marketplace.⁵² The result is that very safe autonomous vehicles could be technologically feasible, but fewer firms will develop them and fewer individuals will buy them because many of their benefits accrue to the public rather than the purchaser.

Safety is just one externality. Many of the benefits and the costs of autonomous vehicles (and vehicles in general) are external. If a buyer's car is energy efficient, it helps the buyer somewhat, but most of the benefits go to other people (e.g., the people who breathe the air in the area where that vehicle is driven). Those costs (e.g., of poor air quality) are real and are borne by society. If the benefits of reducing pollution are not factored into the buyer's cost of the vehicle, there is little incentive for them to buy it, particularly if the vehicle is more expensive than less-efficient alternatives.

Policymakers Can Promote Beneficial Outcomes by Internalizing Externalities

So, how can we solve the externality problem? The key is to use policy tools to "internalize" externalities so that market prices reflect the true costs and benefits of private-sector actions. This can be done with subsidies, user fees, mandates, and privileges to ensure that producers and consumers of autonomous vehicles receive the benefit from (and are thus incentivized toward) making choices that benefit society.

As just one example, when a driver uses a busy road, he adds to congestion that other travelers experience, but he does not have to pay for the cost of that extra congestion—the lost productivity of others as they sit in traffic, the delay in goods movement, and the local increase in pollution. But congestion is a problem that could be solved. Nearly all passenger vehicles in this country have space for at least four people, but on average, there are just 1.67 passengers.⁵³ Those unused seats are extra, already-built transportation capacity. But that capacity is not used because, in large part, the costs of carpooling are internal (the driver bears the cost of the effort and hassle) but the benefits of carpooling remain external (the driver does not benefit from reducing society's congestion). High-occupancy-vehicle (HOV) lanes are one partial remedy: They help internalize the positive externalities of carpooling by enabling carpoolers to themselves bypass congestion and get to their destinations faster.

There are many policy options to internalize not only the congestion externality but also the other driving externalities related to safety, pollution, oil dependence, and mobility. These include creating insurance requirements that strengthen the market for road safety, offering transit incentives that reduce congestion, and offering rebates for using fuel-efficient vehicles, among others. Each option has a long history of research and discussion, and these and other options have been implemented to varying degrees.

It is not possible today to give each policy the discussion it warrants. Nevertheless, now is the time to revisit the impact of driving externalities and the policies to internalize them, because autonomous vehicles could improve our transportation system tremendously, provided the right market signals are in place. In other words, because so many of the benefits and costs of autonomous vehicles would accrue to people other than the buyer, internalizing externalities is a key step to ensuring that society minimizes their disadvantages and maximizes their benefits.

There is also a current window of opportunity to send those new market signals because consumer expectations about autonomous vehicle costs, performance, and other characteristics are not yet set. For instance, congestion pricing requires drivers to pay a fee to travel during peak rush hour, because driving during rush hour imposes higher congestion costs on everyone than driving at other times does. Although congestion pricing is widely recognized as an effective means of internalizing the cost of congestion and thereby reducing congestion, it has been difficult to implement, partly because drivers are unaccustomed to paying different prices based on when they travel. However, today, many private ride-sharing companies charge an extra fee for their services during rush hour, analogous to congestion pricing. Because these services are new and the reasons for the charge are understandable to

⁵²This externality explains, in part, why there is little market for vehicles that are designed to better protect individuals outside of the vehicle in the event of a crash. The technology exists, but the societal benefit of protecting others does not reach the buyer in the form of a relatively lower-priced vehicle.

⁵³Federal Highway Administration, Summary of Travel Trends: 2009 National Household Travel Survey, June 2011. As of November 8, 2016: <http://nhts.ornl.gov/2009/pub/stt.pdf>.

consumers (greater demand for a limited supply of goods), these fees have been generally acceptable. Similarly, consumers may be more amenable to new policies that internalize the externalities of driving now, before autonomous vehicles are available, rather than later, once expectations about autonomous vehicles are set. Of course, these policies must apply to all auto travel, not just autonomous vehicle travel, for the market signals to be clear.

In sum, it is not possible to fully predict what a future with autonomous vehicles will look like. However, by using the current window of opportunity to internalize the externalities of driving, it is possible to send the right market signals, paving the way for a future transportation system that maximizes the potential advantages while minimizing the potential disadvantages. This is an exciting future of increased mobility and economic growth and greater transportation safety, efficiency, equity, and sustainability.

[Conflict of Interest Statement: Nidhi Kalra's spouse, David Ferguson, is co-founder and president of Nuro, an autonomous vehicle startup. He previously served as a principal engineer for Google's driverless car project. This written testimony was carefully reviewed by subject-matter experts within the RAND Corporation; the research quality assurance team for the RAND Justice, Infrastructure, and Environment division; and the RAND Office of Congressional Relations. However, the opinions and conclusions expressed in this testimony are the author's alone and should not be interpreted as representing those of the RAND Corporation or any of the sponsors of its research.]

Senator COLLINS. Thank you very much for your testimony, and I am going to start my questions with you.

MOBILITY FOR SENIORS

As a senator representing a State with the oldest median age in the country, I can see tremendous potential for seniors whose vision has diminished to the point where they no longer can safely drive being able to use these autonomous vehicles so that they can maintain a measure of independence and not be dependent on others. So I see that, in addition to the safety benefits, and really the two are linked, as being a tremendous advantage.

Another advantage which I wondered whether you had analyzed at all is whether there would be an impact on the insurance market and the rates that individuals would pay for insurance if they are driving cars with either limited safety features that have been added to it or are fully autonomous.

Dr. KALRA. I appreciate the note about seniors. My grandparents are in that same boat, so I understand that very clearly.

In terms of insurance, yes, in the long run we might expect insurance rates to go down because fewer crashes mean lower costs for personal injury and damage, and eventually they may be needed for declining auto insurance. But in the short run, it's actually hard to say what the effect of insurance is going to be, for a few reasons.

First, it may take many years or many decades for the fleet to become largely autonomous, so the risks may not change as quickly as we anticipate.

Second, because at least for some types of autonomous vehicles there's going to be shared control between the human and the machine, there may be over-reliance on the technology, which is one of the things we've seen with Tesla. So it may not necessarily translate into lower crashes or crash rates. That remains to be seen.

And third, the car repair costs for a crash could actually increase, because right now if I rear-end someone, it's a few hundred

dollars to bang out that bumper, but in the future it could be much more expensive.

Now, there's a different issue with people who are insured at the minimum insurance rate, but that's a little more complicated. We can go there if you want to.

Senator COLLINS. Thank you.

EXISTING VEHICLE TECHNOLOGIES

Administrator, we heard Ms. Hersman say that three technologies, if they were mandated, could save some 10,000 lives. Now, whenever the Federal Government mandates, there is obviously cost involved. But I am curious whether NHTSA has considered mandating proven safety technologies that are available right now on new vehicles as they're manufactured. I should make that clear.

Mr. ROSEKIND. In fact, I think as soon as anybody says to any of you "We need to regulate to get safety," the first thing you need to ask is what are we going to regulate? Because for regulation we need performance criteria, testing, we need to know that there's enough penetration that we have sufficient data, cost/benefit analyses, et cetera.

I say that because the last technologies that we have seen come through rulemaking are things like electronic stability control, that rear visibility camera that you like so much, advanced air bags. Those took 6, 8, and 10 years to actually get through the regulatory process. That's really important because in these new technologies, by the time those rules would come out it would be irrelevant for the new technology that would have evolved.

And I say that because, quickly, in September of 2015 we actually challenged the auto industry: how do you take automatic emergency braking and make it standard on all vehicles? This is called democratizing safety. So it's not just on high-end or an option. Basically what they did was in March come back, and 20 automakers are going to make AEB standard by 2022 on all vehicles in our country. That will beat regulation by 3 or 4 years. We can count the lives saved.

So there are ways to do this besides regulation, and I think we have to use the right tool. For the moment, this policy is the right tool at the right time.

STATE REGULATIONS OF AUTOMATED VEHICLES

Senator COLLINS. Well, let me ask you the other side of that coin. The guidance the Department has put out said a 15-point safety assessment is voluntary, but as you're well aware, States like California are already proposing to make it mandatory for companies that want to test or deploy automated vehicles. What can you do, what can NHTSA do to ensure that States do not arbitrarily mandate various aspects of your guidance document, thereby creating a patchwork of ever-changing State laws that would stymie innovation and the deployment of these vehicles?

Mr. ROSEKIND. Really, a huge part of including that piece, the model state policy, was to differentiate the Federal versus State roles. In fact, directly to your point, we make it absolutely clear that States actually have to do nothing in this area. They can actu-

ally support the advancement of these safety technologies with no policy or regulations. If they choose to, we identify some areas where they can move forward. Everyone on the State level that we've interacted with is absolutely interested in seeing a consistent framework and trying to avoid the patchwork. This is an area I think we need to watch and see it develop.

And California, as you mentioned, if you look at their early, sort of recommended policies, they've changed dramatically in their latest proposals because they waited for this policy.

So I think everybody is seeing an effort and an interest right now in trying to prevent that patchwork, and we're going to have to wait and see how it actually develops.

Senator COLLINS. But should the States even be involved in this area, or should it be left up to the Federal Government so that there is a nationwide standard and approach?

Mr. ROSEKIND. In the policy we make that explicit, here's what the Federal Government is concerned about, standards for the vehicles, defects, et cetera, and the States, they still stay responsible and they don't have to do anything. We make that explicit.

Senator COLLINS. You do, but if California is moving forward to implement your guidance and make it mandatory, isn't that contrary to the goal of your guidance?

Mr. ROSEKIND. Two things. One is we are explicit in there saying that this policy was not intended to codify, and at the same time I think right now California has not actually put their regulations out. They've put a proposal out. They've talked about other aspects, that they want to evaluate it, and they're even questioning the language that's being used, and that's what I'm saying. I don't think we even know what their final stance is going to be, because they have continually emphasized the need for consistent framework.

Senator COLLINS. Senator Reed.

CYBERSECURITY

Senator REED. Well, thank you, Chairman, very much.

I agree with Mr. Brubaker; computers don't get tired, they don't get road rage, but they open a whole new dimension of cyber security which we have to deal with. I know, Administrator, the FAVP encourages information sharing on cyber security, but we've seen incidents in which systems have been hacked recently, vulnerabilities in automobiles, GPS systems, insurance plugins have been used.

So can you give us an idea of what you're doing in terms of ensuring that we can reassure the public that these vehicles will not be subject to cyber attacks?

Mr. ROSEKIND. Thank you for emphasizing this issue because, as you've heard from pretty much everybody, without public confidence in these vehicles, it's just not going to happen.

So specifically to cyber security, NHTSA has actually been on this for many years. In 2012 we formalized that with a group, an office within the agency. Just recently we have had a roundtable with 300 people, pulling them together. We had an intra-government meeting after that, which has resulted in everything from urging and supporting an agency, Auto ISAC, Information Sharing and Analysis Center, within the industry. The industry has come

out with their own best practices. Just a few weeks ago, NHTSA came out with its own cyber security best practices. Just yesterday the Department of Homeland Security actually highlighted our cyber security best practices, a model for other industries to go after.

So the good news is all of this has been done before an incident has actually occurred within the auto industry. One that everybody knows about, about a year ago in July Wired Magazine, that was planned. That was a researcher demonstrating it could be done. I'd point out that even with the authorities and tools we had, within 3 days the defect was called and 1.4 million vehicles basically were already under remedy at that point.

So I would just say it's a constant vulnerability. It clearly is a threat that needs to be addressed. But for the moment there's a lot of action going on in that arena.

Senator REED. Let me just quickly follow up with Ms. Hersman, and thank you. How do you think outside expertise could assist in combatting these cyber threats and regulating advanced technologies like HAVs?

Ms. HERSMAN. I think there's a tremendous opportunity to call on experts, just like this committee does. Things change very quickly, and when it comes to technology, we certainly can't expect NHTSA to always stay on the cutting edge. Potentially having advisory groups, organizations that will assist them in evaluating new cutting-edge technology is an opportunity that they should consider and take advantage of going forward. We're going to ask so much of this agency when it comes to looking at the evolution of technology that we need to support them and give them opportunities to get the best and the brightest to weigh in on it.

Senator REED. Thank you very much.

IMPACT ON LABOR

Dr. Kalra, I seem to be emphasizing the potential challenges rather than the golden opportunities, but we should do that. And one of them, as I mentioned in my statement, is employment, roughly 3 to 4 million jobs that are good jobs. You've done some work, I believe, on this. You made some comments in your discussion.

Can you just comment upon the implications of the labor market, both positive and negative, for these vehicles?

Dr. KALRA. Absolutely. So you're absolutely right that there are millions of Americans who make their living behind the wheel, and there's no question that autonomous vehicles do threaten those jobs. I think we have to stare that back in the face. The question is what to do about it.

This transition to full autonomy is going to take time, so time can be an advantage in this respect in that we are ahead of the curve. We can start thinking now about how to develop an alternative job market, where that's possible. We also know that freight may be one of the areas that is first hit because of the private nature of the industry and because we're talking about goods movement rather than people movement. So the technology may make its way there faster. One aspect of that is that many freight ex-

perts project a lack of supply of drivers in the future, so there may be a little cushion in there.

In terms of on the flip side, autonomous vehicles will create new kinds of jobs or increase the technical nature of existing jobs. An auto body shop is not going to look the same as it does today. So we need to prepare our young people especially, people in community colleges, for those high-tech jobs.

The broader issue is that autonomous vehicles could and, I believe, will democratize transportation and give mobility to people who currently don't have it. Important to that is physical mobility. Being able to get around is one of the most important things to help people out of poverty, getting them access to training, getting them to jobs. The unfortunate part is people who have the least access to transportation often are the ones who struggle to get jobs, people who are in poverty who can't afford their cars.

So there's two sides of this coin. I think we need to do everything we can to bring mobility to people who are currently underserved by our transportation system, while providing cushion to people who will be negatively affected.

Senator REED. Your comments seem to be there has to be a conscious, deliberate planning process because this is coming.

Dr. KALRA. That is right.

Senator REED. And your best guess at when we'll see, for example, significant autonomy in freight delivery? Is it 5 years? 10 years? Too far to guess?

Dr. KALRA. I can only guess. I would be surprised if we don't have it in 10 years. I would be surprised if we do have it in the next two to three.

Senator REED. Okay. Anybody else want to take a wild guess, like the lottery?

Senator REED. Okay. Thank you, Madam Chairman.

Senator COLLINS. Thank you, Senator.

Senator Daines.

DATA SECURITY

Senator DAINES. Thank you, Madam Chair and Ranking Member Reed. And thank you for testifying here today. This is a topic that covers many issues I care deeply about. As a 5th generation Montanan, we have a lot of open space, a lot of roadways. In fact, we just wrapped up the election season, and one of the candidates running for governor traveled 64,000 miles during the course of the campaign on the roads. So that kind of puts in perspective that we're not as big as Texas or Alaska or California, but we have to drive a lot more. So I care very much about what you're talking about, saving lives, to improve passenger and freight mobility, very important for us in a State that requires moving our products, ag products particularly, around the world.

I'm very excited about these new technologies. I spent 12 years in the cloud computing business, executive capacity, before I came to politics.

So I wanted to follow up on Senator Reed's question on the cyber piece here, Mr. Rosekind. You said in your testimony that the quickest way to slam the brakes on innovation is for the public to lose confidence. I think that's well said. I was a private employee

for 28 years, and the best was when I didn't have my information compromised, until I became a Federal employee. Then I got the letter from OPM. Thank you, Federal Government here. I never had that issue in the private sector.

Mr. ROSEKIND. I got that letter, too.

Senator DAINES. Many of us did. I'm sure if we polled the audience here, there would be a lot of hands going up. Clearly, we want to make sure we're protecting privacy and hardening our systems.

Many consumers no longer have confidence in the government. I appreciate the fact that you're bringing some advisory groups in to bring that perspective. Going fast, at the speed of business out there, sometimes I think government needs to.

How is NHTSA gaining the public's confidence with this latest guidance that you're looking at here as it relates to cybersecurity?

Mr. ROSEKIND. I think in the policy, one of the ways actually that we're trying to do that is through the innovation approach. I think, just like when people talk about regulation, when you talk about cyber security, if someone were to say regulate that, as you know, the speed that this stuff is changing, by the time you get through a 6- to 10-year regulation it's not going to be relevant anymore.

So, one of the 15 safety assessment items is cyber security. Everybody has to tell us how they're addressing that particular issue, and our intent here is to see as many different forms of innovation coming to us as we can, and the data will drive the safest and best way to protect these systems. In fact, at some point, if there are best practices, it should be based on that data. In the future if there's rulemaking, it should probably be based as a foundation on whatever those best practices were.

Senator DAINES. I know industry has been working collaboratively to address cyber and published some best practices in July. How did NHTSA's guidance incorporate their experiences and expertise?

Mr. ROSEKIND. We had a lot of interaction with them. We knew what was coming. In fact, I would highlight not just this policy but our own best practices came out just a few weeks ago, and they complement exactly what we know the industry was doing.

Senator DAINES. So I guess my understanding is they didn't go through a notice and comment process before being issued. Afterwards DOT solicited comments, and I think they're due next week. So my question, I guess, is why wasn't there more consultation with industry before the guidance was issued?

Mr. ROSEKIND. Well, let's keep them separated. The best practices came out a few weeks ago, and the policy came out September 20th. We actually have an extensive amount of open time. So the policy is under a 60-day comment period right now. That closes November 22nd. And what was already identified in here is 23 next steps. So we actually have a whole new set of public meetings that are coming up to talk about all the different elements. We just did that last week. We had a meeting on the letter, which includes the cyber security part. So there's all kinds of other opportunity for people to add input.

Senator DAINES. And that's helpful, and I know Senator Collins was talking with us a bit about some of this guidance, which be-

comes quasi-regulation. You touched on the time required to go through the formal rulemaking process, and the guidance allows you to be more nimble, but it may not always be as transparent. I think that's one of the political concerns we hear.

RULEMAKING PROCESS

Should voluntary guidance policies be used to expedite the rulemaking process or Federal enforcement action?

Mr. ROSEKIND. I think what we're trying to do is continue our enforcement and regulatory tools. We have those authorities. We're not giving any of them up. All we've done is try and complement those with the way to support innovation at this time. It is absolutely possible, if you come in with the right data, that we will use that data to create best practices and rulemaking. We actually identify potential rulemaking in here as well. So that is just one more tool that's being included to deal with this fast-paced technology.

Senator DAINES. Thank you. I'm running out of time.

DRIVING IN RURAL AREAS

Dr. Kalra, a question. You discussed lowering the risk to pilot programs and raised questions about the ability of this technology to function better than humans in complex conditions. I come from a State that has a lot of rural roads. Fifty-four percent of automobile fatalities occur on rural roads despite the fact that just 19 percent of Americans live in rural areas.

How do you incorporate issues like we have in Montana of unmapped roads, gravel, snow, wildlife, where 95 percent of the roads are rural? As we know, accidents often happen when things we don't anticipate occur. How do we lower the risk of these technologies in rural settings?

Dr. KALRA. By testing them in those environments. And I'll point to the University of Michigan's testing center for autonomous vehicles, where they are committed to testing on different kinds of road surfaces, in different kinds of weather conditions. We need to get autonomous vehicles not only in sunny Southern California but also in Montana, and I think that has to be a priority.

Senator DAINES. The sun shines a lot in Montana, but we also have ice and big elk out there at times.

Dr. KALRA. I'm from North Dakota. I know that ice.

Senator DAINES. Oh, you do understand that.

Dr. KALRA. I do.

Senator DAINES. You might understand ice better than I understand it, I think.

Anyway, thank you. I'm out of time.

CYBERSECURITY RISKS

Senator COLLINS. Thank you for raising that very important issue, which is one that concerns me as well.

Mr. Brubaker, both of my colleagues have brought up the cyber security issue, which is also of great concern to me as we've seen we have rogue States and terrorist groups that seem to be able to hack into virtually any database. What is the industry doing to ad-

dress the cyber security risks of autonomous vehicles, and do you think that there's more that NHTSA could do to proactively address such a risk?

Mr. BRUBAKER. Yes, I do. The one thing I would caution is you want to be very careful in regulating cyber security and establishing cyber rules because you tend to lock in a solution that's relevant for that time period, but it's not timeless.

But to answer your specific question about what NHTSA can do, I would actually start by going across the river to the five-sided building and start talking to the people who have been doing embedded system cyber security for years who are really good at it. One of the key elements of the third offset strategy the Department is pursuing right now—and I know both you and the ranking member have a strong defense background, so you would get this—is really focusing in on automation and robotics, advanced robotics. So they're doing the kind of cyber security strategy and employing the kind of tactics that you need to really lock down these embedded systems, and they've been doing it pretty successfully for years.

So I think the one thing that we could do is look across the river, look to the IC, the intelligence community, for lessons learned on how they do encryption, how they do authentication. I know that the industry has issued its best practices but, frankly, when I look at it, I think it's a lot of reinventing the wheel, a lot of things that have already been done.

I would also say, again, the caution on the regulatory piece is we've had the Federal Information Security Management Act, FISMA, for a number of years, but it didn't prevent the OPM hack. So you can issue the regulations, and you can comply with those regulations, and you can go down a cyber security checklist, but unless it's substantive, and unless it's moving, because it's a constant game with the adversaries, and you need to understand their motives and what they're about and do the risk assessment accordingly and structure your systems from the ground up.

The one area that I think industry has really got to pay very close attention to is supply chain integrity, where they're securing the components, they know where those components come from, they have visibility end to end, and there are a handful of companies out there who are focused on it, automakers that are focused on it. But by and large, the industry is having a very difficult time adjusting its culture to harden its systems.

Senator COLLINS. Thank you.

DISTRACTED DRIVING

Ms. Hersman, yesterday's New York Times quoted you in the area of distracted driving, and you pointed out that new technologies that are intended to allow the driver to keep his or her hands on the wheel may actually be preventing the driver from paying attention to his or her driving environment, and the article quotes you as saying it's the cognitive workload on your brain that's the problem.

Are you concerned that automated and self-driving vehicles—well, self-driving vehicles are not a problem if we really get to that stage. But the semi-automated, if you will—you have your scale for

the degree of automation—are going to produce even more distracted drivers and thus more crashes?

Ms. HERSMAN. I would say there are always unintended consequences when we introduce new things. We do know that people are very distracted today. People are addicted to their devices that they bring into the car with them. The challenge with moving to things like hands-free is that people think that the distraction is in their hands, but the distraction is really in your brain. We would have outlawed stick-shift cars a long time ago if it was our hands that were the problem.

So when we look at automating vehicles further, what that does is potentially has the human being stepping back a little bit, and human beings typically are not good monitors. When everything works according to plan 99 times out of 100, it's hard for the human being to pay attention 100 percent of the time. In aviation we call this over-reliance on automation. We saw pilots' skills deteriorate as airplanes performed more functions for the pilot.

One of the challenges is how do you compel the human being to pay attention so that when they need to take over or when they need to intervene, they're ready and they're prepared to do so? If you could text, if you could read the newspaper, if you could do other things, 99 percent of the time it might work well. It's that one time that you need to intervene that you're not prepared to, and we haven't even touched on impaired drivers and drivers who might be sleeping, who might be fatigued or not paying attention.

So there definitely are some risks and some tradeoffs. I think a number of the panelists have touched on these. That's why we talk about the messy transition between Level 1 and Level 5 and having to keep that human in the loop, how can you compel them when they need to be engaged to do it.

Senator COLLINS. Thank you.

LESSONS FROM VOLVO DEMONSTRATION

Administrator, last month the world's first shipment by a self-driving truck was made by an auto Volvo truck. I watched the video of that. There was a professional driver on board but, in fact, the truck was driving itself 120 miles along Interstate 25, and it was operating fully autonomously without that driver's assistance. It was very exciting to watch, but I'll have to admit to you it also made me a bit nervous as I watched it.

Are there any lessons from that test that NHTSA has learned so far, and would it have any effect on where you're going with your future guidance?

Mr. ROSEKIND. Absolutely. Let me just add a little bit to that confidence. That was actually at 2:00 a.m. in the morning with a patrol car behind them, so there was a lot more protection there than just what you see in the video, which was very promotional.

Having said that, there is a lot of lessons learned, and part of the reason to have the policy out is so that people are basically handling all these safety issues before they're ever out testing or deploying these kinds of things. That's part of what we're trying to do, is be proactive instead of reactive, wait for something bad to happen and then react to it. We'd rather deal with all of these issues, not just with that truck example but what's going on in

Pittsburgh. You cited all of the exciting things that are happening, but we really need to make sure that safety is being addressed, at least for these 15 items, before these things get tested or deployed on the road.

Senator COLLINS. Senator Reed. Thank you.

IMPACT ON LABOR

Senator REED. Thank you very much, Ms. Chairman.

Mr. Brubaker, you in your testimony note also this potential labor shift and that we have to be prepared to respond to it. Could you just give us your advice or your thoughts on the type of coordination at the Federal level we have to take to anticipate this and deal with it?

Mr. BRUBAKER. Sure, absolutely. I want to commend the subcommittee for the language that they put in the report language last year asking the Secretary to devote funds to TRB (Transportation Research Board) to study the economic impacts of these self-driving technologies because, as we all know, there will be displacement, and we really need to understand it and get proactive.

So it's going to involve a number of different Federal agencies. I mean, the obvious one is the Department of Labor. They would be best poised to kind of understand where the shifts are. But I think even to the point where you're identifying the most vulnerable professions would be very, very helpful. And then even to the point where if people wanted to volunteer proactively for retraining and job placement in needed skill areas, we could coordinate that, and it's one of the areas that we lay out in our framework. It's the eighth area where we really need to be mindful of it and very sensitive.

I mean, I grew up in Youngstown, Ohio, and I saw what happens when people don't—and how they vote later—when people aren't treated with respect.

Senator REED. That's exactly right. I was in Niles a few months ago, right outside of Youngstown.

Mr. BRUBAKER. Near my hometown.

Senator REED. So I get it. We have to be very, very conscious of this.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION GUIDANCE

Doctor, you and RAND published a guide on this technology in 2014. As you look at NHTSA's guidance, do you think they're addressing policy areas that need to be addressed at the Federal level? I have harped on employment and cyber security. Are there other issues?

Dr. KALRA. Can I ask, do you mean for NHTSA in particular, or the Federal Government in general?

Senator REED. NHTSA in particular, and then go big.

Dr. KALRA. Okay. For NHTSA, I think they need to continue the course that they're going on. Their guidance is admirable. It threads the needle well on how do you provide guidance and a framework for safety while allowing innovation to occur. But one of those items is, for example, ethics, and it asks developers to say how will the car handle ethical issues. Even if the reporting is done, it's not clear that reporting will lead to safety. So there's a

gap there because even though one can follow the guidelines, that doesn't mean autonomous vehicles will be safe, and that's because no one really knows how to prove safety in advance of getting these vehicles on the road.

So I think continuing in that direction is important.

For the Federal Government more broadly, in addition to the economic issues, I just want to reiterate that there are market distortions. I know this is wonky, this is what RAND does, but there are market distortions in our transportation system that mean that we don't take full advantage of the opportunity for cost savings.

I'll be very specific. When we have pollution, whether it's factory pollution or automotive pollution, that's a real cost to our society. It is paid in healthcare. It is paid. It's not an invisible cost; it's a real cost. The question is who pays for it? So as long as the market does not take into account the costs that we all bear for some of these activities, there isn't an incentive, a market incentive to reduce them.

So I think that is something that often gets overlooked as we talk about the safety of autonomous vehicles, which is understandable. But I would encourage us, if we want this future of sustainability and efficiency and mobility for everyone, to look at the other things in our transportation market that are preventing us already from achieving those goals.

Senator REED. Thank you.

Ms. Hersman, in terms of NHTSA's guidance, do you think it effectively addresses safety concerns from your perspective?

Ms. HERSMAN. I would say it's a good first step, and I think we can see the challenge that exists of not having anything and having a vacuum, and then the States are stepping in, there's a patchwork system. But I think we're also so in the early days here. There's so much that we don't know. If they were to put out regulations right now, they probably wouldn't be the right ones.

So I think when we look at the balance between the Wild West of doing nothing and saying nothing on this and letting everyone do whatever they want versus locking everything down with prescriptive regulations going into the future, I think they've really tried to achieve a fine balance there. I think there's more work to be done, absolutely. But I think this gives people something to react to. It gives us a framework to start from.

I do want to go back to the issue of workplace. We're a safety organization, so we track deaths and injuries. The transportation industry is one of the most dangerous when it comes to workers' health and their injuries and deaths. They're just behind the construction industry for absolute numbers of fatalities, and just behind agriculture and mining for the rates. So it's a very dangerous job. Forty percent of workplace fatalities are motor vehicle crash related.

So those folks, we want to make them safer too. So if we can have that path to figure out how to take care of them over the long run, I think this will be good for them as far as their safety.

ROLE OF GOVERNMENT

Senator REED. There are so many opportunities for safety, for improved productivity, for better health effects. But then there's

the other side of the equation of what about the drivers that have done a good job, the defined pension, et cetera, and suddenly there's an autonomous vehicles and thank you very much for your service. We have to deal with that.

And that goes to the question of there are some people that might prefer the Wild West, let the chips fall where they may and this will work itself out. But that goes to, Mr. Rosekind, the agency has to have a role here.

So can you just give us a sense of what that role is going forward as you deal with a very sophisticated industry that is conscious of these issues, the safety advocates of the cyber dimensions? Can you just give us assurance that it won't be the Wild West but it will be innovative and based on good experience?

MR. ROSEKIND. You've just heard from pretty much everybody on the panel what a challenging arena to address. How do you make sure you don't clamp it down, all this great American entrepreneurial spirit that could save lives and make life so much better for everybody? Henry Claypool is over there. We talk about the elderly. He's representing the disabled community. Never had driver's licenses; don't need them. Autonomous vehicles can do it. We're just talking about great entrepreneurship and innovation being tremendous and not wanting the Wild, Wild West. That's why it's the right tool at the right time.

The policy is intended, we hope, to be literally as innovative for the government as it is for the technology companies. This is a first step. In fact, in there we make a commitment that in a year, with all of the different 23 next steps that are going on, on an annual basis this policy will be reviewed and updated. We can't do that with regulation in any kind of effective way.

So we're trying to strike for a very first effort that right balance, to support innovation and safety. People think they're at the opposite ends. We're trying to support that middle ground, safety and innovation, because we're talking about 32,092 lives, and we could save all of them. Autonomous vehicles should play a critical role in us getting there.

Senator REED. Thank you.

Thank you, Madam Chairman.

ENERGY AND ENVIRONMENT

Senator COLLINS. Thank you and I appreciate very much you bringing up the employment impact, which is certainly something for us all to think about as well.

I just have a couple more questions. One, Dr. Kalra, do you see any energy consumption and environmental benefits from the deployment of autonomous vehicles?

DR. KALRA. Absolutely. There are tremendous benefits and risks. But the benefits include, for example, if we have a large number of autonomous vehicles, we can increase the throughput of vehicles on our roads, reduce congestion, because a lot of congestion is actually caused by crashes. So there's a reduction in congestion, which immediately translates into a reduction in fuel consumption.

But if we think big, one of the biggest challenges we have in getting real alternative fuels, like hydrogen, into our transportation system is the infrastructure problem, meaning the distribution

problem of how many hydrogen stations do you need. And if an autonomous vehicle, fully autonomous, can drive itself to a hydrogen station in the future, gas up at 2:00 in the morning, or maybe there are long lines but no one cares because there's no one in there, autonomous vehicles could actually make possible transportation fuels that right now are struggling to get off the ground because of these logistical issues.

So the opportunities, dare I say it, are limitless for improvement. But again, the market signals should also be in play.

Senator COLLINS. Thank you.

ETHICAL CONSIDERATIONS

I have one final question that I wanted to ask each of you, and that is as I have gotten more involved in this fascinating issue, there is a question that keeps occurring to me, and that is the ethical considerations that a human driver makes when faced with two unpalatable choices. I wonder how do you teach a fully autonomous vehicle judgment, the kind of judgment that that professional truck driver has because of his or her many years of experience.

I was thinking—and we've all been in these kinds of situations where you have to make a split-second judgment on whether you're going to swerve around a vehicle that suddenly stopped or has spun on an icy road and risk going off the road and hitting a tree, perhaps killing yourself and your passengers, or a pedestrian or a bicyclist has darted in front of you in the road, and yet if you slam on the brakes you're going to be back-ended.

I mean, driving is not a simple task. It requires complex judgments all the time. So how does a self-driving vehicle make those kinds of judgments?

We'll start with the Administrator, and I'd like to go right down the line.

Mr. ROSEKIND. I am going to use that to address two things. You've just raised a great example of all the unknowns that are out there still related to autonomous vehicles, and the questions you've just raised—and there are many, many more related to ethics—there are no answers right now. But we are taking hands off the wheel, human hands, and putting them into the hands of a coder, because that car will be programmed to make decisions, basically.

So I think that's why, for example, people have questioned us—it's part of our 15-item assessment. We put ethics in there, and people have questions. When you think about when people are really going to accept these and have confidence, and we know the ethics are going to be an issue people are going to ask about, there are no answers right now. That's why it's in there for us to really look at the innovation of what people bring to this.

But let me just add one element to that that nobody is really talking about. I've been fortunate over about the last decade to get to know Captain Gene Cernan, the Apollo 17 astronaut, the last man who walked on the moon. One of my favorite sayings at safety meetings with him is, you know, I'm never going to live long enough to make all the mistakes that could kill me, right? So why does he go to safety meetings? For just that reason.

So think about how all of us learned to drive a vehicle. Our experience is those ethical decisions we're going to make are based on

our personal experience. Now, with autonomous vehicles, if we collect all of this information and share those cases where somebody died in some unique edge or corner case, if that information were shared, no other person should ever lose their life in that same situation because that information gets shared with the entire fleet, with every vehicle that's out there. That's the future that we could look toward, including in these ethical issues. We get to make decisions at some point that we could share and make sure that everybody basically is allowed the same opportunity to be safe.

Senator COLLINS. Thank you.

Ms. Hersman.

Ms. HERSMAN. I would probably fall back on the 10 years that I spent at the NTSB and say that we've got to take care of the data. That means we've got to learn from the data. It's got to be accessible. We have to have standardized, accessible formats.

If you think about black boxes on airplanes, that's how we learn. We know what happened. When it comes to autonomous vehicles, or even something that's in-between, in order to understand those decisions or those outcomes that you talked about, who was in charge? The car, the human, or some combination of the two?

We've got to share that data. When we talk about mistakes that occurred or close calls or things that happened, if we don't have all manufacturers willing to share those lessons learned, we're going to have to have each provider learn the lesson anew every time. So we've got to look at this holistically and say there will be failures. Will there be deaths? Absolutely, as this technology rolls out. Will there be things that happen that we don't expect? I can't tell you how many investigations we went into and people said this was never supposed to happen. This scenario was 10 to the minus 9th. It was never going to occur, and it did.

So things will happen, but that data to me is incredibly important to how this rolls out and to maintain that confidence going forward. We've got to learn.

Senator COLLINS. Thank you.

Mr. Brubaker.

Mr. BRUBAKER. Yes. So these ethical issues when they get raised cause me to lose the rest of my hair here. Part of the issue is we're all thinking about this in a human context. We're all sort of applying that judgment that we have to make, and what we're not cognizant of or what we're really not thinking through is that the level of situational awareness that these vehicles are going to have far exceeds that of a human. You're talking about redundant sensors. You're talking about the ability to see far beyond what a human eye can see and have this 360-degree, 24/7 situational awareness.

The data is important. I agree with the two prior speakers. But the thing that we have to remember is that this is all about artificial intelligence. This is about instantly assessing the situation, constantly assessing it, calculating probabilities and reducing the risk of being in an emergent situation where you've got to make two really unpalatable choices.

So my whole view on this, and this is from having lots and lots of conversations with people in the AI world and people who are looking at this and building the sensor suites and mashing up this technology, that those ethical considerations are—I don't want to

call them a red herring, but in many cases the whole notion is to create the kind of technology that will avoid those emerging situations in the first place.

Senator COLLINS. Thank you.

Dr. Kalra.

Dr. KALRA. I agree with the other speakers in almost every regard. I do want to say that when we raise these vivid examples of swerve or do this, people don't actually make ethical judgments when they decide what to do. They make snap judgments. They don't have time. They barely react. It's just a knee-jerk thing that you do without thinking about the consequences. The ethical things that we do when we drive, or the unethical things, are driving when we're intoxicated, or texting while we drive, and autonomous vehicles won't make those kinds of ethical mistakes.

But the ethical judgments that autonomous vehicles will have to make I don't believe are the pedestrian versus the driver but really about how the autonomous vehicle distributes risk on the road at every moment of driving. The example I'll give is when I'm driving and there's a bicyclist next to me, I'll drive in the middle of the lane because I want to distribute the risk differently between the bicycle, myself, and the other people who might be on the road. Autonomous vehicles will have to make those judgments, and I think attention needs to be placed on how do autonomous vehicles ethically distribute regular risk on the road rather than in the sort of imminent crash cases, and there's no answers to this because even ethicists don't have the thing that's the right thing to do. But I would urge us to put our attention on those everyday kinds of ethical problems.

Senator COLLINS. Thank you very much.

Senator Reed, do you have anything else?

Senator REED. No.

Senator COLLINS. I want to thank you all for testifying today. This was a superb panel.

This technology is so fascinating and moving so quickly, and the fact that it could substantially reduce or perhaps one day even eliminate the 94 percent of crashes that are attributable to human error is truly an astonishing fact, and that's one fact that prompted me to call this hearing.

I appreciate your advancing our understanding of the issues, the technology, and the policy considerations that we will have to face.

CONCLUSION OF HEARINGS

The hearing record will remain open until next Wednesday, November 23rd, 2016. There may be additional questions submitted by us or by our colleagues for the record. We very much appreciate your cooperation, and we look forward to continue to working with you.

This hearing is now adjourned.

[Whereupon, at 3:53 p.m., Wednesday, November 16, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

MATERIAL SUBMITTED SUBSEQUENT TO THE HEARING

[CLERK'S NOTE.—The following outside witness testimonies were received subsequent to the hearing for inclusion in the record.]

PREPARED STATEMENT OF JOHN BOZZELLA, PRESIDENT AND CEO, ASSOCIATION OF
GLOBAL AUTOMAKERS

On behalf of the Association of Global Automakers ("Global Automakers"), I am pleased to provide the following statement for the record of the Senate Committee on Appropriations Subcommittee on Transportation, Housing and Urban Development, and Related Agencies hearing entitled "The Automated & Self-Driving Vehicle Revolution: What Is the Role of Government?" Global Automakers represents international automobile manufacturers that design, build, and sell cars and light trucks in the United States. These companies have invested \$52 billion in U.S.-based facilities, directly employ more than 100,000 Americans, and sell 47 percent of all new vehicles purchased annually in the country. Combined, our members operate more than 300 production, design, R&D, sales, finance and other facilities across the United States.

The automotive industry is in the midst of an unprecedented wave of technological innovation that is redefining how we think about transportation. Advancements in connected and automated vehicle technology promise to enhance mobility, help save lives, improve transportation efficiency, and reduce fuel consumption and associated emissions. Over the past several decades, our members have made tremendous strides in safety by improving vehicle crashworthiness; today, automakers are deploying crash avoidance technologies to help prevent crashes from occurring altogether. Our members are at the forefront of this innovation, as they have made, and continue to make, substantial investments in the research and development of automated vehicle systems and other advanced automotive technologies.

With the introduction of advanced sensors such as cameras and radar, a number of vehicles on the road today already provide automated functionality through advanced crash-avoidance and convenience features like automatic emergency braking, lane keeping assist, and adaptive cruise control. These systems, which are foundational to the development of more highly automated systems, are designed to provide support to the driver only in certain situations. As these systems become more advanced, a vehicle's capability to operate without active control by the driver will increase.

The next breakthrough in vehicle safety, and a critical technology for realizing the benefits of automated driving, is Dedicated Short Range Communications (DSRC) connected car technology. This technology supports vehicle to vehicle communications (V2V) allowing cars to have greater 360-degree situational awareness. Through DSRC, vehicles can speak to each other and to surrounding infrastructure at the rate of ten times per second to avoid crashes and improve mobility. This technology is on the road today; pilot projects and deployments around the country are using DSRC supported applications to demonstrate the value of connected mobility to the traveling public. Soon, and increasingly into the future, we will share our roads with automated vehicles; V2V has the ability to connect all vehicles, regardless of mode or level of automation.

While we are indeed at the cusp of a transportation revolution through connected automation, these transformations are not inevitable nor accidental. Public policy can either spur investment and innovation, or hinder them, depending on which policy choices are made. Effective public policy on connected and automated vehicles should have two components. First, it should be flexible and provide room for innovators to develop, test and sell new technologies. Overly prescriptive and rigid regulation would slow and limit innovation. Second, manufacturers should be able to build vehicles and systems that can be sold in all fifty States. A patchwork of inconsistent laws and regulation would be unworkable.

The National Highway Traffic Safety Administration (NHTSA) Federal Automated Vehicle Policy, released in September 2016, provides a policy framework that is more flexible and nimble than the formal rulemaking process, and recognizes that technology can advance more rapidly than regulation. Last month, NHTSA issued its Cybersecurity Best Practices for Modern Vehicles to complement the important efforts already underway within the Automotive Information Sharing and Analysis Center (Auto-ISAC) to develop industry-led best practices to enhance vehicle cybersecurity as systems become more electronic and connected. Issues of consumer

privacy have also been addressed through the automakers' consumer privacy protection principles. These actions, by Federal regulators and industry, help spur the development of live-saving technologies and ensure that the public has confidence in them.

The NHTSA's Federal Automated Vehicle Policy is intended to address a number of key policy questions and is a positive first step to demonstrate Federal leadership. The Policy is divided into four main sections. First, the Vehicle Performance Guidance for Automated Vehicles outlines recommended practices for the safe pre-deployment design, development and testing of highly automated vehicle systems prior to the sale or operation on public roads. The Guidance was designed to be flexible and dynamic; it is intended by NHTSA to highlight important areas that manufacturers should consider and address as they design and test their systems. The Guidance provides for a "Safety Assessment Letter," a voluntary tool by which developers would communicate to the agency how it addresses fifteen key safety areas in designing their vehicles and systems. NHTSA is in the midst of developing a template for the Letter, and we believe NHTSA should establish a clearly defined and practicable approach that does not create an undue administrative burden that could slow innovation. It is also our expectation that NHTSA will not use the Guidance and the Safety Assessment Letter as a mechanism for "premarket approval" (or "premarket disapproval") of automated vehicle technology, as this would extend beyond the agency's current authority.

Second, the agency has developed a Model State Policy which seeks to provide guidance to the States in order to help support a more uniform nationwide approach to automated vehicle policy. While the Policy cannot in itself preempt State action, it does set a clear marker in defining the roles of State government in addressing issues related to vehicle automation. We support the strong statements in the Policy that affirm that "[t]he shared objective is to ensure the establishment of a consistent national framework rather than a patchwork of incompatible laws," and that "[the] Guidance is not intended for States to codify as legal requirements for the development, design, manufacture, testing, and operation of automated vehicles."

However, despite the guidance in the Model State Policy, several States are in the process of establishing their own regulatory programs for automated vehicles. In some instances, State departments of motor vehicles would assume the responsibility of determining whether a particular automated vehicle or system is safe and thus may be sold or operated in the State. Such State-by-State regulations would present a significant obstacle to the future testing and deployment of automated vehicles. While the Model State Policy clearly delineates the Federal roles and States' roles, it does not clearly limit or prevent State regulation of automated vehicle design and performance.

Additionally, we have some concerns with certain recommendations in the Model State Policy that encourage States to regulate automated vehicle test programs. Already, we have seen State proposals to require manufacturers to obtain an ordinance authorizing testing from each local jurisdiction in which testing will be conducted. However, Federal law authorizes original manufacturers to conduct on-road test programs and authorizes NHTSA to regulate test programs. Allowing a patchwork of State and local test requirements for automated vehicle testing would significantly obstruct the development of these vehicles. We are open to working with NHTSA and Congress to ensure there is a path forward for automated vehicle deployment without unnecessary obstacles at the State level.

Third, the Federal Policy provides a useful description of the agency's current regulatory tools, which includes issuance of safety standards, interpretations of the meaning and application of standards, and exemptions from standards, as well as the agency's ability to take enforcement action regarding safety related defects. Each of these tools could have a valuable application in facilitating and regulating the entry of automated vehicles into U.S. commerce. At the same time, we must consider the long-term efficacy of these tools in determining whether other regulatory and non-regulatory policies may be appropriate and necessary in the future. It is important that any action be data driven and technology neutral.

Finally, the agency discusses the potential new tools and authorities that may be necessary in addressing the challenges and opportunities involved in facilitating the deployment of automated vehicles. We agree with NHTSA's assessment that new authorities could assist the agency in facilitating the development and introduction of automated technology. However, imprudent legislation in this area could have the opposite effect and delay technology development. For example, we see no basis at all for any change to the self-certification system for vehicles. The Federal Policy's discussion of the Federal Aviation Administration (FAA) process of "premarket approval" is not practical given the structural differences between the automotive industry and aviation sector, and implementation of such an approach could signifi-

cantly slow innovation. Similarly, the Safety Assessment Letter should not be used as a means to prohibit testing or deployment of technology without adequate data to support an unreasonable safety risk.

We believe that NHTSA's Federal Automated Vehicle Policy is an important first step in the development of a flexible and nimble approach that can adapt to the pace of technology. However, the document requires further clarification and refinement to achieve these goals. Global Automakers is currently preparing comments on the NHTSA guidance and will provide a copy to the Committee upon submission to NHTSA. Additionally, we agree with NHTSA that the agency should update its Federal Automated Vehicle Policy and regularly review the Policy, as it is designed to never be frozen or final. Global Automakers and its members remain committed to working with Federal, State, and local governments to ensure there is a flexible, consistent framework for automated vehicle technologies so consumers can fully realize the benefits as quickly as possible.

In addition, the Federal Government must move expeditiously to establish a framework for the deployment V2V communications through DSRC connectivity. NHTSA is developing a new vehicle safety standard that would require vehicles to be equipped with DSRC technology. Global Automakers looks forward to the release of the proposed rule, and will continue to work with the Federal Communications Commission to ensure that the 5.9 GHz Safety Spectrum remains free from harmful interference to support DSRC technology.

The automobile industry continues to provide innovative technologies with demonstrable safety, mobility, and environmental benefits. To achieve these benefits, there must be close collaboration and coordination among and between government, industry, academia, and other stakeholders. Global Automakers and our member companies believe that connected and automated vehicles represent the next giant leap towards our shared long-term goal of safer and cleaner, and more efficient vehicle transportation.

PREPARED STATEMENT OF PROPERTY CASUALTY INSURERS ASSOCIATION OF AMERICA

There are public perceptions that auto accidents and insurance costs are decreasing. In fact, our roads are becoming increasingly dangerous and auto repair and medical costs are increasing. According to the National Highway Transportation Safety Administration (NHTSA), 17,775 people died on our Nation's roads in the first half of 2016. Traffic deaths are increasing at the fastest rate in 50 years, with a 10.4 percent increase in the first 6 months of this year. Even adjusted for the increase in vehicle miles traveled (VMT), the fatality rate increased 6.6 percent to 1.12 per 100 million VMT. Non-fatal injuries are on the rise as well, increasing 28 percent since 2009, according to the National Safety Council. Someday, self-driving cars may reduce the number of accidents and deaths. However, the potential of automated vehicle technology stands in sharp contrast to what is happening on our roads today.

The Property Casualty Insurers Association of America (PCI) is composed of nearly 1,000 member companies, representing the broadest cross section of insurers of any national trade association. PCI members write \$202 billion in annual premium, 35 percent of the Nation's property casualty insurance. That figure includes over \$97 billion, or 42 percent, of the auto insurance premium written in the United States. PCI's analysis has found that since 2013, auto claims frequency has increased nearly 5 percent, increasing the overall cost of claims by more than 18 percent. PCI has analyzed the recent increase in auto insurance claim frequency and found strong correlations with traffic congestion and distracted driving, weaker correlations from increasing populations of novice and older drivers, and some correlation with liberalized marijuana laws.

While it is important to prepare for the automated vehicle of the future, we urge policymakers to continue to focus on the auto safety challenges that face us today, such as distracted and impaired driving. H.R. 22, the FAST Act, provides for increased public awareness, improved enforcement, and establishing an enforceable impairment standard for drivers under the influence of marijuana. These provisions are critical to reducing accidents, injuries and deaths on our Nation's roads. The importance of addressing these issues was also the subject of a bipartisan letter from 23 members of Congress to Transportation Secretary Foxx urging prompt implementation of these FAST Act provisions.

[The bipartisan letter is attached.]

NHTSA recently unveiled its "Federal Automated Vehicle Policy," which is intended to provide guidance for States on the testing and deployment of highly automated vehicles (HAVs). While mentions of insurance are few, the new policy raises

issues that are important to the automobile insurance market as it seeks to adapt and develop new products to meet consumer needs.

RECOGNITION OF STATE REGULATION OF INSURANCE AND LIABILITY ISSUES

NHTSA's policy identifies the following as Federal responsibilities: setting and enforcing safety standards for motor vehicles, recalls, promoting public awareness and providing guidance for the States. NHTSA's policy also recognizes that it is the State's role to license drivers and vehicles, enforce traffic laws, regulate motor vehicle insurance, and legislate regarding tort and criminal liability issues pertaining to automated vehicles. PCI shares the view that the States should continue to have primacy on motor vehicle insurance and liability issues as they do today, and we support NHTSA's recognition of that role.

NHTSA's policy also repeats the recommendation from its 2013 guidance that entities testing automated technology should provide proof of financial responsibility coverage of at least \$5 million. PCI has not taken a position on this coverage requirement. However, as HAVs are deployed for public use, States will need to consider what, if any, changes need to be made to existing State motor vehicle financial responsibility laws.

DATA COLLECTION AND ACCESS

As policymakers consider what data should be collected and retained by automated vehicles, it is essential that insurers have reasonable access to the data for providing customer service for claims handling and underwriting purposes. In many auto accidents, apportionment of liability is likely to hinge upon whether or not a human driver or the vehicle itself was in control and what actions either the driver or the vehicle took or did not take immediately prior to the loss event. Access to data for insurers will speed claims handling and potentially avoid disputes that could delay compensation to accident victims. Access to historical anonymized data on the different automated vehicle systems will also be important to help insurers innovate and develop new insurance products as the nature of the risk changes.

CONCLUSION

Automated driving technology holds great promise for the future. Implementing clear policies on the Federal and State roles in regulating automated vehicle technology and ensuring that insurers have access to vehicle data on reasonable terms to efficiently handle claims, develop products and underwrite are essential to that future. However, policymakers must not lose sight of the auto safety issues that face us today. We look forward to working with policymakers at the Federal and State level to reduce accidents on our roads today and in the future.

ATTACHMENT

Congress of the United States
Washington, DC 20515

May 18, 2016

The Honorable Anthony Foxx
Secretary
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Secretary Foxx,

Auto accidents and road fatalities are on the rise in the United States. In January, the National Highway Traffic Safety Administration (NHTSA) reported that in the first nine months of 2015, fatalities increased by more than 9 percent over the same period in 2014. Statistics from the National Safety Council (NSC) paint an even bleaker picture. The 38,000 people who died on U.S. roads in 2015 represent the largest increase in highway fatalities in the last 50 years. And early last year, before the increase in fatalities, NHTSA's estimate of auto accident costs totaled \$836 billion per year.

According to the NSC, there are a number of potential causes for this increase in accidents, including distracted driving on increasingly congested roads and a rise in drug impaired driving. These trends point to the need for the Department of Transportation (DOT) to promote awareness and provide leadership and guidance to the states on these auto safety issues.

Congress has already taken the first step with the passage of H.R. 22, The FAST Act, which contains important initiatives to address these issues. With your leadership and guidance, we can do more to help keep motorists and pedestrians safe. DOT can increase public awareness of these issues by implementing the "High Visibility Enforcement Program", intended to reduce alcohol and drug impaired driving and to increase seat belt usage. In addition, the Department's management of "National Priority Safety Program" will be critical in helping to reduce highway deaths and injuries by allocating funds among states that reduce impaired driving, distracted driving and deaths and injuries among unrestrained vehicle occupants.

The FAST Act also directs DOT to study the feasibility of establishing an impairment standard for drivers under the influence of marijuana, and develop recommendations on how to implement such a standard.

Recent trends indicate the need for urgent action on these and other auto safety initiatives. On behalf of our constituents, we urge DOT to promptly implement the "High Visibility Enforcement Program" and "National Priority Safety Programs" and expedite the completion of the marijuana impairment study to provide critical guidance to combat marijuana impaired driving.

Sincerely,


Rodney Davis
Member of Congress
Daniel Lipinski
Member of Congress

Pat Tiberi

Patrick Tiberi
Member of Congress

Brad Sherman

Brad Sherman
Member of Congress

Steve Stivers

Steve Stivers
Member of Congress

Joyce Beatty

Joyce Beatty
Member of Congress

Mimi Walters

Mimi Walters
Member of Congress

Julia Brownley

Julia Brownley
Member of Congress

Ryan Zinke

Ryan Zinke
Member of Congress

Judy Chu

Judy Chu
Member of Congress

Mike Bishop

Mike Bishop
Member of Congress

Denny Heck

Denny Heck
Member of Congress

Peter King

Peter King
Member of Congress

Robert Pittenger

Robert Pittenger
Member of Congress

Robert J. Dold

Robert J. Dold
Member of Congress

Bill Posey

Bill Posey
Member of Congress

Randy Hultgren

Randy Hultgren
Member of Congress

Dan M. Donovan, Jr.

Daniel M. Donovan, Jr.
Member of Congress



Frank Guinta
Member of Congress



Steve Israel
Member of Congress



Tom Emmer
Member of Congress



Barry Loudermilk
Member of Congress



Tom MacArthur
Member of Congress

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