

**MOVING AMERICA: STAKEHOLDER PERSPECTIVES
ON OUR MULTIMODAL TRANSPORTATION SYSTEM**

HEARING

BEFORE THE

SUBCOMMITTEE ON SURFACE TRANSPORTATION
AND MERCHANT MARINE INFRASTRUCTURE,
SAFETY AND SECURITY

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

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FEBRUARY 15, 2017
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ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

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**MOVING AMERICA: STAKEHOLDER
PERSPECTIVES ON OUR MULTIMODAL
TRANSPORTATION SYSTEM**

WEDNESDAY, FEBRUARY 15, 2017

U.S. SENATE,
SUBCOMMITTEE ON SURFACE TRANSPORTATION AND
MERCHANT MARINE INFRASTRUCTURE, SAFETY AND SECURITY,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2:31 p.m. in room SR-253, Russell Senate Office Building, Hon. Deb Fischer, Chairman of the Subcommittee, presiding.

Present: Senators Fischer [presiding], Nelson, Cantwell, Klobuchar, Blumenthal, Booker, Udall, Peters, Duckworth, Hassan, Wicker, Blunt, Cruz, Inhofe, Moore Capito, Gardner, and Young.

**OPENING STATEMENT OF HON. DEB FISCHER,
U.S. SENATOR FROM NEBRASKA**

The CHAIRMAN. Good afternoon, everyone. And welcome to the Surface Transportation Subcommittee. I thank you for being here today for our first hearing of the 115th Congress.

Today's hearing, entitled, "Moving America: Stakeholder Perspectives on our Multimodal Transportation System," brings together an esteemed panel of transportation leaders.

As many of you are aware, President Trump mentioned strengthening and renewing our Nation's transportation infrastructure in his inaugural address. I'm encouraged to see the President making transportation infrastructure a top priority.

As Congress and this new administration seek to develop infrastructure solutions, my hope is that we address future infrastructure funding challenges. Like many of my colleagues, I am proud of the bipartisan work Congress did to enact the Fixing America's Surface Transportation, or the FAST Act.

However, our work is not done. According to the latest projections by the Congressional Budget Office, the Highway Trust Fund will face a deficit of over \$100 billion in the next 5 years, following the expiration of the FAST Act. The Highway Trust Fund serves as a fair and equitable source of transportation funding for all states.

To address this funding shortfall, I've introduced the Build USA Infrastructure Act, modeled on Nebraska's successful transportation funding efforts. This bill would divert a portion of the revenues collected by the Customs and Border Patrol on freight and

passengers at ports of entry to cover the projected deficit. In addition, the bill would establish measures to offer states greater flexibility in initiating critical transportation infrastructure projects.

Certainty in Federal highway funding and project flexibility for states should be key elements of any major infrastructure package. I also suggest that Congress build off of the successful freight programs established in the FAST Act. The multimodal freight program provides dedicated formula funding to states for critical urban and rural corridors.

It's important that our work to make America's transportation system more reliable and efficient also addresses the challenging regulatory environment. In 2015, I authored the TRUCK Safety Reform Act. This bill reformed the controversial and obscure regulatory process at the Federal Motor Carrier Safety Administration, and it was included in the FAST Act. Because of this measure, the FMCSA now needs to conduct a more transparent, inclusive, and responsive regulatory process with stronger cost-benefit analysis.

The FMCSA's "entry level driver training" negotiated rulemaking is a good example of stakeholders coming together with the agency to produce positive outcomes and increased safety.

I hope to work closely with Transportation Secretary Elaine Chao, my colleagues here in Congress, and stakeholders to address similar regulatory process challenges across agencies at the DOT.

For example, in the previous administration, the Federal Railroad Administration's electronic braking rule represented a multi-billion dollar mandate without clear safety benefits. In fact, several railroads had tested and then abandoned these systems, a fact effectively disregarded by the FRA. This effort was followed by an ideological "government knows best" PR campaign that criticized operators opposed to the mandate.

In reviewing this rulemaking, the Government Accountability Office found that, "DOT's modeling lacked transparency as the information published may not be sufficient for a third party to replicate . . ."

With new leadership at the FRA, we hope the agency will improve, but we cannot rely on that alone. Congress must act to improve the use of data, risk-based analysis, transparency, collaboration, and objective-based rules at the FRA.

As we examine how the FRA conducts its regulatory process, we must consider the cumulative impact of regulations across the government on a freight rail industry that is projected to infuse \$22 billion in private investment in our Nation's transportation system. We should all applaud this tremendous investment in our transportation network.

Today, I look forward to hearing how Congress can work to strengthen our Nation's transportation infrastructure while enhancing safety, reliability, innovation, and efficiency across the entire network.

I would now recognize the Ranking Member of the Commerce Committee, Senator Nelson, for any statement he wishes to make.

Senator BOOKER. No, you go ahead.

Senator NELSON. Well, I always want the Ranking Member of the Subcommittee to go first. So would you, please?

Senator BOOKER. Sir, your wish is my command.

The CHAIRMAN. Ranking Member Booker, great to have you.
 Senator BOOKER. Thank you. Thank you very much.

**STATEMENT OF HON. CORY BOOKER,
 U.S. SENATOR FROM NEW JERSEY**

Senator BOOKER. I actually first want to give some acknowledgement and gratitude to the Chairperson of this committee. One of the things I feel most excited about in my time as a Senator has been the partnership I've had with the Chairperson of this committee. We have found a good way to work together in a bipartisan fashion to actually move some very positive things forward. When I'm talking to friends of mine, I often describe this relationship as a bipartisan Batman and Robin, and I'll say here for the record just in case you have heard about that, I am Robin, you are Batman.

[Laughter.]

Senator CRUZ. Nice tie.

Senator BOOKER. Thank you very much. You should see the full gear.

[Laughter.]

Senator BOOKER. But I do want to say that I still believe even with the progress that we've made, we're at a point in our Nation where we're in a crisis, we are in an infrastructure crisis. The American Society of Civil Engineers ranks American infrastructure now at D-plus. Literally in a generation, my father's generation, we had the number one ranked infrastructure on the planet Earth, and now our infrastructure in this country is not even in the top 10.

Nothing about our country, we are a phenomenal gift to humanity in so many ways, nothing about our country should be a D-plus. We should lead the globe in infrastructure, and that's in particular because having a great infrastructure is a critical ingredient to having a great economy.

That's why I use the word "crisis" very purposefully, because the Chinese symbol—and the Chinese obviously spending 5 percent of their GDP on their infrastructure, us spending 1 percent or less—the Chinese symbol for a crisis is danger and opportunity. There is a tremendous opportunity here to help infuse our economy with strength, to put people back to work—Americans back to work—to give industries a boost through Buy America provisions. All of these things give us an opportunity that is especially important now because the cost of capital is so low.

For those of us who are concerned about debt-to-GDP ratio, we understand that every dollar invested in infrastructure growth actually grows our economy by two dollars, making that debt-to-GDP ratio even better.

We are a nation that can and must do better, and there is bipartisan space for us to work together to get it done. One of the areas I'm obviously most concerned about is the Northeast corridor in which I live and reside and represent. One of the worst chokepoints in the Nation in terms of the value of this piece of real estate, the greater—I call it the greater Newark metropolitan area, but some people call it the greater New York metropolitan area, is one of the most economically productive regions on the planet Earth, it has one of the most inadequate infrastructures there are. The choke-

point that exists there is literally strangling our national economy, and that's one of the reasons why the Gateway Project has been so important to me, and I value my partnerships again with Republican colleagues like the Ranking Member, like Senator Roger Wicker.

I would be remiss if I don't speak finally, Chairwoman, about one very important thing, which is just this idea of safety. It doesn't have to be an either/or. We can find ways to control regulations. I've actually learned a lot from Senator Fischer's approach, but we can also do things to emphasize the safety and security of our highways, of our airways, and more. And we should have that balance.

Right now, we're seeing a startling increase of traffic fatalities on our highways specifically involving large trucks. That does not have to be the case. We can and must do better to elevate human life.

So I'm excited about this Congress. I'm excited about under the leadership of my Chairman that we've put forth, Democrats put forth, a trillion dollar proposal for improving our infrastructure. I think it's a solid proposal, it's a fiscally wise proposal, and those investments will help to really make our economy boom, but not just for today, for tomorrow.

Remember, we got an inheritance from our grandparents, the best infrastructure on the globe, we've now trashed that inheritance. It's time for our generation to step up and do the right thing, make the investments so that our children and grandchildren can again be number one on the planet Earth, not just for the quality of our infrastructure, but because that infrastructure ensures we will continue to be the dominant economy and innovators on the globe for the future.

Thank you very much, Chairman.

The CHAIRMAN. Thank you, Senator Booker.

And now I would like to recognize the Ranking Member of the Full Committee, Senator Nelson.

**STATEMENT OF HON. BILL NELSON,
U.S. SENATOR FROM FLORIDA**

Senator NELSON. Thank you. I want to point out Senator Peters and Senator Cantwell, along with the Ranking Member of this subcommittee, we really got some terrific Members assigned on this side, Amy Klobuchar, Richard Blumenthal, Tom Udall, Tammy Baldwin, Tammy Duckworth, and Maggie Hassan. So you can see this subcommittee has a lot of interest.

Now, for example, you need a tunnel. There is a chokepoint. There are one or two tunnels there between New Jersey and New York. Right here, coming across the Potomac River from the south there's a chokepoint. We've got to shore these up.

Dr. Lofgren is concerned with the roads and bridges. There are 56,000 structurally deficient bridges in this country. In Florida alone, there are 200 that are determined by the Florida Department of Transportation as structurally deficient. And, of course, we remember the very tragedy that we saw in Minneapolis with the collapse of an interstate bridge.

I can go on and on, whether it's the bottleneck at our ports or the congestion on our roads, this aging infrastructure goes on and

on. Now, there is going to be a lot of consensus around here for spending on infrastructure, but then you're going to get to the question, How are you going to pay for it?

All of your industries—and I assume, Mr. Gurd, you are one of the shippers, so you've got the freight railroad, you've got the passenger railroad, you've got the trucks right here at the table. Tell us what we need to know so that we can light a fire under these folks that keep sticking their heads in the sand to not fix this national security issue of a tunnel going into New York, et cetera, et cetera.

Thank you, Madam Chairman.

The CHAIRMAN. Thank you, Senator Nelson.

At this time, I would like to recognize Senator Cruz, from Texas, who will be introducing the BNSF Executive Chairman.

Senator Cruz.

**STATEMENT OF HON. TED CRUZ,
U.S. SENATOR FROM TEXAS**

Senator CRUZ. Thank you, Madam Chairman and Ranking Member Booker, for holding this important hearing. And it's a privilege to join you this afternoon and have the opportunity to introduce my fellow Texan, Matt Rose, who's the Executive Chairman of the Burlington Northern and Santa Fe Railway Company, otherwise known as BNSF.

As many of you know, Matt has a long history working within the rail industry, which includes having served 13 years as Chief Executive Officer and 11 years as Chairman of BNSF. In this role, Matt has led one of North America's leading freight transportation companies, which has a rail network of 32,500 route miles in 28 states and three Canadian provinces—you've always got to be careful traveling to Canada—and which transports millions of shipments each year, thanks to the dedication and commitment of 41,000 employees.

As all of you know, this is no easy task. Over the past few years, the rail industry has experienced declines in commodities such as coal and crude oil moving across rail networks, has faced challenges from environmental advocacy groups opposing the construction of facilities, and must still ultimately operate within one of the most regulated industries in the United States.

In addition to his leadership at BNSF, Matt and his wife, Lisa, are very active within the Fort Worth community in Texas, where they started Gatehouse, a supportive living community where women and their children in crisis can discover a new path for permanent change.

Matt also dedicates his time to Read Fort Worth, a coalition of businesses, civic, education, philanthropic, nonprofit, and volunteer leaders working to ensure that 100 percent of Fort Worth third graders are reading on grade level by 2025.

In short, Matt brings a wealth of knowledge about the rail industry as well as the communities in which they serve. I look forward to his testimony before this subcommittee this afternoon as we explore both the challenges and the opportunities facing the rail industry, as well as the steps that this subcommittee can take to help

ensure American competitiveness today and beyond, for our nation's transportation sector.

The CHAIRMAN. Thank you, Senator Cruz.

And now I would like to recognize Senator Peters, who will introduce Dow Chemical's Tom Gurd.

**STATEMENT OF HON. GARY PETERS,
U.S. SENATOR FROM MICHIGAN**

Senator PETERS. Well, thank you, Chairman Fischer and Ranking Member Booker, for having this very important hearing.

And I would like to introduce Mr. Tom Gurd to the Subcommittee today, another fellow Michigander.

Mr. Gurd is the Vice President of Integrated Supply Chain for the Dow Chemical Company and is also a member of the American Chemistry Council. And I am pleased that he has taken the time to be with us to share his thoughts on how we can develop policies that foster growth in the manufacturing sector and grow our economy.

Our state of Michigan, which we're very proud to live in, has a long history of being a leader in scientific and engineering advancements, and Dow Chemical Company is certainly an excellent example of my state's talented and innovative companies in today's global workforce.

Founded and headquartered in Midland, Michigan, Dow has grown to be one of the world's largest chemical companies, in part, due to its commitment to continually pushing scientific boundaries of plastics, chemicals, and agricultural products. These products reach consumers across the United States and in nearly 160 countries around the world, and they reach those locations by efficiently using our multimodal transportation system.

Companies like Dow depend on a well-maintained, safe, and efficient transportation system to move their goods to market. However, our transportation infrastructure is falling behind the rest of the developed world. I believe that we have to invest in 21st century infrastructure that focuses on new and emerging technologies, which is one reason why I'm a huge proponent of connected and automated vehicles, which will revolutionize the way that we move people and goods in the next 10 to 20 years.

But I'm honored to have had the opportunity to work with Tom in Dow Chemical on a range of critical policy issues, and I believe that Tom's understanding of our nation's transportation needs will be of great benefit to this Subcommittee and to the Committee as a whole.

Thank you for being with us.

The CHAIRMAN. Thank you, Senator Peters.

And it's my pleasure to introduce Dr. Christopher Lofgren, who has been the Chief Executive Officer and President of Schneider National, Incorporated, since August 2, 2002. Dr. Lofgren served as the Chief Operating Officer of Schneider from 2000 to 2002, and served as its Chief Information Officer and Chief Technology Officer.

He holds a Bachelor's degree—a Bachelor of Science and Master of Science degrees in industrial and management engineering from

Montana State University, and a Ph.D. in industrial and system engineering from the Georgia Institute of Technology.

We are also joined today by Wick Moorman. Welcome. The Amtrak Board of Directors appointed Charles W. "Wick" Moorman IV, President and Chief Executive Officer effective September 1, 2016. Mr. Moorman is the tenth executive to lead America's railroads since the company began operations in 1971. Prior to coming to Amtrak, Mr. Moorman spent approximately 4 decades at Norfolk Southern Corporation and its predecessor, Southern Railway. He retired as Chairman and CEO of NS in 2015.

Mr. Moorman earned a Bachelor of Science in Civil Engineering from the Georgia Institute of Technology in 1975 and a Master's of Business Administration at Harvard University.

So welcome to all of you gentlemen. We will now begin with your opening statements. And I would ask Mr. Rose if you would please begin with yours. Thank you.

**STATEMENT OF MATTHEW K. ROSE, EXECUTIVE CHAIRMAN,
BNSF RAILWAY COMPANY**

Mr. ROSE. Thank you, Senator Fischer, Senator Booker, members of the Subcommittee, for inviting me here to appear before you today on our perspective as a stakeholder in the U.S. supply chain.

I would like to start by thanking the Committee for its good work last Congress on a number of matters important to the rail industry.

The U.S. supply chain is changing under our feet. The rail industry is going through a transition driven by shifts in the energy landscape, our customers' ever-changing supply chain, our competitors, and, yes, public policy, such as how our Nation's highway infrastructure is funded and whether railroads will be constrained from innovating.

Rail volume in recent periods are lagging the already lethargic U.S. manufacturing and economic growth. Over the past 5 years, GDP has grown about 2 percent in our United States, while rail volumes have declined actually by two-tenths of 1 percent.

So the big game changer for the industry is the loss of the coal business. The cumulative impact of environmental policies, the price of natural gas, and the incentives provided to renewables has resulted in about a 50 percent decline in coal's historic volumes. Weak consumer demand and changing consumer habits has also impacted our international intermodal markets. There is softness in other segments as well.

We do believe that 2017 will be a better year, but we still will not reach historic peak volumes. We're hopeful that Congress will enact policies that help stimulate the economy, like corporate tax reform, sensible regulatory reforms, coupled with growth-oriented trade policies.

We will also be focused on the rail industries national labor negotiations, which we are now in the final stages. A work stoppage would negatively impact rail volumes and the entire U.S. economy.

For railroads in 2017 and beyond to remain competitive will require a level playing field across competing freight transportation modes. For our part, we will continue to focus on cost control in all areas of the operation and make significant investments in our

track, equipment, and new technologies consistent with this evolving business environment.

My written testimony discusses the many operating practices in technologies and use being developed which promote necessary efficiencies and also increase safety. By all measures, recent years have been the safest in rail history. In 2016, reportable train accidents on BNSF were at historic lows, down more than 16 percent when compared to 2015. This reflects the increased leverage of data from our expansive trackside detector network and other technologies as well as the effectiveness of our annual maintenance and ongoing employee training and rules compliance program.

BNSF's ability to earn adequate returns becoming increasingly more efficient supports these continuous safety improvements and our efforts to consistently meet our customer service needs and their expectations.

BNSF's risk management goes beyond compliance with government regulations. We're already transitioning to the next level of safety through technology-driven data integration provides a comprehensive view into how various conditions on the railroad interact with each other, identifying issues well before problems can occur. We think regulations should incentivize these efforts in contrast to which some which we believe currently discourage it.

Over the last 130 years, unique legal and regulatory schemes have developed that govern nearly every facet of the rail industry. I believe I can affirm that the railroads are one of the most "command and control" regulated industries in the United States. We believe that regulation can be improved to take into account a railroad safety record and the successful risk management activities. Neither the Congress nor the FRA has taken a comprehensive look at the cumulative impact and the effectiveness of the totality of railroad regulation.

My written testimony details recommended steps for improving the regulatory process. They include improving procedures for granting waivers, ensuring rules provide benefits that outweigh their costs, and avoiding or removing potential redundancies.

Congress should also direct the FRA to account for the rail industry's exceptional safety record, which would support movement toward a more balanced, collaborative, and transparent approach to performance-based regulatory policies.

Turning to surface transportation policy, we support additional investments in highways. We know it's necessary. The General Fund's transfers to the Highway Trust Fund, now totaling some \$140 billion since 2008, is not a sustainable model for the future, and unfairly tilts the playing field against privately funded freight railroads. Congress must find a new way to at least increase the commercial user's contribution to the infrastructure that they use through increased fuel taxes, a weight/distance fee, or similar proxy. This isn't something that must happen eventually; it's time to look at it now. The trucking industry, to its credit, also recognizes this.

In closing, whether the issue is highway funding, truck weights, regulatory policy, or taxes, I would ask policymakers to carefully consider freight rail's public benefits, including environmental, sup-

ply chain efficiencies, and reduced highway congestion, and maintenance costs.

Whatever policy you enact, will it result in more or less freight on the privately funded freight railroads? That's the important question. And more is better for us and the country.

Thank you very much.

[The prepared statement of Mr. Rose follows:]

PREPARED STATEMENT OF MATTHEW K. ROSE, EXECUTIVE CHAIRMAN,
BNSF RAILWAY COMPANY

Introduction

Thank you Senator Fischer, Senator Booker and Members of the Subcommittee for the opportunity to submit testimony and appear before the Subcommittee to provide our perspective as a stakeholder in the U.S. supply chain. It is a privilege to discuss with you the challenges and opportunities that may affect our outlook. As we look at 2017, we see a time of change and uncertainty. As a railroad, understanding the future is critical; we make long-term decisions and it is crucial to match our capacity—manpower, track, equipment and facilities—with demand. If we have too little capacity, then we can suffer service issues, like those in 2013–2014, with which the Committee is familiar. If we overestimate and have too many assets, our ability to continue to make strong investments could be jeopardized, which also negatively impacts our customers, and the economy.

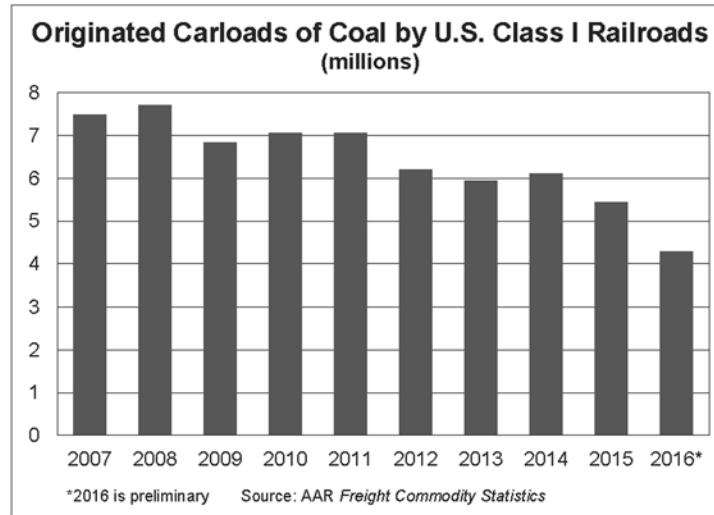
The U.S. supply chain is changing under our feet. The rail industry is going through a transition that is the largest we have seen in the twenty years that I have been in leadership at BNSF. It is being driven by shifts in the energy landscape, our customers' ever-changing supply chains, our competitors and, yes, public policy, such as how our Nation's highway infrastructure is funded, and how railroads will be permitted to innovate. The railroad industry must become more efficient in order to remain competitive, and since we pay for our own infrastructure, we need a level playing field as we compete with other modes for freight. We ask that policymakers consider the public benefits that freight rail transportation provides—energy and environmental benefits, supply chain efficiencies, reduced highway congestion and maintenance costs—and how they are affected by public policy.

At the outset, I would like to commend this Committee on enactment of an extraordinary amount of good legislation related to railroads in the last Congress, including an extension of the Positive Train Control (PTC) implementation deadline, passing a range of railroad-related provisions in the Fixing America's Surface Transportation (FAST) Act, as well as reauthorizing the Surface Transportation Board (STB) for the first time since 1995. In this Congress, we look forward to working closely with the Committee on a proactive agenda that provides for updating and improving regulation and ensures that infrastructure investment and policy treats railroads equitably. BNSF and the freight rail industry hope to be a resource to the Committee as it addresses these important issues.

Economic Update and Outlook

Over the past five years, GDP has produced more than two percent growth, while rail volumes have declined by two-tenths of a percent due to a change in consumer buying habits, the service sector attracting a larger portion of GDP, and the decline in the coal sector. BNSF moved more than 9.7 million units in 2016, half a million fewer units than in 2015, representing five percent decline in our total business. We experienced declines in three important commodities that are at the core of the railroad's business—energy, namely coal and crude oil, and international intermodal containers.

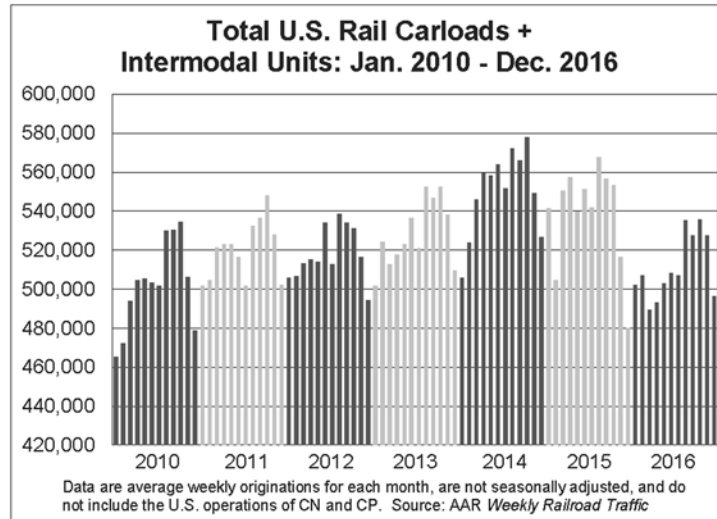
In 2016, BNSF handled about 480,000 fewer units of coal than in 2015, and finished the year with our lowest coal volumes since the Powder River Basin (PRB) mine expansion in 2002–2003. Our utility customers are in the midst of a long-term transition of their generation assets, moving away from coal and toward natural gas and renewables due to the low price and abundant supply of natural gas, regulatory pressures on coal, and tax policies that incentivize renewables.



The U.S. freight rail industry as a whole has experienced a similar trend related to coal. In 2008, the peak year for U.S. rail coal traffic, Class I railroads originated 7.5 million carloads of coal. In 2016, coal carloads totaled just 4.1 million carloads, or 3.4 million *fewer* carloads than in 2008. The revenues and profits lost by railroads because of coal's decline will be extremely difficult to replace. Many of railroads' coal assets have or will become "stranded," meaning their revenue-generating potential is lost or greatly reduced even though the costs of most of these assets will remain on railroads' balance sheets for years to come. The loss of railroads' coal traffic combined with the market volatility of other commodities hauled by railroads means that the market outlook for railroads has become inherently less stable. Typically, coal provided a base revenue load for many rail lines that helped keep costs down for other lines of traffic. For many rail lines, that base is gone.

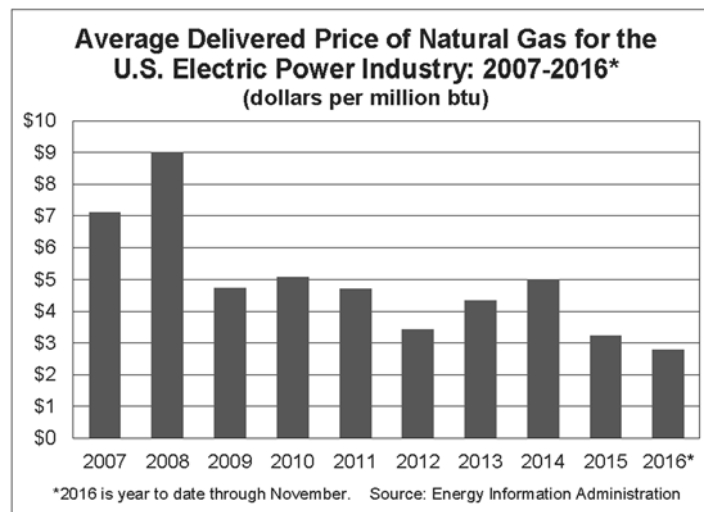
BNSF's crude oil volumes declined with domestic U.S. oil production due to the long-term drop in the world price of oil and increased pipeline competition. In 2016, we handled almost 130,000 fewer units of crude than in 2015, which is a decline of about 40 percent.

International intermodal volumes from west coast ports on BNSF were down by more than 60,000 units in 2016 as compared to 2015, and will continue to face headwinds, as volumes have been flat or down the past several years. Domestic intermodal continues to grow, but at a slower pace than we would like. Trucks are our customers and our competition. They have benefited from consistently low fuel prices and truck over-capacity which contributes to flat near-term forecasts for railroad domestic intermodal.



BNSF's primary area of growth was in the agricultural sector. The U.S. had record corn and soybean volumes in 2016 due to several factors, including strong harvests, but also due to Asian buyers purchasing more U.S. corn when Brazilian supplies were reduced by summer droughts. This, in tandem with a stronger Brazilian currency, helped enhance U.S. corn and soybean export sales and also contributed to all-time record volumes and shuttle sales on BNSF in the fall. However, agriculture represents just ten percent of our annual volumes.

In general, rail volumes have been linked to the performance of the broader economy; when the economy is suffering, most rail traffic categories suffer too. However, it is less true now that when the economy does well, most segments of rail traffic do better. Rail volumes for commodities like grain and energy products often vary significantly year-to-year for reasons that have little to do with the state of the economy (e.g., the price of natural gas can have a big effect on coal volumes; droughts, exchange rates and worldwide weather patterns can affect grain volumes).



Consumers are changing their buying patterns. In recent years, changes in consumer spending have also reduced rail volumes as a larger percent of GDP moves to technology, like smart phones, and to services and entertainment. Consumer staples, such as clothing and household goods, appear to be moving down on the list of consumer spending, resulting in fewer containers of imported goods destined to the big box retailers. There will likely always be growth in freight volumes associated with consumer goods spending related to population growth, but the future may bring less of it than in previous cycles, and railroads must compete hard for every load. This means that the rail industry must continue to become ever more efficient.

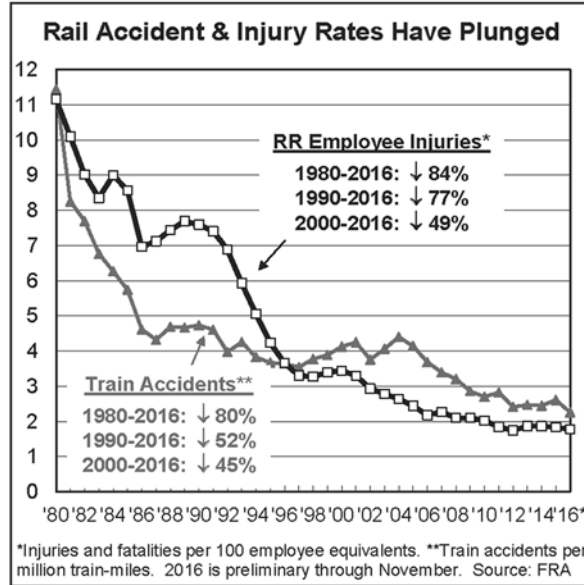
At BNSF, and throughout the industry, our focus has been on reducing variable costs wherever possible, including shrinking the size of our active equipment and locomotive fleets to match volumes. Given the drop in volumes and the resulting financial impact, we also need to address fixed costs and ensure our workforce is sized to our needs. Unfortunately, non-seasonal furloughs of scheduled employees peaked at about 5,000 early in 2016; these numbers dropped to about 2,700 by the end of the year. In 2016, we also reduced salaried headcount by about nine percent and significantly restructured our operating teams. As we continue into 2017, our attention to cost control and efficiency across our operations will continue to be intense. We need to be able to continue to provide excellent service and invest where demand does exist. BNSF's infrastructure maintenance and investment remains strong relative to volumes and market demand and I believe our network has never been in better overall condition.

BNSF's business model is predicated on a "virtuous cycle," where we actively grow our markets and volumes, which allows us to continue to invest in and expand our system, improve our service, and continue to grow. We believe 2017 will be a better year but we will not grow past peak volume levels. Volumes have the potential to grow if policy changes stimulate the economy through corporate tax reform and infrastructure investment, as long as other policies like trade—which impact roughly one-third of our economy's GDP—are still growth-oriented. Additionally, the rail industry is in final stages of labor negotiations. If a related work stoppage occurred, rail volumes would be impacted.

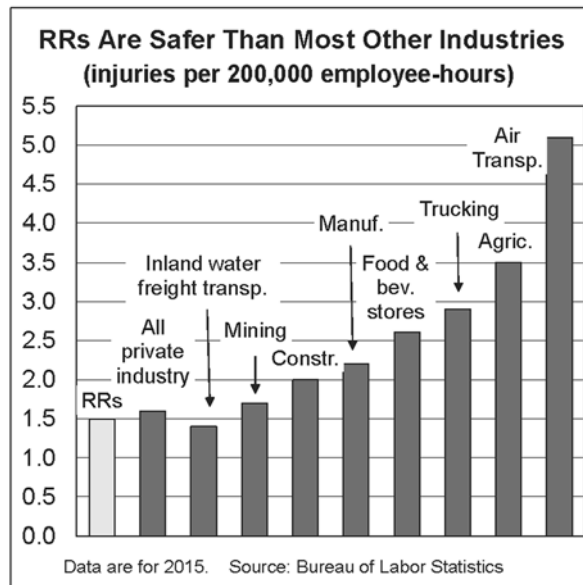
In sum, for railroads in 2017 and beyond, remaining competitive will require stringent attention to cost control in all areas of operation and continued significant levels of rail investment in infrastructure, equipment, and new technologies, consistent with the evolving business environment. Many of the operating practices and technologies being developed and used promote necessary efficiencies and increase safety.

Safety Overview

The laws of physics that make railroads the most efficient mode of surface transportation are also unforgiving; however railroading has been made incredibly safe. The industry's most recent safety statistics demonstrate the trend of continuous safety improvement. Preliminary Federal Railroad Administration (FRA) data indicates that the train accident rate in 2016 was down 80 percent from 1980 and down 45 percent from 2000; the employee injury rate in 2016 was down 84 percent from 1980 and down 49 percent from 2000; and the grade crossing collision rate in 2016 was down 80 percent from 1980 and down 40 percent from 2000. By all of these measures, recent years have been the safest in rail history.



At BNSF our safety vision is a workplace free of injuries and incidents. We believe that we can achieve this goal, and that is the reason safety continuously improves. But we have not yet achieved our vision; incidents and accidents do occur. However, we believe that they are outliers; operating safely every day is our normative behavior. We are committed to the work of continuous safety improvement, because derailments and other significant safety failures, which pose risks to employees and communities, are not an acceptable cost of doing business, nor are they morally acceptable.



In the freight rail industry, safe operations supported by the industry's continuous safety improvements are not achieved through just compliance with FRA regulations. It requires a comprehensive risk based safety program, many elements of which go well beyond Federal mandates. And perhaps most importantly, it requires earning adequate revenues for the significant reinvestment necessary to safely operate the freight rail network and serve customers.

Railroad Technology and Operational Innovation

Technology has been an essential element of the improvements in safety seen by the rail industry over the last decade. In 2015, BNSF testified before the Subcommittee about the technologies being applied to railroad operations that allow us to detect safety standard deviations in real time so that we can respond before something happens. BNSF has increased the pace with which we install and utilize technologies, helping to transform the railroad's efficiency, while making it smarter and safer.

In 2016, reportable train incidents on BNSF were at historic lows, down 16.6 percent year-over-year, which reflects the increased leverage of data from our detector network to resolve issues before they become problems, as well as the effectiveness of our annual maintenance and on-going employee training and rules compliance programs. Derailments caused by human error, a significant subset of these incidents, also declined on BNSF in 2016. Below is a review of the technologies being implemented and developed on BNSF.

- Track Inspection:
 - Track geometry inspections employ high-speed laser and inertia test systems to collect track condition data on main line routes, a minimum of three times per year. Track geometry cars measure the track's surface under load for gauge, cross-level, alignment and vertical acceleration; data indicating any detected flaws is communicated to BNSF personnel for remediation.
 - BNSF utilizes a fleet of manned and unmanned track geometry cars, track measurement trucks and strength testing and reporting (STAR) cars to test several geometric parameters of the track.
 - Rail defect detection systems utilize ultrasonic technology to detect internal flaws in rail. Minimum intervals between inspections are determined by tonnage moved; heaviest traffic routes are inspected every 18 days.
- Mechanical Wayside Detectors:
 - Wheel temperature detectors, using infrared technology, are used to identify braking issues. BNSF currently has approximately 260 detectors located at over 190 sites along our network.
 - Acoustic and Hot Bearing Detectors are used to identify wheel bearing fatigue. On BNSF, there are over 1,200 hot bearing detectors and 16 permanent and 3 portable acoustic bearing detectors.
 - Machine Vision systems inspect freight cars for defects in passing trains at track speed with over ten different technologies used through 64 detectors on BNSF's network.
- BNSF is using Unmanned Aircraft Systems (UAS)—or drones—for supplemental visual track and bridge inspections in a variety of conditions. As part of the Federal Aviation Administration's (FAA) Pathfinder Program, we are a partner to the agency on developing rules, procedures and technology for extended range (beyond visual line of sight) track integrity flights. Since 2015, BNSF has expanded the use of both short range and long range aircraft as well as computer vision and data analytics to provide our engineering staff with bridge and structure change detections, track integrity analysis and yard measurement capability. In 2017, BNSF's UAS team (in partnership with the FAA), will continue to expand our areas of long range flight research and enhancement of detection capabilities to include non-visual conditions.
- Train Operations and Control
 - As you know, the industry is engaged in installing PTC. BNSF will have the physical installation completed by 2017 and it will be operational by the 2018 deadline. We are currently operating PTC on 47 of the 90 mandated subdivisions and have already run PTC on over 200,000 trips and have trained over 22,000 employees.
 - BNSF is the largest user of energy management systems (Trip Optimizer or TO) with over 3,300 locomotives equipped. TO serves as an automated train operations control which was designed to reduce fuel use, and our carbon foot-

print, by requiring the most fuel-efficient operation of the locomotive. It also considerably reduces the potential for operating rules violations, particularly in a non-PTC environment.

- Movement Planner (MP) is a tool in development that plans train operations and optimizes use of the network's capacity. Current computer aided dispatching is being augmented with a system to auto-route a train's most efficient movement, coordinate movements along a corridor, and provide for better human dispatch management. PTC will overlay MP, so that it can utilize real time location information. Ultimately, the integration of PTC, MP, and other planning tools will increase efficiency and visibility into train operations by operations and maintenance personnel.

These innovations demonstrate our commitment to leveraging technology in the continuous pursuit of more safe and efficient operations for our employees and the communities we serve.

Railroad Regulation Review and Improvement

It is well known to this Committee that, as one of the country's oldest industries, nearly every facet of the rail industry is governed by unique legal and regulatory schemes that have been developed over the last 130 years. Freight railroads' business interactions are governed by the Interstate Commerce Act. Our employees receive Railroad Retirement benefits instead of Social Security. Labor negotiations with unions representing our employees are governed by the Railway Labor Act. Railroads do not have insurance-based Workman's Compensation; instead, we operate under a nearly 110 year old statute called the Federal Employee Liability Act (FELA), established long before Workman's Compensation. FELA is a tort-based system that requires employees to litigate injury claims against railroads under a comparative fault system. Railroad operations are governed by the Federal Rail Safety Act and more than a century of design-based regulation where safety compliance can only be achieved by executing mandated step-by-step processes or activities against which regulators inspect and enforce.

There are very few exceptions to this "command and control" regulatory paradigm. Therefore, railroads are one of the most regulated industrial activities in the U.S. Between 2008 and 2013, Congress mandated 49 percent of all prescriptive, economically significant regulations that were promulgated by regulatory agencies. These mandates have been a product of Congressional action—and in recent years are a common "reaction" to an incident.

I attach to my testimony a 1982 *Chicago Tribune* article that demonstrates the process of regulatory change. It is about how the Class 1A 500 mile brake inspection standard, which was based on old steam engine stops was finally updated to a 1,000 mile brake inspection. It highlights for the Committee that the process for updating standards may have marginally changed, but not fundamentally. In 2017, notwithstanding the tremendous advances in locomotive, brake and detection technology, railroads have been unsuccessful in updating the brake inspection standard originally based on steam engine technology, which was last changed more than thirty years ago through negotiation with labor unions.

There are a multitude of internal and external incentives for railroads to operate safely, in addition to regulation, which is why railroads have well-developed risk management plans. As the railroad industry develops new technologies, they are overlaid upon railroads' existing regulatory compliance activities. We find that these activities in some cases no longer fit an operating environment increasingly supported by technology. At BNSF, our maintenance standards meet and even exceed FRA regulations. For example, BNSF inspects our densest lines both visually and technically at a rate at least twice the FRA requirement, in many ways rendering the prescriptive inspection activity requirements moot.

Advances in locomotives, signal systems, grade-crossing warning devices, and track inspection made possible by technology in some ways are marginalized for purposes of regulatory compliance because they exist outside of the current regulatory construct, which recognizes only the safety value of prescribed practices. Existing regulations which prescribe physical inspection at specific intervals for equipment and facilities now make less sense because of the advances in equipment, which is itself continuously self-diagnostic and self-reporting in the event of defects. Technology-based inspection can also reduce the safety exposures related to frequently putting people in, under and between equipment or out on the line of road to perform physical inspections for the same conditions. Technology-driven operational advancements, like electronic delivery of mandatory train orders and directives in lieu of required paper versions which will enable other technologies, should be incentivized.

Granting waivers is a measured approach to bridging past with present and help make regulatory evolution possible. The FRA's waiver authority is appropriately very broad. The regulations provide that, "the Secretary may waive compliance with any part of a regulation prescribed or order issued under this chapter if the waiver is in the public interest and consistent with railroad safety." Waivers represent industry and the regulator's best opportunity to modify FRA regulatory directives in light of changed circumstances, with appropriate regulatory oversight. However, implementation of the existing waiver process has been difficult and the timelines for even the simplest of waivers are measured in months or years, and quite often come with conditions that sub-optimize the value of the waiver or innovation being sought.

Waivers are important to allow the industry to demonstrate new technologies and practices that might—or might not—work to enhance safety. As the regulatory mandate to implement electronically controlled pneumatic (ECP) brake mandate demonstrates, some technologies are determined by the industry after demonstration to simply not be ready for prime time or could be disruptive if integrated into operations. Mandating a demonstrated technology after it has been shown to not be suitable for implementation will chill this kind of important experimentation. Nonetheless, waivers help create common understanding between the regulator and the regulated about railroad operations, and waiver-generated data can lay the predicate for updating regulations.

New rules should only be adopted when the rule's benefits clearly outweigh its costs. The cost-benefit analysis process for imposing costly new mandates will rarely work when the industry is already so safe. Regulators recently have resorted to tortured cost-benefit calculations to justify proposed mandates. One of the most glaring examples, which required legislation by this Committee, was the recent ECP brake mandate where the FRA averaged the cost-benefit analysis across the tank car safety rule to justify mandating ECP brakes.

Neither Congress nor the FRA has taken a comprehensive look at the cumulative impact and effectiveness of the body of railroad regulations, or how they can be changed to reflect the current state of operations practices and ensure that they incentivize technology, or at least do not discourage it. We believe that regulation can be improved to take into account a railroad's safety record and their successful risk management activities.

Regulatory requirements for prescriptive activities is not the best way to improve safety if measuring safety outcomes can provide better incentives and flexibility. We believe that PTC is one of the best examples of how a technology mandate could have been more performance-based, which we believe could have achieved better safety outcomes sooner. As you may recall, the PTC regulations as originally adopted by the FRA had a cost of approximately \$20 for every dollar of benefit. Had Congress and the FRA required performance standards for the types of incidents prevented by PTC, then railroads could have identified and implemented the best way to achieve those goals. This would have included PTC; in 2008, BNSF was in the process of implementing a version of PTC called Electronic Train Management System (ETMS). But given more flexibility to develop it, it could have been implemented in a more efficient and cost effective manner, possibly in tandem with some of the recent operationally beneficial technologies outlined, above.

Going forward, Congress needs to create a process that directs the FRA to, in more cases, embrace collaboration and transparency toward identifying the optimal performance targets and more formally aligning regulator and the regulated entities around incentives for continuous safety improvement. We believe that currently deployed and in-development safety and detector technologies combined with advanced data analytics has allowed us to achieve a level of safety that makes regulatory development and oversight of performance standards supportable.

There is a pending risk reduction regulation (FRA-2009-0038), required by Congress in the Rail Safety Improvement Act of 2008 which may have been, in fact, an effort by Congress to move the FRA towards a more performance-based regulatory paradigm. However, when the Congressional directive became a proposed rule by the FRA, the rule moved in the direction of imposing extensive reporting requirements, mandating risk reduction activities and applying regulation to technology innovations to prescribe design and maintenance requirements—all layered on top of existing mandates, and not in lieu of them. In the FRA's approach to implementation of this rule, railroads see detailed requirements for reporting their risk management plans, accompanied by related "paperwork violation" enforcement opportunities without the tradeoff of performance based regulation. Furthermore, any requirement for detailed safety evaluation and risk management disclosures must be closely accompanied by information protections which railroads believe must be improved in this rule. If required railroad operational review and mitigation data is not pro-

tected, then the “lottery”-like recoveries we increasingly see in courts will impede innovation and even possibly challenge compliance.

Railroads, and the public for that matter, need forward-thinking Federal railroad safety regulators and appropriate regulations. In a technologically and operationally complex and increasingly data-driven railroad industry, the existing “inspect and enforce” paradigm may not allow regulators to best understand the evolving technology-based railroad operating environment. Regulatory “reform” does not happen overnight, and it is especially hard when there are more than 100 years of how “it has always been done.” But there is payoff, as well as a role, for all stakeholders involved in achieving near-, mid- and long-term goals for the Administration, Congress and the industry. A framework for that is outlined below.

Near-Term Goal—Improve the Waiver Process

- The Secretary of Transportation and FRA Administrator should review existing waivers, streamlining them as appropriate, and making some permanent in order to provide certainty to the industry and stakeholders. Typically waivers are granted for no longer than five years.
- Expeditiously consider and act on pending waivers, especially those that promote innovation, demonstrate technology or proof of concept, or allow operating practices that are more efficient and consistent with railroad safety, and promptly grant them when appropriate.
- The FRA should reform the process for granting new waivers with a focus on efficiency, prioritizing technology and collaboration.
 - Shorten the waiver review period to six months; the current process requires that waiver requests be presented to the FRA Safety Board which in turn has up to nine months to act on the request;
 - Conduct an ongoing evaluation of waivers to determine whether and how they become permanent rule changes consistent with their grant;
 - Include a railroad/industry representative on the FRA Safety Board, even as a non-voting member;
 - Prioritize waivers that provide technology demonstration;
 - Ensure that waivers are not conditioned with unreasonable or unrelated operating restrictions; and
 - Ensure that waiver reporting requirements are reasonable and related to helping achieve performance based regulatory treatment.

With process improvements, the FRA and railroads would be able to more quickly address and implement waiver applications, especially those demonstrating innovation and technology.

Mid-Term Objective—Regulatory Rationalization and Administrative Procedures Act Reform

Although prescriptive, activity-based regulation is likely to continue in certain areas, the rail industry’s extraordinary safety record should allow for movement toward a balanced approach that also includes performance based regulation, with the goal of achieving greater safety and operational benefits. As Congress reviews how railroads are regulated and considers needed improvements, the following guidelines should be kept in mind:

- Regulations should be based on a demonstrated need, as reflected in current and complete data and sound science. They should have a well-defined and measurable objective, and be regularly evaluated as to their effectiveness in achieving it.
- All components of an agency’s decision-making should be transparent to the public and subject to meaningful analysis and comment before the rule is finalized.
- Non-prescriptive regulatory tools, like performance-based regulations, should be deployed wherever possible to align the interests of the regulator and the industry, and to foster and facilitate innovation to achieve well-defined policy goals.
- Regulations should provide benefits outweighing their costs, and the potential redundancies and general interplay with other existing regulations should be considered in every rulemaking.
- Use of “guidance” should be limited to appropriate situations and time periods.

While these comments are focused on the FRA, many of these principles can and should be adopted by all agencies with railroad oversight, like the STB.

Long-Term Objective—FRA Implementation of Performance Standards for Compliant Railroads

After creating a statutory framework that allows the FRA to develop performance based regulations, Congress should oversee FRA's progress in achieving it. The FRA should be empowered to set up a standard for identifying precursors to accidents. Specifically, the FRA could develop a targeted standard that is as safe, or safer, than current operations, and apply a different level of mandated requirements if the railroad met the standard. In that event, the FRA would maintain a broad review of a railroad's safety performance plan, including the railroad's track and equipment safety practices and technology, along with its operating practices such as training and employee engagement. Done correctly, regulation would incentivize railroads to achieve safety performance standards. Acknowledging that creating such a framework will be complex, we believe that it is possible and will benefit all stakeholders.

Infrastructure Investment and Policy

Modal Equity

There has been a lot of discussion about additional infrastructure investment on both sides of the aisle, but it is important to point out that during the last Congress, this Committee provided opportunities to the transportation community by helping to enact the FAST Act. Railroads supported the FAST Act. Except, that it was not entirely paid for by users, which I will discuss further.

While BNSF and the Nation's Class I freight railroads are almost entirely funded with private capital, we have a strong vested interest in ensuring adequate investments are made in public infrastructure like ports and highways, which, when combined with rail, make up the Nation's integrated freight supply chain. The U.S. has achieved today's efficient supply chain with each mode of transportation doing what it does best—railroads move freight long haul, often in partnership with trucking company customers; trucks handle the bulk of shorter haul and local delivery; and ocean carriers, dock workers and freight owners all come together to help create an efficient intermodal freight transportation network.

In order to sustain a strong and efficient supply chain to handle future freight growth, we must all work to ensure the necessary capacity is in place across all modes. The investment looks a bit different for each stakeholder. For rail and BNSF, this means expanding our line haul and terminal capacity to keep trains moving and avoid congestion or delay. As rail volumes grew over the past 25 years, the industry invested a massive amount into infrastructure maintenance and expansion to create capacity. BNSF's recent investments are evidence of our commitment to increase capacity. In fact, since 2000, we have invested more than \$55 billion in our network to ensure we are positioned to grow with our customers.

With respect to federally funded capacity investments in public road and bridge infrastructure, the U.S. has historically relied upon a "user pays" system, which until recently worked extremely well. However, the user pays model has experienced significant erosion as Highway Trust Fund (HTF) revenues, generated through fuel taxes and other static user fees, have failed to keep up with investment needs and have been supplemented with general taxpayer dollars and other non-traditional funding sources.

General fund transfers to the HTF, now totaling some \$143 billion since 2008, amounts to more than three years' worth of non-user, or "free" taxpayer money for those who benefit from federal-aid highway programs, assuming FAST Act levels of budget authority. Further, the Congressional Budget Office (CBO) projects that under FAST Act funding levels the gap between dedicated surface transportation user-based revenues and spending will average \$21.2 billion annually from Fiscal Year 2021 to 2026.

The heaviest of trucks already underpay their share of the wear and tear on Federal highways. According to the U.S. Department of Transportation's Highway Cost Allocation Study released in 2000, 80,000-pound, five-axle combination trucks cover just 80 percent of the damage they cause to our highways; six-axle, 97,000-pound trucks cover just 50 percent of their cost responsibility; and trucks weighing more than 100,000 pounds cover only 40 percent. Underpayments on state taxes are also significant and are in addition to the Federal underpayment. Recent studies suggest that, adjusted for inflation, the DOT findings mean that 80,000-pound trucks currently underpay their Federal cost responsibility by around 27 cents per gallon of fuel. For some truck size and weight configurations, the Federal underpayment could be as high as \$1.17 per gallon. Many states already have exemptions to allow heavier trucks on state roads, and in recent years, a number of Federal truck size and weight exemptions have passed, without any related increase in fees. Last Congress, the trucking industry supported an increase in the fuel tax.

Some of BNSF's biggest customers and valued supply chain partners are trucking companies, and they are also in many cases intense competitors. Railroads have a significant cost advantage over all-truck long-haul freight moves, but this is eroded by the ongoing infusions of General Funds into the HTF without appropriate increases in the fees, taxes and other charges paid by truck users of the infrastructure. As I like to say, if you subsidize something, you get more of it. Moving away from the trucking industry paying its fair share in usage taxes will result in more trucks on the highway system and shifts modal equity from more fuel efficient and environmentally-friendly freight rail. Even public policy support for development and testing of truck automation could tilt the playing field away from intermodal freight rail, especially if railroads' own automation, both within facilities and along the line of road, is not also a public policy priority.

Congress should strengthen the "user pays" requirement. It could be done by increasing the fuel tax and/or moving toward a weight distance/vehicle-miles-traveled tax system for trucks. The FAST Act established the Surface Transportation System Funding Alternatives grant program to fund projects testing the design, implementation and acceptance of user-based alternative revenue mechanisms. The program has awarded over \$14 million in grants to the following state transportation departments: California, Delaware, Hawaii, Minnesota, Missouri, Oregon and Washington. Congress should be aware of these and other opportunities for demonstrating ways to determine and assess a fair fee for commercial use of highway infrastructure.

Permitting Reform

Turning back to the FAST Act, there were many things to like, especially in terms of freight transportation policy. The law calls for development of a national freight strategy and prioritizes freight projects in a way no previous surface transportation authorization bill has. Below are highlights of the law from the railroad perspective, as well as additional recommendations where appropriate.

The FAST Act continued and expanded upon project delivery and permitting reforms enacted as part of the reauthorization bill's predecessor legislation, MAP-21. For example, FAST directs the DOT to review all previously enacted highway permit reforms and project streamlining procedures and apply them to railroad projects. The bill also expands on the types of rail projects that can be categorically excluded from extensive review requirements, and further mandates that the DOT, in consultation with the Advisory Council on Historic Preservation, create a process to mirror that of the Federal highway system, which would exclude railroad rights-of-way from unnecessary historic reviews. Careful implementation of these reforms by the DOT and the Advisory Council on Historic Preservation will be important to ensuring that the intended benefits are fully realized.

While project delivery reforms at the Federal level have been an important focus, improved permitting processes remain a critical need at all levels of government. Almost weekly, negative decisions from courts or permitting authorities at the local and state level demonstrate to BNSF and its customers that our growth, especially at origins and destinations, is limited by the inability to secure required permits. Over the past few years, facility expansion on the West Coast for both BNSF and our customers has been severely challenged by the regulatory process and environmental advocacy groups opposed to facility construction. These decisions effectively cut the rest of the U.S. off from valuable access to the Pacific Ocean.

In some cases, local permitting processes are used as a means to target and prevent interstate transportation, particularly of fossil fuels. Under the Interstate Commerce Commission Termination Act (ICCTA), many state or local regulations are preempted with respect to rail transportation—including zoning and land use regulation, construction and environmental permitting of rail facilities and regulation of railroad operations. When it comes to interstate commerce, Federal agencies, including the STB, must not be reluctant to intervene and provide clear direction that using such regulations to block these projects is preempted. Strong direction is necessary to ensure that important rail projects are not shelved or abandoned altogether, and that the flow of interstate commerce is not impeded. Additional permitting reform recommendations include:

- Statutorily prioritize project permitting for international commerce.
- Review the scope of state implementation of Federal statutes to ensure consistency with Federal regulators for projects in interstate commerce.
- Expand Federal Communications Commission regulatory streamlining to expedite the deployment of technologies that improve safety and efficiency in the railroad industry

FASTLANE and Other Grant Programs

The FAST Act provides dedicated freight funding both by formula to the states as well as through a competitive FASTLANE grant program for addressing critical freight needs including, among other things, intermodal connectors, port facilities, highway-rail grade separations and certain rail projects. Below are several examples of FASTLANE grant projects which demonstrate the intermodal significance of the program.

- The CREATE Project in Chicago makes improvements including grade separations along four rail corridors that handle passenger and freight traffic reducing train and vehicle delays throughout the Chicago area, the busiest rail hub in the country. A pending \$160 million FASTLANE grant for the 75th Street Corridor Improvement Project will eliminate the most congested chokepoint in the Chicago Terminal, Belt Junction, where 30 Metra trains and 90 freight trains cross each other's path each day. In total, the CREATE partnership has committed \$1.4 billion in funding for the Chicago Region's freight network.
- The Terminal Railroad Association of St. Louis's (TRRA) Merchants Bridge across the Mississippi River, which was originally constructed in 1890, requires replacement of the east approach and main spans, a \$222 million project. The Missouri DOT has applied for a \$75 million FASTLANE grant to help pay for an upgrade of the bridge's seismic resilience, as part of the project which will be otherwise funded by the TRRA. The bridge is one of the busiest rail bridges across the Mississippi River, facilitating Amtrak service as well as the efficient movement of freight.
- The Tennessee DOT has applied for an approximately \$100 million FASTLANE grant as part of a more than \$300 million project to improve critical roadway infrastructure in a key freight corridor through Memphis. Roadway capacity improvements in the corridor will benefit a large number of freight transportation companies and their customers, including helping facilitate efficient truck flows in and out of BNSF's Memphis intermodal facility, in which BNSF invested \$200 million for expansion in 2010. The project will have significant traffic congestion and delay savings, environmental benefits from improved vehicle flows and reduced idling, and improved roadway safety.

The FAST Act also importantly provided a funding increase for the Railway-Highway Crossings Program ("Section 130 program") from \$230 million in 2017 to \$245 million in 2020—funding that should be fully utilized by states but often is not. The Section 130 program provides apportioned funds to states for the elimination of hazards at highway grade crossings, with 50 percent of a state's apportionment dedicated to installation of protective devices at crossings and the remainder for any hazard elimination project. Section 130 is a critically important program, and while it does allow for some funding to go towards highway-rail grade separation projects, it does not come close to meeting the pressing needs that states and local governments have to increase funding toward projects that separate their roadways from railroad operations. The FAST Act prioritized grade separations in ways previous highway bills did not by making them eligible grade separation projects across multiple funding programs, but if the legislative opportunity to assist state and local governments with additional funding for this important roadway investment presents itself, railroads would continue to participate and support those projects.

As Congress considers additional infrastructure-related legislation, we believe the project grant eligibilities developed by Congress in the FAST Act provide an excellent framework. However, we also recommend that Congress consider providing additional funding for commuters and Amtrak to implement PTC, and to provide funding for track and other improvements on the Amtrak national route system.

Conclusion

I always like to remind Members of Congress about their important role in designing and paying for a transportation network to facilitate American competitiveness. Many of the more than 150 million Americans who go to work every day rely on their employers to be able to compete in the global competitive marketplace. Congress provides Federal funding for the highway network which is key to this ability for the American worker to compete. Our supply chain is also enormously blessed with the most efficient freight rail network in the world. This freight rail network participates in almost 40 percent of all of the intercity gross ton miles that move in our country. It is privately funded and Congress does not have to debate the funding levels for these networks because their maintenance, expansion and operations are fully paid for by the railroads. These well-maintained and efficient networks benefit our customers but these investments are also an important part of

why railroads are setting new safety records. They also provide key public benefits by mitigating the impacts of highway congestion and wear and tear.

By increasing the cost of compliance, preventing efficiency or adequate returns through regulation, or creating a playing field that is not level for railroads vis-à-vis their competitors, Congress and the Administration "control the dial" on how much of the railroad industry's benefits we can afford to deliver. However, we know that Congress and especially this Committee understand the role of railroads in the economy, and in each of your states, and we appreciate that we are heard and able to remain engaged in dialogue with you about these issues and others related to strengthening freight movement in our Nation.

ATTACHMENT

<http://archives.chicagotribune.com/1982/01/10/page/67/article/ancient-rail-rules-getting-an-update>

Chicago Tribune

Chicago Tribune, Sunday, January 10, 1982 Section 5 3

Ancient rail rules getting an update

By David Young
Transportation editor

THE FEDERAL agency in charge of railroad safety is making the first major revision of its rules since 1910 to eliminate outdated regulations, some from the early 1900s.

Railroad officials claim many of these obsolete regulations add millions of dollars a year to operating costs.

The Federal Railroad Administration hopes to have the new rules in effect before year's end. The rewrite job has been one of the top priorities of Robert W. Blanche, head of FRA.

ALTHOUGH THE changes of some rules have been considered since 1970, the current proposals were formulated out of meetings between railroad management and labor and then turned over to FRA.

A William Johnston, operating vice president of the Association of American Railroads, and James Broder, registrar for the Railway Labor Executive Association, advanced their proposals as compromise rule changes to Blanche this fall.

Some changes can be administered by FRA, but others will require congressional action. Richard Chase, attorney for FRA working on the regulations, said:

AMONG MAJOR changes being considered are:

- Elimination of the requirement that freight train crews inspect the brakes of an entire train every 300 miles.
- Existing rules stipulating which railroad must repair safety defects on freight cars, that speeding the movement of trains at interchange points between line railroads.
- Giving railroads greater flexibility on when and how they must repair track defects on little used branch lines and in yards.
- Upgrading of standards on such things as the spacing of railroad ties, gauge distance between rails of track, and type of devices used to tension track ties.

THE RULES were drafted to reflect the real world," Johnston said. "In the case of track standards, it will allow the railroads to better utilize their resources (track crews) instead of running around paying out track fees."

Probably the single most important change will involve what is known as the "No-Mile Rule." The existing rule requires that each freight train be stopped after it has traveled 300 miles so that the crew can inspect the brakes.

Often, crews were required to stop trains, checking steersides, only a few miles short of terminals so that the mandatory inspection could be made.

THE 30-MILE Rule, although it was adopted as a federal standard in 1910, has a history that dates from the 1890s. When railroad operating rules were reworked in 1910, it was required that each train be inspected as it left a division or changed crews — often at shorter distances as 100 miles — because those inspections were often changed at those points, FRA officials said.

"The divisions operated almost as independent railroads in those days and kept their own inspectors, one official said.

"Today, the railroads will run identical locomotives for LAA right from Chicago to Los Angeles before changing them."

The proposed new rule would make freight train brake inspections mandatory at 100-mile intervals.

THE RAILROAD industry has estimated that going to 1,000-mile inspections could save \$100 million to \$150 million a year.

Other proposed changes to what are known as the "power" rules include a softening of standards requiring an inspection of braking equipment on individual cars, and the brake tests required on cars that have been substituted for other reasons.

Currently, brake testing is required on a substituted car before it's released to service if the brakes haven't been tested in three months, even if the car's defects don't involve the braking system.

Officials estimate that as many as a million such tests are made every year, costing \$6 each.

Another rule change that is considered crucial is the handling of freight cars found to have defects while they are being transferred between railroads (interchanged). The rule now requires the receiving railroad to refuse to accept the car and for the sending railroad to haul the car to its nearest repair shop.

That could involve breaking apart a 10-car freight train to remove the defective car, then shipping it back hundreds of miles to a maintenance shop, even though the receiving railroad had a shop only a few miles away.

"When you look at it, the regulation could actually have increased the rate for an accident by requiring a defective car to be shipped 300 miles although a maintenance shop was only a mile away," Chase said.

THE REVERSED rule, which needs Congressional approval, will allow the defective car to be nearest repair shop.

The proposed regulations also would give railroads much more latitude than now in a variety of trackage conditions. Track defects are the second largest cause, after human error, of U.S. railroad accidents.

Although many of the changes are technical and involve updating the last quarter century, others critically affect the way railroads must maintain 38,000 miles of track.

POSSIBLY the most important is the creation of a new classification of track for little-used branch lines. Railroad track is classified 1 through 6 according to its condition — class 6 being the best track and allowing the highest speeds.

Existing branch line track is now most commonly rated as Class 4, which permits trains to operate at no more than 30 miles an hour and requires a rail to be good condition every 180 inches to hold the track in place.

The proposed regulation would create a new Class 5 track with lower standards than the existing Class 4. The new class will be confined to use by passenger trains and only minor shipments of hazardous materials. The new regulations also require five good ties every 20 yards, instead of one every 300 inches.



A requirement that crews inspect freight train brakes every 300 miles is among the items that would be eliminated under a federal reform of railroad rules. Many of the rules date to the early part of the century.

The CHAIRMAN. Thank you, Mr. Rose.
And next, Dr. Lofgren. Welcome.

**STATEMENT OF DR. CHRISTOPHER B. LOFGREN, PRESIDENT
AND CHIEF EXECUTIVE OFFICER, SCHNEIDER NATIONAL, INC.**

Dr. LOFGREN. Chairman Fischer, Ranking Member Mr. Booker, distinguished members of the Subcommittee, thank you for the opportunity to be here today.

Schneider National was founded in 1935 by Al Schneider when he sold the family car and bought the truck. Since then, we've grown to become one of the largest truckload and intermodal transportation companies in North America. We employ more than 19,000 associates across the country, with strong presence in many states represented on this subcommittee.

Trucking companies like Schneider are the backbone of America's economy. The trucking industry transports more than 80 percent of the Nation's freight tonnage and employs approximately 7 million workers in trucking-related jobs. In addition to moving goods into and out of the U.S. ports, we also provide essential lifeline to communities across the country, delivering supplies and essential commodities.

In order to meet the current and projected future demand for freight movement, Congress and the new administration should promote policies and regulations that ensure safety, support innovation, and increase productivity.

At Schneider, safety is our number one core value. This commitment stems from our founding common sense observation that nothing we do is worth hurting others or ourselves. We are constantly striving to put safety first and always, which is why we've established industry-leading policies, practices, and technologies. This includes significant investments in safety-enhancing equipment and technology, including roll stability, collision avoidance, forward-facing cameras, training simulators, and real-time truck sensor monitoring.

We were the first to install game-changing in-cab communication devices back in 1985, and have continued to adopt cutting edge technology since then. A more recent technological investment, making our trucks, our drivers, and highways safer every day is the OnGuard collision mitigation system. Installed in every new tractor, this forward-looking, radar-based system monitors the distance, speed, and deceleration of the vehicle ahead.

Since our deployment of the collision mitigation technology in 2012, Schneider has experienced a 69 percent decrease in rear-end accidents and a 95 percent reduction in rear-end accident claim costs. While Schneider has excelled as an industry leader in safety, innovation, and technology, we still draw concern from a range of critical issues impacting our business and the future of our industry.

As you seek input on these matters in order to shape policy for the 115th Congress, I would like to highlight the following. We operate in a highly regulated industry. While some regulations have merit and will successfully increase safety within our industry, these things, such as hours of service, requirements for electronic logging devices, hair follicle testing, and speed limiters, we've also

experienced a general trend of restrictive and complex regulations, which impact the overall supply of trucks and drivers in the industry.

We're also subject to regulation at the State level, where new laws and litigation threaten our efficiency and the ability to conduct business in a uniform manner. Although Congress provided for the express preemption of State laws related to the prices, routes, and services of motor carriers through legislation in 1994, that preemption has recently been challenged. State laws regarding drivers' meals and rest breaks, payment agreements, and more have evolved into a new patchwork of rules and regulations at the State level. The lack of consistency on this and other issues governing interstate trucking have created unintended consequences that actually decrease safety and hurt the environment.

In the area of cybersecurity, while the application of innovative technologies around information, automation, and communication optimizes our operations and increases safety, it also makes our businesses more dependent upon uninterrupted and secure networks. Infrastructure investment is crucial, as you've highlighted. Underinvestment in our Nation's surface transportation infrastructure produces inefficiencies in ways that we move our goods, it wastes fuel, and increases operating costs.

Chairman Fischer, Ranking Member Booker, and other distinguished members of the Committee, thank you for the opportunity to testify and provide Schneider's perspective on increasing safety and efficiency for the trucking industry. As the Committee continues to work, we stand ready to support your efforts and offer insights about our industry and policies that pertain to your jurisdiction.

Thank you.

[The prepared statement of Dr. Lofgren follows:]

PREPARED STATEMENT OF DR. CHRISTOPHER B. LOFGREN, PRESIDENT AND CHIEF EXECUTIVE OFFICER, SCHNEIDER NATIONAL, INC.

Introduction

Chairman Fischer, Ranking Member Booker and distinguished members of the subcommittee, thank you for the opportunity to testify about "Moving America with our Multi-modal Transportation System." My name is Chris Lofgren and I am President and Chief Executive Officer of Schneider National, Inc., headquartered in Green Bay, Wisconsin. Today, I would like to offer you my insights about the trucking and transportation logistics industry and share with you the best practices that Schneider National has deployed that increase the efficiency, effectiveness and safety of our Nation's multimodal transportation system. I hope that it will inform the Committee's agenda in the 115th Congress.

Schneider National was founded by Al Schneider in 1935 when he sold his family car to buy the company's first truck. Since that time, Schneider National has grown to become one of the largest truckload and intermodal transportation companies in North America. Our business consists of approximately 10,800 company and 2,800 owner-operator trucks, 38,400 trailers and 18,000 intermodal containers. Schneider National employs 19,300 associates across all 48 of the contiguous United States, with a strong presence in many of the states represented on this subcommittee such as New Jersey, Wisconsin, Washington and Nebraska.

We serve a diverse customer base, which includes multiple industries represented by approximately 10,000 customers, including more than 200 Fortune 500 companies. Each day, our freight moves more than 8.8 million miles, equivalent to circling the globe approximately 350 times. Our logistics business manages over 20,000 qualified carrier relationships and, in 2015, managed approximately \$2 billion of third-party freight. Our portfolio diversity, network density throughout North America, and large fleet allows us to provide an exceptional level of service to our cus-

tomers and consistently excel as a reliable partner, especially at times of peak demand.

Schneider National is driven by our uncompromising values to deliver the goods that enhance the lives of people everywhere. Core to these values is our commitment to safety, integrity, respect and excellence. These principles are guiding tenants of our business at every level of the company.

Trucking companies like Schneider National are the backbone of America's economy. The trucking industry transports more than 80 percent of our Nation's freight tonnage and employs approximately 7 million workers in trucking-related jobs.¹ In addition to moving goods into and out of U.S. ports, we also provide an essential lifeline to communities across the country, delivering supplies and essential commodities.

Our nation's ability to compete in global markets, and to meet the needs and expectations of consumers and businesses, depends on a robust freight system driven by the trucking industry. In order to meet current and projected future demand for freight movement, Congress and the new Administration should promote policies and regulations that ensure safety, support innovation and increase productivity.

Safety, Innovation and Technology

At Schneider National, safety is our number one core value. This commitment stems from our founding common sense observation that "nothing we do is worth hurting others or ourselves." Today, our culture of safety starts with our people and layers in training, processes and technology. We are constantly striving to put safety first and always, which is why we have established industry-leading policies, practices and technologies.

Our relentless focus on safety not only enables us to better uphold our responsibility towards our employees, customers and the community, but also provides a critical competitive advantage in an industry with increasingly stringent safety and regulatory requirements, resulting in lower operating risk and insurance costs.

I would like to share some of the policies, practices and technologies we at Schneider National have adopted that may serve as best practices in the eyes of the Committee as it seeks to increase the safety of our multi-modal transportation system.

- *Safety through Innovative Technology:* At Schneider National, we have made significant investments in safety-enhancing equipment and technology, including roll stability, collision avoidance, forward facing cab cameras, training simulators and realtime truck sensor monitoring. We were the first to install game-changing in-cab communication devices back in 1985 and have continued to adopt cutting edge technology since that time. A more recent technological investment making our trucks, drivers and highways safer every day is the OnGuard™ collision mitigation system. Installed on every new tractor, this forward-looking, radar-based system monitors the distance, speed and deceleration of the vehicle ahead. OnGuard alerts the driver to possible collision risks and actively works to eliminate, or at worst mitigate the severity of, any impact. Since our deployment of the collision mitigation technology in 2012, Schneider National has experienced a 69 percent decrease in rear-end accidents and a 95 percent reduction in rear-end accident claims cost. Additionally, Schneider National was an early adopter of Electronic Logging Devices (ELDs) and supports the Federal Motor Carrier Safety Administration (FMCSA) final rule requiring the installation of ELDs by December of this year. We recommend the Committee continues to advance policies that encourage the development and implementation of innovative technologies that can improve safety.
- *Practices that Promote Health and Safety:* As a company that is strongly committed to safety, Schneider National is constantly seeking ways to protect the traveling public and the communities in which we operate. This includes our investments in cutting edge technology as well as our pursuit of additional opportunities to enhance health and safety, such as mandatory pre-employment drug tests that surpass U.S. Department of Transportation standards by requiring hair samples. Under current FMCSA regulations, truck drivers are required to undergo mandatory pre-employment urine testing for drugs and alcohol. While urine testing has been somewhat effective in identifying drug use, Schneider National has recognized that there are alternative routes to urinalysis, such as hair follicle testing that can better identify drug users. Specifically, hair testing can detect drug use for a period of up to 90 days, while urine testing only detects usage over a much shorter period of time (48–72 hours). At Schneider National, we believe there is no place for drug use in a safety-sen-

¹American Trucking Associations, *American Trucking Trends 2016* (August 2016)

sitive environment such as the trucking industry. That is why we have voluntarily opted to utilize the more reliable and comprehensive hair follicle testing, despite its increased cost. We recommend the Committee encourage the voluntary adoption of practices that promote health and safety by allowing companies like Schneider National to substitute proven practices in lieu of less stringent U.S. DOT requirements.

Critical Issues and Future Challenges

While Schneider National has excelled as an industry leader in safety, innovation and technology, we still draw concern from a range of critical issues impacting our business and the future of our industry. As you seek input on these matters in order to shape policy for the 115th Congress, I would like to highlight the following:

- *Federal Regulations:* We operate in a highly regulated industry. While some regulations have merit and will successfully increase safety within our industry and across the system—like Hours of Service rules, requirements for ELDs, hair follicle testing and speed limiters, we also have experienced a general trend of restrictive and complex regulation, which impacts the overall supply of trucks and drivers in the industry. Furthermore, the use of guidance rather than rulemakings creates an unintended sense of uncertainty within the industry while also increasing liability exposure.
- *State Regulations:* In addition to Federal regulations, we are subject to regulation at the state level where new laws and litigation threatens our efficiency and ability to conduct business in a uniform manner. Although Congress provided for the express preemption of state laws related to the prices, routes and services of motor carriers when it passed the Federal Aviation Administration Authorization Act (FAAAA) of 1994, that preemption has recently been challenged. State laws regarding drivers' meal and rest break periods, payment agreements and more has evolved into a new patchwork of rules and regulations at the state level. The lack of consistency on this and other issues governing interstate trucking have created unintended consequences that decrease safety and hurt the environment.
- *Cybersecurity:* While the application of innovative information, automation and communications technologies optimizes our operations and increases safety, it also makes our business more dependent on an uninterrupted and secure network. If the stability or capability our technologies is compromised, it could adversely affect our revenue, customer service, driver turnover rates and data preservation. Additionally, if any of our critical information or communications systems fail or become unavailable, we would be required to perform certain functions manually, which could temporarily affect the efficiency and effectiveness of the supply chain.
- *Infrastructure Investment:* Underinvestment in our Nation's surface transportation infrastructure produces inefficiencies in the way we move goods, wastes fuel and increases operating costs. Current freight bottlenecks and interstate congestion already challenges our operations. With U.S. freight volume anticipated to increase 45 percent by the year 2040², the system must be updated and prepared for this surge. Otherwise, our environment and economy will suffer.

Conclusion

Chairman Fischer, Ranking Member Booker and other distinguished members of the subcommittee, thank you again for the opportunity to testify and provide Schneider National's perspective on increasing safety and efficiency for the trucking industry. As the Committee continues its work in the 115th Congress, we stand ready to support your efforts and offer insight about our industry and policies that pertain to the jurisdiction of this committee.

The CHAIRMAN. Thank you, Dr. Lofgren.
Mr. Gurd, welcome.

STATEMENT OF TOM GURD, VICE PRESIDENT, INTEGRATED SUPPLY CHAIN, THE DOW CHEMICAL COMPANY

Mr. GURD. Good afternoon. I'm Tom Gurd, Vice President of Integrated Supply Chain for the Dow Chemical Company. I would like

²U.S. Department of Transportation, *Beyond Traffic 2045: Trends and Choices*

to thank Chairman Fischer, Ranking Member Booker, and members of the Subcommittee for inviting Dow to testify at this hearing. I'm here to testify on behalf of Dow and also a member of the American Chemistry Council, a trade association representing America's leading chemical companies.

I would like to thank the Subcommittee for recognizing that the chemical industry is a principal stakeholder in developing policies that can keep our economy moving. We welcome the opportunity to work closely with the Subcommittee to develop infrastructure and transportation policies that further drive investment and manufacturing growth in the U.S.

Dow's products help address many of the world's most challenging problems, such as the need for fresh food, safer and more sustainable transportation, clean water, energy efficiency, more durable infrastructure, and increasing agricultural productivity.

Dow is one of the largest chemical and plastic shippers in North America. Our operations continue to grow, most significantly in the U.S. Gulf Coast. In 2016, we made over 1 million shipments from over 60 production facilities. This represented over 40 billion pounds of product being shipped; over 16 billion pounds shipped by rail, 13 billion pounds by road, and over 11 billion by marine.

We contract with over 200 different third-party carriers to transport our products. Two of them are here with me today.

We have over 160 third-party warehouses, terminals, and transloading facilities. We operate a fleet of 18,000 railcars, including 7,500 tank cars for the transportation of chemicals. Approximately 20 percent of our shipments are hazardous material shipments. Transportation of chemicals, including hazardous materials, is vital to U.S. competitiveness in the global marketplace as well as to the health, safety, and welfare of the American public.

Safety is Dow's top priority. We strive to ensure safe operations at our production facilities. We collaborate with our logistics service providers to ensure safe, secure, and compliant transportation of our products. We work with our customers at their locations for the safe handling of our products.

Dow is committed to Responsible Care, the chemical industry's world-class environmental, health, safety, and security performance initiative. Our transportation partners demonstrate the same safety commitment through the Responsible Care Partnership program.

Dow has an extensive risk management program, but we're also committed to ensuring communities are aware and prepared if an incident does occur. We support this commitment through TRANSCAER and CHEMTREC, which provide the training, support, and information necessary for effective and timely emergency response.

Dow is fully committed to transportation safety and security advancements and to the reduction of risk to people, communities, and the environment. This requires close collaboration with all industry stakeholders. An example of this is Dow's participation as the ACC member representative on the Advanced Tank Car Collaborative Research Program to improve tank car safety.

Dow supports the Federal Government's comprehensive regulatory framework to mitigate safety and security risks. We encourage the government agencies to further collaborate with industry

stakeholders to ensure that current and proposed regulations are designed to improve safety and reduce unnecessary burdens.

In advance of the Commerce Committee's recent hearing on "Reducing Unnecessary Regulatory Burdens," ACC identified a number of regulatory actions by the DOT that impose burdens without advancing safety. These actions include regulatory provisions and interpretations that directly impact Dow. We welcome further discussion on these issues.

The DOT serves a critical role in establishing uniform national standards for the safe transportation of hazardous materials. The DOT must maintain this exclusive role. Any new requirements imposed on the regulated community must be developed through an appropriate Federal rulemaking process, and supported by a cost-benefit analysis. If regulations are adopted with an unsubstantiated cost-benefit analysis, the regulated community will incur significant costs, yet without increased safety.

I conclude my testimony by acknowledging your efforts and willingness to work with the chemistry industry and our integrated transportation partners to ensure that the U.S. has a safe, secure, sustainable, and competitive network to deliver our products when and where they're needed.

We look forward to working closely with the Subcommittee, our transportation partners, and the DOT to further collaborate on policies and programs that will enhance our Nation's transportation infrastructure.

Thank you.

[The prepared statement of Mr. Gurd follows:]

PREPARED STATEMENT OF TOM GURD, CORPORATE VICE PRESIDENT,
INTEGRATED SUPPLY CHAIN, THE DOW CHEMICAL COMPANY

Good afternoon. I am Tom Gurd, Vice President of Integrated Supply Chain for The Dow Chemical Company. I would like to thank Chairman Fischer, Ranking Member Booker and Members of the Subcommittee for inviting Dow to testify at this hearing. I am here to testify on behalf of Dow and also as a member of the American Chemistry Council ("ACC"), a trade association representing America's leading chemical companies.

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Dow supports the Federal Government's comprehensive regulatory framework to mitigate safety and security risks. We encourage the government agencies to further collaborate with industry stakeholders to ensure that current and proposed regulations are designed to improve safety and reduce unnecessary burdens.

In advance of the Commerce Committee's recent hearing on "Reducing Unnecessary Regulatory Burdens," ACC identified a number of regulatory actions by the DOT that impose burdens without advancing safety. These actions include regulatory provisions and interpretations that directly impact Dow. We welcome further discussion on these issues.

The DOT serves a critical role in establishing uniform, national standards for the safe transportation of hazardous materials. The DOT must maintain this exclusive role. Any new requirements imposed on the regulated community must be developed through an appropriate Federal rulemaking process, and supported by a cost-benefit analysis. If regulations are adopted with an unsubstantiated cost-benefit analysis, the regulated community will incur significant costs, yet without increasing safety.

I conclude my testimony by acknowledging your efforts and willingness to work with the chemical industry and our integrated transportation partners to ensure that the U.S. has a safe, secure, sustainable and competitive network to deliver our products when and where they are needed. We look forward to working closely with the Subcommittee, our transportation partners and the DOT to further collaborate on policies and programs that will enhance our Nation's transportation infrastructure.

Thank you. I look forward to your questions.

The CHAIRMAN. Thank you, Mr. Gurd.
And, Mr. Moorman. Welcome.

**STATEMENT OF WICK MOORMAN, PRESIDENT
AND CHIEF EXECUTIVE OFFICER, AMTRAK**

Mr. MOORMAN. Thank you, Chairman Fischer, Ranking Member Booker, members of the Subcommittee, and my fellow witnesses. Good afternoon, everyone. I am Wick Moorman. And it's a privilege for me to be here today to testify on behalf of Amtrak.

As you've heard, I joined Amtrak in September 2016, after a 40-some-year career with Norfolk Southern Corporation that culminated in my service as President, CEO, and Chairman of the Board. I retired from those positions in 2015, with the idea of enjoying time with my family and absolutely no idea of working full-time again.

However, I've followed Amtrak since its creation in 1970. I have a deep appreciation for its mission. And to my wife's dismay, I was ultimately persuaded to come on board as President and CEO with really two responsibilities: one is to build on the progress that Amtrak has seen over the past decade, and then to lead the search for the right long-term CEO.

First, let me express my gratitude to the Committee for the passage of the FAST Act, which recognizes the critical role Amtrak plays in our Nation's transportation network. 2016 was a strong year for our company. We tick at revenues of \$2.2 billion in more than 31 million passengers. We set another record. And additionally and importantly, we reduced our need for Federal operating grants to cover our operating loss by covering 94 percent of our operating costs through ticket sales and other revenues, a first for us and an achievement matched by few, if any other, passenger railroads worldwide.

As strong as that performance was, I know that we can get better first by working on our safety culture. Amtrak is a safe company today, but we can get better. And then modernizing and upgrading our products and strengthening our operational efficiency and our project delivery.

We streamlined our organizational structure. We have a consolidated senior executive team to provide focused leadership. And with this change, Amtrak is organized now like most freight railroad companies and, in fact, most major corporations, which is entirely appropriate because that's what Amtrak is, it's a corporation.

And while our business model is somewhat different than the typical publicly held for-profit company, at the end of the day, Amtrak is a business and will operate like a business on par with all of the other companies that rely largely on government funding as part of their business model. Our job is to deliver the services and run the network that you, our principal stakeholders, believe is in the public interest and warrants Federal investment.

With our new structure in place, I think we're well positioned for future growth opportunities and for delivering more value to the American public. However, for us to truly seize the opportunities before us, we need to begin a new era of investment in the critical assets that are central to our operations: our infrastructure, our fleet, and our stations.

This brings me to my core message today—now is the time to invest in our aging assets. The infrastructure challenges that plague our National Highway System, our ports, our inland waterways, and transit systems are in many ways similar to the problems facing Amtrak today. More than ever, our Nation and the traveling public rely on Amtrak for mobility, but our future depends on whether we can renew the cars, locomotives, bridges, tunnels, stations, and the other infrastructure that will allow us to meet these growing demands. Our list of needs are long, and several are included in my written testimony submitted for the record.

We applaud the growing consensus in Congress and certainly the work of this committee and the administration that the time is right for major infrastructure investments, and we urge you to consider the many ways in which the Federal Government can help bring this to fruition, from direct funding for projects to the streamlining of things like the environmental review process and the removal of unneeded regulation and red tape.

Additionally, public-private partnerships and innovative financing mechanisms should be part of this mix, and they will be good options for us. But if we're serious about maximizing the value of

our investments and advancing them quickly, direct Federal funding to entities such as Amtrak should also play a major part.

Finally, I would be remiss if I didn't emphasize the important nature of our relationships with the 21 states and the various commuter agencies that we partner with. The growth of our State services is a testimony to the strength of these routes and the demand for passenger rail traffic. They now account for about half of our total ridership.

Likewise, in the Northeast Corridor and the other parts of the United States where Amtrak owns significant infrastructure, we host hundreds of millions of annual commuter trips, and now we're seeing significant investments from these agencies toward our common cause. We're very focused on identifying ways to work even more collaboratively with these states and agencies on our long list of important needs, many of which I've discussed today.

I look forward to your questions. Thanks for the opportunity to appear before you.

[The prepared statement of Mr. Moorman follows:]

PREPARED STATEMENT OF WICK MOORMAN, PRESIDENT
AND CHIEF EXECUTIVE OFFICER, AMTRAK

Chairman Fischer, Ranking Member Booker, members of the Subcommittee, and fellow witnesses, good afternoon. My name is Wick Moorman, and it is my privilege to be here today on behalf of Amtrak to discuss our integral role in America's multimodal transportation system.

Introduction

As most of you know, in September of 2016, I joined Amtrak after a forty-two year career with Norfolk Southern Railway that culminated in my service as President, CEO and Chairman of the Board. I retired from those positions in 2015, with the idea of enjoying time with my family and had absolutely no intention of working full-time again. However, I was then approached by the Amtrak Board about the possibility of leading Amtrak. Having followed Amtrak since it was created in 1970, I have a deep appreciation for the company's mission and ultimately was persuaded to serve as President and CEO, with the goal of building upon Amtrak's progress of the past decade and leading the search to find a long-term CEO that can lead the company into the future.

I come to Amtrak at an important time in our history, as intercity passenger rail service has reemerged as a vital and growing part of our national transportation network in the new century. In recognition of this, Congress passed the FAST Act in December 2015, the first surface transportation bill to include a reauthorization of Amtrak and the first to bring the Federal Government's rail, highway and transit programs together into one legislative package. I'd like to thank the members of this Subcommittee for your leadership of that effort and applaud steps like today's hearing that look at ways to further integrate Federal policy and programs for the benefit of mobility, safety and efficiency.

The FAST Act recognizes the critical role Amtrak plays in our Nation's transportation network. I am pleased to report to you that Fiscal Year 2016 was a strong year for the company. With ticket revenues of \$2.2 billion and more than 31 million passengers, it was another record year. Additionally, we reduced the need for our Federal grant to fund operations, by covering 94 percent of our operating costs through ticket sales and other revenues—another first. This is an achievement matched by few, if any, other passenger railroads worldwide.

Corporate Reorganization

As strong as our FY16 performance was, I'm certain that we can get even better by first relentlessly improving our safety culture, modernizing and upgrading our products, and strengthening our operational efficiency and project delivery. The first step we took towards these goals was streamlining our organizational structure, creating a consolidated senior executive team to provide focused leadership and to work with our Board of Directors to drive long-term value. With this change, Amtrak is now organized like most freight railroads and major corporations, which is entirely appropriate because that is just what Amtrak is—a corporation.

Although we have a somewhat different history, in that the core of our business and mission was established by Congress, we are a business and that business is moving people by rail and serving our main stakeholders, the Federal Government and the American taxpayer. Our business model is different than that of a typical, publicly held, for-profit company. But we have a lot in common with other businesses, from defense contractors to highway builders, who are in business to serve government and to support public purposes. Highway builders, for instance, design and build essential road infrastructure projects for our government and in support of the national economy, charging the public for these services at levels sufficient to generate adequate returns for their owners. Similarly, Amtrak receives funds from the Federal Government to augment the more than \$2 billion in revenue we generate directly through ticket sales every year. In that way, we also provide infrastructure and services that produce public benefit and promote the Nation's economy.

Federal funds are what allow us to meet the operational and capital needs of our 46-state national network of trains and our infrastructure that serve more than 500 communities, urban and rural, across America. We serve these communities and operate these routes because Congress, various Administrations, and the public generally have recognized the unique value that intercity passenger rail service can provide to these communities and the Nation. Our job is to deliver the services and run the network that you, our principal stakeholders, believe is in the public interest and that provides sufficient value to warrant the investment. In doing so, my pledge to you is to operate Amtrak as safely, efficiently, and effectively as possible. From better project delivery to greater operational excellence, we are working on ways to deliver even greater value from your investments in our mission.

Let me also take a moment to answer a question I receive from a lot of people about whether the government needs to fund passenger rail service at all, and whether or not private entities or the freight railroads could just take over the operation of this network. I began my career with the Southern Railway, a Norfolk Southern predecessor that chose not to join Amtrak in 1971 and operated some of the last privately funded, regularly scheduled intercity service in the U.S. until 1979. Eventually, dwindling revenues and the cost of equipment improvements led the Southern to turn over operation of passenger service to Amtrak, just as every other private freight railroad has done. Having led Norfolk Southern, and as a student of the industry for many years, it is clear to me that the fundamentals of the rail passenger business remain the same today. If the Nation wants a passenger network of any significant size and impact, like the one we operate today, it will take public support to make it happen, just as it does everywhere across the globe.

Passenger Rail Investment Opportunities—Northeast Corridor and National Network

With a new corporate structure in place and with a renewed focus on strengthening safety, operational excellence, and the quality of our product, we are well-positioned for future growth opportunities and for delivering more value to the American public. However, for us to truly seize the opportunities before us, we need to begin a new era of investment in the critical assets that are central to our operations—our infrastructure, fleet, and stations.

This brings me to the core message that I want to share with you today—now is the time to advance initiatives to provide funding and investment opportunities for our aging assets. The infrastructure challenges plaguing our National Highway System, ports, inland waterways, and transit systems are similar to some of the problems Amtrak is facing in these major areas:

- (1) *Northeast Corridor*: Amtrak's Northeast Corridor is North America's busiest railroad, with 363 miles of Amtrak-owned infrastructure and 2,200 daily high-speed, commuter, and freight trains operating on an underlying infrastructure built between 80–110 years ago. While the track and signal systems are reasonably sound, they need improvement, and many major bridges, tunnels and stations must be replaced and expanded to preserve current service levels and permit future growth.
- (2) *National Network*: Outside of the Northeast Corridor and across the National Network, Amtrak is a tenant operating over the 20,000 miles of freight and commuter railroads—including Mr. Rose's railroad, BNSF. While the condition of the freight railroad infrastructure is generally very good, we still encounter capacity constraints that limit and delay both passenger and freight volumes.
- (3) *Rolling Stock and Stations*: Much of our current equipment has reached or exceeded the end of its useful life. In order to meet the current requirements and growing demands of our passengers, we must replace these assets. The

depots that Amtrak inherited are old and in significant need of repair and modernization.

More than ever, our Nation and the traveling public rely on Amtrak for mobility, but the future of Amtrak depends on whether we can renew the cars, locomotives, bridges, tunnels, stations, and other infrastructure that allow us to meet these growing demands. Amtrak already has begun to face this challenge. Enabled by the RRIF loan program championed by this Committee, and using our own ticket revenue, we are purchasing new electric locomotives and new trainsets for our second generation Acela Express. But we need the help of Congress, if we are to make a serious dent in the massive backlog of deferred investment in right-of-way infrastructure and rolling stock that constricts growth and reliability today. As Congress and the Administration develop and advance a multimodal transportation investment program to rebuild assets and spur job growth, it is imperative that significant funds for Amtrak and passenger rail capital investments be included in that package.

Our list of needs is long, but each item offers the country a chance to invest in long-term assets with big benefits to the travelling public and the national economy. A few specific examples include:

- Construction of the Portal North Bridge and new Hudson Tunnels, both parts of the larger Gateway Program that will ensure that 450 daily Amtrak and NJ Transit trains can continue to serve New York City from the south;
- Construction of a new Baltimore & Potomac Tunnel and replacement of the 110-year old Susquehanna Bridge in Maryland to improve reliability, expand service, and lower trip time;
- Construction of fleet of new or rebuilt diesel locomotives and passenger cars to support Amtrak's National Network;
- Construction of track, signaling, and other improvements to remove chokepoints on our host railroads or restore service in key underserved markets, such as along the Gulf Coast; and
- Expansion and improvement of Chicago and Washington Union Stations to improve accessibility, expand capacity, spur local development and enhance safety.

We applaud the growing consensus in Congress and in the Administration that the time is right for major infrastructure investments. We urge you to consider the many ways in which the Federal Government can help bring this to fruition, from direct funding for projects to streamlining of the environmental review process and removal of red tape. In that regard, I want to thank this Committee for including the provisions in the FAST Act that help streamline environmental reviews and project delivery for railroad projects. I am also aware of the President's recent executive order directing agencies to streamline and expedite high priority infrastructure projects. These are important steps that can help reduce time and expense for both freight and passenger rail projects across this country, and we look forward to working with our partners to identify additional steps to further expedite these critical rail projects.

Additionally, public-private partnerships and innovative financing mechanisms should be part of this mix and will be good options for some projects. But if we are serious about maximizing the value of these investments and advancing them quickly, direct Federal funding to entities such as Amtrak should also play a major part of a multi-pronged investment strategy to jumpstart the American economy. Rail infrastructure investments stimulate job growth in construction, manufacturing, and professional services. Rail cars, locomotives, steel, concrete, machinery, signals, and track are all sourced from across the Nation. Investments in these sectors can help spur the rebirth of America's passenger rail manufacturing and supply sector which largely has been dormant and overtaken by international firms.

Amtrak stands ready to work with each of you and all of Congress to seize this opportunity to make smart investments and help make America's transportation network the greatest in the world for generations of Americans to come.

I look forward to your questions. Thank you.

The CHAIRMAN. Thank you very much.

I would like to begin by posing a question to all of our panelists. As we look at major infrastructure initiatives in this Congress and with the new administration, I think we need to be strategic in how we invest in our transportation system. For example, the multimodal freight program in the Highway Bill offers dedicated

funding and incentivizes investment in critical urban and rural freight corridors.

I would like to know if any of you believe that that freight program might be a model on how we move forward? Is that something we could build off of so that we can look strategically and be focused in an infrastructure proposal?

Mr. Rose.

Mr. ROSE. So, I think the FAST Act that you all passed, is undoubtedly the most important freight policy structure that's ever been passed up here. And so I think it has great bones for the future.

Whether we think about projects of national significance, TIGER funding, intermodal connectors, all of those things, they're all vitally important. And the way we think of it, from the railroad industry, is that every ton of freight that we can take off the national highway system to create more capacity for the passengers and the traveling public is a ton of freight that you don't have to maintain. And so those individual categories that you listed and I listed are really important to facilitate things like permit reform, things like investment reform, investments, and how we look at those things, at the end of the day really achieve the goal of creating the most efficient supply chain in our country that we can have.

The CHAIRMAN. Thank you.

Dr. Lofgren.

Dr. LOFGREN. Our heritage, as a company, was long-haul random one-way trucking. If you look at our business today, close to \$1 billion of our revenue actually comes in partnership with Matt's company and our partner in the eastern half of the United States where for those long distances, it's effective and efficient for us to put our equipment onto the train and to take that first and last mile and run it by road.

So clearly, we have opportunities, and, frankly, we have opportunities here in this country that are beyond what exists anywhere else to take advantage of multimodal transportation, and technology and appropriate structures, where they interface, are really critical to effectively moving the goods of this country.

I think the actions that we have taken recently are important. I think there's more to come. And I think that the challenge is, is that oftentimes the infrastructure that's required to connect large population centers run through rural areas, and so we have to keep in mind what those look like and how they're maintained in order to keep a connected network together, which is really where the competitive advantage that allows this country in total to participate in the economy.

The CHAIRMAN. Thank you.

Mr. Gurd.

Mr. GURD. As mentioned, we continue to have growth in the U.S. Gulf Coast and many of our other production facilities, so anything that would support safe transportation of our materials as we grow in order to get product to our customers is something that's very important to us.

Multimodal is something that we continue to look to for opportunities. Where we can ship rail as our safest mode of transportation,

we'll continue to do that; where we can't, we'll be shipping with truck. Multimodal is something that we continue to support.

So I would say anything with regards to infrastructure that would help with the safe transportation of those materials we would be supporting.

Thank you.

The CHAIRMAN. Thank you.

Mr. Moorman.

Mr. MOORMAN. Let me echo what Matt said in two ways. First, the importance of the FAST Act for the entire transportation network. The second thing I would say is that as you look at that model and you look at the impact on the freight railroads, the important thing for Amtrak is we're part of the railroad industry, and our strength—we're only as strong as the freight railroads. Seventy percent of our train mileage is on freight hosts, such as BNSF. So I think that it's an important framework and something that will be good not only for the transportation of freight, but ultimately for the transportation of people as well.

The CHAIRMAN. Thank you all very much.

Senator Booker.

Senator BOOKER. Chairwoman, Senator Blumenthal has a pressing obligation, so I'm going to pass my time to him if that's okay with you.

The CHAIRMAN. That would be fine.

Senator Blumenthal.

**STATEMENT OF HON. RICHARD BLUMENTHAL,
U.S. SENATOR FROM CONNECTICUT**

Senator BLUMENTHAL. Thank you very much, Senator Booker. I really appreciate that courtesy.

I have a couple of brief questions, beginning, Mr. Moorman, with yourself. You may recall that I wrote you just a few weeks ago concerning the noise generated by Amtrak trains going through Stonington, and, in particular, I've been in contact with the town, and I understand perhaps you have been as well. I would like your commitment that you will work with the town to resolve these concerns, which are extremely pressing to the town of Stonington and people who live in the region generally.

Mr. MOORMAN. Well, you absolutely have the Amtrak commitment on that. And as I wrote the town, and I think you saw a copy of the letter, there's a process for the town to go through primarily driven by the Federal Railway Administration. And so we will assist in any way that we can in helping the town through that process.

Senator BLUMENTHAL. I hope that that process can be expedited and that any sort of bureaucratic delay can be avoided. I know you'll give it your personal attention.

Mr. MOORMAN. Yes, sir.

Senator BLUMENTHAL. Thank you.

All of the witnesses may be aware that there are ports in Connecticut: Bridgeport, New Haven, and New London. My colleague from New Jersey has ports as well in his state. When we talk about rail, we talk about delivering freight that may come through our ports. Would you agree with me that increasing the reliability

and capacity of our ports is essential to delivering more freight, more readily, more speedily to the places and people who need them?

Mr. ROSE. We would agree with that totally, Senator, and go on to say that our ports are really national treasures. And if we go back 30 or 40 years ago, trade was not that big of an impact to our country, GDP. Today, arguably, it represents almost 40 percent of our GDP, inbound, outbound trade, going through those specific ports.

And when we don't have the right funding for the ports, two bad things happen. One is I believe you have more environmental concerns at the ports themselves. But you also have congestion at those ports. And then that freight is going to come into our country another way versus the most efficient port. So it will come through Canada, it will come through Mexico, it will come through another port.

And so the ports—we've got to—and part of the programs, the legislation you all passed, and some of the things you're talking about doing, is money that can go directly to ports, and we're very, very supportive of that.

Senator BLUMENTHAL. I appreciate those very well-stated comments. Thank you.

I also want to ask about Positive Train Control.

Mr. Rose, you have really done yeoman's work in this regard. Do you have guidance for other railroads that may be behind yours in implementing Positive Train Control and perhaps some comments about its importance to rail safety?

Mr. ROSE. So Positive Train Control will not be the be-all/end-all for rail safety. It is a very important risk mitigation, and it will, without a doubt, reduce injuries, fatalities, and derailments. We're very excited about the progress that we're making and that the rail industry is making. Last month, for instance, we ran 35,000 Positive Train Control segments at 85 percent that went through the entire system without having a defect.

So we've still got another year and a half on our implementation schedule through 2018. We feel very, very confident that we will have our entire network outfitted. And we think that all the work that we're doing at BNSF is getting rid of a lot of the challenges, a lot of the problems, that some of the other railroads maybe that are not as far along as we are, that they will face, and we're working with the same suppliers. And so we hope that our hard-knock lessons will help the rest of the industry.

The final thing is there are a lot of passenger commuter rails that still have not had the—they just don't have the money to implement Positive Train Control, and it doesn't escape me that the main reason that Congress passed the law in 2009 was because of a passenger/freight accident.

And so as a freight railroad, it may sound out of line, but I actually urge Congress to fund passenger/commuter rail funding for Positive Train Control. I can't imagine a more difficult train wreck for us to have to go to where we have the Positive Train Control on the freight rail, and the passenger or the commuter didn't because of lack of funding. It is technology that will work, and we're excited to be leading the charge.

Senator BLUMENTHAL. Thank you. My time is expired, but I hope that railroads around the country, including commuter railroads, Metro-North being one of them, will take your guidance seriously. Some of them may have the resources or access to the funds to implement Positive Train Control, but still have not implemented this life-saving technology, which is hardly novel or new. It has been around for a long time, and I thank you for your commitment to it.

Thank you, Mr. Chairman—Madam Chairwoman.
The CHAIRMAN. Thank you, Senator Blumenthal.
Senator Inhofe.

**STATEMENT OF HON. JIM INHOFE,
U.S. SENATOR FROM OKLAHOMA**

Senator INHOFE. Thank you, Madam Chair.

Dr. Lofgren, in your remarks, you mentioned something that's very obvious, and that is that a patchwork of State-level laws negatively impacts what you're able to do, and that's one of the reasons way back when the National Highway System started, we wanted uniformity, particularly not just truckers, but everyone going across the country.

Now, I was here in 1994 when we established the Federal standards for prices, routes, and services of motor carriers. Then along comes California, and they established that State meal and rest break requirements are in violation of this law, but in 2014, the Ninth Circuit said, "no, it's not in violation."

So I would ask you, what kind of impact is this having on your business?

Dr. LOFGREN. Well, I think as it relates to interstate commerce, which we're involved in, we can have a driver who starts in one state, travels across multiple states, and will finish his day or her day in another state. And as these things start to creep up, with all of the best of intentions, you can find yourself violating one or the other because they don't take into account how a driver works through their day.

And that's the challenge, and that was really what was driving the legislation back in 1994, was a recognition that interstate commerce had people moving, and it was the ability to freely move around this country to transport goods was giving us a competitive advantage.

And so the challenge is, is that they don't recognize the very work that's being done and how they impact, and it essentially can create discontinuities in terms of doing that and operating consistent with the regulations.

Senator INHOFE. Yes, and you agreed with me that you were probably somewhat surprised in 2014 when the Ninth Circuit came out with their ruling on this.

Dr. LOFGREN. Well, I think, look, when you operate within a state, and we have some of our drivers who operate within just one state or, frankly, one municipality, and in those circumstances, we can certainly design the work, design the pay programs, and ensure compliance to that and serve customers.

And so the issue isn't one where it's operating within a state, it is absolutely around interstate commerce. And so that's the part that I guess seems strange to me.

Senator INHOFE. It's a little strange, yes.

And, Mr. Rose, first of all, thank you for all your help and cooperation in our tank car efforts. You've been a big, big help. The BNSF is part of the FAA's Pathfinder Program to perform research aimed at expanding the drone system and their capabilities. This is something that I successfully pushed in the FAA bill when we had the language—and I was actually aiming at pipelines, an obvious exception that should have been made.

Now, do you want to share with us any kind of benefits that you see in that expansion?

Mr. ROSE. Sure. So we're pleased that we have a partnership with the FAA, and we were the first company to get non-line-of-sight, which really opens up a whole different world for us. We're using it in some cases out in New Mexico to fly drones ahead of trains. We're using it to take videos of track conditions. We're using it to inspect bridges instead of having to hang an individual in a very precarious situation over a bridge to look at the structural ability of a bridge.

So I think we're just in the first inning of seeing everything that is out there for us with drones. We're working with IBM in terms of looking at big data. We're getting just millions of pieces of information coming from these drones, and now creating the information set that will allow us, quite frankly, to improve our operation reliability and improve our safety greatly—

Senator INHOFE. Yes, I was going to say every example you used, it's a matter of safety that it addresses.

Mr. ROSE. Right.

Senator INHOFE. Not just efficiencies.

Mr. ROSE. Correct.

Senator INHOFE. Safety. That's good. Let me—the Chair, when she opened up, was talking about our bill that we passed, the FAST Act, and the fact that we had for the first time a national freight program, and I was chairing that committee at that time. And the reason that she is bringing it up and the reason I want to bring it up also is because we're going to be starting to work right away on the next one. And since this is the first time we had a national freight program, I just want to get into the record that it's something that is really desired, something that's helpful.

Any comments, Mr. Rose, or anyone else that you have on that program, other than what you've already responded to?

Mr. ROSE. Yes. We're very, very supportive. I served on the last time the surface transportation network in this country was studied through the SAFETEA-LU legislation back in 2009, and we looked at what happens. At that time, our population in this country, we had 312 million people. We actually modeled the highway network, the port network, and the railroad network when we get to 330 million people, when we get to 350 million people.

And the only way to stay up and remain our competitiveness from an infrastructure supply chain as a percent of GDP is, quite frankly, to handle this freight. And freight is a vital link to our Nation's economy.

And so I think really for the first time through the FAST Act, we've actually seen a freight program. It's not fully fleshed out. The bones, I would call it, it has good bones to be able to build on, like you're talking about, and we want to participate in terms—specifically for things like intermodal connection; freight collection areas; overpasses; underpasses; grade crossing safety, which I know Senator Gardner is very, very interested in; rail relocation; port enhancements; all these things that at the end of the day make freight move more efficiently because when freight doesn't move efficiently, you get massive congestion costs, and massive congestion of commuters on the Nation's highways.

Senator INHOFE. OK. Thank you very much.

The CHAIRMAN. Thank you, Senator Inhofe.

Senator Young.

**STATEMENT OF HON. TODD YOUNG,
U.S. SENATOR FROM INDIANA**

Senator YOUNG. Madam Chair, thank you for holding this hearing. I want to thank our Ranking Member and all our witnesses here today.

Indiana is the hub for several major interstate highways. It's earned us the moniker "The Crossroads of America," in addition to "Paradise." You may not have heard that one, but it's popular back home.

[Laughter.]

Senator YOUNG. Dr. Lofgren, you spoke to, in response to a question by my colleague from Oklahoma, the impact and enterprise level of this Ninth Circuit Court decision pertaining to the preemption of Federal law related to interstate commerce by state laws, and the impact it's had at a company level. Could you sort of translate that down to the worker level and the consumer level, please?

Dr. LOFGREN. Sure. So, for example, where that law really started was to make sure that agricultural workers were getting the opportunity to take their breaks and get rest. That's where it started, had its roots, and appropriately so.

The challenge can be when you look at applying it the way that the state of California would like us to do it, and, frankly, the way which we do, do it now. But what it requires is, is that when a driver has to take a 15-minute rest break, our drivers are not going to pull off on the side of the road. It's a safety hazard. It creates issues. So they're going to find the best place where they can move that vehicle off, they can park it safely, and take their break.

The challenge is the way that that restriction is, is that you have to do it like now. So it doesn't really account for the work. And the issue that we have is we want our drivers to take breaks, to do things safely, we encourage them to do that, and we want them to do it when it's safe, at appropriate times, and those regulations just put us at odds, and it frankly makes it difficult.

And so just recognizing how freight moves, how the industry works, it's not about being safe, it's about recognizing how it works and making sure that the requirements align up with that.

Senator YOUNG. So in your estimation, this actually—this could decrease safety among those who work for trucking companies like

yours, and we certainly don't want that. That's a correct characterization, right?

Dr. LOFGREN. That's correct.

Senator YOUNG. Right. Yes. Let me transition to regulatory reform. It's my sense, informed by conversations with people back home, that the need for regulatory reform, whether it's in the manufacturing sector or services or in the logistics industry, has never been greater. And in your testimony, you speak to the unintended sense of uncertainty within the trucking industry by rulemakings. I maintain concerns that in recent years well-intended regulations have been issued without a firm basis in the facts, without the supporting data.

Some industry groups point to the inadequate data from Federal Highway Safety regulators when they issue proposed rules, such as mandatory speed limit requirements and sleep apnea screenings. We can all support, I know, everyone in this hearing and beyond, everyone throughout the country, improved safety standards for your industry and others, and we're looking for ways to remove obstacles to that happening.

Could you speak to the need to require our Federal Highway Safety regulators to ground their rules in rigorously supported data, preventing the sort of uncertainty you spoke to?

Dr. LOFGREN. Well, certainly. And, actually, we got involved, were asked—I think the industry stands ready, or a number of people who are committed to safety, because I'll just give you one example. The great competitors that we have in the industry have said safety is not going to create competitive advantage, so we do benchmarking sharing best practices because we believe it in the industry, and therefore each of our company's, best interest to do that.

I think that we recently were asked by FMCSA to help give real data on the day of a driver. And, I mean, we're pulling all of this information off the truck all of the time, and we said, "Sure. Here. Here's some data."

I think there is a willingness, I think there is an awareness, and I think the way we get to the right kinds of answers is to engage the people doing the work with the people regulating the work with the people legislating the work because I think there are real answers.

There is more data available today coming off of our trucks and interfacing with our drivers to get to the right answer, and I think there is a willingness and commitment that we get to the right answer because nothing is worth having somebody injured. And I think you will find my best competitors would line right up along with that.

So I think there's a pathway. We just have to get on the pathway to do it.

Senator YOUNG. And I want to play a constructive role as we look to improve the rulemaking process, so perhaps we can work together in that regard.

Mr. ROSE. We would be delighted.

Senator YOUNG. Thank you, Madam Chair.

The CHAIRMAN. Thank you, Senator Young.
Senator Gardner.

**STATEMENT OF HON. CORY GARDNER,
U.S. SENATOR FROM COLORADO**

Senator GARDNER. Thank you, Madam Chair.

And, Senator Young, I didn't realize that Colorado and Indiana shared the same slogan.

[Laughter.]

Senator GARDNER. It's fantastic. So thanks to all the witnesses—

Senator YOUNG. Are you the crossroads, too? You're the crossroads, paradise part, yes.

Senator GARDNER. Right, yes.

I want to thank you all for being here and the opportunity to hear what's on your mind. And just a couple quick questions as we've gone through and heard some of our other colleagues ask questions.

Mr. Rose, 10 years or so when we saw the auto industry starting to see its decline, we saw a number of car carriers that were off the tracks and resting. And later on, we saw oil tankers. That was a pretty good indication of what was happening in the economy, so really sort of the indicator of what's happening, what's moving.

Is there anything that we should be concerned about that you're seeing right now in business, economic leaders, indicators, that we ought to be aware of?

Mr. ROSE. So last year, when we ended the year, we looked at 22 businesses on the railroad, and only half a dozen of them were positive, the rest were all negative. So that's a bad sign. We should be at least 50-50, if not a few more being positive.

I do believe there's a sense of things are getting better, and for us, in the railroad industry, and to some degree with Chris's business, it all is going to depend on consumer confidence and the U.S. manufacturing footprint. And the investments that Dow Chemical is making on the chemical coast, it's enormous. I mean, there are probably \$150 billion being invested in the entire chemical coast of our country today, and it's due to one thing—well, several things, but one thing mainly, it's low natural gas prices.

And so low-cost, affordable, reliable energy goes through a thread of our society, it's goes through the railroads, it goes through the trucking company, and it goes through the consumer.

And so we're real bullish that with sustained domestic production, diversification of fuel, that the consumer is enjoying that and the consumer is going to keep spending money, because we've got a hole, as I said in my testimony, we've got a hole to dig out of with what has happened in the coal business for the railroads.

The railroads used to account for about 20 percent of all their units from coal, and that's going to be somewhat less than 10 percent. So it's a big commodity to replace, and that's why we need to rely on people, partnerships we have with Schneider National, UPS, Federal Express, and all these trucking partners, to really achieve what is a great public policy destiny of bringing trucks, trailers, containers, to the railroad, taking them off the highway, preventing that highway damage, we have a great environmental footprint, and then taking them to a destination and letting them redeliver it back into the consumer supply chain.

Senator GARDNER. Thank you. And the issue came up in your testimony, or at least you answered or responded to a question, about the issue of crossings, the train horn rule currently being discussed by the Freight Rail Administration. What is the FRA—what is—the Federal Railroad Administration, excuse me—what is your idea perhaps of a better balance between the safety of grade crossings as well as train noise?

Mr. ROSE. That's a tough situation, Senator, because in our country we have almost 240,000 grade crossings. On BNSF alone, we have almost 30,000 of them, and about half of them are non-signalized or non-gated crossings. And I think we're early on to this question of quiet zones, but, unfortunately, I do think that we will have the unfortunate information that accidents per million train miles through grade crossings that do not sound the horn have higher incident rates of injuries and fatalities. And so I think we have to walk cautiously down this path.

There is some new technology like directional horns that would be placed on the actual crossing themselves that would lower the decibel, instead of having a locomotive hitting the entire spray of the noise if you will. So those types of things I'm encouraged about, but we really, I think, would walk cautiously down before we would ask the FRA to revert the rules that have been in place since about 1998.

And the challenges that communities have is that these are expensive technologies to put in these grade crossings. You can easily spend \$400,000, \$500,000, \$600,000 per crossing to go to a whistle-free zone, but you've got to make a big investment to replace that reliability that that locomotive horn provides.

Senator GARDNER. Thanks, Mr. Rose.

Just a couple of questions related to Mr. Moorman, I wanted to talk a little bit about—thank you for the Winter Park Ski Train and the incredible opportunities that it presents. It's paradise there. And if we could expand a little bit about that. I know we have some maintenance employees that may be moving, some concern was raised in Colorado about that and what that means for Ski Train. Obviously, Southwest Chief is very important to southeastern Colorado, and what that means.

And I'm going to get one last question in here before—my time has already run out. Somebody mentioned the ports. I think Senator Nelson mentioned, or Blumenthal mentioned, the ports issue. In a few years, we have a situation, the East Coast and West Coast ports that could lead to a similar slowdown, shutdown, like we saw in the West Coast port just a couple of years ago, cost our economy dramatically.

Maybe somebody could address the impact if that were to happen, what would happen to our economy if that happens again on the East Coast and West Coast at the same time?

Mr. ROSE. Yes, I think we saw it in 2000, we saw it again in 2012, where a relatively few number of ports can have an outsized impact to our economy, and the challenge is, is that those ports are not under the same labor act or same negotiating act like the airlines or the railroads or anything else are. And it's very, very unfortunate, but we literally, when we have a big port strike, we're

changing the nature of supply chains in this country, and we are definitely hurting our commerce.

So I would just urge that there would be a process in place, whether it's baseball arbitration or some sort of mediation, that could at least be imposed because there are a lot of Americans that depend on their jobs for the competitiveness of these ports. And these are enormously well-paying, high-paying jobs. And when the West Coast or the East Coast decides to go out, the hundreds of millions and billions of dollars of economic impact are felt for literally weeks and months. And we back up trains all the way to Chicago, and it creates conditions that take us out of our normal pace, that we don't like the risk of that as well.

The CHAIRMAN. Thank you, Senator.
Senator Hassan.

**STATEMENT OF HON. MAGGIE HASSAN,
U.S. SENATOR FROM NEW HAMPSHIRE**

Senator HASSAN. Thank you, Chairwoman Fischer and Ranking Member Booker, and thanks to all of you for being here today. I'm sorry I wasn't here to hear your testimony, but I will be well briefed on it.

I wanted to start with a question to you, Mr. Lofgren. The trucking industry obviously plays a critical role in our country, it certainly does in New Hampshire, where we have about 27,000 jobs that are related to the trucking industry, and not only is New Hampshire paradise, we're small, so from 1.3 million people, 27,000 jobs is quite a lot.

We all know how hard our drivers work, often in really rigorous weather conditions. And some of the roads aren't very well kept up. You know, we've all had our infrastructure challenges over the last couple of decades really. The American Society of Civil Engineers has deemed one in nine U.S. bridges structurally deficient, clearly posing a risk to travelers, including truckers, all around our country.

So I think we all talk about the need for more infrastructure investment and that it's very, very clear. It seems to me it's always how we do it that's the question, right? Some are good for tax breaks and public-private partnerships. Others maintain direct Federal spending will be needed if we're going to really develop a 21st infrastructure that lasts.

As an industry expert and a business leader, do you believe we can reach infrastructure goals with tax cuts alone, or do you think we need to take an all-of-the-above approach to tackle this challenge?

Dr. LOFGREN. Well, you're really putting me on the spot, aren't you?

Senator HASSAN. I know.

Dr. LOFGREN. Well, I will tell you that the trucking industry recognizes that we have to pay our fair share, and we realize that the mechanism for doing that has to be created. Now, there's a lot of debate here in this city as to how that should happen.

Senator HASSAN. Right.

Dr. LOFGREN. I'll just go back, when Eisenhower started the effort that said we're going to build an interstate system that will

connect this country, he talked about a usage fee, and it was really a recognition that as people gained benefits from this infrastructure that was put in place, they should contribute to both its growth and its maintenance. I would say our industry is more than willing to do it because it is fundamental to successfully and safely executing what it is that we do.

So I think there is an absolute willingness for us to pay more. We want it to be effectively deployed to address the need. And I think that's why we send all of you here, is to figure out what's the best way for that to happen.

[Laughter.]

Senator HASSAN. Well, thank you. Now you've put me on the spot, so we're even, right?

[Laughter.]

Senator HASSAN. Well, thank you very much.

And, Mr. Rose, I wanted to just talk a little bit about some of the innovations, and as I came in, you were talking about some of them, some of the uses of drones. As a former Governor, I got to appreciate the importance of technology, especially for particular safety functions. It is my understanding that BNSF has successfully been utilizing UAS or drone technology to assist, as you were talking about. And certainly the use of technology can save on your bottom line and increase safety.

So I guess it's an open-ended question. What can we do here to make sure that companies like yours have a regulatory framework in place that will allow businesses to innovate and experiment as new technologies emerge?

Mr. ROSE. Yes, so in my statement, I talk about doing a full comprehensive review of the FRA, Federal Railroad Association, undertaking that. I could point to a lot of rules in the railroad industry that go back to the steam locomotive.

Senator HASSAN. Yes.

Mr. ROSE. Literally. I mean, we set up our crude districts on that, we set up our inspections. And so things like the command and control structure of railroad regulations go back to a time when we had steam locomotives, and here we are, fast-forward, we've got the technology we have in these locomotives today now with Positive Train Control are going to totally change the face of that.

So the problem is that we don't have a good process in this country for looking at old regulations and the cumulative impact on regulations. And so I think we just need to take a holistic view and find where technology has replaced that old command and control, activity-based, regulatory oversight structure and start peeling them off.

Senator HASSAN. OK. All right.

Mr. ROSE. And while I've got my mic open, I just want to comment briefly on the highway system because I've studied it a lot and I just—Chris is exactly right on a user-based system. You know, long term, the gas tax doesn't work. The hybrids, the alternative issues, the inflation that comes into the gas tax. We all have studied it, know that we've got to come up with a different issue.

The ideal perfect issue is some sort of vehicle miles travel. We know that there are all sorts of public sensitivity around that. The information is already there in these cars.

Senator HASSAN. Yes.

Mr. ROSE. The information is there in our cell phones. And the faster we get that, I truly believe the faster we'll find a sustainable methodology to pay for our nation's highway, which, quite frankly, the railroads rely on.

Senator HASSAN. OK. Well, thank you.

And I see that I'm over my time. I would love to follow up with you all separately about the issue of Twin 33s on our highways, and now my office will do that. Thank you very much.

The CHAIRMAN. Thank you.

Senator Klobuchar.

**STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA**

Senator KLOBUCHAR. Thank you very much, Chair Fischer and Senator Booker. Thank you for this important hearing. I was very proud of the work that was done on the FAST Act last year, and was one of the early Senators to support it. I think you know why we need it, but for me, that's a floor, and I hope we can do even more in the years to come.

I did want to thank Mr. Rose. We have some rail projects in Minnesota in the metro area, including Southwest and Bottineau light rail projects. And I really appreciate the work that he has been doing to work with the Governor and others. So thank you so much.

We had a little snow out in the western states, and I'm not going to get into that, but thank you for responding. I know it's not easy. Mr. Moorman knows that we had to stop some planes and some trains from running during that time.

But I thought I would lead with just some of the issues. I know, Mr. Rose, that Burlington Northern makes long-term capacity decisions and must anticipate changes in market demand years in advance. This planning can be difficult. In 2016, you handled about 480,000 fewer units of coal than in 2015, while at the same time, you saw high U.S. corn and soybean export sales, and many from my state, contribute to an all-time record volume in shuttle sales and BNSF in the fall.

How do you adjust to better accommodate these variations? You know, we had that one year where it was really difficult because of oil coming in from North Dakota and other places, and because of the commodities at the same time. Since then, things have been pretty even keeled from my perspective, and I want to thank you for that.

But can you talk about how you accommodate things?

Mr. ROSE. Yes, well, it helps when you start with spending a lot of money. And unfortunately sometimes those massive investments like we made on the Northern line at \$1 billion, sometimes markets do change, and we know that that's just the nature of the business that we're involved in. It wasn't literally 7 or 8 years ago when FERC—we were being called into FERC, a railroad. We were

like, “Why are we going into FERC?” That’s not our territory. We like FRA, NTSB, STB, you all, T&I, but—

Senator KLOBUCHAR. You’re really fast with those initials. That’s very impressive.

[Laughter.]

Mr. ROSE. And we were being call in there because they thought that there was going to be a massive expansion in the coal business. And so, you know, that’s just the nature of these networks.

And I really am serious, though, we’ve spent enormous amounts of money. The industry will spend—we’ll spend about \$115 billion in this country on the highway system—that’s Federal, State, and local—and the railroads are spending about \$25 billion.

So what we’ve got to do is to make sure that the railroads can continue to spend that money and then we’ve got to have the best insight by working with our customers, such as Dow and Schneider, to see where their needs are going to go because, as you know, building—once you have a market and once you have the money, the ability to build it out because of the challenges of permitting are really significant.

And we feel like we literally, in some cases, need to be out 5 years, and when we think about our vision of going out 5 years and understanding where Chris’s business is going to be in 5 years, it’s sometimes hard to see that.

Senator KLOBUCHAR. How about rail crossings? Any developments with those? I know we’ve worked on those together before.

Mr. ROSE. Yes. Again, I think that—we call it—you all call it section 130 money, we call it that, too. That’s a good thing. You’ve increased the funding of that to I think about \$225 million a year. Quite frankly, it probably needs to be closer to a billion dollars a year. That allows communities to draw into that, do separations, overpasses, underpasses, increase the level of safety, go to flashers, grade gates, those types of things.

As I said earlier, we have about 250,000 grade crossings in this country. Probably half of them have absolutely no mechanized devices at all. They’re traditionally out in the middle of the country. We call them crossbuck-protected crossings.

But when you look at these metropolitan areas like Minnesota and Saint Paul-Minneapolis, where we start getting—the urban sprawl is going out further and further, a great way to relieve congestion is to separate that crossing, but they’re really expensive to do.

And so I would just urge more money, more programmatic reform, like you all have already started to do, that will allow states to draw down.

Senator KLOBUCHAR. OK. Thank you.

Just one quick question at the end, Mr. Moorman. I led the bill with Senator Cornyn on human trafficking last year, and then we actually, this committee, passed through a bill with the airlines and flight attendants to improve training of workers on the front end to catch human trafficking. We’ve been amazed at the cases that can come in.

I was just wondering, I know that Amtrak is interested in this issue. Could you just very briefly tell me about your efforts? Because I’ve run out of time here.

Mr. MOORMAN. We have done a lot of education across the entire company with all of our field people, exposed them to the issues, given them training on them. We keep a lot of information displayed still to make sure that information remains timely and that they're aware of it. I think there is the Blue program, which Amtrak participates in as well.

So it's an issue that we continue to educate our people about and deal with, but we're very involved with that.

Senator KLOBUCHAR. Thank you very much. Thank you, all of you. Thanks.

The CHAIRMAN. Thank you, Senator.
Senator Udall.

**STATEMENT OF HON. TOM UDALL,
U.S. SENATOR FROM NEW MEXICO**

Senator UDALL. Thank you very much, Chair Fischer and Ranking Member Booker. Welcome. Good to see all of you today. Had an opportunity to watch you from my office, but good to be here today in person with you.

A WalletHub study recently ranked my home state number four on the list of states that could be hardest hit by a trade war with Mexico. In 2016, New Mexico exported \$1.5 billion in goods across the southern border, significant transportation investments in Santa Teresa, for example, to help facilitate trade and increase economic opportunity in southern New Mexico.

But President Trump seems to be leading us to a trade war with Mexico. He has proposed a 35 percent tariff on goods coming from Mexico. Mexico's economic minister has recently reported that if a border tax like that is put on Mexican goods, they would immediately seek retaliation.

So I would ask Mr. Rose and Dr. Lofgren, is this saber-rattling on trade good for the transportation industry? Would a trade war with Mexico be good for your businesses? And are other transportation companies concerned about this from what you're hearing from your colleagues in the industry?

Mr. ROSE. So I would like to just brag for a minute on my largest competitor, Union Pacific, who really is responsible for Santa Teresa.

Senator UDALL. You bet. You've got it.

Mr. ROSE. I sit on the Dallas fence, and we watch all of your state as well as Texas. And Santa Teresa is a great example of how a large rail logistics park can go in and create enormous economic commerce and create jobs for a community and facilitate the flow of goods across our country.

Senator UDALL. You're absolutely right on that.

Mr. ROSE. And I let my favorite customer and colleague, Dr. Lofgren, answer the question on the trade war.

Senator UDALL. You're going to punt.

[Laughter.]

Senator UDALL. Mr. Rose, you're punting then on me. You're passing it off, the hot potato.

Mr. ROSE. We do not believe in trade wars.

Senator UDALL. The hot potato. OK. Good. That was good. You put it on the record, we don't need trade wars.

[Comment off microphone.]

Senator UDALL. For the record.

Dr. LOFGREN. Yes, I know. This is an example—this is an example of Matt's great sophistication and time spent here in this fine city, how he handled that. He will pay for that one way or another.

[Laughter.]

Dr. LOFGREN. Clearly, we have significant operations that move freight both into Mexico and out of Mexico, and clearly, these kinds of issues are not going to be helpful to our business in terms of reducing the flow of goods. Now, I know that a lot of our customers have significant manufacturing facilities that bring component parts or build component parts, which they need to finalize here in the U.S. So I'm pretty sure that it's not going to go to zero, but there is no doubt that if the path that we're on here continues, we'll see reductions in the amount of business that we're going to conduct between the United States and Mexico.

Senator UDALL. Yes, and the reduction in business means reduction in jobs, and that's what we're really worried about in New Mexico.

Now, I very much support investing in infrastructure, but there is one massive infrastructure project proposed by President Trump I'm not very excited about, and that's a border wall with Mexico. This wall could cost \$21.6 billion, and that's with a "B," \$21.6 billion. That's according to a news report quoting Department of Homeland Security cost estimates. And now we know that American taxpayers, not Mexico, will pay for the wall. Business leaders in southern New Mexico are also worried about the economic costs to their companies once Trump's taxpayer-funded wall is built.

And Jerry Pacheco, President and CEO of the Border Industrial Association, explained that building a border wall would hamper cross-border partnerships. In my view, building this wall could send a message to foreign companies that the border is closed for business.

Mr. Rose, how would a border wall impact our trade relationship with Mexico? And, specifically, how would a border wall impact the rail business in places like Santa Teresa along the southern border?

Mr. ROSE. I'm really not sure how a border wall would be impacted. I think, you know, right, wrong, or indifferent, we'll probably haul a lot of the product going into if there is a wall being built. But I really don't know how that wall will impact our business. We, quite frankly, haven't thought a lot about it.

Senator UDALL. Yes. One of the things that I'd want to put on the record, this area that I'm talking about that Jerry Pacheco—many people think that Albuquerque is our biggest economic area. It's actually the border area, where you're across border, have huge amounts of activity, and then in New Mexico, it's growing, it's booming, and they're very worried, they're very worried about it. So it's something that concerns me a lot. And the whole issue here is jobs, as you know.

Could I ask one more question? I want to get to Amtrak, which we love in New Mexico. You know, all the Boy Scouts, whenever you run into Boy Scouts around the country, they're headed to New Mexico on Amtrak to go to the Philmont Ranch, premier area to

go. So we want to make sure that Amtrak continues running. And, as you know, New Mexico, Kansas, and Colorado have worked together successfully to get TIGER grants that help support track safety improvements for the Southwest Chief line. Do you agree with me that rail projects should continue to be eligible for TIGER grant support?

Mr. MOORMAN. Well, absolutely. And I think that the model you cite is a classic example of communities and states understanding the importance and desirability of passenger rail transportation. We see that in a lot of other parts of the country as well. So I certainly agree that the accessibility of TIGER grants is an important tool for them to use.

Senator UDALL. Great. Thank you very much.

Thank you, Madam Chair, for your courtesy.

The CHAIRMAN. Thank you.

Senator UDALL. I really appreciate it. Take care.

The CHAIRMAN. Thank you, Senator.

Senator Duckworth.

**STATEMENT OF HON. TAMMY DUCKWORTH,
U.S. SENATOR FROM ILLINOIS**

Senator DUCKWORTH. Thank you, Madam Chair, and thank you to the Ranking Member, for convening this important hearing on the Nation's multimodal transportation system. You know, the people of Illinois sent me here with a clear message: Americans are ready, willing, and eager to rebuild our Nation's infrastructure.

Whenever I travel across Illinois, whatever else is happening that's dysfunctional in this country, one of the things that unites people, whether I go into a rural community or an urban center, is an agreement that we need to finally come together and work to modernize our country's aging roads, railways, and bridges.

It doesn't matter where I go, whether I am in El Paso, Illinois, or whether I am in Chicago, Illinois, people are deeply concerned. They're ready for us to place a big bet on America, and they want to invest in American workers and American companies as part of a multiyear rebuilding effort for our infrastructure using American workers, using American steel in particular.

Mr. Rose, as BNSF knows well, any serious efforts to upgrade our Nation's freight rail system must prioritize Illinois. Our great state is proud to be home to more than 9,000 miles of railroad tracks and the 41 railroads that travel on them. Chicago is the busiest rail hub in America, and East St. Louis is another major rail center. Millions of tons of freight rail travel across Illinois every single year. And, in fact, we're almost like the arteries in your body when it comes to the railroad, and if you just have one artery that gets clogged, the entire Nation does suffer.

I'll give you an example. Right now, today, a train can ship freight from Los Angeles to Chicago in under 48 hours, closer to about 35 hours, but it takes that same train 30 hours just to get from one side of Chicago to the other. And that reverberates up and down the supply chain.

So, Mr. Rose, would you agree with me that this status quo must be improved and upgrades increasing rail capacity and reliability

to combat congestion in Illinois would both improve supply chain efficiency and strengthen our entire economy?

Mr. ROSE. Senator, when we think about Chicago, it really is the textbook example of a project of national significance. All freight railroads, six of the seven big-class ones, touch Chicago, Amtrak, Metra, hundreds and hundreds of passenger trains. And we agree with you about Chicago really being at the epicenter of the entire freight railroad network. We have looked at it over the years. I will tell you I share many of your frustrations.

There is a significant effort, as you know, CREATE. It has made progress for improving the connectedness of the freight rails. The next stage of it is additional funding. Projects like the 75th Street overpass we know are vitally important to the passenger commuter side of Chicago. We will continue to be supportive in those efforts. But if we were going to place one big bet on a project of national significance for the freight railroad industry, it would come back to Chicago.

Senator DUCKWORTH. Thank you. I thank you for highlighting CREATE. Could you describe a little bit, just take a moment to describe, how the FASTLANE grant for this vital project and—well, FASTLANE grants for both the 75th Corridor Improvement Project, as well as the Merchants Bridge project, would be absolutely vital to the transportation of goods and services as you were mentioning?

Mr. ROSE. Yes. So, again, I think that the FASTLANE program has great bones. It's going to need more funding for the first time, multimodal projects, intermodal projects. The Merchants Bridge is a great example of where that money could be applied to that, lower the financing costs of that. Chicago, CREATE, a lot of multimodal projects in Chicago that would be eligible for FASTLANE.

So we're real excited about the program. I know it's going to come under funding constraints, but, again, I said earlier, I think for the first time ever what you all have done is by really highlighting the necessity of a freight program and having those freight plans, will give people a better pathway to justify the funding that you all will eventually have to come up with.

Senator DUCKWORTH. Thank you.

Mr. Moorman, do you want to talk a little bit about Amtrak's role in this? Because as the Merchants Bridge is concerned, Amtrak also goes over that bridge and I believe has agreed that we need to really prioritize the improvements there.

Mr. MOORMAN. We have. We have a very strong interest obviously in the Merchants Bridge and in the Chicago area as well. Amtrak is a participant in CREATE and certainly has stepped up I think to support all of the freight industry in Metra, in the 75th Street project, the application for the grant there.

Anything, as I've said before, anything that improves the rail infrastructure of this country in those places where Amtrak operates is something that we strongly support and believe in and want to work with you and the Congress as well as our partners in the freight industry to further those initiatives.

Senator DUCKWORTH. Thank you. Thank you, Mr. Rose.

Thank you, Madam Chair.

The CHAIRMAN. Thank you.

Senator Booker.

Senator BOOKER. Thank you very much, Chairman.

Mr. Moorman, you heard me in my opening comments talk about the Gateway chokehold, and obviously we have two tunnels there, about 107 years old, that probably, given on whose estimates you look at, have 10 to 15 years left in life. The last Congress, the administration ranked that as like the number one infrastructure urgency in the United States of America. What's going to happen if the Federal Government doesn't continue what we've seen in the last Congress and really step up to partner on the project?

Mr. MOORMAN. Well, we're already seeing increased reliability issues through the tunnels, primarily are driven largely by the recent flooding of Hurricane Sandy, which flooded not only the two tunnels under the Hudson, but the four tunnels under the East River, and they are creating lots of electrical problems, signal problems. Those problems will just continue to get worse. And at some point, if it's 10 years or 15 years, we'll have to shut one of them down.

Senator BOOKER. And what's the economic impact of shutting one of those tunnels?

Mr. MOORMAN. Well, it's extraordinarily difficult to calculate. If you look at our peak service through those tunnels in the morning and the evening, we put about 24 trains an hour through them.

Senator BOOKER. You're moving literally hundreds of thousands of people a day.

Mr. MOORMAN. Absolutely. There are several hundred thousand people a day. Once one tunnel goes out, and it would go out for well over a year to rebuild, you're down to six trains an hour, and it would be nonfunctional.

Senator BOOKER. Am I overly dramatic to say you would have a traffic "Armageddon" in that region?

Mr. MOORMAN. You would. No, I don't think it's overdramatic. It would freeze that side of the river I think in terms of people getting in and out of the city.

Senator BOOKER. Yes. So I'm a little frustrated because I think that in the beginning of your remarks, you talked about bringing business sense and practices, and I really just—I'm excited about your leadership with that.

But one of the biggest problems it seems is that your funding is not in any way regular or reliable and it's not a part of the overall Transportation Trust Fund. Could you address the challenges that that brings to the way you're trying to run this Amtrak like a business?

Mr. MOORMAN. Well, it obviously creates a lot of problems. Now, but one thing let me applaud the Committee for is that the FAST Act, under the provisions of the FAST Act, the authorization is at least for a known amount of money over the next few years, so we can make better plans as a result. The only issue with that is that while that's sufficient to keep the network certainly operating and to do some modest improvements, these major projects that you're describing are far beyond the funding that's committed to Amtrak, and that's where my real concern comes in about the Northeast

corridor and about the long-term needs we have in terms of locomotives and rolling stock. So—

Senator BOOKER. Mr. Moorman, I hate to interrupt you, but anytime you want to applaud this subcommittee, you should go right ahead and do it, literally or figuratively.

[Laughter.]

Senator BOOKER. Just for the Committee as a whole—and, Mr. Gurd, I really feel bad, like you have not been grilled sufficiently in this hearing, and so I'm going to allow you to answer this as well—direct government investment in infrastructure, a lot of talk about infrastructure by our President and by Congress.

I believe that you need to have a direct investment by government in addition to like we did through the FAST Act, making the RRIF program and other loan programs.

How do you feel about direct government investment? Is that necessary in terms of the economic growth strategy for our country?

Mr. Gurd?

Mr. GURD. Thank you.

Senator BOOKER. Yes, sir.

Mr. GURD. I would say so, yes. With regards to infrastructure and our ability to be able to ship products to our customers, every day customers are continuing to get more demanding in what they need, when they need it, and our ability to connect with our carriers. Our ability to make sure that we get products to get products to our customers safely and on time when they require them is something that is very important to us and our ability to be competitive. And being able to have the infrastructure in place in order to make sure that that happens as it comes outside of our fence line is extremely important.

Senator BOOKER. So you would be in support of direct government spending on infrastructure?

Mr. GURD. Yes.

Senator BOOKER. And, Dr. Lofgren, the man with more degrees than the month of July, sir, yes or no, when an infrastructure package comes down, would you like to see a big robust part of that being direct government spending?

Dr. LOFGREN. Yes, I would.

Senator BOOKER. And, Mr. Rose, by any other name?

[Laughter.]

Mr. ROSE. Yes, so if you think about our nation's infrastructure, it's really a weapon of competitiveness for the U.S. worker.

Senator BOOKER. I love that, a weapon of competitiveness.

Mr. ROSE. Yes. And investments in this network are going to enable that worker to be more competitive. I'm fine with direct government investments with the caveat that we don't change the balance of modal equity. OK? What you should want—I'm sorry, I interrupted.

Senator BOOKER. No, I was just saying modal equity meaning?

Mr. ROSE. Between the highway and the railroads. OK? We pay for 100—99.3 percent of our own infrastructure in the railroad industry, and clearly I hope I've made the point today, what you should want is for the next ton of freight that's moved on the surface of this network in this country, that somehow it gets off the

highway and gets put to the railroad industry because of our efficiency, our environmental impact, and the fact that then you don't have to pay for that next road pavement on that highway system.

And if we lose the economic tilt, if you will, of how these networks are funded—and I'll say Chris has been—he has advocated that the trucking industry needs to pay their fair share, and as long as we go down that pathway and that the trucks continue to pay for their use of the highway network, it's great.

If we just move away from this user pay system and end up where all the money that goes into the Highway Trust Fund is paid through general revenues or some of the creative things that had to get passed in this last bill, then what will happen over time, because you'll be subsidizing the railroad's largest competitor, and our largest customer, and what will happen over time is that you'll get more and more trucks to the highway network, and I don't think that that's what anybody in this town wants.

Senator BOOKER. No, sir. I appreciate that. And I want the record to show that as I looked at Dr. Lofgren's face, that he took no umbrage to that comment whatsoever, none.

OK. And I am over my time. I only have one more sort of question for us, but I've learned to defer to my senior Senator and the chairperson of this committee.

The CHAIRMAN. No, go ahead.

Senator BOOKER. Go ahead. OK.

So I just want to say first of all that, Mr. Rose and Dr. Lofgren, you guys are really leaders, amongst the leaders, in industry when it comes to safety issues, and I'm just grateful for the commitment you both have made, Mr. Rose, you all are ahead of schedule in your industry for putting in Positive Train Control, and I'm really grateful for the sincere effort you all are making to meet the Congressional mandates, but also, as you said in your testimony earlier, that it's not a be-all and end-all to train safety, and you all are innovating in ways to find other ways to ensure safety, and that means I speak at least as one Senator that really appreciates that work.

Dr. Lofgren, the same thing goes for you all. You know that I'm a guy that has been harping on truck safety, you may have heard that, sir, but I just want to say that you and your company, really again, amongst industry leaders and what you're doing to try to lead in safety innovations and technology, and I'm one Senator, I just want to say publicly, I am deeply appreciative of the work that you all do. I know how seriously your company takes it. So I really want to have that on the record.

I do, though, just have the concern, Dr. Lofgren, if I can focus, on what the trend is out on our highways. And, again, the preliminary data that's come from the National Safety Council released in a report found that these preliminary estimates, as many as 40,000 people died just last year in vehicle crashes, it's yet another year where we're seeing a 6 percent increase over 2015 and a 14 percent increase over 2014. That's a 2-year increase, the most dramatic 2-year increase in 50 years.

And I say that to say—and I talk to truckers now all the time and they rightfully point out that cars act whacky around trucks and often are the ones causing the so-called truck accidents. So I

don't want to pin this on the trucking industry, the level of carnage we're having on our highways, but, as someone who I afford a lot of respect to because I know how seriously you take this, could you just give me just some thoughts that you have about, how can we deal with what I think is a major crisis, one of the leading causes of death in our country, destroying so many families?

I'm wondering if you have some thoughts and input and advice. That's really my last request, my last question here, if you could just sort of talk to me specifically about what your industry could be doing or should be doing to make us more safe out there, because the gravity of the carnage and injury and loss of life, loss of property, is just stunning.

Dr. LOFGREN. Do you want me to answer?

Senator BOOKER. Yes, sir. I'm done.

Dr. LOFGREN. OK. You are right. With forward-facing cameras, some of the video that we can show you of behaviors of the motor-ing public, you would think we had maybe created a comedy. It's not comedy, but the reality is, is that if you look at vehicle miles traveled on the road today, the real growth is in passenger vehicles versus trucks. That's not to say that we haven't at times really messed things up and very, very horrific things have happened.

What I find interesting, as we think about putting in regulations, the reality is, is if you look at the dramatic improvement in rear-end accidents that we've had at the company since we have put the OnGuard technology in, it speaks for itself. The reality is, is that there is no requirement that a truck coming off the manufacturing line today, Class 8 vehicle, have that equipment on it as standard.

So when you look at some things where you say there are regulations that could have massive impact, the reality is, is that you cannot reverse engineer that back into a piece of equipment, it has to be a new vehicle.

So I think some of the things like that, I mean, there are regulations that I don't think are productive that we operate under in the industry, that would be one that there is so much evidence to say this needs to be a part of what is coming on and hauling freight today.

So I think there are things that are going to emerge over time where there ought to be incentives to get people to do that and to invest the incremental money because of the paybacks. So that would be one area where I think there is opportunity.

Senator BOOKER. So let me just say thank you because the data in your testimony was stunning about the rear crash, and that you all are doing that, not as an industry mandate, but—

Dr. LOFGREN. And there are others of our competitors who are doing it as well, so I don't want to stand up and say we're the only ones.

Senator BOOKER. But now at the risk of being kicked by my Chairperson here, I do want to note for the record that an industry leader just called for some more regulation. Thank you very much.

[Laughter.]

Dr. LOFGREN. The right regulation.

Senator BOOKER. The right.

The CHAIRMAN. Thank you, Senator Booker.

And I would like to thank the panel for being here today. I think this has been an important hearing where we talk about moving people and moving freight, seeing our economy grow, provide jobs. We move America, but as you can tell from the questioning, there are differing views on how we're going to do that. And we need, I believe, to look outside the box.

Earlier—I'm going to go on since the Ranking Member went on for a while.

[Laughter.]

The CHAIRMAN. I think earlier we heard about the issues we have with the fuel tax. It is not sustainable. I would propose to you that it hurts lower income people. It, in many cases, can limit job opportunities. But as we move to new technologies, a fuel tax is not going to grow our transportation system, in my opinion.

So I think it is important that we look outside the box. And I thank you, Dr. Lofgren, for being willing to step up and assume more of the cost of roads, but that's hard for a trucker who has one truck and is trying to take care of his family. I heard that when I was in New Hampshire. There are many small truckers in that state, and they were worried about it.

I come from a state that has small truckers, but also has a number of very, very big companies, and I have always appreciated the support of truckers when I am trying to work on financing for infrastructure at the State level and now at the level here that we're looking at nationally. So I thank you as we move our freight.

Mr. Gurd, I appreciate the consideration that you have to give for transporting materials that are needed for our economy but are also difficult to transport, and you do that with care and you do that with a sense of responsibility to your drivers, to the public, to our country. So I thank you.

And, Mr. Moorman, when you are moving people in this country, especially in the Northeast Corridor, where my Ranking Member, he just wants more and more and more—

[Laughter.]

The CHAIRMAN—but we do appreciate the services that you provide as well. And I think there should be a way that we can provide for the needs that you face in a creative way in the future.

And, Mr. Rose, I know that Ted Cruz claims you in Texas, but we claim Burlington in Nebraska. I have family ties to Burlington. As I think if you go back far enough to the people in Nebraska, somewhere in our history, our family history, there is a connection to a railroad. You folks have grown and built this country.

So I thank you all for being here today. I appreciate it.

The hearing record will remain open for 2 weeks, and during this time, Senators are asked to submit any questions for the record. Upon receipt, I would ask the witnesses to please submit your written answers to the Committee as soon as possible.

With that, I thank you all, and the hearing is adjourned.

[Whereupon, at 4:22 p.m., the hearing was adjourned.]

A P P E N D I X

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEB FISCHER TO
MATTHEW K. ROSE

Question 1. Mr. Rose in your testimonies you each discussed reforms in the FAST Act that streamlined the environmental review process and removed some of the red tape on routine infrastructure and asset maintenance. Would you please elaborate on the types of challenges your railroads face when attempting to build or improve its infrastructure? Are there ways that Congress can improve on the work within the FAST Act?

Answer. Congress has recognized the difficulty of project permitting, including projects related to railroad operations, which the rail industry appreciates. There are areas where additional Congressional action would be helpful, in both the railroad-specific context and in ways that benefit all permitted projects. Congressional oversight of the implementation of items that Congress has already addressed is also important.

As noted in my testimony over the past few years, facility expansion on the West Coast for both BNSF and our customers has been severely challenged by the regulatory process and environmental advocacy groups opposed to facility construction. In some cases, local permitting processes are used as a means to target and prevent interstate transportation, particularly of fossil fuels. Under the Interstate Commerce Commission Termination Act (ICCTA), many state or local regulations are preempted with respect to rail transportation—including zoning and land use regulation, construction and environmental permitting of rail facilities and regulation of railroad operations. When it comes to interstate commerce, Federal agencies, including the STB, must not be reluctant to intervene and provide clear direction that using such regulations to block these projects is preempted. Strong direction from Congress could ensure that important rail projects are not shelved or abandoned altogether, and that the flow of interstate commerce is not impeded.

An area of needed reform common to many projects, including railroad projects, relates to reviews under the Endangered Species Act. In some cases both the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service must be consulted before a permit or clearance can be issued. Neither agency has a speedy consultation process. It is imperative that Congress consider time limits after which, if the Service cannot articulate an adverse impact on a species that is likely to occur from the project, then the project is deemed “not likely to have an adverse effect” by the Service under the Endangered Species Act. Many times, particularly for most fish species, the Service knows the appropriate time windows when work should and should not proceed, and knows the best management practices that will protect the species of concern. However, instead of promulgating regulations or agreements that would streamline projects that agree to use the standard fish windows and best management practices, the Services go through long, laborious processes to recommend the same windows and practices. In some cases, we have seen the Services use this process to make comments regarding the lead agency’s scope of review under NEPA.

Lengthy consultations between Federal agencies are also a challenge under section 404 of the Clean Water Act. The process for the U.S. Army Corps of Engineers (USACE) to initiate a consultation with the USFWS to examine impacts to fish and wildlife needs to be streamlined and expedited. There should be a hard deadline for the USACE to initiate the consultation process.

When it comes to mitigating environmental impacts of projects, we concur with the USACE that mitigation banks and in-lieu fee programs are usually the right answer from an environmental standpoint. However, the process that allows a person or group to create a mitigation bank is overly burdensome. There are some watersheds where no banks are available, and this is at least in part because of the onerous, years long process that must be undertaken before a bank can sell credits. Congress should encourage the USACE to study its process and streamline it to the maximum extent practicable for both public and private mitigation banks.

Congress can make additional improvements to the FAST Act to ensure the timely delivery of much needed infrastructure projects.

- Statutorily prioritize project permitting for international commerce.
- Review the scope of state implementation of Federal statutes to ensure consistency with Federal regulators for projects in interstate commerce.
- Expand Federal Communications Commission regulatory streamlining to expedite the deployment of technologies that improve safety and efficiency in the railroad industry.
- Expand FAST-41 to railroad projects.
 - The FAST Act (under Title 41 or “FAST-41”) creates a new initiative to expedite permitting and environmental review for complex infrastructure projects. The FAST-41 provisions make fundamental changes in project delivery by setting timetables for review which can be modified under limited circumstances, creating accountability through performance metrics, and limiting judicial review. Unfortunately there are a number of limitations on projects that are covered under FAST-41, including rail projects. Rail projects are increasingly complex, with multiple agency reviews and uncertain timelines. The benefits of this new permitting structure should also include large rail projects.
- Require that permitting authorities at all levels of government use technology for streamlining.
- Public and Private Geographic Information System tools are widely available and make relevant, scientific, environmental, cultural and other data easily accessible to facilitate project siting. Congress should statutorily prioritize the use of GIS tools for NEPA analysis instead of costly on-the-ground studies to help reach conclusions in a timely manner.

Congress should exercise careful oversight of the FAST Act rail project delivery/permit reform provisions to ensure they are implemented in a fashion to deliver their intended efficiency benefits. As I covered in my testimony, the FAST Act directs the U.S. DOT to apply, to the extent feasible, previously enacted highway-related environmental streamlining to railroad projects. The rail industry stands ready to work with the Department to determine how best to apply these roadway project efficiencies to railroad and intermodal projects. The FAST Act also mandates that the DOT, in consultation with the Advisory Council on Historic Preservation (ACHP), establish a Section 106 exemption for railroads rights-of-way consistent with the exemption currently in place for the Nation’s Interstate system. At the time of transition to the new Administration, the Department had not completed action on a draft proposal for submittal to the ACHP. The Department had also begun but did not conclude the process called for in the FAST Act to survey the Federal Railroad Administration’s use of NEPA categorical exclusions and a rulemaking for new exclusions to facilitate rail projects. Finally, the Act exempts from Section 4(f) review the use of railroad and rail transit lines that are in use or that were historically used for the transportation of goods or passengers.

Question 2. Mr. Rose, in your written testimony, you mentioned that FRA data indicates a drop in employee injuries by a remarkable 80 percent from 1980. At BNSF, what would you say are the major elements of this drastic increase in safety on our Nation’s railroads? And, as a follow up, how is technology and innovation enhancing safety on our Nation’s railroads?

Answer. Government data shows that for the freight rail industry, the train accident rate has fallen 43 percent since 2000 and 79 percent since 1980, and the rail employee injury rate has fallen 46 percent since 2000 and 83 percent since 1980. Continued robust investment in infrastructure has played a direct role in this success, along with the deployment of technology and safe operating practices, which involve rules compliance and a commitment to safety by our employees. According to the Association of American Railroads (AAR), the industry has spent on average close to \$25 billion annually over the last five years and a total of \$600 billion since 1980. Since 2000, BNSF has invested more than \$55 billion in its network, and our infrastructure is in the best shape it has ever been to meet customer needs and operate safely.

While railroading has become extremely safe, it remains a very unforgiving environment. The scope and complexity of the Nation’s rail operations, operating over a 140,000 mile outdoor production line, means that infrastructure and equipment will sometimes fail or that human error can occur. In response, BNSF employs a broad-based risk reduction framework to reduce risk in all aspects of our operations. Infrastructure investment, intense focus on fostering a safety “Culture of Commit-

ment”, along with risk countermeasures including a combination of critical safety processes and technology, have produced tremendous safety results. Our vision and ultimate goal is to operate completely accident and injury free and so we recognize and are committed to the fact that there is more work to be done.

BNSF recognizes that effective safety programs include the engagement of every employee. BNSF’s employee safety training initiative, “Approaching Others About Safety,” (AOAS) is a training program for all BNSF employees that focuses on confident and effective peer interaction. AOAS launched in 2013 and is the single largest training program BNSF has ever undertaken. The idea is simple: If you care about someone, you’ll approach them when you see them working safely and let them know. At the same time, if you see them putting themselves at risk, you will approach them and recommend a safer way. AOAS was created with the involvement of many BNSF employees, including focus groups with union employees within our Transportation, Mechanical, Engineering, Intermodal and Telecom groups. The program encourages attention to behaviors that, when done safely, reduce the level of risk. Training focuses on the exposures that result in 97 percent of injuries, specifically the critical or primary exposure areas, including: line of fire/release of energy, pinch points, ascending/descending, walking/path of travel, and life-saving processes. We believe Approaching Others has fundamentally changed our safety culture.

Technology continues to play an important and growing role in improving safety. BNSF and the freight rail industry deploy a range of safety technologies and operational innovations across the North American rail network, a considerable amount of which was developed in cooperation with the Transportation Technology Center, Inc. (TTCI) in Pueblo CO, and in coordination with the FRA and backed by support from the U.S. Congress. These technologies include:

- Wayside detectors that identify defects on passing rail cars
- Wheel profile monitors which use lasers and optics to capture images of wheels
- Wheel Impact Load Detectors (WILD), which measure vertical wheel forces on the rail. Algorithms help identify wheels that have experienced a recent traumatic event and wheels with low-level long-term defects that could negatively affect the bearing or wheel life and rail health over time.
- Tracksides detector systems that use “acoustic signatures” to evaluate the sound of internal wheel bearings
- Wheel temperature detectors, using infrared technology, to identify wheel bearing fatigue
- Rail inspection systems using induction or ultrasonic technology to detect internal flaws in the rail
- Track geometry vehicles that use sophisticated electronic and optical instruments and ground-penetrating radar to monitor all aspects of our track infrastructure
- Machine Visioning systems which use camera-based technology to identify defects like worn truck components, worn brake shoes and missing bolts in the coupler carrier plate. These systems can identify defects of equipment in motion at over 70 mph, day or night, rain or shine.
- BNSF is also now in its third year of piloting Unmanned Aircraft Systems (UAS)—drones—for visual right of way and supplemental track inspections in a variety of conditions. We are one of three companies partnering in the FAA Pathfinder Program which will allow BNSF to perform extended track integrity flights.
- Positive Train Control (PTC) is an unprecedented “system of systems,” bringing together advanced analytics, wireless communications networks, GPS, tracksides and locomotive hardware and software and a back office computer system. BNSF is committed to the technology and will ultimately invest more than \$2 billion to deploy it, which will be important to help prevent the extremely rare but potentially catastrophic human error-caused accidents, like head-on collisions.

The future potential for technology’s role in improving safety remains tremendous provided we have a regulatory environment that encourages innovation. Policy makers and the FRA should support movement toward a more balanced, collaborative and transparent approach to a performance-based regulatory paradigm, one that focuses on safety outcomes and not necessarily the specific means by which to achieve them. The old “command and control” paradigm simply cannot keep up and doesn’t make sense in the modern and rapidly evolving world of technology and data analytics. The rail industry will continue to innovate to support our culture of safety

and sound operating practices—ensuring railroads can continue to earn the revenues necessary to invest adequately in infrastructure, maintenance and technology will be one of the most significant things that Congress can do.

Question 3. As we enter into a new administration and a new Congress, how can we improve the regulatory process at agencies to move towards outcome, or performance-based regulations with better data? As you are aware, in the FAST Act, I authored measures to reform the Federal Motor Carrier Safety Administration to ensure more participation and a stronger cost-benefit analysis. Are there specific changes you would hope to see across the DOT to improve the regulatory process?

Answer. My written testimony outlined near-, mid- and long-term improvements that Congress, the Administrator and railroad safety stakeholders should consider. While the underlying framework of regulations between the FMCSA and the FRA are different, the regulatory process improvements in the FAST Act informed aspects of those recommendations.

Neither Congress nor the FRA has taken a comprehensive look at the cumulative impact and effectiveness of the body of railroad safety regulation, or how safety and operating technology can be incentivized by regulatory processes. In particular, moving towards measuring outcomes, rather than activities, guided by better data would represent a change not only for railroads, but for regulators. Moving to more data driven oversight of outcomes does present certain risks for rail carriers, if not implemented cooperatively and if data is not adequately protected.

Many other industries in this country and across the globe now participate in the performance based regulatory model. The foundation of this model is a mature industry with a good safety record and appropriate incentives to be safe, like adequate returns and the ability to easily implement technologies. There are a multitude of internal and external incentives for railroads to operate safely.

We believe that the cost and efficiency of regulatory compliance can be improved, and that the safety gains we have achieved can be enhanced. That is always our goal; it is part of our corporate vision and drives how we operate. We look forward to working with the Committee on the details of its proposals, and thank you for opening the discussion.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO
MATTHEW K. ROSE

Question 1. Support for Freight Funding

- Should there be robust Federal freight investment in a future infrastructure package?
- Do you support lifting the current \$500 million cap on multimodal projects in the FASTLANE program?
- How have state freight plans and the National Freight Plan guided BSNF's capital investment decisions?

Answer. The Fixing America's Surface Transportation (FAST) Act is an important step in developing a national freight policy structure, and can serve as a good template to build upon for any additional infrastructure legislation that Congress might consider in the future. With one exception—it continues the regular and sizable infusion of General Funds into the Highway Trust Fund (HTF). This cannot continue in the future because it not only puts necessary transportation investments in budget competition with many other Federal funding priorities, it represents a national freight policy of subsidizing one mode over another and incentivizing the very road and bridge damage that Congress struggles to find the funding to mitigate.

Job one of a Federal highway program is to reinvest in the maintenance of the existing system and bring it to a state of good repair. Basic maintenance and operations of key infrastructure are critical to capacity and fluidity. Congress, the Administration and the users of the highway network need to be working aggressively now to strengthen the user based foundation of the HTF. This key principle has experienced significant erosion as HTF revenues have failed to keep up with investment needs and have been supplemented with general taxpayer dollars and other non-traditional funding sources.

Fortunately, the FAST Act contained provisions for demonstrating alternatives to the gas tax in a number of states and there are pilot programs underway. However, as the U.S. Department of Transportation (DOT) and states oversee how the private sector develops automated vehicle development and testing, driver assisted trucks and platooning, and even the requirement to maintain electronic logs for trucking

fleets, they should explore how these technologies will contribute to a future with sustainable, user derived fees for maintaining the highways.

One of the most notable elements of the FAST Act is the “Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies” (FASTLANE) grant program. This program is intended to help states, localities, and other entities overcome funding barriers to complete projects of national or regional significance. The program is funded at \$800 million annually, increasing to \$1 billion annually by 2020. Eligible projects must be highway freight projects on the National Highway Freight Network, highway or bridge projects on the National Highway System (NHS), intermodal facilities or railroad grade crossings, although intermodal projects are capped at a total of \$500 million over the life of the bill. It would be beneficial to the national freight system to lift the \$500 million cap on multimodal projects in the FASTLANE program, given that a significant amount of funding is generated by the General Fund. The competitive FASTLANE grant program should be just that, competitive. While there are a finite number of public-private partnerships in the freight rail segment, the demand for grants is strong as many communities seek to work with railroads to realign tracks through or around urban areas to change development patterns, want to separate more highways from rail rights-of-way or improve terminal railroads that serve key industrial areas. These multimodal projects could help ease congestion across the U.S. and improve the efficiency of our national highways. In addition, port projects are excellent candidates for FASTLANE grants.

As Congress considers additional infrastructure-related legislation, there should be continued eligibility and funding for the Railway-Highway Crossings Program (“Section 130 program”)—funding that should be fully utilized by states but often is not. Section 130 is a critically important program, and while it allows for some funding to go towards highway-rail grade separation projects, it does not come close to meeting the pressing needs that states and local governments have to increase funding toward projects that separate their roadways from railroad operations. The FAST Act prioritized grade separations in ways previous highway bills did not by making them eligible projects across multiple funding programs. If the legislative opportunity to assist state and local governments with additional funding for these critical roadway investments presents itself, railroads would continue to participate and support those projects.

Regarding state and national freight plans, BNSF believes they have been useful in identifying, prioritizing, and positioning important freight projects that provide substantial public and private benefits but have not traditionally fit within past transportation funding mechanisms. These plans are critical to securing the necessary public funding and benefits in cases where these important projects align with BNSF’s interest in providing a safe, reliable, and efficient U.S. supply chain. This influences BNSF private funding decisions in three primary ways:

- Allows BNSF to plan and commit its private funding commensurate with its benefit in projects that also have public benefits and public funding (PPPs), such as Tower 55 in Fort Worth, Texas, the Willmar Wye project in Willmar, Minnesota, or Sound Transit projects in Washington State.
- Provides funding for public infrastructure which enables BNSF to unlock latent capacity or justify investment in parallel projects, such as intermodal connectors and collectors. This also encourages BNSF (and our customers) to make investments in intermodal facilities or warehouses dependent on those roadways, such as the investments in the roadways and highways around BNSF’s Logistics Park, Kansas City in Edgerton, Kansas.
- Providing funding for ports, industrial parks, and other major freight demand generators drives BNSF’s investment decisions which support network capacity and performance to serve those facilities.

Question 2. Port of Quincy

- Why has BNSF not renewed service at the Port of Quincy for refrigerated cars?
- Will you commit to working with the Port of Quincy to restore cold train service?

Answer. BNSF is always looking for ways to be responsive to market demands and bring innovative rail solutions to our customers that make economic sense for us and our customers. We are always open to working with the Port of Quincy or any other port or customer to explore new market opportunities and provide service products that are in demand in the marketplace.

Question 3. Port of Bingen

- Why does BNSF believe that these grade crossings need to be closed?
- Has BNSF worked to understand the Port of Klickitat?
- Will you commit to ongoing discussion with Bingen to resolve this issue?

Answer. BNSF is engaged with Washington's Department of Transportation (WSDOT) as it looks to provide a grade separation to support access to the Port of Klickitat and Bingen Point. WSDOT believes an improved rail crossing will reduce potential backups on SR 14 while increasing mobility and safety in order to support future economic growth in the area. BNSF remains engaged with stakeholders including the Port of Klickitat and the City of Bingen at regular project development meetings and has offered to meet separately with the Port.

Question 4. Short-Line Railroads

- How will investment in last-mile projects benefit short-line railroads?
- How can freight investment be combined with the short-line tax credit to better improve freight infrastructure?

Answer. BNSF connects with approximately 200 shortlines who perform local and gathering activities (first-mile/last mile) for BNSF. In 2016, shortlines originated or terminated about one third of BNSF's agriculture and industrial products traffic. Shortline investments improve safety and service to our mutual customers and supports growth with existing and new customers.

The Shortline Tax Credit leverages private sector investment in rail infrastructure by providing a tax credit of 50 cents for every dollar spent on track improvements. The tax credits help shortlines make necessary investments in their infrastructure, ensuring these lines will continue to provide service to our shared customers.

Question 5. Viability of West Coast Ports. According to a recent article in the Journal of Commerce, West Coast ports' market share of Asian import cargo has declined from 78.3 percent in 2005 to a new low of 67 percent last year, a reduction of 12 percent. Additionally, the article goes on to say that the increasing intermodal rail rates we are seeing are the single biggest reason for this decline in market share.

As a stakeholder and an important service provider for the Pacific Northwest trade gateway—and one that has the ability and flexibility to set prices—what are your plans for ensuring its viability as far as the cost of your product is concerned?

Answer. A fair and comprehensive review of what considerations determine shippers' corridor and gateway utilization would include multiple factors such as commodity, time and distance to port and inland markets, capacity, port capabilities and perceived reliability. Rail cost is merely one component of the total cost of doing business through a particular port. Some perceived advantages in the Canadian supply chain include greater labor stability, strategic terminal expansions, a robust defense of industrial land to serve the global market, no Harbor Maintenance Taxes and alignment in support of serving Canada's product and commodity spectrum at the Federal, Provincial, and Local levels.

2015 was a pivotal year for U.S. Cargo diversions due to the cumulative effect of U.S. West Coast port congestion resulting in severe disruption and financial harm to shippers' supply chains. All major U.S. West Coast container ports contributed to the disruption. At one point in 2015, there were forty one ships anchored off the coast of Los Angeles, Long Beach, Oakland and the ports of Seattle and Tacoma. Although the congestion has improved, the long-term effect to the supply chain—and shippers' diversions to mitigate risk—is still being felt today. Canadian ports in particular have benefited by ensuring stakeholders that they can be a reliable routing alternative.

As the largest rail intermodal provider in North America, BNSF continues to invest to ensure that it offers needed capacity, service and value to its customers. BNSF has committed to transforming and enhancing our Northern Corridor between the Pacific Northwest and Chicago into a rail superhighway, just as we have with our Southern Transcon route between Southern California and Chicago. Since 2013, BNSF has invested more than \$5 billion to maintain and expand the Northern Corridor. We have added more than 135 miles of double track to our network with over 1,000 miles of centralized traffic control technology and 32 new or extended sidings. With this investment, we have permanently expanded the capacity of our network, which we believe will contribute to maintaining the U.S. supply chain advantage and supporting the Pacific Gateway Ports competitiveness.

The West Coast ports' market share is extremely important to BNSF. We offer our customers optionality by serving a broad Pacific gateway with multiple origin/

destination options, thus giving customers the power and flexibility to decide where best to direct their freight movements. We will continue to work closely with our customers, understanding their proprietary needs and preserving their confidentiality as we offer the value needed to win their business. There is robust competition in the marketplace—at each port, and between ports—and a wide range of factors driving customer decisions.

There are also challenges at West Coast Ports that must be addressed if they are to maintain their current market share, much less grow it. A recent study entitled “Unleashing Washington’s Maritime Potential: Identifying challenges to Port Competitiveness and Recommending Solutions” released in October 2016 highlighted the need to invest in maritime facilities in the state and the difficulty in doing so related to local land use decisions on waterfront property, related funding decisions and difficulty in permitting port and trade related projects for which funding and public and private support does exist. This includes local waterfront development in the Puget Sound area which must consider potential long-term conflicts with freight movement in the region.

We have and will continue to make investments in service innovation through line and facility capacity expansion, technology implementation, improved service design and by focusing on operating efficiency. Continued growth on BNSF’s Northern Tier is essential and we have been fully committed to helping grow imports and exports of all kinds through Washington state, but achieving growth has been difficult. We will continue to work closely with the Washington ports, Washington DOT and other stakeholders to understand and support how to fully utilize Washington’s gateways.

Question 6. Competition from Canadian Ports. The Canadian Government, ports and railroads appear to be doubling down on the strategy of increasing their share of U.S. cargo. Where before Canadian ports handled mostly Canadian cargo, today 24 percent of Vancouver’s cargo and fully two-thirds of Prince Rupert’s is bound for or originates from the US. In recent years the ports of Seattle and Tacoma have lost market share, associated jobs and export capacity to these Canadian ports.

- What is your perspective on the cost advantage by Canadian railroads in terms of why they can offer lower rates and how it will affect your business strategy?
- Are you aware of incentives from the Canadian government that allows them to charge lower rates than those in the Pacific Northwest?

Answer. The Canadian Federal and provincial governments, ports and key stakeholders have developed an effective long-term collaboration focused on growth and reliability, especially in advancing infrastructure and adding capacity to meet the changing needs of the ocean container industry. For example, all three major Canadian ports have extensive and expanding on-dock rail facilities. Ongoing support and effective policies by government have made the Port of Prince Rupert and the Port of Vancouver attractive routing alternatives to U.S. West Coast ports. There is also alignment between interior and coastal Provinces on projects that benefit the Port of Vancouver and Rupert as both recognize the importance of exports to the viability of their local and national economies. This collaborative and aligned effort extends to permitting and approvals for key projects. In Canada, the combination of a strong effort to ensure port competitiveness between governments at all levels and key stakeholders has created a largely stable, cost efficient and achievable environment to attract growth. In contrast, U.S. West Coast ports have lagged in developing a comprehensive approach that results in long-term infrastructure investments to attract more volumes.

For West Coast container ports competing with Canada, the U.S. Harbor Maintenance Tax creates a competitive disadvantage. Not only are ports disadvantaged because of the added cost of the tax, they receive little or no benefit from the authorized use of the tax. In addition, Canada has a long-standing successful national port infrastructure and corridor program that not only assists with port development but finds projects in the corridors connecting the ports. At BNSF, we stand ready to work with Federal, State and local public policy makers to similarly support our port partners.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MAGGIE HASSAN TO
MATTHEW K. ROSE

Question. One area that I know has repeatedly come before this Committee and the full Senate is the issue of increasing the size of trucks by allowing for a massive tractor-trailers, known as Twin 33s. While these larger trucks may drive decently on long stretches of highway in sparsely populated swaths of our country, I worry about how they would fare travelling through busy small and medium-sized towns

and on winding mountainous roads like the ones in New Hampshire. I want to keep our truck drivers and travelers on the roads with them safe. Do you agree that the industry, state, and Federal governments must meticulously study the potential impacts of these larger trucks—specifically on the types of communities I've described—before making decisions that could harm people in our communities?

Answer. BNSF agrees that the impacts of any change in truck configuration must be studied carefully, and that direct consequences, such as pavement and bridge damage, must be remediated as part of any such change. In addition, the long-standing underpayment of heavier trucks must be taken into account when any configuration change is considered. Regarding the safety consequences of proposed changes to existing truck configurations, we leave that to public safety experts, Members of Congress and the Administration to carefully consider.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEB FISCHER TO
DR. CHRISTOPHER B. LOFGREN

Question 1. As we enter into a new administration and a new Congress, how can we improve the regulatory process at agencies to move towards outcome, or performance-based regulations with better data? As you are aware, in the FAST Act, I authored measures to reform the Federal Motor Carrier Safety Administration to ensure more participation and a stronger cost-benefit analysis. Are there specific changes you would hope to see across the DOT to improve the regulatory process?

Answer. I would like to thank you for your leadership and dedication to ensuring that the regulatory process engages stakeholders and relies on quality data. At Schneider National, Inc. we depend on data every day to navigate a host of complex logistic, strategic and tactical challenges, make business decisions, and more importantly, ensure safety in our operations.

From our experience I can confidently say that decisions (or regulations) rooted in data, are only as good as the data upon which they rely. Therefore, I would like to offer four key themes for you and the Committee to consider in your pursuit of better data to guide the regulatory process.

- First, there should be increased transparency when data is presented to ensure it is clearly understood by stakeholders, lawmakers and regulators;
- Second, stakeholders should be engaged earlier in the regulatory process since they have the best understanding of what data is available and what assumptions and behaviors need to be understood when using specific data elements;
- Third, any data, research or cost-benefit analysis used by regulators should include an adequate (not selective) representation of the industry; and
- Fourth, data consistency is critical. For example, using a standard crash report form that can be completed by all states would allow for the gathering of critical data elements and provide for a better understanding of a rule's impact and benefit.

As for improving the overall regulatory process, I would like to emphasize my earlier point about the importance of early engagement of stakeholders either through advanced notice of proposed rulemakings or more use of the negotiated rulemaking process.

Finally, I would like to encourage the Committee, Congress and regulators to explore opportunities to improve safety outside of the regulatory rulemaking process. For example, the U.S. Department of Transportation should work with the U.S. Treasury Department to reduce or eliminate the Federal excise tax on new tractor and trailer equipment, such as collision mitigation technology. I believe this effort could be accomplished within the regulatory process through administrative guidance and would incent carriers to invest in the newest equipment with the most advanced safety technologies, best fuel efficiency, and most up-to-date emissions systems.

Question 2. As we enter into a new administration and a new Congress, how can we improve the regulatory process at agencies to move towards outcome, or performance-based regulations with better data? As you are aware, in the FAST Act, I authored measures to reform the Federal Motor Carrier Safety Administration to ensure more participation and a stronger cost-benefit analysis. Are there specific changes you would hope to see across the DOT to improve the regulatory process?

Answer. Please see my response to *Question 1*.

Question 3. Many stakeholders in the trucking industry have applauded the FMCSA's entry-level driver training rule, which is based on consensus recommendations from stakeholders and will increase safety. Would you please talk about the

positive aspects of this rulemaking process and how this process could be replicated in the future at FMCSA?

Answer. While Schneider was not a member of the Committee that participated in the entry-level driver training rulemaking process, we did follow the rule closely and would recommend the process be replicated in the future by the Federal Motor Carrier Safety Administration and other regulatory agencies.

Because of the benefits I noted in my response to *Question 1*, we support any rulemaking process in which input from the major stakeholders is gathered as early in the process as possible. While the use of a notice of proposed rulemaking also seeks early input from stakeholders, we believe the negotiated rulemaking process used in the entry-level driver training rulemaking allows for a greater level of dialogue and idea generation between stakeholders and regulators.

Specifically, the face to face meetings allow for the feedback loop to be expedited to real-time, which is beneficial since the rulemaking process tends to be lengthy by nature. Additionally, we appreciate that the structure guiding the process ensures the negotiated rulemaking committee is fair and balanced in points of view, and that all parties are willing to negotiate in good faith to reach consensus.

Finally, the process also allows for relationships to be formed between stakeholders and regulators, and for education to occur for all parties. Even if consensus is not reached through the process, value is still gained by the experience.

As you look to expand the use of negotiated rulemaking, I would suggest considering the application of the process for pending rulemakings such as the Speed Limiter, Obstructive Sleep Apnea and Safety Fitness Determination rules. Although these rules are already occurring under the standard rulemaking process, we believe the industry and regulators would benefit greatly from applying the guiding structure and principles of the negotiated process.

Question 4. One issue we have heard a lot about in the trucking industry is the driver shortage. In your opinion, what do you believe are the major contributing factors that have led to this shortage? How is your company seeking to address this challenge?

Answer. A key contributing factor to the driver shortage is the aging nature of the industry's workforce, which has resulted in more drivers retiring and leaving the industry. Additionally, we have identified a change in workforce demographics that also contributes to driver supply. Specifically, driving candidates now prefer to be home weekly, or even nightly, and are willing to work jobs that provide them with that opportunity even if it pays less. As a result, fewer driving candidates are willing to accept jobs that require them to be away for long periods of time.

While some trucking companies may choose to combat the driver shortage by lowering their hiring standards, Schneider and other quality carriers are unwilling to compromise our commitment to protecting the motoring public and remain steadfast in our mission to find qualified drivers that meet training, safety and drug testing standards. This makes the driver shortage more challenging for companies like ours but we continue to be dedicated to our safety practices, such as Schneider's hair follicle drug testing program, and pursue other options for recruiting drivers that meet our standards.

At Schneider, we are addressing the driver shortage in numerous ways, including through the use of technology. Automated manual transmissions and safety technology, such as collision mitigation systems, make the truck easier and safer to drive. This makes our positions more attractive to the top flight professionals who understand that our investments make them safer. We are also continuing to improve our value proposition to existing and candidate drivers by increasing pay, changing the way we move freight to allow for more regional movements (which allows drivers to be home more frequently) and enhancing our overall benefits package. Finally, we offer tuition assistance to truck driving schools for new candidates entering the industry.

Schneider also recognizes the value of separated military personnel and the trouble many of them have in finding good paying jobs when adjusting to civilian life. We have a Military Apprenticeship program through the U.S. Department of Veterans Affairs (VA), in which new Schneider drivers can earn a monthly educational benefit from the VA in addition to their Schneider paycheck during their first year—up to \$1,266 per month. Schneider further recognizes military experience and credits it toward Schneider driving experience to increase starting pay. Extended benefits and differential pay is also provided if Guard or Reserve personnel are deployed for up to 18 months and we offer guaranteed home time for weekend drill and annual military training—no time off is required.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICHARD BLUMENTHAL TO
DR. CHRISTOPHER B. LOFGREN

Question 1. Issue: Trucking industry support for a rule mandating speed limiters— The faster large vehicles travel, the deadlier they can become. Large vehicles already take longer to stop than smaller passenger vehicles. And just a small increase in speed leads to an exponentially large increase in kinetic energy, which can cause far greater damage and destruction in a crash—especially to those traveling nearby in much smaller, lighter passenger vehicles.

Crashes involving large vehicles kill around 4,000 people each year and injure more than 100,000. Speeding has been identified as a possible factor in as many as 23 percent of these crashes. A vehicle with a functioning speed limiter is only half as likely to be involved in a crash as a vehicle without an operating device.

Mr. Lofgren, your testimony notes the importance and potential of speed limiters. I have been very supportive of the use of speed limiters and want to see the finalization of a rule begun by President Obama to require these devices.

What safety benefits can be realized through their use? At what speed do you set the devices your company uses?

Answer. Schneider National Inc. has supported the use of speed limiting devices for decades and has utilized these devices within its fleet since they were first made available by manufacturers. It is well documented that there is a strict correlation between the speed of a truck and the severity of the injuries in a trucking accident; accordingly, the higher the speed of the truck, the more severe the injuries. Additionally, trucks traveling at a lower speed incur less in heavy vehicle fuel. These factors contributed greatly in Schneider's decision to implement speed limiting devices and why our company continues to utilize this equipment. These devices currently have our trucks governed at 63 mph for solo drivers and 65 mph for team drivers (meaning that there is more than one driver present in the vehicle).

Question 2. Should all trucks operating in the U.S. be equipped with this type of technology?

Answer. Schneider supports speed limiters on those vehicles with a gross vehicle weight rating (GVWR) of more than 26,000 lbs. Schneider recommends not only requiring speed limiting devices for newly manufactured equipment but also requiring the technology for any vehicle currently in-use with a GVWR of more than 26,000 lbs that is equipped with an electronically controlled engine.

Question 3. You also have installed collision avoidance technology. Can you explain the importance of this technology?

Answer. A collision mitigation system (CMS) is an active technology that uses a front bumper-mounted radar to detect slower moving or stopped vehicles ahead. These systems can determine when a potential crash may occur and assist the driver in quickly slowing down the truck. In some instances, the system works faster than the driver is able to recognize the situation and react. This is especially important because many motorists do not understand the size and weight of a tractor trailer and "cut in front" and slow down without an appreciation for the true stopping distance of a vehicle that is of much greater size than their own. Since beginning our initial deployment of CMS on newly purchased trucks in 2012, we have experienced a 69 percent reduction in rear-end accidents and a 95 percent reduction in the claims costs (proxy for accident severity) associated with these accidents.

We believe the industry should be provided with an incentive to purchase this type of technology and suggest that Congress, the Federal Motor Carrier Safety Administration, and National Highway Traffic Safety Administration work with the U.S. Treasury Department to reduce or eliminate the Federal excise tax on new tractor and trailer equipment. Doing so would incent carriers to invest in the newest equipment with the most advanced safety technologies, best fuel efficiency, and most up-to-date emissions systems.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MAGGIE HASSAN TO
DR. CHRISTOPHER B. LOFGREN

Question. One area that I know has repeatedly come before this Committee and the full Senate is the issue of increasing the size of trucks by allowing for a massive tractor-trailers, known as Twin 33s. While these larger trucks may drive decently on long stretches of highway in sparsely populated swaths of our country, I worry about how they would fare travelling through busy small and medium-sized towns and on winding mountainous roads like the ones in New Hampshire. I want to keep our truck drivers and travelers on the roads with them safe. Do you agree that the industry, state, and Federal governments must meticulously study the potential im-

pacts of these larger trucks—specifically on the types of communities I’ve described—before making decisions that could harm people in our communities?

Answer. Schneider is familiar with the Twin 33 equipment, however it would not be part of our freight hauling model. For Schneider, safety is always our top priority. With any new endeavor Schneider pursues, we believe it is prudent to evaluate and ensure that allowable equipment (including size and length) is safe and compatible with existing infrastructure. We encourage Congress to make the same sort of evaluation for new types of equipment it considers allowing on our Nation’s infrastructure.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEB FISCHER TO
TOM GURD

Question 1. As we enter into a new administration and a new Congress, how can we improve the regulatory process at agencies to move towards outcome, or performance-based regulations with better data? As you are aware, in the FAST Act, I authored measures to reform the Federal Motor Carrier Safety Administration to ensure more participation and a stronger cost-benefit analysis. Are there specific changes you would hope to see across the DOT to improve the regulatory process?

Answer. Safety is Dow’s top priority. Dow is one of the largest chemical shippers in North America. Our business model is based on the ability to ship large volumes, long distances over land by rail. Rail is the safest, most efficient way to transport our high volume raw materials and products.

Dow supports continuous improvement in rail safety and security within a holistic risk management framework. This includes full consideration of operational and infrastructure improvements to prevent train accidents, along with tank car design. Advancements can only be achieved with further close collaboration amongst all industry stakeholders. Continuous improvement under this framework must improve safety to further mitigate risk to the public and the environment, without placing unnecessarily economic and operational burdens upon industry stakeholders.

The DOT alone, not any other entity, is authorized to establish uniform national standards for the transportation of hazardous materials, including standards for tank cars. To this extent, Dow supports the joint shipper petition submitted to the DOT on August 12, 2016 (Petition Number P-1678). The petition asks DOT to clarify that while stakeholders may recommend changes to tank car standards for DOT consideration, no other entity should be permitted to impose its own *de facto* regulations on shippers and tank car owners. Any new regulations imposed on industry stakeholders can and must be developed through an appropriate Federal rule-making process, and supported by a sound cost-benefit analysis.

Dow supports improving the Federal Government’s use of risk assessment to prioritize actions with the greatest potential to advance safety, and ensuring that regulations are based on sound cost-benefit analysis. We call on DOT to implement Office of Management and Budget guidance in these areas, and specific directions in Executive Orders 12866 Regulatory Planning and Review and 13563 Improving Regulation and Regulatory Review.

At the Surface Transportation Board (“STB”), it is necessary to improve the timeliness and the effectiveness of large rail rate case review procedures. Last year, the National Academy of Sciences’ Transportation Research Board (“TRB”) issued a report, *Modernizing Freight Rail Regulation*, developed by an independent panel of transportation experts and economists with input from a broad range of stakeholders. The TRB report concluded that the STB’s rate review procedures “lack a sound economic rationale and are unusable by most shippers.” The STB should fully consider TRB’s recommendations and work on the methods to resolve large rate case disputes.

Question 2. Mr. Gurd, in your written testimony you mentioned the advanced security and safety initiatives that Dow is undertaking. Would you further elaborate on these emergency response programs and Dow’s coordination with DOT and local emergency responders? How can Congress and the administration help support these partnerships, particularly as it relates to relaying information and data and on the ground coordination with responders?

Answer. As stated in my testimony, Dow has an extensive Risk Management Program, but we are also committed to ensuring communities are aware and prepared if an incident does occur. We support this commitment through TRANSCAER® and CHEMTREC®.

TRANSCAER® (*Transportation Community Awareness and Emergency Response*) is a voluntary national outreach effort that focuses on assisting communities prepare for and respond to a possible hazardous material transportation incident. Since

its inception in 1986, TRANSCAER® has trained hundreds of thousands of participants, free of charge. Hundreds of training events are offered annually. In 2015, over 50,000 participants were trained. Dow alone has trained almost 11,000 participants since 2007. We have received the TRANSCAER® National Achievement award in the last 8 consecutive years, which is given in recognition of extraordinary achievement by an individual person, individual company, individual organization, or a team (of individuals, companies, or organizations) in support of the initiative. TRANSCAER® fosters collaboration and partnerships between shippers, carriers, communities, emergency responders, and the DOT for effective, coordinated and timely emergency response.

In addition to the DOT partnering with TRANSCAER®, it also develops the Emergency Response Guide (“ERG”) for publication every four years. The ERG is critical for emergency responders to initiate emergency response in the event of a hazardous material incident.

Emergency responders also have access to a wide variety of experts through CHEMTREC® (*Chemical Transportation Emergency Center*) service. When an incident does take place, responders can contact CHEMTREC’s state-of-the-art, 24/7 emergency center to determine the best way to handle a wide range of chemicals and other hazardous materials.

Dow, and on behalf of the American Chemistry Council (“ACC”), appreciates your interest in further strengthening partnerships to support emergency response capabilities. While training programs such as TRANSCAER® are available, local emergency responders face a number of challenges that limit their ability to utilize these programs. Congress and the administration should look for ways to provide further support to communities, including:

- Resources for travel, time away and backfilling positions to attend training;
- Addressing technology constraints, such as computer equipment and high-speed Internet access, to facilitate more robust, interactive remote online training; and
- Increased recognition and incentives for responders who attend the industry-sponsored training.

In addition, DOT could help facilitate the development of more robust standards for Emergency Response Information Providers (“ERIPs”) such as CHEMTREC®. We believe that elevating the expectations on ERIPs would help ensure that emergency responders receive reliable, accurate, timely information.

Question 3. You mentioned Dow’s massive supply chain with hundreds of third party operators and providers. Would you elaborate about the impact or burden regulations can have on your supply chains?

Answer. Dow shares the DOT mission “to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.” However, unnecessary regulatory burdens can have a significant impact on our global supply chain.

Dow supports the ACC submission to the Commerce Committee for its February 1 hearing, “A Growth Agenda: Reducing Unnecessary Regulatory Burdens.” ACC identified a number of regulatory actions by the DOT that add unnecessary regulatory burdens without advancing safety. We would like to take this opportunity to provide two additional significant actions that have arisen since that submission.

Harmonization with the international regulatory bodies and Canada for cross-border shipments is vital to the U.S. economy and Dow’s position in the global marketplace. Dow applauds and supports the work underway under the U.S.-Canada Regulatory Cooperation Council. Some of this work has been completed specific to the safe transportation of hazardous materials, and is included in DOT’s rulemaking entitled Harmonization with International Standards (HM-215N). The final rule pre-publication was published in the *Federal Register* on January 18, 2017, but then a week later it was withdrawn for review by the new administration. As of this response, it is still not published in the *Federal Register*. This rulemaking is critical for the uninterrupted, harmonized transportation of hazardous materials not only across the border, but by water and air around the world.

In the rulemaking, DOT is introducing new regulations for polymerizing substances. These are materials which, without stabilization, are liable to undergo an exothermic reaction resulting in the formation of larger molecules or resulting in the formation of polymers under conditions normally encountered in transport. Dow ships a number of these materials, primarily Monomers. Monomers are vital to the American public, for applications such as water treatment, adhesives, paints, caulks and sealants, and paper coatings. While Dow supports the need for further regulation of these materials in the U.S. and around the world, in viewing the pre-publication

tion of the final rule, there are two specific regulations DOT is not harmonizing with the international regulatory bodies that will result in undue economic impact on U.S. shippers while not improving safety, as follows:

§ 172.102(c)(1), Special Provision 387

DOT will require a different temperature (50°C versus internationally required 45°C) for these materials that when transported in a portable tank, such as an ISO container, and when chemical stabilization is employed, the level of stabilization is sufficient to prevent a dangerous polymerization.

§ 173.124(a)(4)(i)

DOT will require a UN Test Series E, or equivalent test method with the approval of the Associate Administrator, be performed on these materials when transported in certain packaging types, whereas the international bodies do not require such a test.

Dow urges DOT to publish the HM-215N final rule as soon as possible, including fully harmonizing the aforementioned regulations to avert undue burden on U.S. shippers.

Another rulemaking published by the DOT since December is an Advance Notice of Proposed Rulemaking entitled Volatility of Unrefined Petroleum Products and Class 3 Materials (HM-251D). DOT is considering establishing vapor pressure limits for unrefined petroleum-based products and potentially all Class 3 flammable liquid hazardous materials for transportation by all modes. The comment period was extended until May 19, 2017. For the reasons to be outlined in our comment submission, as well as our industry member association submissions, namely the ACC and the Dangerous Goods Advisory Council, Dow believes establishing a vapor pressure limit to encompass all Class 3 flammable liquids by any mode of transportation would not improve the safe transportation of our chemicals and would cause undue economic and operational burdens.

In closing, the U.S. needs sound policies and a comprehensive strategy for a robust transportation sector and investment in its infrastructure if we are to improve the global competitiveness of the U.S. manufacturing sector. These policies must keep upstream and downstream manufacturing businesses competitive to create the kind of long term job growth our company needs. For example, significant railroad consolidation has been allowed since Congress passed the Staggers Rail Act of 1980, achieving a desired result of well-capitalized, revenue adequate railroads. It is now time to establish a greater balance between competition and revenue adequacy in our Nation's rail regulatory policy. A competitive transportation system is vital to American manufacturing growth that creates new investment and job opportunities. Competitive switching is one step that will help bring us closer to promoting competition for shippers in rail transportation, and promises to improve rail service, provide better routing options, and establish competitive rates, all of which are important for American manufacturers to be competitive in a global marketplace.

Thank you once again for recognizing the chemical industry as a principal stakeholder in developing policies that can keep our economy moving. We welcome the opportunity to further collaborate with the Subcommittee, the DOT and all industry stakeholders to develop infrastructure and transportation policies that further drive investment and manufacturing growth in the U.S. We must ensure our Nation has a safe, secure, sustainable, and competitive network to deliver our products when and where they are needed not only within our borders but around the world. Please let me know if you should have any additional questions.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MAGGIE HASSAN TO
TOM GURD

Question. One area that I know has repeatedly come before this Committee and the full Senate is the issue of increasing the size of trucks by allowing for a massive tractor-trailers, known as Twin 33s. While these larger trucks may drive decently on long stretches of highway in sparsely populated swaths of our country, I worry about how they would fare travelling through busy small and medium-sized towns and on winding mountainous roads like the ones in New Hampshire. I want to keep our truck drivers and travelers on the roads with them safe. Do you agree that the industry, state, and Federal governments must meticulously study the potential impacts of these larger trucks—specifically on the types of communities I've described—before making decisions that could harm people in our communities?

Answer. Safety is Dow's top priority. Dow is one of the largest chemical shippers in North America. We support continuous improvement in transportation safety and

security to protect the American public and the environment. This includes full consideration of operational, infrastructure, technological, and sustainable advancements. Dow is committed to Responsible Care®, the chemical industry’s world-class environmental, health, safety, and security performance initiative. Our carriers, including our road carriers, demonstrate this same safety commitment through the Responsible Care® Partnership program.

With any legislative or regulatory actions, Dow believes they must be data-driven and supported by a sound cost-benefit analysis. There appears to be data available in support of a safe and sustainable shift to the Twin 33. We referenced a study commissioned by Americans for Modern Transportation entitled “Twin 33 Foot Truck Trailers: Making U.S. Freight Transport Safer and More Efficient”, which cites data published in the Federal Highway Administration’s 2015 study entitled a “Comprehensive Truck Size and Weight Limits Study”.

Based on the Americans for Modern Transportation study, it appears there would be benefits to the U.S. freight system, economy and the American public. Dow understands a Twin 33 would supplant a Twin 28 currently utilized on our Nation’s highways, and would not supplant trucks currently traveling through busy small and medium-sized towns and winding mountainous roads like the ones in New Hampshire.

Safety benefits include fewer trucks, fewer trips, better enforcement to ensure the safety of other trucks, improved high-speed dynamics compared to a Twin 28, and leading safety technology. Dow understands that mileage exposure is the single biggest factor driving year-to-year changes in crashes, injuries and fatalities associated with motor vehicle travel, including truck travel. Fewer trucks on our roads could also reduce effects on our transportation infrastructure.

In 2016, Dow launched our 2025 Sustainability Goals. Sustainability benefits of the Twin 33 include better fuel efficiency and environmental benefits, saving 255.2 million gallons of fuel, and reducing carbon and nitrous oxide emissions by nearly three million tons and one billions grams, respectively. These emissions reductions would be equivalent to taking 551,000 cars off our Nation’s roads.

Operational and societal benefits include increasing volume capacity by 18.6 percent without a maximum weight increase, reduced traffic congestion, and alleviating the driver shortage while providing higher-quality and more stable jobs for drivers. These benefits would allow Dow to make our supply chain more efficient, while making transportation safer and more sustainable.

Thank you once again for recognizing the chemical industry as a principal stakeholder in developing policies that can keep our economy moving. We must ensure our Nation has a safe, secure, and sustainable network to deliver our products when and where they are needed. Please let me know if you should have any additional questions.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEB FISCHER TO
WICK MOORMAN

Question 1. Mr. Moorman, in your testimonies you each discussed reforms in the FAST Act that streamlined the environmental review process and removed some of the red tape on routine infrastructure and asset maintenance. Would you please elaborate on the types of challenges your railroads face when attempting to build or improve its infrastructure? Are there ways that Congress can improve on the work within the FAST Act?

Answer. We appreciate the efforts of Congress, and specifically this Committee, to streamline the environmental review process, providing rail parity with other modes of transportation. While we have a multi-step process for building and improving infrastructure, our greatest challenge remains our access to direct Federal funding for critical infrastructure projects throughout our system that require dedicated funding to help move these processes along. In some cases, even with a streamlined process for environmental review, the long absence of Federal support for a project will allow the assessment to lapse and require us to restart permitting and reviews that expire. We continue to request additional predictable and dedicated funding for our critical infrastructure investments as I outlined in my testimony.

Question 2. As we enter into a new administration and a new Congress, how can we improve the regulatory process at agencies to move towards outcome, or performance-based regulations with better data? As you are aware, in the FAST Act, I authored measures to reform the Federal Motor Carrier Safety Administration to ensure more participation and a stronger cost-benefit analysis. Are there specific changes you would hope to see across the DOT to improve the regulatory process?

Answer. In general, we support improved regulatory processes and better data. However, each proposal must be carefully weighed for its potential benefit to improved safety of the passengers and workers in our rail system, based on new and proven technologies available to the rail industry, and the funding to support such changes to the regulations that guide our daily action. We are happy to work with Congress and FRA to identify potential improvements. Better data will always be a welcome addition and criteria for our decision making in identifying these improvements.

Question 3. Mr. Moorman, I greatly appreciate the depth of private sector railroad experience you bring to Amtrak. Would you please talk about some of the positive reforms you are making at Amtrak's corporate structure, operations, and business objectives? For example, in early January you took efforts to consolidate the leadership structure at Amtrak.

Answer. It is vital for us to capitalize on the success of Amtrak over the past 10 years. We have an opportunity to build an even more efficient and effective company that can facilitate, organize and operate best-in-class passenger rail services throughout the United States. To do so, we needed to be structured properly and I streamlined and improved our reporting structure to reflect that desired outcome.

We have a new organizational structure for Amtrak that will enable us to create greater product and customer focus, along with strengthening accountability and decision making throughout our company. This new structure aligns with our focus to improve the way we do business, modernize and enhance the customer experience, and invest in our future. These changes are a necessary first step to driving the five key objectives that we believe are critical to our long-term success:

- Building a world-class safety culture with a relentless focus on training, risk-reduction, positive reinforcement and personal accountability;
- Developing and consistently providing competitive products and services;
- Creating the teams and processes necessary to serve and grow our customers across all business segments;
- Gaining support for and delivering on investments that sustain, improve and grow our business; and
- Harnessing innovation, technology and partnerships to enhance and accelerate our business.

