

**RECOVERY UPDATE: STATUS OF FEMA RECOVERY
EFFORTS IN PUERTO RICO AND U.S. VIRGIN
ISLANDS FIVE YEARS AFTER HURRICANES IRMA
AND MARIA**

(117-58)

**REMOTELY ATTENDED
HEARING**

BEFORE THE

SUBCOMMITTEE ON
ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND
EMERGENCY MANAGEMENT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTEENTH CONGRESS

SECOND SESSION

SEPTEMBER 15, 2022

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Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

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SEPTEMBER 12, 2022

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Economic Development, Public Buildings, and Emergency Management
FROM: Subcommittee Staff
RE: Subcommittee Hearing on “Recovery Update: Status of FEMA Recovery Efforts in Puerto Rico and U.S. Virgin Islands 5 Years After Hurricanes Irma and Maria”

PURPOSE

The Subcommittee on Economic Development, Public Buildings, and Emergency Management will meet on Thursday, September 15, 2022, at 10:00 a.m. EDT in 2167 Rayburn House Office Building and via Zoom for a hearing titled, “Recovery Update: Status of FEMA Recovery Efforts in Puerto Rico and U.S. Virgin Islands 5 Years After Hurricanes Irma and Maria.” The subcommittee will hear testimony from two panels. The first panel will feature Anne Bink, Associate Administrator of the Federal Emergency Management Agency (FEMA) Office of Response and Recovery. The second panel will include Chris Currie, Director of the Government Accountability Office (GAO) Office of Homeland Security and Justice; Adrienne Williams, Director of the U.S. Virgin Islands (USVI) Office of Disaster Recovery (ODR); Manuel Laboy, Executive Director of the Puerto Rico Central Office for Recovery, Reconstruction, and Resiliency (COR3); Shay Bahramirad, Senior Vice President of LUMA Energy; and Josué Colón, Executive Director of the Puerto Rico Electric Power Authority (PREPA).

BACKGROUND

The Commonwealth of Puerto Rico and the USVI were devastated by Hurricanes Irma and Maria on September 6, 2017, and September 20, 2017, respectively. In Puerto Rico the storms damaged the entire power grid and triggered the longest blackout in U.S. history (11 months), left 43 percent of wastewater treatment plants inoperable, 97 percent of roads impassable, and 95 percent of Puerto Ricans without drinking water, damaged 28 percent of health centers, required 90 percent of households to apply for individual assistance, and tragically caused 3,000 fatalities.¹ In the USVI the storms destroyed 70 percent of the buildings on the main island of

¹ RAND. *Hurricanes Irma and Maria: Impact and Aftermath*. 2020. Available at: <https://www.rand.org/hsrd/hsoac/projects/puerto-rico-recovery/hurricanes-irma-and-maria.html>

St. Croix, damaged the entire power grid and communication networks, and damaged or destroyed large swaths of critical infrastructure such as roads.²

Given the extraordinary level of infrastructure damage caused by Hurricane Maria, and the territories' difficult financial position, the use of alternative procedures, authorized by Section 428 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act, P.L. 93-288, as amended), was added to the presidential disaster declarations made for the territories.³ The alternative procedures authority was considered the best option for the territories since it enables recipients more flexibility to rebuild facilities to meet current needs and build in mitigation; thus, outdated infrastructure could be updated and designed for long-term resiliency.⁴ When utilizing alternative procedures, a fixed cost estimate for each project must be agreed upon by the recipient and FEMA before work begins.⁵ If the actual cost of a project exceeds the fixed cost estimate the recipient is responsible for the overrun.⁶

Additionally, Congress included Section 20601 in the Bipartisan Budget Act of 2018 (BBA 2018) to provide additional assistance for the recovery efforts in Puerto Rico and the USVI. BBA 2018 authorized FEMA to restore disaster damaged facilities or systems that provide critical services to industry standard without regard for pre-disaster condition.⁷ Officials in both Puerto Rico and the USVI have reported to the committee that the implementation of BBA has significantly aided the recovery process.

LIQUIDITY CONSTRAINTS AND FUNDING PROCEDURES IN PUERTO RICO AND THE USVI

Liquidity constraints have persistently hampered hurricane recovery efforts in Puerto Rico.⁸ FEMA Public Assistance (PA) is a reimbursement-based program.⁹ In general, only after applicants pay eligible costs may they request reimbursement from PA funds obligated by FEMA.¹⁰ For this reason, applicants need to have initial, non-FEMA funds available to cover the costs of project application and management, architecture and engineering services, and construction contracting before they can receive reimbursement.¹¹

COR3 currently manages reimbursement in Puerto Rico.¹² However, Commonwealth agencies, municipalities, and private nonprofits often do not have financial reserves and access to initial capital to launch projects.¹³ The Commonwealth's fiscal crisis has exacerbated these liquidity constraints.¹⁴

FEMA and COR3 have implemented several measures to address this issue, including a Working Capital Advance program for municipalities and selected FEMA Accelerated Awards Strategy (FAAST) Applicants,¹⁵ and making available limited

²USDA. *USDA Tracks Recovery Following Hurricanes Irma & Maria*. 2022. Available at: <https://recovery.fema.gov/funding-in-action/mariaPR7#:~:text=Maria%20damaged%20or%20destroyed%2070,hit%20Puerto%20Rico%20since%201928>.

³GAO. *FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery*, GAO-21-264. May 2021. Available at: <https://www.gao.gov/assets/gao-21-264.pdf>. & FEMA. 2017 Hurricane Season FEMA After-Action Report. July 12, 2017, Available at: https://www.fema.gov/sites/default/files/2020-08/fema_hurricane-season-after-action-report_2017.pdf

⁴Id.

⁵Id.

⁶Id.

⁷FEMA. *Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program*. September 2018. Available at: https://www.fema.gov/sites/default/files/2020-05/Section_20601_BBA_FP-104-009-5.pdf.

⁸GAO. *Puerto Rico Recovery: FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery*, GAO-21-264. May 19, 2021. Available at: <https://www.gao.gov/products/gao-21-264> & NPR. *How Puerto Rico's Debt Created A Perfect Storm Before The Storm*. May 2, 2018. Available at: <https://www.npr.org/2018/05/02/607032585/how-puerto-ricos-debt-created-a-perfect-storm-before-the-storm>.

⁹CRS. *The Status of Puerto Rico's Recovery and Ongoing Challenges Following Hurricanes Irma and Maria*: FEMA, SBA, and HUD Assistance. November 13, 2020. Available at: <https://www.crs.gov/Reports/R46609>.

¹⁰Id.

¹¹Id.

¹²COR3. *COR3 Disaster Recovery Federal Funds Management Guide*. June 2022. Available at: https://recovery.pr.gov/documents/CH7_Payment_and_Cash_Management_V3_Final_Version_6_13_2022_signed.pdf.

¹³Id., and COR3. *Seventh Congressional Status Report*. January 31, 2022. Available at: Microsoft Word—Seventh Congressional Report (2-1-2022) Rev PRP-Clean.docx.

¹⁴GAO. *Puerto Rico Recovery: FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery*, GAO-21-264. May 19, 2021. Available at: <https://www.gao.gov/products/gao-21-264>.

¹⁵Id. and COR3. *Seventh Congressional Status Report*. January 31, 2022. Available at: Microsoft Word—Seventh Congressional Report (2-1-2022) Rev PRP-Clean.docx.

cash advances for immediate cash needs.¹⁶ Despite these efforts, some stakeholders and COR3 acknowledge that liquidity constraints and reimbursement delays continue to burden applicants and delay project implementation.¹⁷

Hurricanes Irma and Maria also hit the USVI amid ongoing fiscal instability.¹⁸ The demands of response and decline in tourism and related industries exacerbated the USVI's fiscal challenges; some estimates show that public revenues were halved following the hurricanes.¹⁹ Pre and post-disaster fiscal challenges have delayed PA project progress since applicants have struggled to access initial funding before receiving reimbursement.²⁰ Additionally, applicants report struggling with reimbursement delays that jeopardize project advancement after initial launch, "tremendously impact[ing] timely payment to vendors."²¹ Delays in payments to contractors may also jeopardize an applicants' credibility.²² This, in turn, may lead to price increases as vendors mitigate the risk of payment delays and inconsistent revenue by increasing the price of project bids.²³

To alleviate these liquidity constraints, FEMA and ODR have launched several initiatives, including the following:

- In February 2021, FEMA lifted certain restrictions placed upon ODR's management of the PA reimbursement process that sometimes delay disbursement, including FEMA approval of reimbursement requests.²⁴
- On August 16, 2022, ODR announced the launch of the Public Assistance Advance Funding program, which is to provide up to \$50,000 to private nonprofit organizations to ensure the launch and progress of stalled recovery projects funded through FEMA PA.²⁵
- In October 2021, ODR reported that FEMA modified policies to enable applicants to draw down funds upon receiving an invoice, as opposed to once they have already paid for the invoiced costs.²⁶

THE BIPARTISAN BUDGET ACT OF 2018, BUILDING CODE COMPLIANCE, AND MODERNIZATION

BBA 2018 authorized the reconstruction of critical disaster-damaged facilities to industry standards, regardless of pre-disaster condition, using PA Alternative Procedures, which limits applicants to awards determined using fixed cost estimates.²⁷ PA was additionally authorized for components or facilities unaffected by the hurricanes that required upgrade or repair so the broader facility or system improvements could comply with industry standards.²⁸ These provisions addressed Stafford Act limitations on the use of PA to rebuild to a more resilient standard, given the declining, unmaintained condition of some facilities in the territories.²⁹

The Government Accountability Office (GAO) found that both COR3 and FEMA officials reported challenges and confusion in implementing Section 20601 of BBA

¹⁶ COR3. *COR3 Disaster Recovery Federal Funds Management Guide*. June 2022. Available at: https://recovery.pr.gov/documents/CH7_Payment_and_Cash_Management_V3_Final_Version_6_13_2022_signed.pdf.

¹⁷ Center for Investigative Journalism. *Municipal Response to Disasters in Puerto Rico Cost Candidates Their Re-elections*. February 22, 2021. Available at: <https://periodismoinvestigativo.com/2021/02/municipal-response-to-disasters-in-puerto-rico-cost-candidates-their-re-elections/>.

¹⁸ CRS. *Economic and Fiscal Conditions in the U.S. Virgin Islands*. February 13, 2020. Available at: <https://www.crs.gov/Reports/R45235>.

¹⁹ Id.

²⁰ ODR. *USVI Recovery Leaders: Summit Report*. 2021. Available at: <https://www.usviodr.com/wp-content/uploads/2022/05/FINAL-2021-USVI-Recovery-Leaders-Summit-Report-RS-1.pdf>.

²¹ Id.

²² Id.

²³ Id.

²⁴ ODR. *FEMA Lifts Manual Drawdown Restriction for Reimbursement of Recovery Project Spending*. February 3, 2021. Available at: <https://www.usviodr.com/fema-lifts-manual-drawdown-restriction-for-reimbursement-of-recovery-project-spending/>.

²⁵ ODR. *ODR Announces New Program Giving Non-Profits Access to Funding for Stalled Recovery Projects*. August 16, 2022. Available at: <https://www.usviodr.com/odr-announces-new-program-giving-non-profits-access-to-funding-for-stalled-recovery-projects/>.

²⁶ ODR. *USVI Recovery Leaders: Summit Report*. 2021. Available at: <https://www.usviodr.com/wp-content/uploads/2022/05/FINAL-2021-USVI-Recovery-Leaders-Summit-Report-RS-1.pdf>.

²⁷ CRS. *The Status of Puerto Rico's Recovery and Ongoing Challenges Following Hurricanes Irma and Maria: FEMA, SBA, and HUD Assistance*. November 13, 2020. Available At: <https://www.crs.gov/Reports/R46609>.

²⁸ Section 20601(2) of the BBA of 2018 (P.L. 115–123).

²⁹ Disaster Recovery Reform Act of 2018 (DRRA; Division D of P.L. 115–254).

2018 through early 2019.³⁰ Different views between COR3 and FEMA on the application and scope of this provision has repeatedly raised congressional and stakeholder concern.³¹ In April 2019, then-COR3 Secretary Omar Marrero testified before Congress that FEMA’s “efforts to limit the applicability of BBA” delayed recovery and reduced the awards available to critical facilities.³² In September 2019, FEMA released guidance clarifying the implementation of BBA 2018, which addressed some confusion.³³

IMPLEMENTATION OF THE FAAST PROGRAM IN PUERTO RICO

FEMA and COR3 have demonstrated significant progress in PA obligations over the past three years.³⁴ FEMA recently announced that it had approved 10,000, or 95 percent, of PA projects for Puerto Rico’s hurricane recovery.³⁵ However, COR3 and FEMA data reflect that much of the reconstruction has yet to be completed, and in many cases, has not begun.

In early 2020, FEMA and COR3 launched a new variation of PA called the FEMA Accelerated Awards Strategy (FAAST) to expedite obligations for four Commonwealth agencies in Puerto Rico.³⁶ These agencies are the Puerto Rico Electric Power Authority (PREPA), the Puerto Rico Aqueduct and Sewer Authority (PRASA), the Puerto Rico Department of Education (PRDE), and Puerto Rico Public Housing Administration (PRPHA). Under the FAAST structure FEMA and COR3 obligated aggregated awards for each agency based on samples of damaged sites and estimated costs. These obligations serve as a total “recovery budget” for each agency’s hurricane recovery costs across the territory, but do not represent FEMA approval of the individual projects that need to be completed by those agencies with the obligations. Since FAAST awards represent most PA obligated funds for hurricane recovery (\$15.6 billion of approximately \$21.3 billion in permanent work obligations for hurricane recovery),³⁷ the process of approving individual projects entails significant work for FEMA, COR3, and FAAST applicants.

According to COR3, the FAAST program was designed in part to mitigate the applicants’ “lack of technical expertise to make decisions when designing their projects and the need to balance the assumption of risk” and to “allo[w] critical infrastructure projects to be grouped together in order to expedite recovery work” thereby moving the recovery forward.³⁸ The program also enables applicants to access funds to contract for architecture and engineering services for individual projects.³⁹

News media reports indicate that many individual PA projects may exceed cost estimates.⁴⁰ If individual FAAST projects incur such cost overruns, the overall

³⁰GAO. *Emergency Management: FEMA Has Made Progress, but Challenges and Future Risks Highlight Imperative for Future Improvements*, GAO-19-594T. June 12, 2019. Available at: <https://www.gao.gov/products/gao-19-617t> and GAO. *Puerto Rico Disaster Recovery: FEMA Actions Needed to Strengthen Project Cost Estimation and Awareness of Program Guidance*, GAO-20-221. February 2020. <https://www.gao.gov/assets/710/704282.pdf>.

³¹Testimony by Rep. Lucille Roybal-Allard, U.S. Congress, House Appropriations Subcommittee on Homeland Security, *Hearing on Disaster Recoveries for 2017 and 2018*, hearings, 116th Congress, March 12, 2019. And testimony by GAO Representative Chris Currie, House Homeland Security Committee, U.S. Congress, House Committee on Homeland Security, Subcommittee on Emergency Preparedness, Response, and Recovery, *Road to Recovery: Puerto Rico and the U.S. Virgin Islands After Hurricanes Irma and Maria*, 116th Congress, July 11, 2019.

³²Testimony by Omar Marrero, Executive Director of COR3, U.S. Congress, House Natural Resources Committee, *The Status of the “Rebuilding and Privatization of the Puerto Rico Electric Power Authority”*, hearing, 116th Congress, April 9, 2019.

³³GAO. *Puerto Rico Disaster Recovery: FEMA Actions Needed to Strengthen Project Cost Estimation and Awareness of Program Guidance*, GAO-20-221. February 2020. Available at: <https://www.gao.gov/products/gao-20-221>.

³⁴GAO. *Puerto Rico Recovery: FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery*, GAO-21-264. Available at: <https://www.gao.gov/products/gao-21-264> and CRS. *The Status of Puerto Rico’s Recovery and Ongoing Challenges Following Hurricanes Irma and Maria: FEMA, SBA, and HUD Assistance*. November 13, 2020. Available at: <https://www.crs.gov/Reports/R46609>.

³⁵FEMA. *FEMA Approves its 10,000th Projects Hurricane María Recovery Project*. August 3, 2022. Available at: <https://www.fema.gov/press-release/20220803/fema-approves-its-10000th-projects-hurricane-maria-recovery-project>.

³⁶FEMA. *FEMA Accelerated Awards Strategy (FAAST)*. June 2, 2022. Available at: <https://www.fema.gov/about/reports-and-data/faast>.

³⁷Id.

³⁸COR3. *Seventh Congressional Status Report*. January 31, 2022. Available at: Microsoft Word—Seventh Congressional Report (2-1-2022) Rev PRP-Clean.docx and COR3. *FEMA Accelerated Awards Strategy (FAAST) Projects Execution*. 2022. Available at: <https://recovery.pr.gov/en/road-to-recovery/pa-faast>.

³⁹Id.

⁴⁰Center for Investigative Journalism. *Major recovery projects to be paid for with recovery funds moving at snail’s pace*. September 16, 2021. <https://periodismoinvestigativo.com/2021/09/>

FAAST obligations could prove insufficient to support the work of reconstructing territory-wide critical services (utilities, water/wastewater, education system, and public housing).

PA ALTERNATIVE PROCEDURES AND COST ESTIMATES IN THE USVI

The USVI opted not to group their alternative procedure projects into agency-wide obligations like Puerto Rico has done with the FAAST program. Therefore, each permanent work project using alternative procedures authorities receives an individual obligation.

BBA 2018 authorized applicants in the USVI to receive PA to cover the costs of reconstructing eligible facilities to industry standards “without regard to the pre-disaster condition of the facility or system.” However, in its most recent annual recovery status report, ODR raised repeated concerns that FEMA’s interpretation of BBA 2018 does not capture congressional intent “to repair all eligible damages both pre- and post-disaster, to remedy pre-disaster conditions and even to replace undamaged building components to achieve industry standards.”⁴¹ ODR reports that FEMA’s narrow interpretation of BBA 2018 has impeded the territory’s ability to receive assistance sufficient to reconstruct eligible facilities to industry standards.⁴²

Additionally, ODR has raised concerns that FEMA’s Building Cost Index does not accurately estimate the high cost of construction in the USVI, nor the rising costs of construction attributed to inflation.⁴³ ODR reports that this oversight “could cost the Territory many hundreds of millions of dollars if not corrected and will cause longer term major construction projects to have inadequate funding.”⁴⁴

CONTRACTING AND SUBCONTRACTING IN PUERTO RICO AND THE USVI

It is anticipated that Puerto Rico will encounter a shortage of local contractors when completing reconstruction work.⁴⁵ To complete recovery projects costing \$10 billion per year, Puerto Rico may need up to 32,000 additional workers and shortfalls among licensed engineers and other building industry professionals, as well as grant writers and managers are expected.⁴⁶ It has been reported that the scale of federal funds delivered to Puerto Rico is “likely to fundamentally change the economy in terms of labor, materials, and equipment,”⁴⁷ and it is estimated that approximately 75 percent of the workers required for recovery will come from outside of Puerto Rico.⁴⁸

In 2019 the GAO found that shortages among local and territory government personnel in the USVI exacerbated the difficulties of hurricane recovery.⁴⁹ Both FEMA and USVI staff have additionally reported shortfalls among several key industries critical to executing recovery projects, including architecture and engineering firms.⁵⁰

CONCLUSION

Five years after the devastation Hurricanes Irma and Maria brought to Puerto Rico and the USVI progress has been made in the recovery efforts. However, many challenges remain. This hearing will provide the subcommittee an opportunity to hear directly from federal and territory officials on the remaining challenges in

major-recovery-projects-to-be-paid-for-with-recovery-funds-moving-at-snails-pace/ and Center for Investigative Journalism. *Retrasado y con alza en los costos de construcción el centro de salud de Vieques*. January 21, 2022. Available at: <https://periodismoinvestigativo.com/2022/01/retrasado-y-con-alza-en-los-costos-de-construccion-el-centro-de-salud-de-vieques/>.

⁴¹ ODR. *Annual Progress Report*. September 2021. Available at: <https://www.usviodr.com/wp-content/uploads/2021/12/DisasterRecovery2021.pdf>.

⁴² Id.

⁴³ Id.

⁴⁴ Id.

⁴⁵ RAND. *Building Back Locally: Supporting Puerto Rico’s Municipalities in Post-Hurricane Reconstruction*. 2020. Available at: https://www.rand.org/pubs/research_reports/RR3041.html.

⁴⁶ RAND. *Building Back Locally: Supporting Puerto Rico’s Municipalities in Post-Hurricane Reconstruction*. 2020. Available at: https://www.rand.org/pubs/research_reports/RR3041.html.

⁴⁷ RAND. *Forecasting Public Recovery Expenditures’ Effect on Construction Prices and the Demand for Construction Labor*. 2022. Available at: https://www.rand.org/pubs/research_reports/RR1116-4.html.

⁴⁸ Id.

⁴⁹ GAO. *U.S. Virgin Islands Recovery: Additional Actions Could Strengthen FEMA’s Key Disaster Recovery Efforts*, GAO–20–54. November 2019. Available at: <https://www.gao.gov/assets/gao-20-54.pdf>.

⁵⁰ ODR. *USVI Recovery Leaders: Summit Report*. 2021. Available at: <https://www.usviodr.com/wp-content/uploads/2022/05/FINAL-2021-USVI-Recovery-Leaders-Summit-Report-RS-1.pdf>.

Puerto Rico and the USVI and lessons Congress might learn from the disaster recoveries.

WITNESS LIST

- Anne Bink, Associate Administrator, Office of Response and Recovery, Federal Emergency Management Agency (FEMA)
- Chris Currie, Director, Office of Homeland Security and Justice, Government Accountability Office
- Adrienne Williams, Director, Office of Disaster Recovery, U.S. Virgin Islands
- Manuel Laboy, Executive Director, Office for Recovery, Reconstruction, and Resiliency, Puerto Rico
- Shay Bahramirad, Senior Vice President, LUMA Energy
- Josué Colón, Executive Director, Puerto Rico Electric Power Authority

RECOVERY UPDATE: STATUS OF FEMA RECOVERY EFFORTS IN PUERTO RICO AND U.S. VIRGIN ISLANDS FIVE YEARS AFTER HURRICANES IRMA AND MARIA

THURSDAY, SEPTEMBER 15, 2022

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC
BUILDINGS, AND EMERGENCY MANAGEMENT,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:07 a.m., in room 2167 Rayburn House Office Building and via Zoom, Hon. Dina Titus (Chair of the subcommittee) presiding.

Members present in person: Ms. Titus, Mr. Carter of Louisiana, Mr. Webster of Florida, Miss González-Colón, and Mr. Guest.

Members present remotely: Ms. Norton, Ms. Davids of Kansas, and Mr. García of Illinois.

Ms. TITUS. The meeting will please come to order.

I want to, first, ask unanimous consent to declare a recess at any time during the hearing if it is necessary. Without objection, so ordered.

I also ask unanimous consent that Members not on the subcommittee be permitted—why am I hearing this echo?

I am sorry. OK. I also ask unanimous consent that Members not on the subcommittee be permitted to sit with the subcommittee at today's hearing and ask questions. Without objection, so ordered.

As a reminder, please keep your microphone muted—which we weren't doing apparently—unless speaking. Should I hear any inadvertent background noise, I will request that the Member please mute their microphone.

To insert a document into the record, please have your staff email it to DocumentsT&I@mail.house.gov.

First, let me thank our witnesses for being here today to discuss the Federal disaster recovery in Puerto Rico and the U.S. Virgin Islands as the 5-year anniversary of Hurricane Irma and Maria are upon us.

Before we start, though, I would like to recognize and welcome a former colleague of mine and friend, Governor Pierluisi, who is here from Puerto Rico. Thank you so much for being here. If you feel like interjecting anything, you are more than welcome to join us at the table.

Governor PIERLUISI. Madam Chair and Mr. Ranking Member, I will just say that I thank the committee for holding this oversight

hearing on the status of the recovery and reconstruction of Puerto Rico's infrastructure as a result of both Irma and Maria. And so, I look forward to being here for part of the hearing, and I thank as well the Biden-Harris administration, FEMA in particular, for their support, for the support Puerto Rico is getting in the context of the pending or ongoing reconstruction.

So, thank you, ma'am.

Ms. TITUS. Thank you for being here. You are always welcome. It is nice to see you.

Governor PIERLUISI. Likewise.

Ms. TITUS. These hurricanes, Irma and Maria, absolutely devastated Puerto Rico and the Virgin Islands. They ravaged the islands' infrastructure, the electric grids were wiped out, roads were made impassable, critical water infrastructure was severely damaged, schools were just wiped away, and thousands of homes were destroyed. The Territorywide destruction was unprecedented and it posed major challenges for disaster response and recovery.

When Irma and Maria struck, these two islands did not have the necessary funds available to support a major disaster recovery. As we all know, FEMA's recovery model is centered on reimbursement. It is nearly impossible to kick-start a swift and efficient recovery without access to capital within the existing model. So, the scale of destruction, paired with liquidity constraints, created an unprecedented challenge for the islands and FEMA.

The people of Puerto Rico and the Virgin Islands are entitled to the same quality of critical infrastructure available to the mainland. This includes access to transportation, education, healthcare, reliable electricity, and clean drinking water.

So, while this recovery poses many difficulties, it is essential that we face the challenges head-on and be sure that these facilities are put back in place.

A second challenge for the recovery effort was Federal underinvestment in the islands' public infrastructure prior to the storms. Most public infrastructure already required significant improvements. Consequently, it was quickly determined that FEMA should not use its traditional Public Assistance authorities to build back to status quo ante. Instead, FEMA, Puerto Rico, and the U.S. Virgin Islands agreed to utilize a new authority provided by section 428 of the Stafford Act. This is known as alternative procedures, and it would allow the Territories to build back better and be more resilient in the face of any future storms.

It is important to note, however, that to use these alternate procedures, FEMA and the impacted applicant must determine the value of the damage and develop a fixed-cost estimate for each project. If the actual cost of the project exceeds the fixed-cost estimate, the applicant is responsible for the cost overruns.

It is critical that the estimates are correct from the beginning so construction can begin swiftly once project funds are obligated. Challenges posed by continued liquidity constraints in the Territories, the global pandemic, and inflation, however, have caused many concerns that it may not be possible to complete these projects at their estimated cost.

I hope we can talk about the potential overruns with witnesses today and how we are going to address that challenge.

I am encouraged to hear from the disaster recovery leaders in Puerto Rico and the U.S. Virgin Islands that their relationship with FEMA has improved in recent years, and the pace of recovery is increasing. There has been some success in obligating funds for projects, but unfortunately little reconstruction work has actually begun. We would like to hear about that as well.

Reconstruction marks a new phase of recovery on the islands. I look forward to discussing the challenges and the solutions with the outstanding witnesses we have here today so that we can ensure that the future of these recoveries faces fewer roadblocks than they had in the past.

I am committed to remaining an active partner in this recovery until the very last repair project is completed, and I expect FEMA to commit to us to doing the same.

The people of Puerto Rico and the U.S. Virgin Islands have displayed incredible resilience for the past 5 years, and patience, I might add. So, I thank our witnesses for being here today, and I look forward to discussing lessons learned and how we can improve the process, not just for these two areas, but any place in the future where something similar might occur.

[Ms. Titus' prepared statement follows:]

Prepared Statement of Hon. Dina Titus, a Representative in Congress from the State of Nevada, and Chair, Subcommittee on Economic Development, Public Buildings, and Emergency Management

I'd like to thank our witnesses for being here today to discuss the federal disaster recovery in Puerto Rico and the U.S. Virgin Islands at the five-year anniversary of Hurricanes Irma and Maria.

These hurricanes absolutely devastated Puerto Rico and the Virgin Islands. They ravaged the islands' infrastructure—the electric grids were wiped out, roads were made impassable, critical water infrastructure severely damaged, and thousands of homes were destroyed. The territory-wide destruction was unprecedented and posed major challenges for disaster response and recovery.

When Irma and Maria struck, Puerto Rico and the Virgin Islands did not have the necessary funds available to support a major disaster recovery. The Federal Emergency Management Agency's (FEMA) recovery model is centered upon reimbursement. It is near impossible to kickstart a swift and efficient recovery without access to capital within the existing model. The scale of the destruction paired with liquidity constraints created an unprecedented challenge for the islands and FEMA.

The people of Puerto Rico and the Virgin Islands are entitled to the same quality of critical infrastructure available on the mainland. This includes access to transportation, education, health care, reliable electricity, and clean drinking water. So, while this recovery poses many difficulties—it is essential that we face challenges head on.

A second challenge this recovery encountered was federal underinvestment in the island's public infrastructure prior to the storms. Most public infrastructure already required significant improvements. Consequently, it was quickly determined that FEMA should not use its traditional public assistance authorities to build back what previously existed. Instead, FEMA, Puerto Rico, and the USVI agreed to utilize new authorities provided by Section 428 of the Stafford Act, known as alternative procedures, which would allow the territories to build back better and more resilient.

However, it is important to note that to use alternative procedures, FEMA and the impacted applicant must determine the value of disaster damage and develop a fixed cost estimate for each project. If the actual cost of any project exceeds the fixed cost estimate the applicant is responsible for cost over runs. It is critical that the estimates are correct, and construction can begin swiftly once project funds are obligated. However, challenges posed by continued liquidity constraints in the territories, the global pandemic, and inflation have created many concerns that it may not be possible to complete projects at their estimated cost. I hope to frankly discuss these potential overruns with the witnesses today.

I am encouraged to hear from disaster recovery leaders in Puerto Rico and the Virgin Islands that their relationship with FEMA has improved in recent years and the pace of recovery has increased. There has been particular success obligating projects. However, very little reconstruction work has actually begun.

Reconstruction marks a new phase of recovery on the islands. I look forward to discussing potential challenges and solutions with the witnesses regarding reconstruction, so we ensure the future of these recoveries faces fewer roadblocks than the past.

I am committed to remaining an active partner in this recovery until the last repair project is complete. I expect FEMA to commit to do the same.

The people of Puerto Rico and the Virgin Islands have displayed incredible resilience these past five years. I thank our witnesses for being here today and look forward to discussing lessons learned and how we can make the remainder of this recovery a success.

Ms. TITUS. With that, I would like to ask our ranking member for his opening statement, Mr. Webster.

Mr. WEBSTER OF FLORIDA. Thank you, Chair. Thank you to the witnesses for being here today.

It has been 5 years since Hurricanes Maria and Irma hit Puerto Rico and the U.S. Virgin Islands. I look forward to hearing from our witnesses today on what the recovery process has looked like, what successes and challenges they have faced, and lessons learned that we would be able to apply across disaster recovery efforts.

This is a unique opportunity to examine how our efforts to cut redtape and streamline processes have been implemented by FEMA. Time is money. The longer it takes for communities to rebuild, the higher the costs to both those communities and to the taxpayer.

At times it seems like after Congress removes redtape, more redtape kind of appears. And FEMA is kind of the perpetrator of that. We simply can't afford to continue doing things the way we have done them before and expect some kind of different results.

For example, in the Sandy Recovery Improvement Act, we created section 428, a choice for a streamlined, faster process or to use the old paperwork-intensive process for rebuilding the infrastructure. The 428 authority was intended to speed up the process by basing assistance on certified cost estimates. The idea was to reduce costs by shortening the rebuilding time, cutting administrative costs, and arriving faster at a more definitive dollar amount for a project. Yet by many accounts, the 428 process is looking more like the old cumbersome process, removing any incentives to use it.

The 428 authority and similar reforms have been key tools in the recovery efforts in Puerto Rico and the U.S. Virgin Islands. Understanding how these reforms are working—or not working—will help us know what action to take.

A complicated recovery process not only hurts communities hit by disaster, it also increases costs to the taxpayer, especially given the impact high inflation rates are now having on the costs of materials and labor.

I look forward to hearing the testimony from our witnesses today. And thank you, Chair, for allowing this hearing. And I yield back.

[Mr. Webster of Florida's prepared statement follows:]

Prepared Statement of Hon. Daniel Webster, a Representative in Congress from the State of Florida, and Ranking Member, Subcommittee on Economic Development, Public Buildings, and Emergency Management

Thank you, Chair Titus, and thank you to our witnesses for being here today.

It has been 5 years since hurricanes Maria and Irma hit Puerto Rico and the U.S. Virgin Islands.

I look forward to hearing from our witnesses today on what the recovery process has looked like, what successes and challenges they have faced, and lessons learned that we could apply across disaster recovery efforts. This is a unique opportunity to examine how our efforts to cut red tape and streamline processes have been implemented by FEMA.

Time is money—the longer it takes communities to rebuild, the higher the costs to both those communities and to the federal taxpayer.

At times it seems after Congress removes red tape, more red tape is created by FEMA, and we simply cannot afford to continue doing things the same way and expect different results. For example, in the Sandy Recovery Improvement Act, we created section 428 of the Stafford Act intended to give States a choice for a streamlined, faster process or to use the old, paperwork-intensive process for rebuilding infrastructure. 428 authority was intended to speed up the process by basing assistance on certified cost estimates.

The idea was to reduce costs by shortening the rebuilding time, cutting administrative costs, and arriving faster at a more definitive dollar amount for a project. Yet, by many accounts the 428 process is looking more like the old, cumbersome process, removing any incentives to use it. 428 authority and similar reforms have been key tools in the recovery efforts in Puerto Rico and the U.S. Virgin Islands.

Understanding how these reforms are working—or not working—will help us know what action to take. A complicated recovery process not only hurts communities hit by disaster, it also increases costs to the taxpayer, especially given the impact high inflation rates are having on the costs of materials and labor.

I look forward to hearing the testimony of our witnesses today.

Thank you, Chair Titus. I yield back.

Ms. TITUS. Thank you, Mr. Webster.

We will now turn to our witnesses. We will be hearing testimony from two panels today. Each panel will be followed by questions from the Members.

I would now like to welcome the witness on our first panel. This is Anne Bink, who is the Associate Administrator for the Office of Response and Recovery at FEMA. We thank you for joining us today. We all look forward to hearing your testimony.

Without objection, our witness' full statement will be included in the record. Since your written testimony has been made part of the record, the subcommittee requests that you limit your oral testimony to 5 minutes.

Ms. Bink, welcome, and please proceed.

TESTIMONY OF ANNE BINK, ASSOCIATE ADMINISTRATOR, OFFICE OF RESPONSE AND RECOVERY, FEDERAL EMERGENCY MANAGEMENT AGENCY

Ms. BINK. Thank you.

Chair Titus, Ranking Member Webster, and members of the subcommittee, thank you for the opportunity to testify about FEMA's support of the recovery of Puerto Rico and the U.S. Virgin Islands from Hurricanes Irma and Maria.

As you have stated, in less than 2 weeks, in September 2017, the islands were devastated. Lives were lost, homes were destroyed, the power grid and water systems collapsed, healthcare facilities shut down, and communities were uprooted.

Hurricane Maria was the strongest storm to hit St. Croix and Puerto Rico in nearly a century. There were critical immediate needs, and beyond those needs lay a difficult road to recovery.

For FEMA and the Biden-Harris administration, continued recovery efforts from these storms is a top priority, and the Agency's investment of resources, with the generous support of Congress, has been reflective of this commitment.

A few weeks ago, Puerto Rico reached the milestone of 10,000 obligated Public Assistance projects, a total investment of nearly \$28 billion. This includes the largest ever public infrastructure project obligated by FEMA at nearly \$9.5 billion for the Puerto Rico Electric Power Authority, or PREPA, which will rebuild the power grid and build it back better. We have also provided \$1.5 billion in assistance to nearly half a million residents.

In the U.S. Virgin Islands, FEMA is making similarly historic investments in public infrastructure. FEMA has obligated over \$4 billion across 1,400 projects. And this includes \$1.4 billion to restore the energy grid, nearly \$1 billion for housing, and \$134 million for transportation.

FEMA continues to work with the USVI to reach an agreement on project scopes and expects infrastructure assistance to total \$12 billion. This investment will result in significantly modernized public health and education sectors and completely rebuild—in a more resilient fashion—large portions of the power, water, and wastewater systems.

Five years after the hurricanes, over 1,000 FEMA employees remain on the ground and dedicated to these recovery missions, over 90 percent of whom are local hires.

Notwithstanding this historic commitment, much work remains to be done. This work will lead to a more resilient and better community infrastructure. For example, the Roberto Clemente Stadium in the municipality of Carolina in Puerto Rico. More than a landmark, the baseball stadium plays an important role in the municipality's economy. It impacts local business owners and other sectors like transportation, tourism, and hospitality. This project is nearly complete with the help of over \$18.4 million in FEMA funds.

In the USVI, FEMA is focused on supporting the vision to transform its infrastructure to better withstand future storms. Recently, FEMA approved over \$200 million to replace the now demolished Arthur A. Richards School. This new school will help ensure students can attend a state-of-the-art facility that is more resilient to future storms.

More than \$463 million has been obligated to support healthcare facilities, including the Charles Harwood Medical Clinic and the Roy Lester Schneider Hospital. We are also providing historic levels of mitigation assistance which will greatly enhance resiliency further in the future.

Puerto Rico has access to roughly \$3 billion in hazard mitigation grant program funding, which is the maximum authorized by the Stafford Act, and the U.S. Virgin Islands has access to roughly \$960 million.

FEMA is ensuring we are prepared to support residents in communities of the Caribbean. At this very moment, we have respond-

ers on the ground and commodities pre-positioned in anticipation of Tropical Storm Fiona.

Compared to 2017, we now have 9 times the water, 10 times the meals, and 3 times the number of generators on the island.

Consistent with the goals of FEMA's strategic plan, we are ensuring equity, resilience, and readiness are at the heart of what we do. We are committed to supporting preparedness and resilient recovery, and we are doing so through on-the-ground technical assistance with our local hires who bring invaluable knowledge of the communities they serve.

We also continue to implement policies to advance our strategic plan. One such example is around equitable policy changes. Many homeowners and renters in the past lacked the paperwork required to qualify for some FEMA benefits in the past. Under Administrator Criswell's leadership, FEMA has expanded the types of ownership and occupancy documentation that we can accept, to include self-certification as a last resort. Since implementing this policy, more than 100,000 individuals received assistance that would have otherwise been denied.

All our efforts have to be balanced against dual imperatives: ensuring that our assistance is provided as quickly as possible and ensuring that these resources benefit the people and the communities that need them most. The governments of Puerto Rico and the U.S. Virgin Islands have made great progress in their ability to manage historic levels of Federal funding and advance recovery for the residents.

In closing, when I began leading the Office of Response and Recovery, one of my very first field visits was to Puerto Rico and the U.S. Virgin Islands, where I observed firsthand the achievements of our team on the ground as well as the challenges that lie ahead.

Last fall, FEMA participated in a recovery summit with USVI officials, which provided valuable outcomes. And we are going to continue to build on that as we will host our second annual USVI recovery summit in the fall.

Similarly, just last month, I also spent a week at a summit with Puerto Rico's top recovery officials and our senior leadership team, where we continued to work toward solutions to advance our collective recovery efforts. We are firmly committed to an expedited recovery to enhance resilience against all future hazards.

Thank you, and I look forward to your questions.

[Ms. Bink's prepared statement follows:]

Prepared Statement of Anne Bink, Associate Administrator, Office of Response and Recovery, Federal Emergency Management Agency

Chair Titus, Ranking Member Webster, and Members of the Subcommittee, thank you for the opportunity to testify today about the Federal Emergency Management Agency's (FEMA) efforts in support of the recovery of Puerto Rico and the U.S. Virgin Islands from Hurricanes Irma and Maria.

In less than two weeks in September 2017, Puerto Rico and the U.S. Virgin Islands were severely impacted by two major hurricanes—Irma and Maria—that devastated the Caribbean. On September 7, 2017, Hurricane Irma first struck St. Thomas and St. John, then tracked near northeastern Puerto Rico, causing widespread power outages and straining infrastructure across the islands. Less than two weeks later, Hurricane Maria struck St. Croix, and then made landfall in Puerto Rico. The devastation was of historic proportions. As a result of these hurricanes,

many lives were lost, homes were destroyed, the power grid and water systems collapsed, health care facilities were shut down, and communities were uprooted. Hurricane Maria was the strongest storm to hit St. Croix and Puerto Rico in nearly a century. There were critical immediate needs—and beyond those needs lay a difficult road to recovery. A road that we continue to travel today.

For FEMA and the Biden-Harris Administration, continued recovery efforts from these storms for Puerto Rico and the U.S. Virgin Islands remains a top priority, and the Agency's investment of resources, with the generous support of Congress, has been reflective of this commitment.

HISTORIC LEVELS OF ASSISTANCE

For Puerto Rico, a few weeks ago, FEMA reached the milestone of 10,000 obligated Public Assistance projects, a total investment of nearly \$28 billion. Of this investment, the largest ever public infrastructure project was obligated at nearly \$9.5 billion to the Puerto Rico Electric Power Authority (PREPA), which will not just rebuild Puerto Rico's power grid, but will build it back better. FEMA funds are helping to rebuild roads, hospitals, schools, and water facilities to enable recovery and enhance resilience in communities across Puerto Rico. We have also provided \$1.5 billion in assistance to nearly half a million residents and continue to coordinate interagency recovery efforts, such as with the Department of Housing and Urban Development, which has awarded over \$20 billion in Community Development Block Grant Disaster Recovery Funds, thanks to the tremendous bipartisan support of Congress.

In the U.S. Virgin Islands, FEMA is making similarly historic investments in public infrastructure. FEMA has obligated over \$4 billion across 1,400 projects. This includes \$1.4 billion to restore the energy grid, \$993 million for housing, and \$134 million for transportation. FEMA continues to work with the Territory to reach an agreement on capped-fixed subgrants and expects infrastructure assistance to total over \$12 billion. This investment will result in significantly modernized public health and education sectors and completely rebuild—in a more resilient fashion—large portions of the power, water, and wastewater systems.

Five years after the hurricanes, 850 FEMA employees remain on the ground and dedicated to Puerto Rico and the U.S. Virgin Islands recovery missions, ninety percent of which are local hires. We actively partner with the Puerto Rico Central Office of Recovery, Reconstruction, and Resiliency (COR3), the Puerto Rico Emergency Management Bureau (PREMB), and key critical infrastructure partners such as PREPA, and the Puerto Rico Aqueduct and Sewer Authority (PRASA), and regularly troubleshoot complex challenges to generate innovative solutions. FEMA also has an active partnership with the U.S. Virgin Islands Office of Disaster Recovery, Virgin Islands Territorial Emergency Management Agency (VITEMA), Water and Power Authority (WAPA), Housing Finance Authority (VIHFA), and Waste Management Authority (WMA).

At every step of the way, FEMA is working with these partners to ensure recovery is progressing and we are innovating to address emerging challenges. Most recently, we have worked with Puerto Rico to address supply chain constraints through an approval of almost \$600 million to purchase long-lead items that are needed to rebuild the power grid. This allows for the advance purchase of materials that take time to arrive on the island, so they are available once reconstruction work begins. Working closely with the Government of the U.S. Virgin Islands and staff from this Committee, we have re-evaluated our approach to implementing the Bipartisan Budget Act of 2018 to ensure we are resiliently rebuilding the islands' infrastructure to the latest industry standards. This has resulted in our decision to build 56 brand new medical facilities and schools. Finally, to address liquidity challenges associated with local jurisdictions undertaking large scale construction projects, we worked with Puerto Rico to implement a Working Capital Advance program for municipalities. Recently, PRASA projects were added to the program, which allows for an advance in funds to begin project execution across the island. These, and many other innovative practices, continue to define Puerto Rico's and U.S. Virgin Islands' historic mission.

As if the recovery mission were not challenging enough on its own, our FEMA staff and the residents of Puerto Rico and the U.S. Virgin Islands persevered through the January 2020 Puerto Rican earthquakes—which registered as much as 6.4 in magnitude—and the COVID-19 pandemic that surged just a couple months later. To date, FEMA has obligated over \$740 million to support earthquake recovery and almost \$300 million to support the islands' response to COVID-19. Despite these additional challenges, our dedicated FEMA recovery workforce collaborated with its partners to approve a record number of projects.

BUILDING BACK BETTER

Notwithstanding this historic obligation of funds, much work remains to be done to rebuild the infrastructure of these islands. In Puerto Rico, the Government of Puerto Rico reports 2,260 recovery projects are currently under construction and another 945 have been completed. In the Virgin Islands, the Territory reports that 89 recovery projects are currently under construction. These projects are more than just statistics, they are the foundation of what we expect will be more resilient and better community infrastructure. One such project is the Roberto Clemente Stadium in the Puerto Rican municipality of Carolina. More than a landmark, the baseball stadium plays an important role in the municipality's economy as it impacts local merchants, business owners, and other sectors like transportation, tourism, and hospitality. The stadium also serves as a collection center during disasters and as a mass vaccination and COVID-19 testing site. Repairs to the field, replacement of seating and the electric system, among others, are about ninety percent complete with the help of over \$18.4 million in FEMA funds.

Similarly, FEMA funded the replacement of Puerto Rico's main water testing facility located in Caguas. Operated and maintained by PRASA, this project was developed under FEMA's Accelerated Awards Strategy (FAAST), where a sampling methodology was used to streamline inspections. Of the \$3.7 billion obligated to PRASA under FAASt, about \$30 million corresponds to the water testing lab, which processes and analyzes the purity of drinking water and provides adequate wastewater treatment in Puerto Rico. The new laboratory is being rebuilt using current codes and standards and is about thirty-five percent complete.

In the U.S. Virgin Islands, FEMA is focusing on supporting the Territory's vision to transform its infrastructure to better withstand future storms. Recently, FEMA approved a \$209 million replacement for the now demolished Arthur A. Richards Jr. High School. The new school will help ensure K-through-8 students can get back into classrooms at a state-of-the-art facility that is more resilient to future storms and breaks the cycle of disaster, damage, and reconstruction. More than \$463 million has been obligated to health care facilities in the Territory. FEMA has approved the replacement of four medical facilities in the U.S. Virgin Islands. St. Croix facilities include the Charles Harwood Medical Clinic and Juan F. Luis Hospital, and St. Thomas sites include Charlotte Kimelman Cancer Institute and Roy Lester Schneider Hospital.

We are not just strengthening damaged infrastructure; we are also providing historic levels of mitigation assistance in areas undamaged by the storms. We have committed over \$2.4 billion for projects and obligated over \$132 million in project costs and \$49 million in management costs in Puerto Rico through the Hazard Mitigation Grant Program since Hurricane Maria. In responding to this disaster, Puerto Rico has submitted over \$4 billion worth of projects. Building code enforcement is one of the most significant projects on the island and will help eliminate informal construction. FEMA has obligated more than \$54 million so far for this project, which will enhance Puerto Rico's recovery for generations, making the island safer and stronger. In addition, nearly \$5 million has been obligated to review and update Hazard Mitigation plans in all 78 municipalities. Puerto Rico has access to roughly \$3 billion in Hazard Mitigation Grant Program funding, the maximum authorized by the Stafford Act, and the Virgin Islands has access to roughly \$960 million in Hazard Mitigation Grant Program funding. Working closely with the Governments of Puerto Rico and the Virgin Islands, we are focused on leveraging this funding for the benefit of all residents and communities.

FEMA is not just providing historic levels of funding and building back facilities in a more resilient manner—in line with the Administration's priorities—we are ensuring equity is at the center of this recovery. We have re-designed and re-issued program guidance and trainings to make sure they are available in Spanish, ensuring our communications and programs are more accessible and responsive within affected communities. In both Puerto Rico and U.S. Virgin Islands, as indicated, ninety percent of FEMA staff involved in the recovery missions are local—they know their communities and operate with a high degree of cultural and social awareness. Consistent with the goals of FEMA's 2022–2026 Strategic Plan, we are actively working to ensure recovery projects are completed in compliance with federal laws and executive orders on civil rights & civil liberties, and environmental justice to provide services in an equitable and fair manner. For example, when recently reviewing a proposed mitigation project to address flooding, our team observed land acquisition activities within the project that could unintentionally increase flood risks for surrounding low-income communities. The team worked with the applicant to ensure necessary steps were put in place so the project would not adversely affect homes within those nearby communities.

PREPAREDNESS FOR WHAT MAY COME

Building a stronger infrastructure than what previously existed before Hurricanes Irma and Maria is just one aspect of resilience. FEMA is also ensuring we and the Government of Puerto Rico and Territory governments are prepared to support their residents to withstand future storms. Climate change is impacting the islands, occasioning higher sea levels and more intense storms. Recognizing the challenges of moving emergency supplies to Puerto Rico and the U.S. Virgin Islands after a storm, we have pre-positioned much greater inventories on the islands. For example, compared to on-island supplies in Puerto Rico in 2017, today we have twice the number of generators, nine times the water, ten times the meals, and eight times the number of tarps. Having these resources pre-positioned will significantly enhance our ability to render assistance quickly when future storms impact the islands.

When the next storm hits, we will also be better able to assist previously underserved populations in Puerto Rico and the U.S. Virgin Islands. For instance, in 2017, many homeowners had difficulty proving they owned homes that had been handed down informally through the years. Under Administrator Criswell's leadership, FEMA expanded the types of ownership documentation we can accept, including documents like receipts for major repairs or improvements, court documents, public officials' letters, mobile home park letters, and even applicant self-certification for mobile homes and travel trailers as a last resort. We have also changed the way we calculate the threshold for property losses to qualify for our Direct Housing program. Our goal is to ensure equitable damage evaluations regardless of the amount of damage to the home. Changing the calculation of the threshold from a fixed dollar floor of \$17,000 to a simpler \$12 per square foot will result in families receiving assistance who would not have been considered for direct housing in the past. This change has resulted in more than 5,000 additional survivors receiving Direct Housing assistance so far.

All our efforts have to be balanced against dual imperatives: ensuring that our assistance is provided as quickly and effectively as possible, while simultaneously ensuring that we are watchful stewards of taxpayer dollars so that these resources benefit the people and communities that need them. The governments of Puerto Rico and the U.S. Virgin Islands have made great progress in their ability to manage historic levels of federal funding. For instance, Puerto Rico and the U.S. Virgin Islands have made significant improvements in lowering their improper payment rates, which currently stand at 0.079 percent and 1.13 percent respectively. This stewardship is essential to a successful financial recovery and the intended use of taxpayer dollars.

In closing, the continuing recovery of Puerto Rico and the U.S. Virgin Islands from Hurricanes Irma and Maria, paired with preparations for future disasters, are of paramount importance to FEMA, and to me personally. When I became the head of the Office of Response and Recovery, one of my very first trips was to Puerto Rico and the U.S. Virgin Islands where I observed firsthand the achievements of our team on the ground, as well as the challenges that lie ahead. Just last month, I spent a week at a very productive summit of our senior leadership staff working on Puerto Rico recovery initiatives, along with top recovery officials from the island. We are firmly committed to delivering the quickest and most efficient recovery services to Puerto Rico and the U.S. Virgin Islands, while enhancing the islands' resilience against all future hazards.

Thank you, and I look forward to your questions.

Ms. TITUS. Thank you very much.

We will now move on to the Members' questions. Each Member will be recognized for 5 minutes, and I will start by recognizing myself.

Thank you for that testimony. I would like to go back to something I mentioned in the opening statement, and that is the concern about cost increases, whether it is due to inflation or the pandemic or problems with having the funds in the islands.

Can you address what those problems are, and tell us how the projects that are under that alternative procedure and FFAST [FEMA Accelerated Awards Strategy] will be able to continue if they don't have the money and if the estimates aren't adequate to reach the current costs?

Ms. BINK. Absolutely. I appreciate the question and share the concerns you raised. We are in a dynamic environment, and one of the reasons alternate procedures was a valuable approach is because we built in not only inflationary cost increases into estimates, but also future price factor, which was designed specifically and only for Puerto Rico and the Virgin Islands under the BBA [Bipartisan Budget Act] authority that was provided to us. And that really has resulted in estimates that we believe will meet the needs of the recovery scope going forward.

There is flexibility within those 428 projects, as we call them, to balance underruns with overruns should different estimates and bids come in at different levels, but we are mindful of that and we continue to address the challenges we see in the broader landscape.

One example is around supply chain. We have worked with Puerto Rico's government on a project, which this is the first time we have done this, where we have developed a project of \$650 million to support equipment and supplies that have longer lead times. So that when shovels are ready to go into the ground, that equipment is available to support the grid build back and resilience efforts.

So, that is a \$650 million project we have worked with Puerto Rico to obligate. That is just one example, but we will continue to monitor the landscape. And if conditions reveal needs that we have not yet addressed, we will work to address those within our authorities.

Ms. TITUS. So, you think there is some alternative to just not appropriating the money or forcing the local governments to have to make up the difference?

Ms. BINK. That is right. And we will closely monitor the progress as we move forward. The things like developing projects for those longer lead time materials and equipment is a big step forward, because the best defense against inflationary increases and other supply chain disruptions is to get those shovels in the ground.

And we have seen tremendous progress in that regard, as I am sure you will hear more about from Puerto Rico officials, recovery officials: 2,200 projects in construction now and about 1,000 complete. That is excellent progress, and we are looking forward to building upon that with our close relationship of our teams on the ground.

Ms. TITUS. I appreciate that. I wonder if you can tell us why it has taken so long, what your insights are? And in the last Congress, your predecessor was asked if FEMA was a long-term agency or a short-term. And he said, well, I would make the case that we are a response agency and short term.

Well, I don't know. Is 5 years short term or long term? Is the glass half empty or half full? I wonder if FEMA is committed to the long-term recovery.

Ms. BINK. Chair Titus, I sit before you today confirming our commitment to the long-term recovery of Puerto Rico and the U.S. Virgin Islands. Since the storm hit, we have not left. We still have over 1,000 FEMA employees, many of which are survivors from the storms themselves, that remain on the island and committed to the recovery and resilience of the islands. It is our number one priority, and I stand behind it.

Ms. TITUS. Would you address why it has taken so long?

Ms. BINK. Absolutely. Yes. There is no doubt that starting with a new process under the BBA and developing projects that are of such significance and magnitude, given the scope of the damage, created challenges. We did, through the authorities granted through the BBA, were able to obligate, in historic short timeframes, a large magnitude of funding for Puerto Rico. And that was not without its challenges given how new it was.

That was also through an earthquake, COVID-19 disruptions, and the fact that, if you take the power sector in Puerto Rico as an object lesson, over 80 percent of the transmission and distribution network was damaged or destroyed from Maria. That is a large volume and a very concentrated level of damage that had been unprecedented.

So, yes, there were challenges. I believe we are in a position now to really hit the gas and keep moving in getting those shovels in the ground to progress the recovery of the islands.

Ms. TITUS. Thank you very much.

Ms. BINK. Thank you.

Mr. WEBSTER OF FLORIDA. Thank you, Chair.

Associate Administrator Bink, a goal of disaster funding is to help States rebuild the infrastructure following a disaster. Recognizing the benefits to taxpayer mitigation, Congress authorized funding to ensure States could build in mitigation as they rebuild existing infrastructure. However, mitigation is different than funding completely new and duplicative infrastructure.

For example, I understand that despite the U.S. Virgin Islands existing liquid propane gas system, FEMA may be pushing for USVI to transition to solar in rebuilding.

What is FEMA's role and policies on funding new systems rather than fixing the ones that exist?

Ms. BINK. Ranking Member, thank you very much for the question. Our role is as an enabler. When FEMA is doing our job, we are doing the job of ensuring that the goals of Puerto Rico and the Virgin Islands and all of our recipients across the board are meeting their objectives. We are there to support their projects and their resilience efforts to meet the goals that they have in the future and ensure that their spending is in alignment with all of our program requirements so they can maintain that funding and maintain that progress.

So, we are agnostic to the goals themselves. We support those goals as the recipients move toward more resiliency and a speedy recovery.

Mr. WEBSTER OF FLORIDA. So, the idea of heading out in the direction of rebuilding the existing infrastructure, is that something that can be totally modified?

Ms. BINK. I am happy to look into the specifics of the projects you are speaking of, and I can work with my team and yours to give more detail on the specifics there to work on that.

Mr. WEBSTER OF FLORIDA. OK. So, funding from other agencies like HUD have also been provided for these recovery efforts. However, there are concerns that FEMA's process is not streamlined in a way that would maximize the efficient use of these funds. For example, FEMA requires that HUD funding that may be used to support the State's cost share must be accounted for by project rather

than a faster approach of combining calculations across multiple projects.

Is this the case? If so, why is FEMA requiring this?

Ms. BINK. The complexity is certainly an issue that, as a New York State recovery official, I had experienced related to multiple funding streams. And in this role, it is a priority of mine to ensure that we are reducing complexity wherever we can.

One example is related to implementing a flexible match concept within each of those 428 projects. We have worked with Puerto Rico to, within those large infrastructure projects, like the \$9.5 billion PREPA project, working to provide a flexible structure so that part of the work needs to meet not only FEMA requirements but also HUD requirements, which, as you pointed out, can differ.

That flexibility will streamline the process and save valuable time as Puerto Rico continues its recovery. It is something we have also discussed with the U.S. Virgin Islands and will continue to work to streamline and simplify the application of multiple funding streams as they apply to FEMA projects.

Mr. WEBSTER OF FLORIDA. So, the idea of working together is not anathema; you are pursuing it—OK.

Ms. BINK. Yes. Absolutely. And as part of the summit with USVI, I just discussed with the Office of Disaster Recovery potentially bringing in HUD too, so we can have those critical discussions at the leadership level and make sure we are all leveraging all flexibilities within our authorities to the maximum extent.

Mr. WEBSTER OF FLORIDA. Thank you very much. I yield back.

Ms. BINK. Thank you.

Ms. TITUS. Thank you, Mr. Webster.

Now, Ms. Holmes Norton.

Ms. NORTON. Thank you, Chairwoman Titus.

Associate Administrator Bink, the U.S. Virgin Islands Office of Disaster Recovery reports that FEMA's building cost index reflects the high cost of construction in the Virgin Islands and could leave the long-term construction projects without adequate funding.

How does FEMA account for inflation and supply chain challenges when calculating construction costs for years' long projects?

Ms. BINK. Thank you for the question. There are multiple ways in which we address the inflationary factors and supply chain concerns as we move forward. And when project estimates are developed for alternative projects, not only the future price factor, which is unique to the U.S. Virgin Islands and Puerto Rico, what we are really looking at the future needs when it comes to funding to support the work under those projects as time elapses. There are also inflationary factors that are built in to those projects.

Beyond that, once the values are set, funding can be redistributed within each of those larger alternative projects for underruns and overruns as bids are put out and those numbers come back.

So, there are many factors and many flexibilities within the 428 structure that address supply chain and future inflationary cost concerns.

Ms. NORTON. Well, in light of the Office of Disaster Recovery's concerns, will FEMA undertake a review of the cost estimate models in the building cost index?

Ms. BINK. So, we are certainly looking at our building cost index modeling, and we know there are challenges there. I have just spoken with the Office of Disaster Recovery about it this morning. We will continue those discussions, and we will continue to monitor the impacts of inflationary factors and supply chain considerations in the future as bids do come in for construction and shovels start to hit the ground.

Ms. NORTON. FEMA's Accelerated Awards Strategy expedites obligations by aggregating awards for individual projects to be completed by a local governmental agency and to one overall what it calls recovery budget. However, the individual projects apparently still need to be approved by FEMA.

What steps will FEMA take to expedite the approval process for individual projects?

Ms. BINK. So, that is a great question, and it is squarely within the scope of the review we are doing of the Consolidated Resource Center 5-year review right now. We have taken a deep dive into our process. It has been about 5 years since it has been implemented, and we are looking at things we can improve and things we can streamline to ensure that, when project scopes are submitted, that they are quickly reviewed and adjudicated so that the work can begin.

Again, we know the best defense against inflation, supply chain concerns is really to get to that construction point. And that is our laser focus, and that is the support we are providing on the ground through our joint recovery offices, and it is what we will do centrally through CRC improvements.

Ms. NORTON. Thank you very much, Ms. Bink.

And I yield back.

Ms. TITUS. Thank you.

We will now go to someone who is very much involved in this issue who brings it up at every hearing and who has done a great job of informing us and staying on top of it, Miss González-Colón.

Miss GONZÁLEZ-COLÓN. Thank you, Madam Chair. And I want to say thank you to you and the ranking member for actually having this hearing and allowing Puerto Rico to have so many witnesses in the two panels we have today. I think it is important we are just reaching the 5-year anniversary and there are many questions still in the air about that recovery process.

Having said that, I also want to say that FEMA has done a great job during the last years trying to expedite. There are still a lot of things to do, and that is the reason I think this hearing is so important, seeing what are those areas where we need some improvement. Because on one side, I know local agencies are submitting documents and sometimes they are waiting for too long to get approved or having another second sub.

So, in that sense, it has been 5 years, I think, but it could have been yesterday as well. And the hit that Puerto Rico and the U.S. Virgin Islands took was historic and life changing for many of us. Whole lifetimes of work, even the pride of 80 years of progress just shut down in a night.

Over 3 million left without power, communications, transportation, but the people of Puerto Rico did not fall apart, and I think that is the great message, that we came together just to survive.

In that sense, the extended lack of essential services meant thousands of deaths in Puerto Rico. And my colleagues—and I need to say this—came with me to the island and responded with funding for recovery, a lot of Members. I will say more than 100 Members of Congress came together and traveled to Puerto Rico, alongside with Cabinet officials, to make all the funding that was approved. And staff from FEMA and other agencies have been working hard from the start, but has been too slow to see some effects.

And in that sense, major obligations for primary infrastructure rebuilding really began only late in 2020. My constituents are frustrated with the lack of progress, and the biggest symbol is the continued instability of the electrical grid.

They hear about over \$4 billion approved for repairs of damage or almost \$10 billion obligated for permanent rebuilding, but they are still getting frequent interruptions, lines going offline, substations on fire, lines failing, and that is the reality we face in Puerto Rico right now.

Today, with a tropical storm approaching, the social networks are filling with anxiety about, again, being months without power, and that is the reality Puerto Ricans are living.

So, the people ask, where is all the aid that has been approved by Congress? What has been done or is being done? And when will people see the results, at least in the electric grid? I hope we can get some of those answers today. And there is much more to be done, apply lessons learned, and to commit to doing better going forward, but we are here today to listen.

And I've got some questions for you, and one of them, Administrator Bink, is, of the \$9.5 billion obligated for long-term power grid recovery in Puerto Rico, how much has been applied for?

Ms. BINK. So, right now, with the \$9.5 billion, we are seeing significant—we have over 40 projects that have been approved in scopes of work. That work is continuing at rapid—

Miss GONZÁLEZ-COLÓN [interrupting]. But how much of the \$9.5 billion is being applied for?

Ms. BINK. So, the \$9.5 billion will be completely utilized at the end, meaning that the \$9.5 billion is the amount. And this is what makes the 428 program so valuable for the island. And this, again, is the largest infrastructure project ever obligated by FEMA, which makes this a once-in-a-lifetime opportunity—

Miss GONZÁLEZ-COLÓN [interrupting]. Yes. But my question, Administrator, I know the money is going to be used, but my question, right now, how much of the money has been applied for even by PREPA, by LUMA, or whoever is going to be managing the electrical grid?

You just told me that you just approved 40 of those projects. So, what is the percentage of share of the whole \$9.5 billion?

Ms. BINK. So, what I can do is provide you the detail after. I don't have the specific numbers right upfront—

Miss GONZÁLEZ-COLÓN [interrupting]. Perfect. I prefer that you give me the specifics.

Ms. BINK. Absolutely. And COR3 and PREPA and LUMA will have the specifics on the project. What I can say—

Miss GONZÁLEZ-COLÓN [interrupting]. That is going to be the second panel. I want FEMA to give me the numbers of what you have

been approved, what has been submitted, applied, and approved by FEMA, and how much has been disbursed. What is the expected number for now? You don't have that number right now?

Ms. BINK. Well, the key that I wanted to raise was that the \$9.5 billion will be the amount spent by Puerto Rico. That number will be the ultimate spending, because any funds that are not used to support rebuild will be supporting resilience.

Miss GONZÁLEZ-COLÓN. I know, but that is not the question I am asking.

Ms. BINK. Yes.

Miss GONZÁLEZ-COLÓN. So, if you can provide—I know my time expired—if you can provide us how much has been applied, how much has been approved, how many projects, and what is the percentage of share of the \$9.5 billion.

Ms. BINK. Absolutely.

Miss GONZÁLEZ-COLÓN. I yield back.

Ms. TITUS. You can continue.

Miss GONZÁLEZ-COLÓN. Thank you.

How many of those electrical grid projects have been applied and approved from all sources? Because we are talking here about FAASt, but there is also regular disbursement. And I would love to know how much will be the total of that amount, between the Federal programs that have been approved for just the electrical grid. I am not going to the municipalities. Just for the electrical grid.

Ms. BINK. So, overall for public utilities for Maria, the number of amount obligated is \$13.2 billion, 265 projects, overall. So, that is where a lot of the scopes, including that largest project ever, will be specified, scoped out, and then the shovels will continue to hit the ground. So, that is the overall scope of all public utility projects.

Miss GONZÁLEZ-COLÓN. We knew that. I mean, we were the ones who approved the funding. So, my question, again, is, sometimes agencies on the island claim that FEMA has been slow approving the projects that have been submitted. So, I have you here and that is the reason I am asking the question of how much has been applied for? That is one thing. How much has been obligated? How much has been disbursed? And separating the accounts that money is coming from. FAASt is one thing and the other one was the regular disaster funds.

So, knowing that, who is responsible for applying and certifying those projects, and who is responsible for receiving and accounting for it? Is it FEMA? Is it going to be COR3? Is it going to be LUMA? Is it going to be PREPA?

Ms. BINK. So, that is part of what we are doing on the ground. So, we obligate the funding and the recipient, in this case, would be the Puerto Rico government, determines the scopes within those larger projects and then submits those scopes of work for approval from FEMA. That is typically—

Miss GONZÁLEZ-COLÓN [interrupting]. But we are talking electrical grid. We are not talking about the rest of the—

Ms. BINK [interrupting]. All projects. All projects. And if there are subrecipients, they would move through the recipient, which is

COR3, in this case, with Mr. Laboy serving as the Governor's authorized representative.

So, at that point, we review those scopes, we approve, and then the bids and the construction proceeds.

Miss GONZÁLEZ-COLÓN. How much has been disbursed right now for electrical grid purposes?

Ms. BINK. So, for public utilities, low. Low amount has been disbursed, about \$40 million at this point. But again—

Miss GONZÁLEZ-COLÓN [interposing]. \$40 million.

Ms. BINK [continuing]. That is against the overall public utility category F spending. But, again, there is a lot of detail that goes into that and a lot of work happening to develop those scopes of work. It is the focus of what we are doing with our technical support on the island, which, again, goes beyond what we typically do for disaster recovery development of projects.

Miss GONZÁLEZ-COLÓN. I am not questioning that. I am just saying that \$40 million that has been disbursed for electrical grid—it's been 5 years. And I know a lot of the equipment that is going to be purchased is not over the counter in a store that you just can grab them and put in the electrical. I know many of those scopes of work need plans either from LUMA, either from PREPA.

My concern, and the numbers that I would love for you to provide to this committee, is how much has been applied specifically—I know the government of Puerto Rico and the Governor, who I recognize is here, has been very eager in working together with the Department of Energy, to what intent the money is going to be used: is it for renewables, is it going to the transmission, is it going to be the plants, is it going to the illumination? But our concern, the people of the island, is how much of those funds are being applied, obligated, disbursed?

And in that plan's scope that you were just mentioning, how many projects are in the pipeline? Because if we are going to be waiting 5 more years to get that money done, then the inflation is another big area that we need to tackle, because many of those projects maybe projected today are going to be without resources.

And I want to say thank you, Madam Chair, for providing me with extra time.

Ms. TITUS. Well, maybe Ms. Bink can get together with you afterwards or something and to help you with some of those numbers.

Ms. BINK. We are happy to provide that.

I do want to say one other thing, though. In our role and our coordination with the Department of Energy and the Puerto Rican government, we are in lockstep in working toward the PR100 goals and the 2050 plan for renewable energy, getting to that 100 percent by 2050.

That takes time and that can take work, and that is where you see—while the start could have been faster, we are starting to see that pivot toward more work, more shovels in the ground. And really that work to develop the resilience infrastructure in the island is a once-in-a-lifetime opportunity. And while it takes time to get there, we think it is time well spent, because the island will be more resilient, more independent from an energy perspective going forward.

Ms. TITUS. Thank you. I have heard you mention several times shovel ready, but I have learned over the years from engineers that you really have to be pencil ready. And so, I am sure a lot of what you are working on has involved pretty elaborate pencil-ready projects before you get to the shovels.

Isn't FEMA engaged with that stage of the process?

Ms. BINK. Absolutely. We are really engaged in all steps. Having joint recovery offices onsite, on island, that is an extra step in our technical assistance that you don't typically see. The other thing we are consistently doing is looking for opportunities to expand our technical assistance within the authorities granted, or, in some cases, moving beyond that, requesting additional authorities.

Just last week, we did submit a proposed legislation that would offer further technical assistance to the U.S. Virgin Islands. That would address supply chain concerns, potentially provide additional support to the USVI to achieve their long-term goals. And we will bring more detail on that to the committees and the relevant committees as we move forward, but we are always thinking about what can we do on the ground to move these projects forward and to completion, and what can we do to build in resilience in every opportunity we have.

Ms. TITUS. Thank you.

Now, Mr. García, I recognize you.

Mr. GARCÍA OF ILLINOIS. Thank you, Madam Chair, for having this most important hearing.

To Ms. Bink, we have received important concerns from local groups in Puerto Rico about how the reconstruction of the electrical grid and other projects funded with Public Assistance funds are not complying with climate policies promoted by this administration. Specifically, in the Puerto Rican government 10-year plan for reconstruction of the grid, two methane gas and other carbon-emitting projects are proposed and there is no mention of renewable energy projects such as rooftop solar microgrids. Nevertheless, FEMA has issued an environmental "finding of no significant impact" decision on this 10-year plan, stating that the environmental impact of projects is to be seen in a case-by-case basis.

Thus, my first question: Can you explain to us how FEMA is ensuring that Federal funds for reconstruction are being used in ways that do not violate Federal laws or policies to attend climate change and promote resilient communities?

Ms. BINK. It is a great question. And what you are seeing right now is the start of the projects and the rebuilding work. The scopes related to resilience take time to develop and are and will be in alignment with the PR100 goals that were undertaken jointly with the government of Puerto Rico, as well as the Department of Energy. So, those scopes related to resilience portions of projects take a while.

I experienced this in New York State when I was the recovery official working on 428s for Sandy projects. And it is true here. The resilience work will take time, but the goals will align ultimately with those set forth by Puerto Rico and the U.S. Virgin Islands to meet their needs. We will make sure we enable projects that bring them where they want to be.

Mr. GARCÍA OF ILLINOIS. So, you don't see any violation of laws or policies that have been championed by the administration?

Ms. BINK. So, I am not familiar with the specifics there. I can certainly go back to my team and provide further detail, but not to my knowledge. Thank you.

Mr. GARCÍA OF ILLINOIS. Thank you. My next question: What are the processes to evaluate the projects proposed by the government of Puerto Rico as to their climate sustainability?

Ms. BINK. So, we are an enabler in the sense that we want to ensure that the projects that the government brings forth to us to implement are aligned with FEMA requirements and standards, and that their goals for resiliency are met on their terms—what they are looking to do, how they are looking to do it—and ensuring that all our rules, policies, and laws are followed in the process. So, we are there to enable their recovery on their terms.

Mr. GARCÍA OF ILLINOIS. And my last question: What affirmative steps have been made or taken to make sure that funds are not wasted or misused in building back a fossil fuel infrastructure that is outdated and goes against the logic of building back better?

Ms. BINK. Well, one of the key capacity builders in the grid is ensuring that it can take on renewable energy sources and drive those long-term resilient actions. So, as the rebuilding occurs within the grid, it will set the baseline and the ability to then bring in renewable sources of energy and cleaner sources of energy, which is part of the plan, as I understand it, from Puerto Rico recovery officials.

Mr. GARCÍA OF ILLINOIS. Thank you for that.

No further questions, Madam Chair. I yield back.

Ms. TITUS. Thank you, Mr. García.

That concludes our first panel. We thank you, Ms. Bink, for providing us with information. And we would ask you to get back to the Members who had questions that you said you could get additional information for. So, thank you very much.

We now call up panel 2. There seems to be a lot of questions about the electric grid. I think some of these members of this panel may be able to address those.

It was pointed out to me that Ms. Bink has to leave to go back to get ready for the tropical storm that is coming to Puerto Rico. Seems kind of poetic.

Thank you all very much for being here. We have Chris Currie, who is the Director of Homeland Security and Justice with the Government Accountability Office.

We have Adrienne Williams-Octalien, who is the director of the Office of Disaster Recovery for the U.S. Virgin Islands. And I would point out that we have talked to Stacey Plaskett for her input into some of these questions. She is very concerned about this. So, thank you for being here.

Manuel Laboy, who is executive director for the Central Office for Recovery, Reconstruction, and Resiliency in Puerto Rico.

Shay Bahramirad, who is the senior vice president from LUMA Energy.

And then Josué Colón-Ortiz, who is the executive director of the Puerto Rico Electric Power Authority.

So, we thank you and we look forward to hearing your testimony.

Without objection, our witnesses' full statements will be included in the record. And so, for that reason, we would ask that you keep your oral testimony to 5 minutes.

So, we will start with you, Mr. Currie. You may proceed.

TESTIMONY OF CHRIS P. CURRIE, DIRECTOR, HOMELAND SECURITY AND JUSTICE, U.S. GOVERNMENT ACCOUNTABILITY OFFICE; ADRIENNE L. WILLIAMS-OCTALIEN, DIRECTOR, OFFICE OF DISASTER RECOVERY, U.S. VIRGIN ISLANDS; HON. MANUEL LABOY, EXECUTIVE DIRECTOR, CENTRAL OFFICE FOR RECOVERY, RECONSTRUCTION, AND RESILIENCY, PUERTO RICO; SHAY BAHRAMIRAD, PH.D., SENIOR VICE PRESIDENT OF ENGINEERING, ASSET MANAGEMENT, AND CAPITAL PROGRAMS, LUMA ENERGY; AND JOSUÉ A. COLÓN-ORTIZ, EXECUTIVE DIRECTOR, PUERTO RICO ELECTRIC POWER AUTHORITY

Mr. CURRIE. Thank you, Chair Titus, Ranking Member Webster, other members of the committee. It is a pleasure to be here to talk about all of our work that we have done over the last 5 years on the recoveries in Puerto Rico and the USVI. And I just want to say, I think it is great that you have both places represented here today because the challenges in the Virgin Islands are no less severe than are in Puerto Rico too.

So, the recoveries from these disasters are definitely the most complicated and likely most expensive in the country's history, and not just because of the scale of the damage, but also the complexity of the situation in both places financially.

Most members on this committee have had disasters in your jurisdictions and you know what it is like to manage these programs. Federal programs can be very complicated, lengthy, and very frustrating to navigate, even for the most routine disasters and especially for large complicated ones.

I want to be clear that, in my view, the recovery in both places is not where it needs to be and is not moving as fast as it should be. The best way I can talk about this is through numbers.

Most of the Federal dollars actually spent so far are for earlier response and emergency repair work, not permanent repairs. And rebuilding of key infrastructure like schools, hospital buildings, and other things still has a long way to go.

You heard in the first panel about obligated dollars. To be clear, obligation, according to FEMA itself, is an agreement to spend money now or in the future. Project obligations are not construction. They are not shovels in the ground.

In Puerto Rico, FEMA has obligated over \$21 billion for Public Assistance projects, this permanent work I have talked about. However, only \$407 million, that is 2 percent, has actually been spent. In the VI, they have obligated \$2 billion for permanent projects and they have spent about \$617 million. That is a little bit better at 31 percent. They still have a long way to go, too.

The FEMA money is the largest pot, but Federal funds in other agencies are delayed, too. Congress appropriated about \$20 billion for HUD funds to Puerto Rico, and as of last month, \$900 million had been spent. That is 4.5 percent. The sum of \$1.9 billion was

appropriated to VI for HUD and \$250 million has been spent, and that is 11 percent.

These billions in unspent dollars, as we talk about them, are a huge scope and they represent thousands of projects. But to make this a little bit more real, my written testimony includes pictures, for example, of a school that we have been to outside of San Juan several times over the course of several years. That school now looks worse than it did after Hurricane Maria.

To me, the photo tells the story of the numerous recovery challenges that we faced. I think it would be hard to imagine a school in the suburbs of DC or another large city that was sitting overgrown and dilapidated for 5 years. And I point this out, not to blame anyone, but to be clear on the status of the recovery.

There are thousands of Federal, Commonwealth, and municipal folks working hard on the recovery, and FEMA has also done a number of things to try to address problems and address some of our recommendations. For example, we found in the past that constantly changing policy and guidance for these projects has led to problems in both locations in estimating costs and delays in agreeing to project scope and obligations.

FEMA has worked with both places, both islands, to improve this area and has implemented several steps to streamline these processes. And we have heard during our recent visits just a couple months ago that communication and coordination with FEMA in Puerto Rico, particularly, has been improved.

However, while there has been progress, I think we are entering a really difficult phase. This doesn't get easier the further we get into it. Our ongoing work on Puerto Rico has identified a number of challenges, I think many of which are likely to affect the Virgin Islands in the same way or maybe even worse.

For example, many municipalities still lack the staff, the experience, and the knowledge of Federal procurement rules and policies. And this is really important right now because thousands of contracts, literally thousands are going to be awarded in the coming years for projects. It is critical because these processes can determine whether these costs are reimbursed by FEMA or not. If they are not followed, oftentimes they won't be reimbursed. There are still also many disagreements about project scopes that can lead to delays in starting them.

Inflation, as has been already discussed, is also a huge concern. While some inflation was factored into these projects, like Ms. Bink talked about, that was done 2 or 3 years ago. Nobody could have possibly understood what was going to happen this year with inflation, and I think this is going to have a huge impact on estimated projects as we go.

And lastly, I will just point out for the sake of time, there are also concerns about the supply chain and needed supplies. This is going to be a key part of this, too.

And let me just end by saying, I think it is important to understand that these Federal dollars are not just critical for rebuilding damaged projects; this is critical for the economy of Puerto Rico for the years to come. It is a huge part of their expected GDP, and I think it is very important that we continue to monitor them.

Thank you very much.

[Mr. Currie's prepared statement follows:]

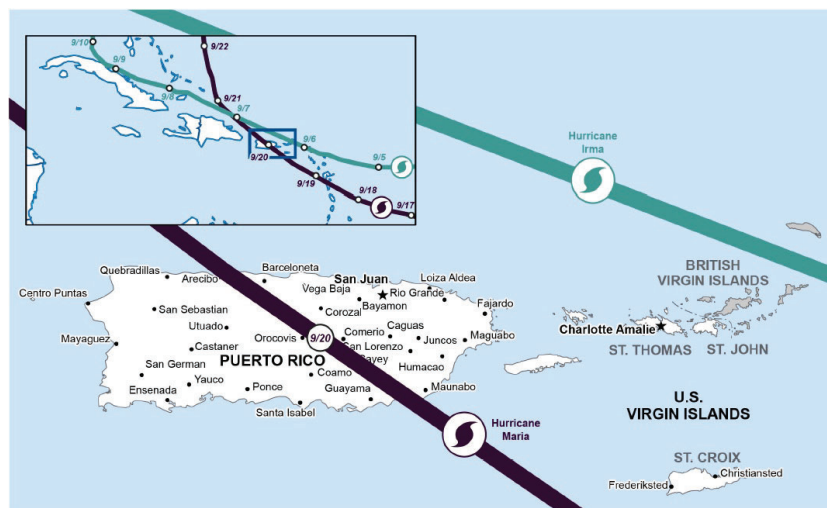
Prepared Statement of Chris P. Currie, Director, Homeland Security and Justice, U.S. Government Accountability Office

Chair Titus, Ranking Member Webster, and Members of the Subcommittee:

Thank you for the opportunity to provide an update on our work on the Federal Emergency Management Agency's (FEMA) disaster recovery efforts in Puerto Rico and the U.S. Virgin Islands (USVI) as we mark the 5-year anniversary of hurricanes Irma and Maria.

In a 14-day span in September 2017, these two hurricanes struck Puerto Rico and the USVI, causing severe damage to critical infrastructure estimated in the hundreds of billions of dollars in Puerto Rico and in the tens of billions of dollars for the USVI (see fig. 1).¹ According to a July 2022 analysis conducted by National Oceanic and Atmospheric Administration, Hurricane Maria is the third costliest hurricane in U.S. history, while Hurricane Irma ranks sixth.²

Figure 1: Path of Hurricanes Irma and Maria through Puerto Rico and the U.S. Virgin Islands



Source: GAO analysis of National Oceanic and Atmospheric Administration; Map Resources (map).
GAO-22-106211

Notably, the hurricanes devastated Puerto Rico's electrical system. It took roughly 11 months to restore power to all of the customers in Puerto Rico, the longest black-out in U.S. history. In the USVI, its Hurricane Recovery and Resilience Task Force concluded that the storms damaged more than half of the territory's housing units as well as its hospitals, schools, and water and wastewater facilities.³

FEMA, a component of the Department of Homeland Security, is the lead federal agency responsible for assisting states, as well as territories like Puerto Rico and

¹In its recovery plan, the Government of Puerto Rico estimated that the territory would need \$132 billion from 2018 through 2028 to repair and reconstruct the infrastructure damaged by the hurricanes, while a 2018 report from the USVI Hurricane Recovery and Resilience Task Force estimated that the hurricanes caused approximately \$10.7 billion in total damages across the USVI.

²National Oceanic and Atmospheric Administration, National Centers for Environmental Information, "Costliest U.S. Tropical Cyclones", accessed September 6, 2022, (Washington, D.C.: July 11, 2022) <https://www.ncei.noaa.gov/access/billions/dcmi.pdf>.

³In addition to the 2017 hurricanes, Puerto Rico also experienced a series of earthquakes in December 2019 and January 2020, with strong aftershocks felt through July 2020. Additionally, both Puerto Rico and the USVI experienced the effects of the COVID-19 pandemic.

the USVI, with disaster recovery efforts.⁴ Among other responsibilities, FEMA awards and administers various disaster recovery and mitigation grant programs, such as the Public Assistance program and the Hazard Mitigation Grant Program, in partnership with state or territorial governments.

My testimony today discusses our prior work on disaster recovery efforts in Puerto Rico and in the USVI since hurricanes Irma and Maria in 2017, as well as preliminary observations from our ongoing work related to Puerto Rico, including:

1. actions FEMA has taken to address recommendations we made in prior reports to improve FEMA's disaster recovery efforts in Puerto Rico and the USVI;
2. the status of FEMA's Public Assistance and Hazard Mitigation Grant Program funding in Puerto Rico and the USVI, as of August 2022; and
3. potential challenges FEMA and Puerto Rico face with ongoing disaster recovery efforts and any actions to address them.

My statement is based on products we issued in from November 2019 to May 2021 as well as data and preliminary observations from an ongoing review of FEMA's disaster recovery efforts in Puerto Rico. To conduct our prior work, we reviewed federal laws related to emergency management, analyzed FEMA data and documentation, and interviewed relevant agency officials. More detailed information on the scope and methodology for our prior work can be found in the issued reports cited throughout this statement.⁵

To develop our preliminary observations from ongoing work, we obtained and analyzed Puerto Rico and USVI obligation and expenditure data as of August 2022 from FEMA's Emergency Management Mission Integrated Environment; Integrated Financial Management Information System; as well as the Puerto Rico Central Office of Recovery, Reconstruction, and Resiliency Transparency Portal. To assess data reliability, we reviewed existing information about these systems, submitted questions to data users and managers responsible for these data, and conducted basic tests on the data such as checking for duplicate records or missing values. We determined these data to be sufficiently reliable for the purposes of this statement. Moreover, we conducted site visits to Puerto Rico in March 2022 and July 2022 to meet with federal, territorial, and local government officials as well as nongovernmental organizations to discuss their observations on disaster recovery efforts and associated challenges, and to observe disaster-damaged areas (see fig. 2).

Figure 2: Status of Recovery Project at Berwind Intermediate School in San Juan, Puerto Rico, March 2019 and March 2022



LEFT: School with internal mold and water damages caused by Hurricane Maria observed in March 2019. RIGHT: School observed in March 2022 awaiting repairs. According to a FEMA official, a construction crew removed doors, windows, and some walls due to asbestos and lead in the building. Source: GAO. GAO-22-106211

Over the course of these site visits, we interviewed officials from FEMA, the government of Puerto Rico's Central Office of Recovery, Reconstruction, and Resiliency

⁴See 6 U.S.C. § 313.

⁵For a complete list of our previous work in this area and on other related topics, see the Related GAO Products page at the end of this statement. [Editor's note: See <https://docs.house.gov/meetings/PW/PW13/20220915/115108/HHRG-117-PW13-Wstate-CurrieC-20220915.PDF> pgs. 23–26.]

(COR3), and four municipalities in Puerto Rico.⁶ In addition, we interviewed a private operator of a Puerto Rico government agency and two nongovernmental organizations that have monitored the progress of Puerto Rico's disaster recovery efforts from hurricanes Irma and Maria. Outside of our site visits, we interviewed one Puerto Rico government agency in June 2022 and three additional Puerto Rico government agencies in August 2022. The information from our site visits and interviews are not generalizable but provide important insights into the ongoing disaster recovery efforts in Puerto Rico.

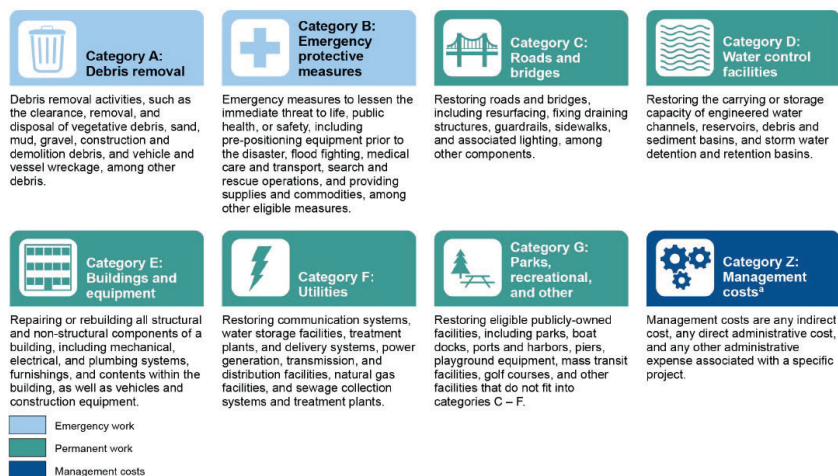
We conducted the work on which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

BACKGROUND

FEMA's Public Assistance Program

FEMA's Public Assistance program provides grant funding to state, territorial, local, and tribal governments, as well as to certain types of private nonprofit organizations, to assist with responding to and recovering from presidentially-declared major disasters or emergencies.⁷ As shown in figure 3, FEMA categorizes Public Assistance grant funds broadly as "emergency work" or "permanent work." Within these broad categories are separate subcategories. In addition to the emergency work and permanent work categories, the program includes category Z, which represents indirect costs, direct administrative costs, and any other administrative expenses associated with a specific project.

Figure 3: Federal Emergency Management Agency's Public Assistance Program Categories of Work



Source: Federal Emergency Management Agency. | GAO-22-106211

^a The Disaster Recovery Reform Act of 2018 amends the definition of Category Z management costs. See Pub. L. No. 115-254, § 1215, 132 Stat. 3186, 3449 (codified at 42 U.S.C. § 5165b(a)).

⁶ COR3 is an office established after the 2017 hurricanes to guide recovery investment and policy and to serve as a focal point for managing Puerto Rico's recovery.

⁷ In accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended, the President of the United States may declare that a major disaster or emergency exists in response to a governor's or tribal chief executive's request if the disaster is of such severity and magnitude that effective response is beyond the capabilities of a state, tribe, or local government and federal assistance is necessary. See 42 U.S.C. §§ 5170–5172. The Public Assistance program represents the largest share of the Disaster Relief Fund, which is the primary source of federal disaster assistance for state and local governments when a disaster is declared.

FEMA's Public Assistance program also provides grant funding for cost-effective hazard mitigation measures to reduce or eliminate the long-term risk to people and property from future natural and man-made disasters and their effects.⁸ For example, a community that had a fire station damaged by a disaster could use Public Assistance grant funding to repair the facility and incorporate additional measures such as installing hurricane shutters over the windows to mitigate the potential for future damage.

FEMA, the state or territorial government (the recipient), and local or territorial entities (the subrecipient) work together to develop projects under the Public Assistance program. After a project has completed FEMA's review process and is approved, FEMA obligates funding for the project by placing money into an account where the recipient has the authority to draw down—or expend—funding to pay the subrecipient for eligible work upon completion.⁹

Figure 4 shows images of a Public Assistance-funded water tank project we visited in Humacao, Puerto Rico in February 2020 (image on left) and again in March 2022.

Figure 4: Status of Federal Emergency Management Agency Public Assistance-Funded Buena Vista Arriba Water Storage Tank in Humacao, Puerto Rico, February 2020 and March 2022



LEFT: Damaged water tank from winds of Hurricane Maria observed in February 2020.
RIGHT: Largely repaired water tank observed in March 2022. Source: GAO. GAO-22-106211

The Sandy Recovery Improvement Act of 2013 authorized the use of alternative procedures in administering the Public Assistance program, thereby providing new flexibilities to FEMA, states, territories, and local governments for debris removal, infrastructure repair, and rebuilding projects using funds from this program.¹⁰ Un-

⁸FEMA may fund hazard mitigation measures related to the damaged facilities receiving Public Assistance grant funding pursuant to section 406 of the Stafford Act, as amended. 42 U.S.C. § 5172; 44 C.F.R. § 206.226.

⁹An obligation is a definite commitment that creates a legal liability of the government for the payment of goods and services ordered or received. For the purposes of this statement, obligations represent the amount of grant funding FEMA provided through the Public Assistance program and the Hazard Mitigation Grant Program for specific projects in Puerto Rico and the USVI. An expenditure is an amount paid by federal agencies, by cash or cash equivalent, during the fiscal year to liquidate government obligations. For the purposes of this statement, an expenditure represents the actual spending by the government of Puerto Rico government or the USVI government of money obligated by the federal government.

¹⁰The Sandy Recovery Improvement Act of 2013 amended the Stafford Act by adding Section 428, which authorized FEMA to approve Public Assistance program projects under the alternative procedures provided by that section for any presidentially-declared major disaster or emergency. This section further authorized FEMA to carry out the alternative procedures as a pilot program until FEMA promulgates regulations to implement this section. Pub. L. No. 113-2, div. B, § 1102(2), 127 Stat. 39, amending Pub. L. No. 93-288, tit. IV, § 428 (codified at 42 U.S.C. § 5189f). The stated goals of the alternative procedures are to reduce the costs to the federal government, increase flexibility in the administration of the Public Assistance program,

Continued

like the standard Public Assistance program where FEMA will reimburse the actual costs of a project, the Public Assistance alternative procedures allow awards for permanent work projects to be made based on fixed-cost estimates to provide financial incentives for the timely and cost-effective completion of work.

Under these procedures, if the actual cost of the project exceeds the fixed-cost estimate agreed upon by FEMA and the recipient, the recipient or subrecipient is responsible for the additional costs at the time of the closeout process.¹¹ However, if the actual cost of completing eligible work for a project is below the estimate, the recipient may use the remaining funds for additional cost-effective hazard mitigation measures to increase the resilience of public infrastructure.¹² In addition, these funds may be used for activities that improve the recipient's or subrecipient's future Public Assistance operations or planning.

In October 2017, Puerto Rico requested, and FEMA approved, the use of the alternative procedures program for all large-project funding for Public Assistance permanent work projects in categories C through G.¹³ Although FEMA had approved alternative procedure grants in 30 states as of April 2018, in these cases, it used alternative procedures on a project-by-project basis. Puerto Rico's recovery from the 2017 hurricanes is the first recovery to use alternative procedures for all large permanent work projects. On January 23, 2020, FEMA made the use of Public Assistance alternative procedures optional for the repair of non-critical service facilities in Puerto Rico damaged by Hurricane Maria; however, it still requires large projects for critical service facilities to use Public Assistance alternative procedures.

In July 2018, FEMA approved a request from the Governor of the USVI to transition to using the Public Assistance alternative procedures program for permanent work in the territory. In addition to the alternative procedures process, the USVI may pursue the use of the standard Public Assistance program on a project-by-project basis.

FEMA's Hazard Mitigation Grant Program

FEMA's Hazard Mitigation Grant Program provides grant funding for long-term mitigation solutions to reduce the risk of loss of life and property from future disasters. Unlike mitigation measures funded through the Public Assistance program to further protect disaster-damaged infrastructure, the Hazard Mitigation Grant Program may fund measures for systems, facilities, or properties that were not damaged in the disaster. For example, program funding can be used to construct flood-water control measures that did not exist prior to the disaster, or to update existing hazard mitigation plans to accurately reflect current mitigation goals.

expedite the provision of assistance under the program, and provide financial incentives for recipients of the program for the timely and cost-effective completion of projects.

¹¹Closeout is the step in which the grant process ends. In order to complete a closeout, award recipients submit the final financial and programmatic reports. According to the OMB Uniform Grants Guidance §200.343, the recipient must submit all financial, performance, and other reports required under the grant within 90 days after the grant award expires or is terminated. The awarding agency will review these reports to ensure compliance with all the grant terms and conditions as well as to make sure recipients spent all the funds appropriately.

¹²Section 20601 of the Bipartisan Budget Act of 2018 also authorizes FEMA, when using the alternative procedures, to provide assistance to fund the replacement or restoration of disaster-damaged infrastructure that provide critical services without regard to pre-disaster condition. Bipartisan Budget Act of 2018, Pub. L. No. 115-123, § 20601(1), 132 Stat. 64 (2018). Critical services include public infrastructure in the following sectors: power, water, sewer, wastewater treatment, communications, education, and emergency medical care. See 42 U.S.C. § 5172(a)(3)(B). The Act also authorizes FEMA to fund the repair or replacement of undamaged components of critical services infrastructure when necessary to restore the function of the facility or system to industry standards. Section 20601 applies only to assistance provided through the Public Assistance alternative procedures program for the duration of the recovery for the major disasters declared in Puerto Rico and the USVI following hurricanes Irma and Maria. Further, the Additional Supplemental Appropriations for Disaster Relief Act of 2019 provides additional direction to FEMA in the implementation of section 20601. See Pub. L. No. 116-20, tit. VI, § 601, 133 Stat. 871, 882 (2019). Specifically, it directs FEMA to "include the costs associated with addressing pre-disaster condition, undamaged components, codes and standards, and industry standards in the cost of repair" when calculating whether a facility should be repaired or replaced.

¹³According to a November 2017 amendment to Puerto Rico's major disaster declaration, due to the extraordinary level of infrastructure damage caused by Hurricane Maria, as well as the financial status of Puerto Rico, officials chose to use the alternative procedures for all large-project funding for Public Assistance categories C through G pursuant to section 428 of the Stafford Act. Puerto Rico; Amendment No. 5 to Notice of a Major Disaster Declaration, 82 Fed. Reg. 53,514 (Nov. 16, 2017). For fiscal year 2022, the large project threshold was any amount over \$139,800.

FEMA HAS TAKEN STEPS TO ADDRESS RECOMMENDATIONS TO IMPROVE THE
MANAGEMENT OF ITS GRANT PROGRAMS

In prior reports, we made recommendations to improve FEMA's management of its recovery grant programs in Puerto Rico and the USVI, including those related to (1) the development of fixed-cost estimates under the Public Assistance alternative procedures, (2) the availability and clarity of guidance for FEMA's Public Assistance program and the Hazard Mitigation Grant Program, and (3) the identification, assessment, and management of risks to recovery in Puerto Rico. In response, FEMA has taken steps to address these recommendations, as discussed below.

Developing Fixed-Cost Estimates. In November 2019 and February 2020, we reported on the development of fixed-cost estimates for permanent work projects under the alternative procedures in the USVI and Puerto Rico, respectively. We reported in November 2019 that FEMA and USVI officials stated that developing accurate fixed-cost estimates for permanent work projects under the alternative procedures posed challenges.¹⁴ Specifically, USVI officials told us that developing fixed-cost estimates that accurately forecast the future costs of completing large, complex permanent work projects in the remote island territory was difficult given the unique circumstances that influence construction costs in the USVI, such as the limited availability of local resources and the need to import construction materials and labor.

To address this issue, in May 2019, FEMA approved a USVI-specific cost factor to incorporate into FEMA's process for developing fixed-cost estimates on an interim basis. The factor aims to ensure that FEMA captures actual costs of implementing permanent work projects in the territory. Given the uncertainty around these fixed-cost estimates, USVI officials told us the territory would need to balance the potential flexibilities provided by the alternative procedures program with the financial risk posed by cost overruns when deciding whether to use the alternative procedures or the standard Public Assistance program for any given permanent work project.

For Puerto Rico, in February 2020, we also reported that, given the importance of reaching mutual agreement on fixed cost estimates for projects under the alternative procedures, FEMA and Puerto Rico had taken a deliberative approach to establishing the data and procedures to use in developing these fixed cost estimates.¹⁵ This included, among other things, adapting the way FEMA estimates costs to the specific post-disaster economic conditions in the territory, including developing exceptions to FEMA's cost estimating guidance. In July 2019, FEMA approved two exceptions: (1) a cost factor to account for local labor, equipment, and material costs in Puerto Rico, and (2) a future price factor and price curve to account for anticipated rises in construction costs over time due to the massive influx of disaster recovery funds, coupled with limited material and labor resources in Puerto Rico.

At the time, we found that FEMA adapted its Public Assistance cost estimating guidance to accurately reflect costs in Puerto Rico but that it could improve the guidance to further enhance its reliability. Specifically, we found that FEMA's guidance substantially or fully met best practices for nine of the 12 steps included in the *GAO Cost Estimating and Assessment Guide*; however, FEMA could improve the guidance in three areas, including analyzing risks and future uncertainties that could affect these estimates.¹⁶ We recommended that FEMA revise its cost estimating guidance for Puerto Rico to fully align with all 12 steps. In response, FEMA addressed this recommendation by, among other things, developing a job aid to provide additional guidance on cost estimating procedures to further align its Public Assistance program guidance with the steps outlined in our guide.

We are continuing to monitor the use of fixed-cost estimates for permanent recovery projects in our ongoing work.

Availability and Clarity of FEMA's Guidance. In November 2019, we reported that the USVI and FEMA established structures for overseeing recovery efforts and had issued numerous useful documents and guidance for implementing its recovery programs.¹⁷ For example, FEMA's consolidated standard operating procedures for the Public Assistance program provided FEMA officials across all disasters nationwide with a common understanding of the expectations and requirements for managing projects. However, we found that FEMA did not have similar consolidated standard operating procedures for the Hazard Mitigation Grant Program, which were located

¹⁴ GAO, *U.S. Virgin Islands Recovery: Additional Actions Could Strengthen FEMA's Key Disaster Recovery Efforts*, GAO-20-54 (Washington, D.C.: Nov. 19, 2019).

¹⁵ GAO, *Puerto Rico Disaster Recovery: FEMA Actions Needed to Strengthen Project Cost Estimation and Awareness of Program Guidance*, GAO-20-221 (Washington, D.C.: Feb. 5, 2020).

¹⁶ GAO, *GAO Cost Estimating and Assessment Guide Best Practices for Developing and Managing Capital Program Costs*, GAO-09-3SP (Washington, D.C.: Mar. 2, 2009).

¹⁷ GAO-20-54.

across multiple guidance documents. Nor did the existing Hazard Mitigation Grant Program documents provide a concise roadmap that outlined roles and responsibilities, key tasks and milestones, and performance measures for FEMA officials to use when monitoring and closing out individual program projects for any given disaster.

To further strengthen its existing program guidance and management, we recommended that FEMA assess the need for an agency-wide consolidated standard operating procedures document for the Hazard Mitigation Grant Program. In response, FEMA published a new webpage in February 2021 to consolidate the program's guidance in one location for easy reference and in January 2022, issued additional guidance for FEMA personnel's use in managing its hazard mitigation programs to address the recommendation.

In addition, we reported in February 2020 that FEMA had developed Public Assistance policies and guidance to respond to complex recovery conditions in Puerto Rico, which FEMA officials said they provided throughout the Public Assistance project development process.¹⁸ However, Puerto Rico government officials we spoke with stated that they were not always certain about how to proceed in accordance with FEMA policy because they did not consistently understand what guidance was in effect. We also found that pertinent guidance may not be shared with key recovery partners and that FEMA did not maintain a repository of Public Assistance guidance available to all recovery partners that included current applicable guidance.

Without real time access to current applicable guidance, recovery partners risked using guidance that has been revised or replaced. Therefore, we recommended that FEMA develop a repository for all current applicable Public Assistance policies and guidance for Puerto Rico and make it available to all recovery partners, including subrecipients. FEMA addressed this recommendation by making Public Assistance policies and guidance documents accessible to Puerto Rico recovery partners, including subrecipients, through its internal Public Assistance application management system.

Risks to Recovery Projects. In May 2021, we reported that although the number of Public Assistance projects developed and obligated for Puerto Rico's recovery had increased, FEMA had not comprehensively identified or assessed the risks that could affect the success of the remainder of the recovery, or identified potential actions to manage them.¹⁹ These risks included (1) delays related to a lack of subrecipient staff expertise to develop projects for obligation and (2) difficulties providing initial construction funding for projects due to financial austerity measures put in place related to the government of Puerto Rico's default on debt beginning in August 2015.

While Puerto Rico-based FEMA officials and Puerto Rico government officials identified risks that could affect continued progress of recovery efforts, we found that FEMA headquarters officials had not comprehensively identified and assessed such risks or identified potential actions to manage or monitor them. As of February 2021, FEMA headquarters was in the early stages of implementing an enterprise risk management framework to identify and assess risks to its mission, as required by the Office of Management and Budget. However, it was too soon to tell if FEMA would use this framework to comprehensively identify, assess, and monitor risks to Puerto Rico's recovery.

Nonetheless, the time that had elapsed since the 2017 hurricanes and the work remaining highlighted the need for urgent and diligent action to help ensure the success of Puerto Rico's remaining recovery efforts. Therefore, we recommended that, in coordination with the government of Puerto Rico and relevant federal agencies, FEMA identify and assess the risks to the remainder of Puerto Rico's recovery, including internal and external factors, such as Puerto Rico's capacity to carry out projects. Further, we recommended that FEMA identify potential actions to manage the risks to the remainder of Puerto Rico's recovery and continuously monitor risks.

In response, FEMA has taken steps toward addressing these recommendations by setting risk assessment related goals for FEMA personnel involved in the process, drafting a risk assessment plan for Puerto Rico's disaster recovery, and developing plans to review the plan with Puerto Rico government officials before adoption in January 2023.

We will monitor FEMA's further actions to identify, assess, and manage risks to recovery in Puerto Rico through our ongoing work.

¹⁸ GAO-20-221.

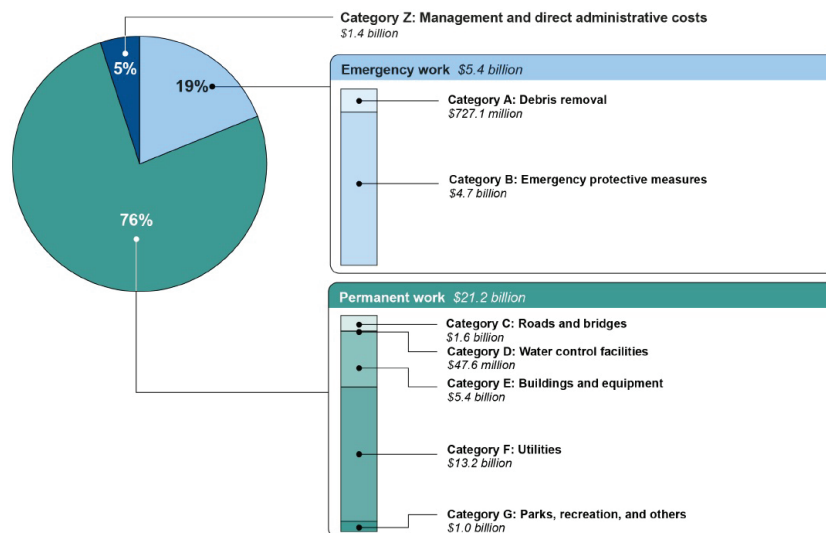
¹⁹ GAO, *Puerto Rico Recovery: FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery*, GAO-21-264 (Washington, D.C.: May 19, 2021).

FEMA HAS OBLIGATED OVER \$32 BILLION FOR RECOVERY EFFORTS AND ABOUT \$1 BILLION HAS BEEN EXPENDED ON PUBLIC ASSISTANCE LONG-TERM REBUILDING PROJECTS

FEMA has obligated a combined total of about \$32.2 billion in grant funds for Public Assistance projects and approximately \$304.8 million for the Hazard Mitigation Grant Program in Puerto Rico and the USVI in response to hurricanes Irma and Maria as of August 2022. In turn, the governments of Puerto Rico and the USVI have expended approximately \$7.7 billion of the Public Assistance obligations and about \$39 million in Hazard Mitigation Grant Program obligations as of August 2022. About \$1 billion of the Public Assistance expenditures were for permanent work projects that support long-term rebuilding projects, such as rebuilding schools, the power grid, water systems, and other damaged infrastructure.

Public Assistance obligations in Puerto Rico. As shown in figure 5, FEMA obligated approximately \$28 billion in Public Assistance funding to Puerto Rico related to the 2017 hurricanes as of August 2022. This funding includes approximately \$5.4 billion (19 percent) for emergency work (categories A and B), about \$21.2 billion (76 percent) for permanent work (categories C through G), and about \$1.4 billion (5 percent) in management and administrative costs (category Z).²⁰

Figure 5: Federal Emergency Management Agency Public Assistance Grant Funding Obligated to Puerto Rico by Category, as of August 2022

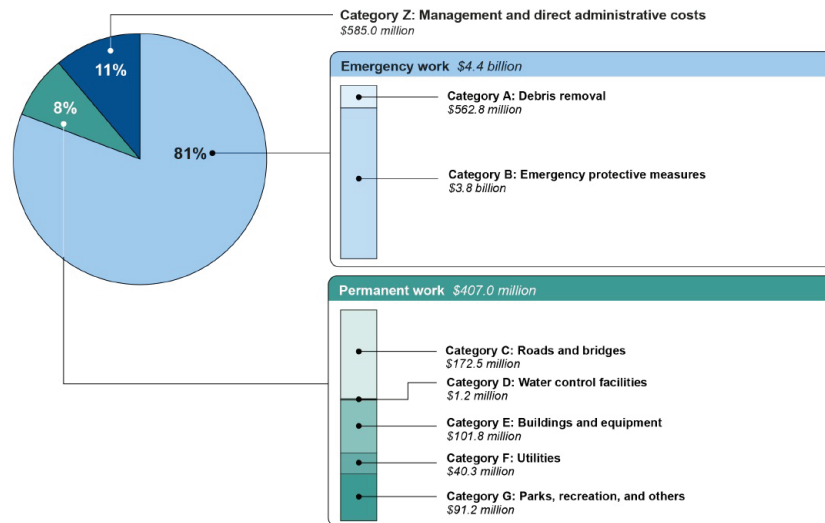


Source: Federal Emergency Management Agency's Emergency Management Mission Integrated Environment. GAO-22-106211

Public Assistance expenditures in Puerto Rico. The government of Puerto Rico has expended about \$5.3 billion—about 19 percent—of the approximately \$28 billion in Public Assistance obligations as of August 2022. However, expenditures for emergency work projects constitute a large majority of expended Public Assistance funding in Puerto Rico. Specifically, as of August 2022, emergency work projects account for 81 percent of the expended amount while permanent work projects account for 8 percent of the total (see figure 6).

²⁰These totals do not include FEMA's Public Assistance obligations in response to the series of earthquakes Puerto Rico experienced starting in December 2019 or to COVID-19. As of August 2022, FEMA's Public Assistance obligations in response to the earthquakes totaled about \$739.5 million, while obligations related to COVID-19 response were approximately \$194.6 million.

Figure 6: Federal Emergency Management Agency (FEMA) Public Assistance Grant Funding Expended by the Government of Puerto Rico by Category, as of August 2022

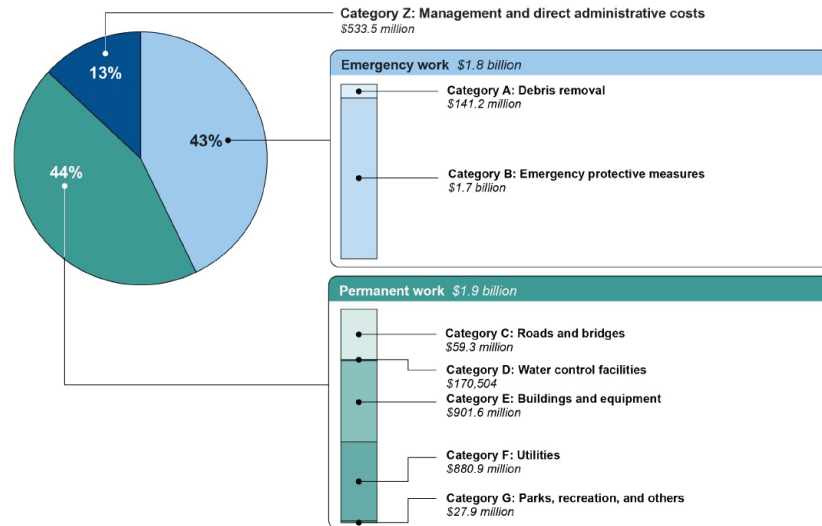


Source: FEMA via the Puerto Rico Central Office for Recovery, Reconstruction, and Resiliency Transparency Portal. GAO-22-106211

We will continue to monitor Public Assistance obligations and expenditures for Puerto Rico through our ongoing work.

Public Assistance obligations in the USVI. FEMA's obligations related to the 2017 hurricanes for Public Assistance projects in the USVI were approximately \$4.2 billion as of August 2022. As figure 7 shows, FEMA's Public Assistance obligations as of August 2022 include approximately \$1.8 billion (43 percent) for emergency work (categories A and B), about \$1.9 billion (44 percent) for permanent work in categories C through G, and \$533.5 million (13 percent) in management and administrative costs (category Z).

Figure 7: Federal Emergency Management Agency Public Assistance Grant Funding Obligated to the U.S. Virgin Islands by Category, as of August 2022

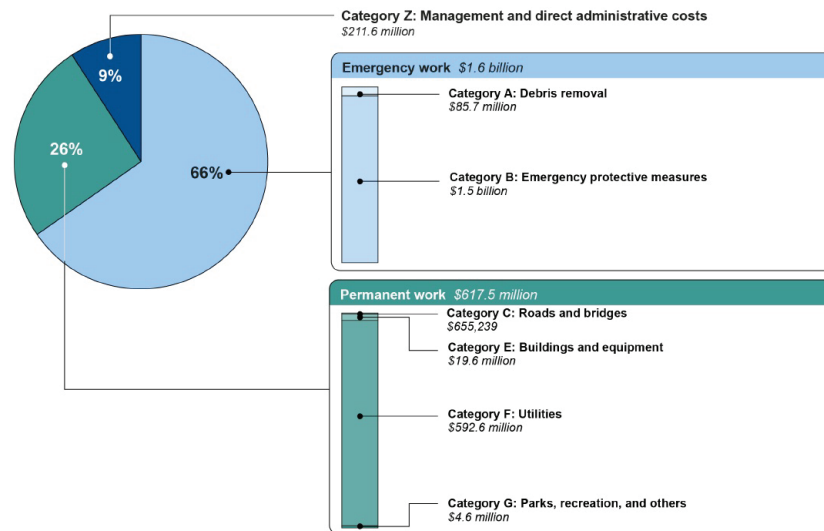


Source: Federal Emergency Management Agency's Emergency Management Mission Integrated Environment. GAO-22-106211

Public Assistance expenditures in the USVI. The USVI government has expended about \$2.4 billion—about 57 percent—of the approximately \$4.2 billion in Public Assistance obligations as of August 2022. About 66 percent of total Public Assistance expenditures in the USVI went toward emergency work projects while 26 percent went toward permanent work projects (see fig. 8).²¹

²¹The remaining Public Assistance expenditures in the USVI in response to the 2017 went toward management and administrative costs.

Figure 8: Federal Emergency Management Agency Public Assistance Grant Funding Expended by the U.S. Virgin Islands Government by Category, as of August 2022



Source: Federal Emergency Management Agency's Integrated Financial Management Information System.
GAO-22-106211

Hazard Mitigation Grant Program obligations and expenditures in Puerto Rico and the USVI. FEMA has obligated a combined total of about \$304.8 million in funding for Hazard Mitigation Grant Program projects in both Puerto Rico and the USVI in response to hurricanes Irma and Maria.

Specifically, in Puerto Rico, FEMA has obligated approximately \$162.7 million as of August 2022 to 200 Hazard Mitigation Grant Program projects specifically in response to Hurricane Maria, and the government of Puerto Rico has expended about \$21.2 million—or 13 percent—of total obligations. For Hurricane Irma, FEMA has obligated about \$3.9 million to six projects related to Hurricane Irma, while the government of Puerto Rico has expended approximately \$252,000, which represents about 6 percent of total obligations, as of August 2022.

In the USVI, FEMA has obligated approximately \$138.2 million in Hazard Mitigation Grant Program funding to projects in response to the 2017 hurricanes while the USVI government has expended about \$17.6 million of these obligations as of August 2022.

With our ongoing work, we will continue to obtain updated Hazard Mitigation Grant Program obligation and expenditure data for Puerto Rico to track the progress of disaster recovery efforts.

PUERTO RICO FACES POTENTIAL CHALLENGES TO ONGOING RECOVERY EFFORTS AND FEMA IS COMMUNICATING REGULARLY WITH STAKEHOLDERS TO DISCUSS ISSUES

In our ongoing work, officials from the agencies and organizations we have interviewed thus far have described potential challenges to the continuing disaster recovery efforts in Puerto Rico. In addition, our preliminary observations indicate that FEMA communicates regularly with government of Puerto Rico agencies about the implementation of Public Assistance and Hazard Mitigation Grant Program projects and has taken actions, such as providing trainings, to help address some of these issues.

FEMA, Puerto Rico Government Agencies, and Other Puerto Rico Stakeholders Cited Potential Challenges to Ongoing Recovery Efforts

In our ongoing work, officials we have interviewed from FEMA and selected Puerto Rico government agencies, Puerto Rico municipalities, a private operator of a Puerto Rico government agency, and nongovernmental organizations have identified potential challenges to Puerto Rico's disaster recovery efforts. These potential challenges include: (1) the limited institutional knowledge and capacity in Puerto Rico

to manage disaster recovery programs; (2) difficulties between FEMA and grant applicants reaching agreement on scopes of work for projects; (3) increases in project costs due to inflation; and (4) difficulties procuring resources such as goods and services for the construction of projects.

Limited institutional knowledge for managing FEMA's grant programs. Preliminary observations from our ongoing work indicate that Puerto Rico faces challenges with building up institutional knowledge to manage FEMA grant awards and projects. In particular, officials from COR3 stated that COR3 found that some local governments—commonly known as municipalities—had relatively little knowledge of the federal procurement process or the use of Public Assistance funding for the administrative and management costs of projects. Specifically, in COR3's February 2021 analysis of its survey to identify the capacities of municipalities, it found that 31 municipalities did not have extensive knowledge of federal regulations and needed to obtain better knowledge in the area to meet federal requirements for recovery project contracting and purchasing.²²

Difficulties reaching agreement on project scopes of work. Among the Puerto Rico government agencies and municipalities that we have interviewed thus far, some officials have described challenges with reaching agreement with FEMA on the scope of work for Public Assistance projects they are submitting to FEMA for approval. For example, officials from a municipality we interviewed stated that getting approval from FEMA to add improvements to a project above its pre-disaster design has been difficult and time consuming.²³ In addition, officials from a private operator of a Puerto Rico government agency told us that they have had disagreements with FEMA on making repairs beyond the damages sustained during Hurricane Maria. Specifically, the private operator and FEMA disagree on which aspects of the agency's proposed project the Public Assistance funding will cover. FEMA officials note that there are nuances involved in developing a complex project and ensuring it is eligible under federal laws and regulations.

Increases in project costs due to inflation. Based on preliminary observations in our ongoing work, officials in Puerto Rico we have interviewed are concerned that inflation will lead to an increase in the cost of executing projects and exceed FEMA's obligations for some projects. For example, officials from a municipality stated that the fixed cost estimates developed under Public Assistance alternative procedures no longer reflects the current costs of basic supplies, such as concrete, needed for their projects. Furthermore, officials from a nongovernmental organization stated that they were concerned with the capability of municipalities—already facing financial hardships—to afford the increased cost of projects due to inflation. Officials from this nongovernmental organization added that since FEMA's Public Assistance is a reimbursement program, grant recipients—such as municipalities—need to pay for the cost of a project upfront before FEMA can reimburse them. These officials also emphasized that with Public Assistance alternative procedures, if the costs of a project exceeds the fixed cost estimate, the grant recipient would have to pay the difference.

Additionally, officials from some Puerto Rico government agencies that received obligations through the FEMA's Accelerated Awards Strategy (FAASt) approach expressed concerns about inflation increasing the overall cost of their projects and making the fixed-cost estimate they agreed to no longer accurate.²⁴ For example, officials from a Puerto Rico government agency stated that some of its projects have doubled in cost from the original estimate. Furthermore, officials from another Puerto Rico government agency stated that they were unsure if the obligation amount estimated using FAASt would adequately cover the cost of their projects due to cost increases they ascribe to inflation. According to FEMA officials, Public Assistance fixed cost estimates accounted for some inflation; however, they told us that they are monitoring for cases of project cost increases that exceed 50 percent of the original fixed cost estimate.

²² As a condition of receiving reimbursement for contractor costs relating to FEMA's federal assistance programs, FEMA award recipients and subrecipients must comply with all applicable federal laws, regulations, and executive orders, including federal procurement standards found at 2 C.F.R. §§ 200.317–200.327.

²³ An Improved Project is a project that incorporates improvements or changes to the pre-disaster design that are not required by eligible codes or standards. Federal Emergency Management Agency. *Public Assistance Program and Policy Guide, FP 104-009-2 Version 4 (June 1, 2020)*.

²⁴ FAASt allows selected Puerto Rico state agencies such as Puerto Rico's Electric Power Authority, Aqueduct and Sewer Authority, Department of Education, and the Public Housing Administration to use a sample of the information needed to extrapolate costs and develop a fixed cost estimate for Public Assistance permanent work projects. See GAO–21–264 for more details.

Difficulties procuring resources to begin construction on projects. According to officials from FEMA and Puerto Rico government agencies, we have interviewed for our ongoing work, procuring resources such as contractors and equipment needed to begin construction of projects can be challenging.²⁵ For example, FEMA officials we spoke with stated that municipalities have particular difficulty procuring specialized personnel such as engineers and construction contractors because they have to compete with government agencies and larger corporations for the same resources. Furthermore, officials from a Puerto Rico government agency we interviewed specified that delays in the global supply chain have affected Puerto Rico. These officials told us that obtaining parts and materials needed to start construction on a project can sometimes take up to 24 months.

FEMA Communicates Regularly with Puerto Rico Stakeholders about Disaster Recovery Efforts

According to FEMA, Puerto Rico government agencies, and municipal officials we interviewed thus far, communication between FEMA and Puerto Rico stakeholders generally occurs frequently through formal and informal means. For example, preliminary observations from our ongoing work indicates that FEMA holds weekly and monthly meetings with COR3 and other government agencies, such as the Puerto Rico Electric Power Authority. These meetings include discussions with FEMA officials on the status of projects and related grant funding or construction issues. Officials from one Puerto Rico government agency told us that through these meetings, they are able to ask FEMA officials for help on specific topics related to their Public Assistance projects, such as FEMA's Environmental and Historic Preservation review process.²⁶ These officials stated that they meet with FEMA and COR3 officials up to three times a week and have informal communications daily with FEMA and COR3 officials. Further, officials from some of the municipalities that we have spoken to also stated that they have constructive relationships with their FEMA Program Delivery Managers and that communication with them has improved since the beginning of the disaster recovery.²⁷

In addition, both FEMA and COR3 have provided municipalities with trainings and technical assistance. For example, in February 2021, FEMA and COR3 hosted a virtual training for municipal staff on the processing of acquisitions and contracting which all 78 municipalities attended. More recently, from December 2021 to June 2022, FEMA delivered multiple 3-day grants management training for municipalities. These trainings covered topics such as the lifecycle of grants, project management, administrative requirements, and the procurement process.

Our ongoing work will continue to explore the challenges to the disaster recovery efforts in Puerto Rico as well as potential solutions to these challenges. We will also continue to identify steps FEMA is taking to help address them. We plan to issue a final report next year.

Chair Titus, Ranking Member Webster, and Members of the Subcommittee, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

Ms. TITUS. Ms. Williams-Octalien.

Ms. WILLIAMS-OCTALIEN. Good morning, Chairwoman Titus and Ranking Member Webster, members of the committee. I am Adrienne Williams-Octalien, director of the Office of Disaster Recovery in the U.S. Virgin Islands. Thank you for holding this hearing and for the opportunity to provide testimony on the status of the Virgin Islands recovery 5 years after the devastating storms.

²⁵ In May 2021, we reported that Puerto Rico would likely face risks finding labor to handle the sheer number of projects that need to be constructed. According to FEMA officials, this is because thousands of projects will be going on simultaneously and will likely put a strain on Puerto Rico's capacity to procure labor, equipment, and materials to start construction. See GAO-21-264.

²⁶ According to FEMA, an Environmental and Historic Preservation review includes FEMA reviewing each Public Assistance project to ensure the work complies with applicable federal laws and implementing regulations, and applicable executive orders to protect the environment and preserve the U.S.'s historic and archeological resources. Federal Emergency Management Agency. *Public Assistance Program and Policy Guide, FP 104-009-2 Version 4 (June 1, 2020)*.

²⁷ According to FEMA, Program Delivery Managers serve as the primary point of contact for applicants, providing customer service and programmatic guidance throughout the grant process.

Hurricanes Irma and Maria brought a tremendous amount of damage to the Virgin Islands, but also provided opportunity to rebuild an aged infrastructure. While there has been significant progress in advancing the efforts, the Territory remains in a fragile state. The accomplishments to date have been achieved despite significant challenges related to Federal bureaucratic processes and a global pandemic, which exacerbated the already acknowledged complexity of recovering from back-to-back category 5 storms.

With damages estimated to be over \$11 billion, which is nearly three times the annual gross domestic product, the Territory anticipates receiving \$8 billion to \$10 billion from Federal programs over the next 5 years to aid in the recovery.

To date, \$5.6 billion of the anticipated \$8 billion has been obligated to the Territory; \$2.7 billion of those funds have been expended. With a portfolio of only 1,500 projects, at least 783 hurricane recovery projects have been completed to date, and 500 are underway.

Progress has not come without its challenges. In requiring the Territory to submit reimbursement requests to FEMA for approval before gaining authorization to draw funds, the Territory was placed in 2019 under manual draw. This created a significant delay in getting payments out to vendors.

In February 2021, FEMA lifted the manual draw requirements for reimbursement spending in the Territory. This decision demonstrated FEMA's confidence in the Territory's ability to manage its Federal recovery dollars.

The geographical makeup and fiscal constraints of the Territory creates a set of unique circumstances not experienced in Anytown, USA. In many instances, these challenges have pushed FEMA into uncharted waters and forced the development of innovative approaches to disaster recovery practices.

Congress recognized these distinct challenges and in 2018 passed the Bipartisan Budget Act. The BBA allowed for the rebuilding of critical facilities to prevailing industry standards. To date, a total of 92 projects have been requested for replacement through FEMA, 46 of which have been approved, to include 17 educational facilities and 8 healthcare facilities. Additionally, FEMA has approved the replacement of the wastewater system and potable water systems for the island of St. Croix, paving the way for similar considerations for St. Thomas and St. John.

The benefits of the BBA cannot be underscored enough. It has created the genesis for the transformation of a resilient Virgin Islands. Although the BBA provided tremendous opportunities for the Territory, unfortunately, it took FEMA almost a year to release the associated policy guidance to enable the implementation of the laws as Congress intended. These provisions created a complete metamorphosis of how FEMA administers its Public Assistance program.

In its initial stages, the Territory had concerns that the FEMA policies were not aligned with Congress' intent. It was not until the October 2021 FEMA/USVI BBA Summit, held with Governor Albert Bryan, Jr., Delegate to Congress Stacey Plaskett, and, of course, members of the Appropriations Committee and FEMA leadership, that key policy decisions were made to align more with the

intent of Congress. This discussion yielded the obligation of funding for reconstruction of the first school and addressed questions that impacted funding for healthcare facilities.

We are, however, still experiencing challenges with the agreement of fixed-cost offers. The Territory has requested a second summit to address lingering issues related to cost development, to ensure that we are maximizing assistance and proper application of the BBA provisions.

As you may be aware, the Territory is not in a position to provide upfront funding projects; therefore, it is critical that obligations are in line with actual costs. Many of these projects will be in construction over the next 5 to 7 years. With the cost of inflation and supply chain issues that are currently being experienced, the Territory is at great risk for cost overruns for section 428 projects.

The Territory has found it necessary to leverage multiple Federal resources for a project to be feasible. The layering of Federal funding is very challenging as agencies become Territorial with governing regulations. This inevitably results in contractors including the cost of time and money in bids and has the unintended consequence of driving the cost of the recovery up.

The Territory continues to advocate for waiver of the local match requirement. Under the current situation, the USVI is dedicating \$500 million of its HUD CDBG-DR funds to cover the non-Federal share of the FEMA Public Assistance projects. This, however, requires the laborious task of having each project reviewed by another Federal agency, again, delaying payment to contractors.

The request to waive the match is well within the line of the Insular Areas Act. However, multiple requests have been denied by FEMA as recently as June 2022. The Territory simply does not have the resources to cover local match requirements, and even with the allocation of the CDBG-DR funds, additional funds may be necessary.

Lastly, capacity issues are not limited to the Territory. Federal agencies are also experiencing the impact of the lack of experienced personnel to assist with the reviewing of recovery funds. Timelines associated with reviewing projects tend to span months before responses are received. As disasters become more prevalent, it is prudent that we remove the complexities so we can get the resources to the people who need them most.

The Territory is continuing to lead efforts to rebuild a resilient public infrastructure and positively transform our Territory for generations to come.

I would like to thank Delegate to Congress Stacey Plaskett, the Department of the Interior, FEMA, HUD, and all of our local and Federal partners for their continued support.

On behalf of Governor Albert Bryan, Jr., and the people of the Virgin Islands, I would again like to thank you and this body for your support and commitment to the U.S. Virgin Islands' recovery and its quest to build a resilient Virgin Islands.

Thank you.

[Ms. Williams-Octalien's prepared statement follows:]

**Prepared Statement of Adrienne L. Williams-Octalien, Director, Office of
Disaster Recovery, U.S. Virgin Islands**

Good morning, Chairman Peter DeFazio, Ranking Member Sam Graves, and Members of the Committee on Transportation and Infrastructure Subcommittee on Economic Development, Public Buildings, and Emergency Management. I am Adrienne L. Williams-Octalien, Director of the Office of Disaster Recovery in the U.S. Virgin Islands. Thank you for holding this hearing and for the opportunity to provide testimony on the status of the Virgin Islands recovery five years after the devastating 2017 hurricane season.

Hurricanes Irma and Maria brought a tremendous amount of damage to the Virgin Islands but also provided the opportunity to rebuild an aged infrastructure and create resiliency. While there has been significant progress in advancing recovery efforts, the Territory remains in a fragile state. There is work left to be done on many of our critical facilities, including hospitals and schools, but the rebuilding efforts are in full swing. The accomplishments to date have been achieved despite significant challenges related to federal bureaucratic processes and a global pandemic, which exacerbated the already acknowledged complexity of recovering from back-to-back Category 5 storms.

With damages estimated to be over \$11B, which is, nearly three times the annual gross domestic product, the Territory anticipates receiving \$8–\$10B through various federal programs over the next five years to aid in the recovery. To date, \$5.6B of the anticipated \$8B has been obligated to the Territory. \$2.7B of those funds have been expended. The Territory anticipates receiving this funding from four main federal programs, including the FEMA–Public Assistance and Hazard Mitigation Grant Programs, HUD–Community Development Block Grant–Disaster Recovery Program and Federal Highway Emergency Relief Program, along with other disaster-related funds from various federal entities.

With a portfolio of over 1,500 projects, at least 783 hurricane recovery projects have been completed to date and over 500 are underway. Progress has not come without its challenges. In October 2019, the Territory was placed on manual draw after the results of a 2018 audit. This required the Territory to submit reimbursement requests to FEMA for approval before gaining authorization to draw funds. This created a significant delay in getting payments out to vendors. In February 2021, FEMA lifted the manual draw requirement for reimbursement spending in the Territory. The decision demonstrated FEMA's confidence in the Territory's ability to manage its federal recovery dollars.

The geographical makeup and fiscal constraints of the Territory creates a set of unique circumstances not experienced in Any Town, USA. In many instances, these challenges have pushed FEMA into uncharted waters and forced the development of innovative approaches to disaster recovery practices.

Congress recognized these distinct challenges and in 2018, passed the Bipartisan Budget Act (BBA). The BBA allowed for the rebuilding of critical facilities to prevailing industry standards. To date, a total of 92 projects have been requested for replacement through FEMA—46 of which have been approved to include 17 educational facilities and eight healthcare facilities. Additionally, FEMA has approved the replacement of the wastewater system and potable water systems for the island of St. Croix, paving the way for similar considerations for St. Thomas and St. John.

The benefits of the BBA cannot be underscored enough. It has created the genesis for the transformation of a resilient Virgin Islands. Although the BBA provided tremendous opportunities for the Territory, unfortunately, it took FEMA almost a year to release the associated policy guidance to enable the implementation of the laws as Congress intended. These provisions created a complete metamorphosis of how FEMA administers its Public Assistance Program. In its initial stages, the Territory had concerns that the FEMA policies were not aligned with Congress' intent. It was not until the October 2021 FEMA/USVI BBA Summit, held with Governor Albert Bryan Jr., Delegate to Congress Stacey Plaskett, staff of the Appropriations Committee and FEMA leadership, that key policy decisions were made to align more with the intent of Congress. This discussion yielded the obligation of funding for the reconstruction of the first school and addressed questions that impacted funding for healthcare facilities.

It is highly encouraged that timelines are mandated for federal agencies to issue guidelines for any programmatic authorities granted through congressional legislation. The time that it takes to deliver these policies negatively affects the impact of the intended legislation on jurisdictions.

We are, however, still experiencing challenges with agreement on fixed cost offers. The Territory has requested a second summit to address lingering issues related to cost development to ensure that we are maximizing assistance and proper applica-

tion of BBA provisions as well as gaining clarification on the appeal process for BBA decisions.

As you may be aware, the Territory is not in a position to provide upfront funding for projects. Therefore, it is critical that obligations are in-line with actual costs. Many of these projects will be in construction over the next 5–7 years. With the cost of inflation and supply chain issues that are currently being experienced, the Territory is at great risk for cost overruns for 428-fixed cost projects.

This risk is further heightened by the lack of workforce to support the rebuilding efforts. According to the findings in the RAND Report commissioned in 2019 by FEMA, if every able body in the Territory were working, an additional 5,000 employees would still be required (Culbertson et al., 2020). The Territory has engaged in a number of workforce training initiatives and recruitment fairs but undoubtedly, the workforce demand will heighten as early as 2023.

This phenomenon also impacts the limited pool of contractors that are able to access required bonding for large projects. The Territory has already begun to see the manifestation of this challenge as solicitations for projects are being issued multiple times due to a lack of interest by contractors. It will be necessary to attract off-island contractors to support the volume of projects that is anticipated for the next 3–5 years. However, off-island contractors who are not familiar with the federal requirements and burdensome administrative processes often grow impatient with the time it takes to process payments.

The Territory has found it necessary to leverage multiple federal resources for a project to be feasible. The layering of federal funding is very challenging as agencies become territorial with governing regulations. This inevitably results in contractors including the cost of time and money in bids and has the unintended consequence of driving the cost of the recovery up. The Territory continues to advocate for a waiver of the local match requirement. Under the current situation, the USVI is dedicating \$500M of its HUD CDBG–DR funds to cover the non-federal share of the FEMA Public Assistance projects. This, however, requires the laborious task of having each project reviewed by another federal agency, again delaying payment to contractors. If the 10% cost share is waived, the USVI can instead redirect these funds to help rebuild homes damaged by the hurricanes and address other critical needs.

The request to waive the match is well in line with the Insular Areas Act. However, multiple requests have been denied by FEMA, as recently as June 2022. The Territory does not have resources to cover local match requirements and even with the allocation of the CDBG–DR funds, additional funds may still be necessary.

Despite the many challenges of the recovery, the Territory is still focused on ensuring that vendors and contractors are paid in a timely manner. This is evidenced by the 2019 petition made to FEMA to allow the Territory to pay on invoice, thereby negating the need to provide proof of payment before drawing reimbursement funds. This eliminated the Territory from seeking loans, lines of credit and other financing mechanisms to commence projects.

Disaster recovery is never fast enough. However, the bureaucratic processes that govern the spending of funds frustrate as opposed to facilitate recovery efforts. To address these concerns, Congress may consider action that identifies one federal agency to review recovery projects for compliance with shared regulations and prioritize the rules and requirements of the primary federal funding source.

It is clear that new flexibilities afforded to programs but executed through the old FEMA model do not meet the level of intended success. The timelines associated with the obligation and expenditure of federal funds are frustrating at best and we should collectively develop an approach to revamp how recoveries are funded. We need to explore closing the gap between FEMA and HUD funding becoming available to disaster-stricken areas this allows for comprehensive recovery planning and execution. In addition, novel solutions for acquiring skilled workers to support recovery efforts from the continental U.S. and other regions of the Caribbean is crucial. Legislation that allows workforce from neighboring Caribbean islands to come to the Territory to accelerate rebuilding efforts is warranted.

Lastly, capacity issues are not only limited to the Territory. Federal agencies are also experiencing the impact of the lack of experienced personnel to assist with the reviewing of recovery projects. Timelines associated with reviewing projects tend to span months before responses are received. As disasters become more prevalent, it is prudent that we remove the complexities so we can get the resources to the people who need them the most.

The Territory is continuing to lead efforts to rebuild a resilient public infrastructure and positively transform our Territory for generations to come. Moving through the complexity of federal requirements across multiple funding sources and ensuring that projects are funded, monitored, and compliant is an arduous task, but it can be done with our combined support. I would like to thank Delegate to Congress

Stacey Plaskett, the Department of Interior, FEMA, HUD and all of our local and federal partners for their continued support. On behalf of Governor Albert Bryan Jr. and the people of the Virgin Islands, I would like to once again thank the members of this body for your support and commitment to the U.S. Virgin Island's Recovery and its quest to "Build a Legacy of Resilience." I remain available to answer any questions you may have.

Ms. TITUS. Thank you.

Now, Mr. Laboy.

Mr. LABOY. Thank you, Chairwoman Titus, Ranking Member Webster, for the chance to be here today to talk about the status of Puerto Rico's recovery 5 years after Hurricanes Irma and Maria. My name is Manuel Laboy, and I serve as the Governor's authorized representative and as the director of the Central Office for Recovery, Reconstruction, and Resiliency for Puerto Rico, also known as COR3.

My remarks today will first describe the dire circumstances under which Puerto Rico was devastated by back-to-back hurricanes and our efforts in the early years to get our heads above water. Then, I will discuss the last couple of years when Puerto Rico's recovery began to take off and make real progress.

When Hurricanes Irma and Maria hit Puerto Rico in September 2017, we were already in crisis. Puerto Rico had just entered bankruptcy. It was illiquid and had no access to capital markets. Much of Puerto Rico's infrastructure was beyond its useful life and in a state of deterioration.

From 2017 until 2020, our recovery was devoted to emergency work and temporary measures. During this phase, FEMA programs and processes went through several major shifts during this time, including institution of a new delivery model, an amendment to the disaster declaration that requires the use of fixed-cost estimates for large projects and implementation of the FEMA Accelerated Awards Strategy, known as FAAS, designed to expedite the obligation of funding for the energy, water and sewer, and public schools infrastructure. During this period, Puerto Rico also suffered two additional major disasters. First, the earthquakes, and then COVID-19.

By the end of 2020, \$4 billion for emergency work had been disbursed and \$13.5 billion for permanent work obligated to repair, restore, and replace damaged facilities by Hurricane Maria. The last 2 years have seen great collaboration with our Federal partners, primarily FEMA. We have moved the recovery forward into the permanent work phase, which requires the development of scopes of work, the design and engineering projects, procurement of construction contracts and, ultimately, construction, while FEMA continues to obligate permanent work funding reaching a total of \$21.4 billion of Federal share to date.

To accelerate the reconstruction, we requested FEMA to take certain actions to remove obstacles, and FEMA has worked with us to do so, including lifting a 2019 agreement that imposed conditions on the island before request for reimbursements could be granted and the provision of Working Capital Advances, which have been immensely helpful in allowing us to increase permanent work disbursements and advance the execution of large projects led by the

municipalities, the Puerto Rico Electric Power Authority, and the Puerto Rico Aqueduct and Sewer Authority.

In the last 2 years, FEMA and Puerto Rico have achieved so much. Over 5,600 projects are under execution, including 1,700 in the design, engineering, and permitting step and about 2,200 projects in the construction phase. Projects include roads and bridges, schools and hospitals, water and sewer, ports, recreation and sports facilities, and power generation and electrical grid. The latter is fundamental for the integration of renewable energy technology.

From 370 permanent work projects completed by the end of 2021, today that number is over 1,100. Equally critical, Puerto Rico has submitted all closeout packages for the Hurricane Irma disaster and over 600 packages for Hurricane Maria, and has continued to undergo FEMA's Validate as You Go process, passing with flying colors.

Since 2021, the amount of permanent work disbursed has increased by \$543 million compared to \$153 million disbursed between 2017 and 2020.

In terms of the Hazard Mitigation Grants Program, COR3 has successfully submitted over \$4 billion in application packages to FEMA, including renewable energy and climate adaptation related projects.

Just 2 weeks ago, FEMA Administrator Deanne Criswell came to visit Puerto Rico and expressed how pleased she was with the collaboration taking place and the work getting done on the island. It has been a difficult journey, and even though we are tackling recent challenges, such as cost increases and availability of skilled labor, Puerto Rico is on the road to recovery and resiliency.

Since 2017, COR3 has provided critical technical assistance to all of our subrecipients to obtain funding and to execute work in compliance with Federal and State requirements. We deeply appreciate FEMA's full support and recent efforts to simplify its recovery processes and look forward to additional steps it may take to continue increasing administrative efficiencies. We are confident that the momentum gained for advancing the reconstruction will not diminish; on the contrary, will accelerate in 2023 and beyond.

Again, we thank you for the opportunity to be here to share this with you today.

[Mr. Laboy's prepared statement follows:]

Prepared Statement of Hon. Manuel Laboy, Executive Director, Central Office for Recovery, Reconstruction, and Resiliency, Puerto Rico

Chairman DeFazio, Ranking Member Graves, and Members of the Committee:

Thank you for the opportunity to appear before you today on behalf of the American Citizens of Puerto Rico to discuss our recovery from Hurricanes Irma and María. In the five years following the devastation of these two hurricanes, we have made significant progress towards building back our Island. This progress is, in part, the result of the tremendous and often bipartisan support we have received from this Committee and Congress more broadly.

PUERTO RICO'S CHALLENGES PRIOR TO HURRICANES IRMA AND MARÍA

As has been well documented, before Hurricanes Irma and María made landfall on the Island, Puerto Rico was already in the middle of a financial crisis. In the

decade prior, the Government of Puerto Rico had amassed unsustainable levels of debt, to a point where credit rating agencies implemented a series of downgrades for Puerto Rico-Related Bonds at various points between 2012 and 2014, with most of those bonds reaching “junk” status between February and June of 2014. This caused the Government of Puerto Rico and its entities to lose access to capital markets which strained Puerto Rico’s liquidity capabilities.

On June 30, 2016, President Barack Obama signed into law the Puerto Rico Oversight, Management, and Economic Stability Act (“PROMESA”), which established a process for restructuring debt and expedited procedures for approving critical infrastructure projects in order to combat the debt crisis. Through PROMESA, the U.S. Congress also established the Financial Oversight and Management Board of Puerto Rico (“FOMB”) to help Puerto Rico achieve fiscal responsibility with pro-growth fiscal reforms and renew access to capital markets. Essentially, FOMB represented the Puerto Rico Government entities having debt in the debt restructuring process, but also presented an additional bureaucratic layer for execution of the Government’s responsibilities.

In addition to the financial crisis, Puerto Rico was suffering from an infrastructure crisis, which made the Island vulnerable to natural hazards. Puerto Rico’s energy grid, roads, bridges, dams, ports, hospitals, water treatment plants, and more had been decaying for years mainly due to deferred maintenance. Moreover, the Puerto Rico Electric Power Authority (“PREPA”) relied too heavily on expensive oil and was plagued by aging infrastructure dating back to the 1960s. Additionally, buildings and infrastructure, including residential septic tanks, were commonly constructed without permits and thus were not in compliance with building codes. Construction was allowed to occur in areas that are known to be hazardous, such as areas prone to flooding and landslides. Similarly, unmetered water connections and inconsistent electricity metering were common, and laws and regulations governing these activities were not rigorously enforced.

In the middle of this financial crisis, Puerto Rico also desperately needed to transform its energy grid; modernize the telecommunications system; rebuild its water system; and strengthen maritime, surface, and air transportations; as well as repair and rebuild residential housing, without any financial means to achieve any of these critical tasks.

IMPACT OF HURRICANES IRMA AND MARÍA 2017–2020

Hurricanes Irma and María dealt a devastating blow to Puerto Rico, resulting in the largest and most complex disaster response and recovery effort in U.S. history. Hurricane Irma skirted the northern coast of the Island from September 6–7, 2017 as a Category 5 storm, causing extreme flooding, regional power and water outages, and other significant impacts. Before response operations had even concluded, however, an even more devastating Hurricane María slammed into Puerto Rico on September 20, making a direct strike as a strong Category 4 storm and causing widespread devastation and destruction the likes of which the Island had never seen.

Hurricane María represented a “worst case scenario” for Puerto Rico, tracking east-to-west across the Island and leaving no one and no thing untouched. Within a matter of hours, 100% of Puerto Rico’s population, economy, critical infrastructure, social service network, healthcare system, and even the government became casualties of the storm. Damage to the electrical grid—including downed power lines, transmission lines, and poles—was catastrophic. All power was lost across the Island as a direct result of the near-total failure of PREPA’s transmission and distribution infrastructure. This produced a cascading effect that impacted critical infrastructure and services that relied on power to operate (such as airports, seaports, hospitals, water systems, communications networks, hotels, traffic and streetlights, etc.). With Puerto Rico’s power grid offline, wastewater treatment plants were out of service. Some sewage plants were upstream from the drinking water supply, so their failure could have increased the risk of contamination of drinking water. Water damaged structures were exposed to other potential environmental hazards, such as mold, an increase in rodents and pests, and chemicals and waste. This obviously caused a devastating blow to Puerto Rico’s already fragile economy.

The powerful winds, storm surge, and localized flooding from Hurricane María caused significant damage or complete destruction of over 472,000 housing units across Puerto Rico. This forced hundreds of thousands of Island residents to seek shelter in hotels, with friends and family, or in congregate shelters. The magnitude of housing losses produced a housing emergency throughout the Island due to the insufficient remaining housing stock to shelter all of those who had lost or had been forced out of their homes. This reality, added to the power and water outages, forced tens of thousands of Puerto Rico residents to flee to the continental United States,

further impacting the Island's ability to recovery and rebuild its communities and economy.

EMERGENCY RESPONSE, STABILIZATION, AND TRANSITION TO DISASTER RECOVERY

Under the National Response Framework, the Department of Homeland Security ("DHS") is the federal department with primary responsibility for coordinating disaster response, and within DHS, the Federal Emergency Management Agency ("FEMA") has lead responsibility. The Administrator of FEMA serves as the principal adviser to the President and the Secretary of Homeland Security regarding emergency management. Due to Hurricane Irma's damages, on September 10, 2017, President Donald Trump issued a major disaster declaration for Puerto Rico (DR-4336) and FEMA designated nine of Puerto Rico's 78 municipalities as eligible for FEMA's Individual Assistance, which provides relief for immediate needs and housing restoration. Later, after Hurricane Maria left island-wide devastation, a second major disaster declaration was issued on September 20, 2017 (DR-4339), and FEMA extended eligibility for both Public Assistance and Individual Assistance to all 78 of Puerto Rico's municipalities. The major disaster declarations triggered a variety of federal response and recovery programs for Puerto Rico government and non-governmental entities, households, and individuals.

On November 5, 2017, FEMA published Amendment No. 5 to the initial declaration notice for Hurricane Maria. Amendment 5 expanded FEMA's funding authority, including the confirmation of availability of funding for hazard mitigation measures under Section 404 of the Stafford Act, but conditioned this funding on three things, including the establishment of a "grant oversight authority, supported by third-party experts, to perform as the grant recipient for Public Assistance and Hazard Mitigation funding to ensure sound project management and enhanced, centralized control and oversight over the distribution of FEMA grant funds." In order to establish a centralized entity to lead the coordination of the long-term recovery, reconstruction planning, and administration of the federal programs for the Government of Puerto Rico, the Governor of Puerto Rico, Hon. Ricardo Rosselló, issued Executive Order 2017-65 (as amended by Executive Order 2017-69). These Executive Orders created the Central Recovery & Reconstruction Office ("COR3"), to act as the lead agency within the Government of Puerto Rico in the coordination, development, and execution of long-term recovery and reconstruction efforts.

As mentioned, Puerto Rico was already going through its share of challenges before the storms and the unprecedented devastation presented a new set of challenges that would muddle an already complicated process under the Public Assistance program. Federal grant award regulations allow FEMA to impose additional specific grant award conditions under certain circumstances, such as to mitigate risk and ensure fiscal accountability of the recipient or subrecipient. In normal circumstances under the Public Assistance program, once FEMA obligates funds, the recipient can disburse funds according to its own management processes, as long as doing so is compliant with federal requirements. However, in November 2017, FEMA instituted a manual reimbursement process for subrecipients in Puerto Rico for federal funds, including Public Assistance funds, to mitigate fiduciary risk and decrease the risk of misuse of funds, commonly known as the "270 Process." This added a significant administrative step to the process and required Puerto Rico to submit funding drawdown requests on behalf of municipalities and state agencies to FEMA for approval. Additionally, the drawdown requests had to include supporting documentation to certify the amount being requested for drawdown was eligible, allowable, reasonable, and in compliance with federal procurement regulations. In 2019, the 270 Process ended, transferring the disbursement responsibility to COR3 via a FEMA-State Agreement, but imposing additional restrictions, terms and conditions related to the disbursements process to be managed by COR3.

In addition, the Public Assistance program is generally a reimbursement program which requires the recipient and subrecipients to have enough liquidity to expend funds first, i.e. the ability to procure and pay for contractors and then submit proof of the incurred expenses for reimbursement, something Puerto Rico completely lacked. In past large recovery efforts, including those managed by recipients in the States of Louisiana, Mississippi, Texas, and Florida following major hurricanes in 2004, 2005, and 2008, there was greater flexibility with respect to recipients' authority to provide advance funding to subrecipients. During these older events, the applicable financial management regulations contained in 44 C.F.R. Part 13 allowed "advances to Subrecipients in the amount of 50 percent of the funds obligated by FEMA under Public Assistance subgrants."

However, 2 C.F.R. Part 200 superseded 44 C.F.R. Part 13 and applies to disasters declared after December 26, 2014, so including Puerto Rico's recovery from Hurri-

canes Irma and María. The newly issued regulations made it more difficult to provide the fiscal support that subrecipients in Puerto Rico needed in order to begin the substantial recovery effort. Specifically, 2 C.F.R. 200.305(b)(1) provides that, “Advance payments to a non-Federal entity must be limited to the minimum amounts needed and be timed to be in accordance with the actual, immediate cash requirements of the non-Federal entity in carrying out the purpose of the approved program or project.” The Cash Management Improvement Act of 1990, 31 U.S.C. §§ 6501–6508, and its implementing regulations at 31 C.F.R. Part 205 also alludes to a minimum amount to meet immediate cash needs.

To make matters worse, Puerto Rico insurance companies received \$8.5 billion in insurance claims. On average, customers received about 60 percent of the amounts they submitted on their claims. Nearly 18 months after the hurricane, there were still about 11,000 unpaid claims. As part of its Public Assistance program, FEMA must ensure that the assistance provided does not duplicate assistance from another source, including insurance. This uncertainty as to whether benefits would be duplicated exacerbated Puerto Rico’s ability to quicken its recovery efforts. Further, FEMA requires that subrecipients pursue all available resources, which put subrecipients in Puerto Rico in a position to make difficult decisions regarding whether to accept insurance settlement offers to cover necessary critical expenses, or continue fighting with insurance companies who had far greater resources at their disposal and none of the time constraints.

Moreover, in 2019 FEMA introduced a new Public Assistance delivery model (the “National Delivery Model”). While, in the broadest sense, Puerto Rico supported the implementation of the National Delivery Model, there were concerns that the model had never before been used on a disaster where Section 428 alternative procedures¹ governed nearly all of the disaster grant funding. Additionally, because it was different from the delivery model Puerto Rico had been using since September 2017, it was yet another change in procedures, which raised concerns over impacts to the already glacial pace of recovery on the Island. However, we adapted and continued the recovery as directed.

In mid-2019, in an effort to expedite the permanent work funding obligation process, FEMA implemented its FEMA Accelerated Award Strategy (“FAASt”), a novel approach never applied in any prior disaster recovery managed by FEMA, under which it uses a Statistical Sampling Methodology to arrive at fixed cost estimates for groups of critical infrastructure projects (energy, sewer and aqueduct, and public schools), rather than requiring inspections and cost estimating for each individual project. While this allowed FEMA to expedite obligation and amounted to a master recovery budget for each FAASt subrecipient, it did not authorize any related construction, and required that all projects needed to be formulated through FEMA’s National Delivery Model by submitting detailed scopes of work for environmental and historic preservation compliance, and to request additional funding on a project-base for hazard mitigation measures.

Compounding Puerto Rico’s challenges, the Island suffered two additional major disasters while in the throws of recovery from Hurricanes Irma and María—major earthquakes that shocked the Island beginning in late 2019 and lasting over six months and the COVID–19 Pandemic.

Despite these challenges, with the help of the Federal Government, Puerto Rico worked diligently to pull itself out of the literal and figurative darkness that the 2017 Hurricanes had cast over the Island. By the end of 2020, 1,416 emergency work projects (Categories A & B) had been obligated for \$4.95 billion, of which \$3.9 billion had been disbursed. During this time, permanent work projects (FEMA Categories C through G) were slow to develop. Through 2020, 4,649 projects were obligated, the majority of which over 80% were small projects, and only \$153.3 million had been disbursed (See Figure 1 in Appendix). The Puerto Rico Energy Power Authority (“PREPA”) and the Puerto Rico Department of Education (“PRDE”) funds under FAASt were obligated in September 2020 (followed by the Puerto Rico Aqueduct and Sewer Authority (“PRASA”) in January 2021). But, 2020 would be a turning point, as the Island moved out of response and into recovery.

COR3’S STRATEGIC PLAN FOR RECOVERY 2021–2022

With the majority of emergency work complete, Puerto Rico’s disaster response transitioned to disaster recovery, with its primary focus on the formulation and exe-

¹ Under Stafford Act § 428, Public Assistance Alternative Procedures, FEMA may award fixed cost grants for large permanent work projects, rather than on an actual cost basis. See Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work, FEMA–4339–DR–PR (Feb. 10, 2020).

cution of permanent work projects (which are captured under FEMA Categories C through G). By its nature, long-term infrastructure recovery is a slower process, as it requires the development of scopes of work, the design and engineering of projects, procurement of construction contracts, and ultimately construction. All indications, however, show significant momentum since 2021. For example, from 2017 to 2020, COR3 disbursed \$3.9 million in FEMA Public Assistance for emergency work (Categories A & B) and just \$153.3 million in for permanent work (Categories C through G). But, from 2021 through the present, COR3 has disbursed an additional \$386.8 million for emergency work (Categories A & B) and another \$543.4 million for permanent work (Categories C through G). These numbers demonstrate the marked shift from response to recovery. (See Figures 2 and 3 in Appendix).

Our relationship with FEMA and other Federal partners has strengthened tremendously as we have worked together to resolve early obstacles and lift restrictions that previously hindered progress. For example, the Government of Puerto Rico requested, and FEMA agreed, to release a 2019 agreement that imposed significant conditions on the Island before requests for reimbursements could be granted. FEMA also approved the provision of working capital advances, which have been immensely helpful in providing subrecipients the liquidity necessary to begin permanent work projects.

Puerto Rico has now submitted all close out packages for the Hurricane Irma disaster and 638 closeout packages for Hurricane Maria, including three for permanent work. Puerto Rico continues to undergo FEMA's Validate-as-You-Go ("VAYGo") process and is passing with flying colors. Just two weeks ago, FEMA Administrator Deanne Criswell came to visit Puerto Rico and expressed how pleased she was with the collaboration taking place and the work getting done on the Island, noting:

Puerto Rico has a unique opportunity to not only rebuild, but to build back better. The historic assistance provided by FEMA presents Puerto Ricans with the opportunity to meet their goal of a strong infrastructure prepared to mitigate future damage. As an agency, we remain committed to advancing equity and combating climate change, while increasing preparedness and resilience in the face of future natural and man-made disasters.²

SUMMARY OF RECENT PROGRESS AND UPDATES TO ADMINISTRATION OF PROGRAMS

As of June 2022, 1,700 permanent work projects (damaged elements) related to Hurricane Maria were in the engineering/design and permitting stage (\$2 billion), and 2,144 were in full construction mode across the island (\$1.3 billion), including the reconstruction of the power grid and generation plants, water and aqueduct installations, roads and bridges, schools and hospitals, and recreational and sport facilities, adding resilience to hundreds of communities. Additionally, 1,176 projects have been completed at a cost of \$200,563,062 compared to 370 in 2021 and very few in 2020. (See Figure 5). We still have much to do, the estimate of repairs needed is over \$30 billion to support the execution of over 8,000 Project Worksheets (PW's) and 14,000 damaged elements for Hurricane Maria alone for permanent work, but as noted above, funding disbursed in 2022 doubled amounts disbursed in 2021—Puerto Rico is on the right track. Additionally, COR3 has disbursed approximately \$326 million in funding for the earthquake disaster and approximately \$117 million for emergency measures to combat the COVID-19 pandemic.

In addition, under FAASt, FEMA has obligated a federal share of \$9.5 billion for PREPA, \$3.7 billion for PRASA, and \$2.1 billion for the Department of Education. These subrecipients have collectively submitted 90 scopes of work for validation by FEMA and \$222.8 million has been disbursed. Notably, the projects that will be executed under FAASt by PREPA will be critical for renewable energy integration to ensure sustainability and resiliency in future disasters. (See Figure 4 in Appendix).

COR3 has also worked to educate and support our subrecipients, to build capacity through training events over the last year, and will continue these efforts. The training provided is based on a customized approach focused on project execution, grants management, procurement, maximization of eligible scope of work, project management, and compliance from project formulation to closeout.

²FEMA Release NR-544, "FEMA Administrator Reaffirms Collaboration with Local Government in Reconstruction Efforts," (Aug. 31, 2022), available as of Sept. 12, 2022 at <https://www.fema.gov/press-release/20220831/fema-administrator-reaffirms-collaboration-local-government-reconstruction>

EFFORTS TO INCREASE SUPPORT OF RECOVERY BY PROVIDING ACCESS TO NECESSARY CAPITAL

As discussed earlier, a major obstacle to recovery in Puerto Rico is access to working capital, especially for large infrastructure and construction projects. As we transition to the recovery phase where these projects are an even greater focus, a successful plan to address these issues is of the utmost importance. Puerto Rico has therefore developed and is now working to implement several strategies to provide the necessary support for these projects.

To address liquidity constraints, on June 15, 2022, COR3 released a new funding support program available to its subrecipients, implemented specifically to provide a mechanism to advance the federal share of funds for approved permanent work projects under FEMA's Public Assistance related to Hurricane Maria and the earthquake disaster. The program was introduced officially through revision to COR3's guidance document, the Disaster Recovery Federal Funds Management Guide ("DRFFMG"), in the form of a new Chapter 7, Payment and Cash Management Policy. This new and improved advance program is officially known as the Working Capital Advance ("WCA") Program and is already demonstrating significant support for the recovery effort.

The WCA Program is available for all Puerto Rico municipalities, PRASA, and PREPA for large permanent work projects. Subrecipients who request a WCA in compliance with the policy requirements are eligible to receive a one-time payment equal to 25% of the obligated federal share of the associated project. To date, COR3 has approved WCAs for 238 total projects which includes support for projects being administered by 38 different municipalities, PREPA, and PRASA. The WCAs account for \$325 million in advanced funding that will be critical in these subrecipients' ability to move forward with the projects. COR3 is in the process of expanding the WCA Program to PRDE and to the Puerto Rico Public Housing Administration, as well as to the Hazard Mitigation Grants Program ("HMGP").

GREATER FLEXIBILITIES FOR CASH MANAGEMENT AND REIMBURSEMENT PROCESSES

COR3 is also encouraged by the continuing close collaboration with FEMA regarding COR3's administration of the Public Assistance program and implementation of payment processes for subrecipients. When the manual drawdown process was lifted for Puerto Rico in 2019, FEMA imposed multiple new conditions and requirements on Puerto Rico's recovery efforts and specifically regarding the payment process implemented by COR3 (the "2019 Agreement"). In April 2021, Puerto Rico sought termination of the 2019 Agreement, as COR3 had successfully met all the federal terms and conditions for two years. Puerto Rico believed it was time to end these special restrictions and allow Puerto Rico to receive equal treatment to the other jurisdictions serving as recipients across the CONUS. Puerto Rico's request was approved on September 22, 2021. The elimination of these additional restrictions allowed Puerto Rico the necessary flexibility to expedite the processing of reimbursement requests and the disbursements of federal funds to subrecipients.

The elimination of the 2019 Agreement has also created flexibilities that have been incorporated into the COR3 Cash Management Policies, transforming the processes around reimbursements and advances. Under the new reimbursement policy, disbursements for reconstruction projects under development by municipalities, government agencies, and non-profit organizations are being expedited, significantly reducing the average number of days from 240 to 60 days. Similarly, new processes around requests for advances for immediate expenses are currently being processed in an average of 21 days rather than 150 days, as was before. These changes, coupled with the WCA Program, enable much greater support of permanent work projects and help provide the resources necessary for all projects to progress more efficiently.

Another positive step in our recovery is the significant progress toward usage of Community Development Block Grant-Disaster Recovery ("CDBG-DR") grant funds for the non-federal cost share on approved FEMA projects. On January 3, 2020, a Memorandum of Understanding ("MOU") was signed by FEMA and HUD to work together to facilitate Puerto Rico's recovery and mitigation activities. This collaboration includes joint-guidance on the flexible application of CDBG-DR grants as resources for the cost share for FEMA-funded projects. Since then, the Puerto Rico Department of Housing ("PRDOH"), the administrators of CDBG-DR funds allocated to Puerto Rico, and COR3 have continued to coordinate on the design, development, and implementation of the FEMA PA Flexible Match Methodology Guidelines ("Guidelines") as published on October 14, 2020.

COR3 and PRDOH have also submitted a joint petition to FEMA discussing the implementation procedure of the Disaster Flexible Match ("DFM") approach. The

DFM proposes a funding strategy for the FEMA Public Assistance program that eliminates the need for eligible applicants to comply with CDBG-DR requirements under each individual project to receive its non-federal share, but rather applying for match payments based on the total cost share corresponding to selected FEMA projects for a specific disaster, thereby reducing additional administrative burdens to the recipient and the participating subrecipients/applicants. Leveraged together, COR3's FEMA Public Assistance and PRDOH's CDBG-DR programs ensure that subrecipients receive the greatest, and most efficient benefit from federal recovery funding while rebuilding in smarter, more resilient ways.

SIGNIFICANT PROGRESS AND STATUS OF CLOSEOUT OF DISASTERS

Puerto Rico's commitment to effective and efficient recovery efforts is demonstrated by the rate at which it has been able to reconcile and close FEMA Public Assistance projects prepared for Hurricane Irma. Beginning in 2021, COR3 made a commitment to prioritize closeout of projects. In 2022, COR3 achieved the submission of all closeout packages for all Hurricane Irma projects. Puerto Rico is very proud of this achievement. Although many project closeouts remain for other disasters, more progress has been made during the past 12 months than in the previous four years combined, another testament to the administrative efficiency achieved using the greater flexibilities and control that FEMA is now allowing for COR3.

Regarding Hurricane María, FEMA has approved a time extension to submit all closeout packages related to Emergency Work Categories (A & B) project worksheets to December 31, 2022. As of September 9, 2022, COR3 has submitted to FEMA 184 large projects, and 454 small projects for closeout, representing a project funding amount of \$360.7 million. COR3 is working diligently to submit the remaining Category A & B projects by the approved deadline.

COR3 established a work plan to close all permanent work projects that have been completed. We have submitted to FEMA the first three projects and have currently assigned an additional 31 projects for a total amount of \$24.7 million. We will keep submitting these projects to FEMA in the coming months.

HAZARD MITIGATION GRANTS PROGRAM ("HMGP")

One of COR3's priorities since 2021 has been to maximize mitigation efforts, for which FEMA made available \$3.999 billion to Puerto Rico under HMGP, which includes \$999 million for the non-federal share portion, implemented under the Global Match Strategy with Community Development Block Grant Mitigation ("CDBG-MIT") funds. The program's primary purpose is to ensure that critical mitigation measures are adapted to reduce the risk of loss of life and property from future disasters are taken during the reconstruction process following a disaster. To ensure this, Puerto Rico's main focus under this program is to promote resilience and climate change adaptation via projects such as localized flood control, coastal erosion, soil stabilization, coral reef protection, ocean energy and structural/wind retrofits.

Furthermore, since 2021 COR3 has made substantial internal investments including staffing up significantly from a staff of 5 to 30, as well as engaged the services of two experienced contracting firms, following a competitive procurement, to support in the process of reviewing and formulating HMGP proposals.

Currently, COR3 has made huge strides in the project formulation phase, as it has 74 projects approved for a total investment of \$2.3 billion. Among these projects that provide resiliency measures are the Department of Health's CDT Generators, to ensure critical health facilities' services remain uninterrupted in the case of a power outage. Another project, the Planning Board's Code Enforcement Project (\$144 million, approved project, 80% completed), is creating stricter and more uniform enforcement of code construction compliance, which will result in a more resilient construction industry that in turn allows for quicker disaster reconstruction activities. (See excel table for additional details.) COR3 has also submitted an additional 225 projects under evaluation by FEMA, which will have a total cost of \$1.7 billion, such as such as the Ocean Thermal Energy Conversion Facility, which will provide the Southeast of Puerto Rico a source of renewable energy that is generated 24/7 by converting ocean water into energy, as well as combat climate change.

In addition, COR3 will soon launch its Road to Resilience dashboard in its Transparency Portal mapping all HMGP projects and continue its full transparency campaign. (See Appendix.)

The Government of Puerto Rico would like to appreciate FEMA's collaboration with COR3 in approving an extension for the 2021 deadline to October 2022.

LESSONS LEARNED AND OPPORTUNITIES TO SUPPORT RECOVERY

It has been a difficult journey, but Puerto Rico is on the road to recovery and resilience. As we reflect on the last five years, there have been many lessons learned. We know that complicated bureaucratic processes and repeated rule changes slow the process, and that sometimes new ideas intended to move things forward cannot realize those goals when they are required to be implemented under existing rules. We appreciate FEMA's recent efforts to simplify its Public Assistance process and look forward to additional steps it may take to reduce the burden on applicants going forward. Although 2022 appears to be a major milestone in Puerto Rico's recovery, there is much ground to be made up after years of delays. Even so, we remain exceptionally hopeful for the future and we look forward to continuing to build and nurture the collaborative relationship that we now have with our federal partners.

ADDITIONAL SUPPORT OF, AND FLEXIBILITIES FOR, CAPPED GRANTS

One of the lessons learned is that attempts to expedite funding and simplify processes are only as effective as the framework in which they are implemented. Two examples of this are FEMA's Public Assistance Alternative Procedures ("PAAP") Program under Stafford Act § 428 and FAASt.

The DHS-Office of Inspector General ("OIG") released a Report in July 2022 outlining its assessment of FEMA's PAAP.³ In comparing obligation times for over fifteen thousand large projects, the OIG determined that FEMA took, on average, more than twice as long to obligate funds for the PAAP projects (845 days) as compared to standard Section 406 projects (411 days). The OIG further found that FEMA's funding obligation times increased significantly for projects in Puerto Rico and the U.S. Virgin Islands, when compared to projects for mainland events.

Similarly, while significant funds have been obligated for Puerto Rico's critical infrastructure under FAASt, this obligation has effectively established master recovery budgets but without expedited project execution. Each project must still work its way through FEMA's lengthy Public Assistance process before obligated funding can be disbursed.

While the PAAP Program and FAASt were well intended, their effectiveness is limited by the complicated framework under which they must be implemented. Moreover, because this was the first time FEMA implemented FAASt, the guidelines to develop individual projects to capture the recovery scopes of work to be implemented has changed multiple times.

LIMITATIONS OF A REIMBURSEMENT PROGRAM

Additionally, although authorization and support for the WCA has been helpful and effective, unfortunately it came late in the process. There is no doubt that Puerto Rico would have been in a much better place if advances for permanent projects and more flexible means of supporting distressed subrecipients were allowed similar to the State of Louisiana's recovery when it experienced two successive extreme events, Hurricanes Rita and Katrina, in 2005. Deficiencies under this disaster affected Puerto Rico as we were denied these benefits which would have accelerated the commencement of reconstruction of bridges, roads, schools, hospitals, electric grid, wastewater treatment plants, among many others.

As has been the case following prior large events that have impacted other locations, when a catastrophic event impacts an already distressed recipient or subrecipient, the solution is to develop proactive and innovative strategies to provide better support, not impose even greater restrictions. *Puerto Rico has proven that it can emerge and thrive even when faced with great adversity, and we hope we can now move forward as a most-trusted partner in recovery.*

SUPPORT FOR ADDITIONAL TIME EXTENSION REQUESTS

Due to the limitations of wide-scale construction on an island, time extensions are required for the remaining permanent recovery work to be completed. Currently, Puerto Rico has 9,186 time extension requests pending with FEMA. Historically, FEMA has set relatively short time extensions that are unrealistic and can lead to heightened frustrations on the part of our subrecipients. Often, by the time a response is received from FEMA, the requested extension date has passed and addi-

³ OIG Audit Report OIG-22-51, *Assessment of FEMA's Public Assistance Alternative Procedures Program* (July 13, 2022), available as of Sept. 12, 2022 at <https://www.oig.dhs.gov/sites/default/files/assets/2022-07/OIG-22-51-July22.pdf>

tional extension is often needed; it's a circle of aggravation that is unnecessary at this stage in the recovery effort when so many permanent work projects are facing "extenuating circumstances"⁴ and eligible for additional extension. *We ask that you* support and encourage FEMA to grant these time extensions, recognizing that although the road to recovery has been long, it has been a collaborative process that has moved forward at a remarkable pace despite major unprecedented storms, earthquakes, and a global pandemic.

CLOSE-OUT CONCERNS

Although Puerto Rico has much recovery ahead, successful closeout of projects begins now. While the Hurricane Irma closeout process has been successful, closeout efficiencies could be improved if there were clearer guidance on the documentation required for each category of work. We ask that Congress support this effort by ensuring FEMA has adequate staffing to take on the monumental task of closing this massive project.

INSURANCE CONSIDERATIONS

Looking forward to post-construction, subrecipients in Puerto Rico have struggled through delays caused by implementation of FEMA's post-construction insurance requirements. As a condition of receiving FEMA Public Assistance, applicants must obtain and maintain insurance coverage for the facility receiving Federal assistance for the type of hazard. Coverage must, at a minimum, be equal to eligible project costs. This is often referred to as the "obtain and maintain" or "O&M" requirement. We have requested FEMA not to require O&M for "Canopy-style" structures, since these are roofed but not walled structures and therefore not identified as "buildings." To meet the definition of building, a facility must have two or more outside rigid walls. This simple change in policy implementation would save Puerto Rico millions in unnecessary insurance and prevent unnecessary denials and confusion in a future disaster event.

VAYGo

For purposes of adequately tracking compliance with applicable policies, laws, and regulations, FEMA implemented the Validate As You Go ("VAYGo") pilot program to test Public Assistance and certain other disaster grant expenditures for Hurricanes Harvey, Irma, and Maria in response to appropriations act provisions and Office of Management and Budget guidance that agencies implement additional measures to identify and address improper payments for disaster programs expending more than \$10 million in any one fiscal year. As part of VAYGo, FEMA reviews project documentation for a sample of funds as they are drawn down by recipients and conducts testing to verify whether the project funding was appropriately expended by the subrecipient. One goal of VAYGo is to identify potential problems earlier, allowing FEMA and recipients—including PA recipients—to correct or mitigate issues earlier in the process instead of waiting until grant closeout. According to FEMA, the primary goal of VAYGo is to test for ineligible costs, which can serve as a gateway for the agency to be on notice of issues of fraud, waste, or abuse in the PA program. For FEMA's VAYGo team to successfully report a recipient's expenditure of Federal funding has been proper, all documentation associated with the expended amount must be available for review by the VAYGO team.

In 2019, FEMA implemented the VAYGo program in Puerto Rico. To date, we have participated in three VAYGo reviews for fiscal years 2018, 2019 and 2020 and have taken significant strides with subrecipients to validate most of the sampled disbursements. It should be noted that VAYGo reviews for fiscal year 2019 mostly correspond to disbursements done directly by FEMA (as per the manual drawdown process that was previously discussed), while the entirety of the 2020 VAYGo process took into account that COR3 manages the reimbursement process. FEMA has informed us that VAYGo has been indefinitely suspended, however, its previous "findings" remain unresolved and could possibly present potential for major delay to an otherwise successful financial closeout.

COR3 and FEMA have agreed to go through a remediation phase to resolve the limited questioned costs. However, we were informed by FEMA that it intends on sending a final debt/collection letter to COR3 by the end of September. Upon COR3's

⁴Pursuant to 44 CFR § 206.204, the recipient is authorized to grant initial extension of projects, with additional extension under the authority of the applicable FEMA Regional Administrator and subject to justification including "extenuating circumstances" beyond the control of the subrecipient or recipient.

request, remediation efforts are being coordinated with FEMA, as COR3 finalizes its submission of documents. Notably, the amount owed for Hurricane Irma is \$2 million and corresponds to projects that have been closed by COR3 and some also by FEMA. COR3 believes that a more collaborative process with FEMA will allow the avoidance of re-opening projects for which FEMA has completed closeout. Such a process would certainly defeat the closeout purpose if after closeout Puerto Rico has to perform an additional review due to VAYGo.

EXPEDITING EHP

According to the Public Assistance Program and Policy Guide (PAPPG) (FP 104-009-02), the FEMA must review each Public Assistance project to ensure the work complies with applicable federal Environmental and Historic Preservation (EHP) laws and their implementing regulations, and applicable Executive Orders. At the same time, we should look for ways to expedite review process and obligate as many projects as possible in this fifth anniversary of 4339-DR-PR.

CONCLUSION

Our mission at COR3 as recipient of FEMA Public Assistance and HMGP funds, and our inherent responsibility over compliance and transparency of the federal funds flowing to subrecipients, is to provide all required technical assistance to the subrecipients of Puerto Rico in furtherance of the execution of the approved recovery and reconstruction projects, which will allow for a better, more resilient Puerto Rico. Effective completion of this work will support a much more stable infrastructure system and create better economic opportunities for our citizens, all of which are goals that we are confident are shared by FEMA, this Congress, and the rest of the federal government.

On behalf of the entire COR3 team, we thank Congress and the U.S. Government, especially FEMA Leadership, for its continued support towards a better life for everyone in Puerto Rico. Puerto Rico appreciates the attention and focus Congress is bringing to these important issues, and we look forward to working with Congress to evaluate and address the lessons we have learned, and continue to learn, from these unprecedented events.

Figure 1

Compared to the first 3 years after Hurricanes Irma and Maria, since 2021 Puerto Rico has moved from emergency work projects to permanent work projects.

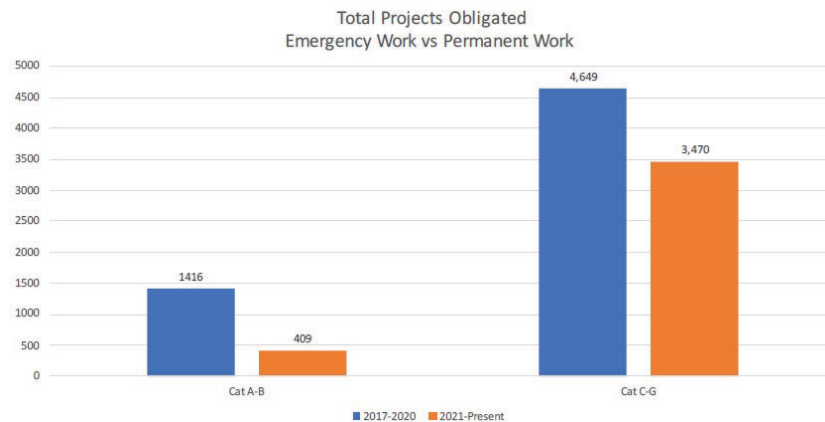
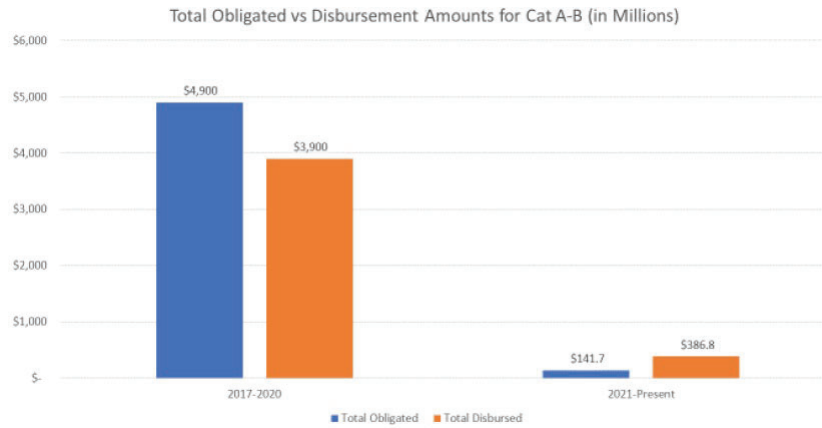
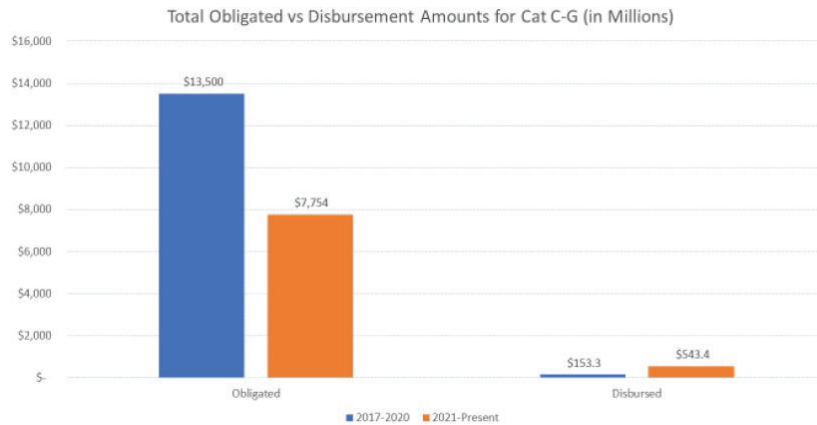


Figure 2

COR3 has worked diligently in increasing the speed of disbursements for emergency work. Since 2021, for the first time since the recovery began, disbursements have outnumbered obligations for Cat A-B projects.

**Figure 3**

As we move toward permanent work projects, we have seen a significant increase in obligated permanent work projects as well as disbursements. Since 2021 disbursements have increased by over 70%.



* In 2020 the FAAsT obligations paved way to \$13,500M in C-G projects. This amount should be considered a construction budget rather than an obligation.

Figure 4

Prior to 2021 Puerto Rico had no permanent work projects underway for PREPA, PRASA and Department of Education, since 2021 and the inception of FAASt, Puerto Rico now has 29 approved permanent projects for PREPA, 9 for PRASA and are awaiting validation from FEMA to commence school repairs. This has been a significant step toward the island's recovery.

FAASt PROJECTS

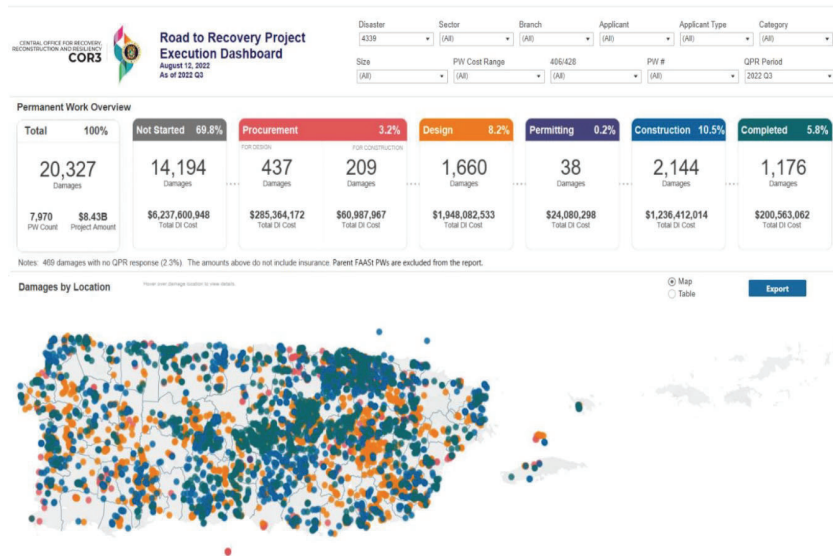
2017-2020 vs 2021-Present

	2017-2020			2021- Present		
	SOW	Approved	Disbursed	SOW	Approved	Disbursed
PREPA (\$9.5B*)	0	0	0	40	29	\$183.0M
PRASA (\$3.7B*)	0	0	0	23	9	\$38.5M
DE (\$2.1B*)	0	0	0	27	0	\$1.3M

* Federal Share Obligated Amount

Figure 5

Road to Recovery



Ms. TITUS. Thank you very much, Mr. Laboy.
And Ms. Bahramirad—will you say it for me?
Ms. BAHRAMIRAD. Good morning. It is Shay Bahramirad.
Ms. TITUS. Well, I was pretty close.

Ms. BAHRAMIRAD. Thank you. Chair Titus and subcommittee Ranking Member Webster, and members of the committee, my name is Dr. Shay Bahramirad, and I am the senior vice president of engineering, asset management, and capital programs with LUMA Energy, and the president-elect of the Institute of Electrical and Electronics Engineers Power and Energy Society. Thank you for the invitation to appear this morning to discuss one of the most important and urgent matters for the people of Puerto Rico: the transformation of Puerto Rico's electric power system.

All of us at LUMA, the over 3,000 men and women who work very hard every day in rain and shine to repair and rebuild the energy system in Puerto Rico, are determined to overcome the profound operational and infrastructure challenges we inherited from the past utility operator. Our goal is clear. We will, over the coming months and years, build a more reliable, more resilient, and cleaner energy future for the 1.5 million customers we are fortunate to serve.

It is important to fully understand the scope of the operational failures that have plagued Puerto Rico and the amazing people who call this beautiful island their home. As we have documented through photographic evidence provided to the committee, the transmission and distribution system LUMA inherited was weakened by years, if not decades, of poor design, little to no maintenance, lack of proper inspection, and other profound failures that continue to impact the overall stability and reliability of the system.

The pictures we provided to you not only highlight the stark reality we have faced, but they help reinforce the importance of the work that our LUMA teams are undertaking every day to repair, rebuild, and restore the electric grid to a modern level.

Since our first day of assuming operation in June of last year, we have implemented an operational approach that is grounded by data, science, and sound engineering, and is aligned with industry standards and best practices.

Guided by this approach, our team has done more to move Puerto Rico's energy transformation forward in 15 months than what was accomplished in the past 10 years, most notably, connecting more than 28,000 customers to solar. That is more solar connection made in a year than was accomplished in the prior decade.

Improving customer service by, as an example, decreasing average call wait time to approximately 3 minutes versus more than 10 minutes under PREPA; improving work safety and training procedures for operations, many of which didn't exist prior to LUMA; replacing over 3,800 failing and broken poles; replacing over 12,000 streetlights; clearing hazardous vegetation from 100 percent of substations; and helping reduce the number of outages that an average customer experienced in a year by 30 percent.

With respect to moving forward FEMA infrastructure projects, we have initiated 225 projects with FEMA, representing more than \$5 billion in federally funded projects. Those include the approval of 29 projects that will address critical infrastructure to reduce outages and increase the reliability and stability of the electric system. We have also started the construction of 14 FEMA projects, including 5 initial streetlight projects with LUMA's \$1 billion Community

Streetlight Initiative. To put these numbers into context, we have moved forward more FEMA projects in 15 months than what was ever done the last 5 years under the prior operator.

Most importantly, it is critical for the committee to hear this: Current and future FEMA projects will be guided by science, data, and engineering. They will be built in a manner that is fiscally sound and with appropriate oversight that serves the interest of Puerto Rican people and all taxpayers.

While we are proud of the progress we have made, there is no doubt that public concerns over operational challenges such as outage duration still exist. We have heard those concerns clearly, and we are determined to act. For example, we recently launched the Outage Reduction and Response Initiative to build the progress we have made, reduce the impact of outage duration, and improve our response time when those outages occur.

Lastly, given the tragic legacy of Hurricane Maria, LUMA has spent the last year preparing and training to respond to such emergencies. We have worked very closely with FEMA and our other partners, and greatly appreciate the support of FEMA and all our agency and Government partners.

In closing, I would like to thank the committee for the opportunity to be here. To be clear, LUMA is absolutely committed to Puerto Rico's energy future, a better energy future that moves Puerto Rico forward, a better energy future that is more reliable and cleaner, a better energy future that serves the daily needs of the people of Puerto Rico. No matter what comes next, all of us at LUMA will not be distracted from this mission. And over the coming months and years, we will build a better energy future that will proudly serve the people of Puerto Rico for generations to come.

Thank you all for your time.

[Ms. Bahramirad's prepared statement follows:]

Prepared Statement of Shay Bahramirad, Ph.D., Senior Vice President of Engineering, Asset Management, and Capital Programs, LUMA Energy

I. INTRODUCTION

Chairman DeFazio, Ranking Member Graves, Subcommittee Chair Titus, and Subcommittee Ranking Member Webster, and members of the Committee:

Thank you for the invitation to appear this morning to discuss one of the most important and urgent matters for the people of Puerto Rico: the transformation of Puerto Rico's electric grid system.

All of us at LUMA, the over 3,000 men and women who work hard every day, are determined to overcome the profound challenges we inherited and build a more reliable, more resilient, and cleaner energy future for the 1.5 million customers we are fortunate to serve.

Throughout this testimony, we will provide the members of this committee with key facts and information regarding the electric grid's condition prior to our commencement of operations on the island; LUMA's commitment to complete repairs in a more detailed and permanent manner; the nature of customer service improvements; as well as our accomplishments in areas where significant challenges still exist.

We will also discuss the status of reconstruction projects that have been submitted to FEMA; hurricane preparedness and emergency response planning; as well as our new Outage Reduction and Response Initiative ("ORRI").

Lastly, all of us at LUMA fully embrace the profound responsibility we have been entrusted with to address and redress the many operational and fiscal failures of the past operator, PREPA, that have so deeply impacted the people of Puerto Rico

since Hurricane Maria and before. With the support of FEMA, the Puerto Rican government, and other partners, we will build an energy future that the people of Puerto Rico deserve and of which they can be proud.

II. HISTORICAL PERSPECTIVE OF PUERTO RICO'S ELECTRIC GRID

To understand the dynamics surrounding our mission to transform Puerto Rico's transmission and distribution system ("T&D") one must first start to analyze the electric grid's condition prior to LUMA beginning operations on the island. As has been documented publicly, Puerto Rico's electrical grid suffered from years and decades of neglect and mismanagement under the past utility operator. These profound operational failures severely impact all areas of the energy system and represent an ongoing challenge that LUMA remains determined to confront and overcome.

With respect to the state of infrastructure that LUMA inherited 15 months ago, the following are just some examples of the conditions that were faced:

- *Poor Substations*: 30% of transmission and distribution substations, key nodes in the electric grid, were estimated to require safety and hazard mitigation to reach remediation.
- *Poor T&D Assets*: An estimated 20% of transmission and distribution line assets, including poles and wires, required safety and hazard mitigation to reach remediation.
- *Public Safety Hazards*: Approximately 50,000 streetlights, more than 10% of all of the streetlights on the island, were estimated to be physical and public safety hazards.
- *Lack of Sound Engineering & Planning*: Processes for engineering functions such as distribution planning, transmission planning, protection and coordination were lacking and not following industry standards. For example, a proper simulation model for the Island's transmission system did not exist to properly design the system.
- *Antiquated EMS*: The Energy Management System (EMS), a primary technology to facilitate the stable grid operations, had been purchased in the mid-1990s, poorly maintained and was no longer supported by the vendor. We found that PREPA had procured spare parts from eBay.
- *Lack of Safety Requirements*: The entire ground and air fleet used for utility operations did not meet U.S. Department of Transportation safety requirements.
- *Lack of Critical Maintenance*: Recommended baseline maintenance of transmission and substation assets were not completed, and manufacturers' guidelines were not followed.
- *Poor Vegetation Management*: Vegetation management was often delayed by PREPA, and vegetation was present and evident when visiting substations.
- *Lasting Impact of Hurricane Maria*: Hurricane Maria accelerated this deterioration and highlighted the flaws in legacy design, operation, and maintenance activities. Some customers didn't have power for more than a year after Hurricane Maria, which is unacceptable.

The above-referenced facts, while significant in scope and impact, do not come close to fully capturing the truly weakened and deteriorated state of the electric grid. As LUMA has documented through photographic evidence that has been provided to the Committee, the T&D system inherited by LUMA was weakened by years, if not decades, of poor design, maintenance, lack of proper inspections, and other profound failures that continue to impact the stability and reliability of the energy system.

As a measure of the fragile and weakened nature of the energy grid, Puerto Rico has experienced a number of large-scale outage events since 2016—five of which preceded a similar large outage event on April 6th of 2022:

- September 21, 2016—Due to fire at Aguirre Power Generating Plant
- April 12, 2018—Due to vegetation
- April 18, 2018—Due to transmission repairs
- January 7, 2020—Due to earthquake on the island
- July 28th, 2020—Due to vegetation / equipment failure

Each of these events noted above affected more than 500,000 customers and restoration efforts lasted for longer than three days. This history of such events underscores how deeply fragile and severely vulnerable Puerto Rico's electric grid and critical infrastructure has been because of the failures of the past operator and reinforces the need for LUMA to remain focused on the fundamental improvements needed to modernize and transform the energy system.

In order to ensure greater transparency and efficiency, the legal framework for the electric sector in Puerto Rico establishes clear roles for different participants in the electric sector. Generators, including PREPA and independent producers, are re-

responsible for operation and maintenance of the power plants, while LUMA is responsible for the operation of the transmission and distribution system as well as overall system coordination, planning and analysis. All of LUMA's customers are critically dependent on the performance of PREPA's power plants that make up over 70% of the generation fleet to meet expected customer demand.

- As a result of PREPA's poor and declining generation plant reliability, the Puerto Rico electrical system had less than the minimum required reserve margin during 33 percent of the time during the past year.
- Though the minimum industry benchmark target standard for planning is that generation should result in load being shed, or customers losing power, 0.1 days per year, a resource adequacy analysis found that in Puerto Rico, the expectation is for it occur over 8.81 days per year, which is 88 times higher than the planning standard for North American utilities.
 - The potential for load shed from lack of generation in California made national news.
 - Meanwhile, generation has caused load shed on 30 separate days since LUMA commenced service.

III. LUMA'S COMMITMENT TO COMPLETE REPAIRS IN A MORE DETAILED AND PERMANENT MANNER

Given the need to address these past infrastructure failures and overall fragility of the energy grid, LUMA takes very seriously the need to improve the reliability and resiliency of Puerto Rico's transmission and distribution system. Accordingly, we have implemented a markedly different approach that is grounded in data, rigorous engineering, sound planning aligned with industry standards, and transparency about the progress being conducted and the challenges that are being faced. Given this approach, and in spite of the challenges we have faced, LUMA has made substantial progress across key areas, including:

- *Improving Reliability (Reducing the Number of Outages Experienced):*
 - The System Average Interruption Frequency Index ("SAIFI"), or the number of outages that an average customer experiences in a year, has been reduced by 30% (improvement from a PREPA baseline of 10.6 to 7.6).
 - What this means is that instead of an average customer experiencing 10.6 outages in a year, they're experiencing 7.6.
 - 15% fewer substation events than in PREPA's last year.
 - Restored and re-energized two transmission lines that were out since Hurricane Maria, and two additional lines that were out since before Hurricane Maria, representing 43 miles of transmission lines.
 - Restored and re-energized 5 substations that had been out since Hurricane Maria.
 - Restored and re-energized 496 pieces of equipment, including in substations and on the transmission and distribution systems.
- *Empowering the Growth of Solar/Clean Energy/Renewables:*
 - Before LUMA began operations, there was a severe backlog of customers applying for inclusion in PREPA's solar net-metering program.
 - We have successfully reduced this backlog and have now integrated more than 28,000 customers to the program, which represents more than double the number of customers than before.
 - In a little over a year, LUMA added more customers to the residential solar program than PREPA ever did over a full decade. Average time for approval of interconnection has dropped to under 30 days and over 70% of customers are interconnected within 30 days.
 - Completed studies to support the interconnection of 844 MW of renewable utility-scale generation and completed solar hosting capacity analyses.
 - Completed cutting-edge optimization analysis to identify locations in the system with zero network upgrade cost for affordable and economical renewable energy integration.
 - We have gone from approximately 450 distributed generation interconnections monthly to approximately 2,100 interconnections.
 - Reenergized transmission line that connected a 27 MW wind farm to the system that was out of service since Hurricane Maria.
- *Improving Customer Service:*
 - 2 million customers have been provided support by LUMA, through 2.5 million calls, 350K+ e-mails, 430K+ DMs on social media.
 - The average wait time of customers on the phone decreased from more than 10 minutes while under PREPA to approximately 3 minutes under LUMA.

- The rate of call abandonment declined from more than 50% with PREPA to 15% under LUMA.
- 560,000+ downloads of MiLUMA application.
- *Improving Workplace Safety & Trainings:*
 - Developed procedures to support the operation of interconnected generation resources, the reliable dispatch of power, black start¹ and restoration, as well as numerous other critical operations. These procedures did not exist prior to our arrival as operator of the T&D system.
 - We have renewed the service fleet with 1,200 new or repaired vehicles, fully compliant with safety and transportation requirements.
 - Graduated the first class of Puerto Rican electric line workers from LUMA Technical College, with subsequent graduating classes during the last year.
 - Total recordable injury rate went from 8.63 under PREPA to 2.88 under LUMA.
 - Injury severity rate declined from 62.9 under PREPA to 11.64 under LUMA.

IV. STATUS OF FEMA FUNDED RECONSTRUCTION PROJECTS

When LUMA assumed operations of Puerto Rico's transmission and distribution system, one of our highest priorities was to work together with FEMA, the Puerto Rico Energy Bureau, the Puerto Rico Public-Private Partnership Authority, the Central Office for Recovery, Reconstruction and Resiliency and PREPA to develop and advance a series of federally funded infrastructure improvement projects to transform and modernize Puerto Rico's energy system.

In 15 months, LUMA has advanced FEMA projects in Puerto Rico at a historic pace—a stark comparison to the previous five years under the prior operator.

A. FEMA Reconstruction Projects

As of September 8, 2022, LUMA has initiated 225 projects with FEMA², representing more than \$5 billion worth of federally funded projects. In contrast, only 35 project submissions had even been made before LUMA assumed operations on June 1, 2021.

- *Obligated FEMA Projects:* LUMA has received, to date, FEMA approval for 29 critical infrastructure projects³ including:
 - *Over 21 distribution projects* that will address critical infrastructure, such as streetlights and pole replacement, targeting the municipalities of San Juan, Arecibo, Mayaguez, Caguas, Bayamon and Carolina to reduce outages and increase the reliability of the electric system.
 - *Three transmission reconstruction projects* targeting Line 2200, Line 13300 and Line 6700 that will help improve the critical energy infrastructure that delivers energy across the island.
 - *Five substation modernization projects* that will address the critical role played by substations in helping deliver energy to communities across Puerto Rico beginning in the municipalities of Cataño, Vieques, Culebra, Manatí and Costa Sur.
- *FEMA Projects Under Construction:* LUMA has started construction on 14 FEMA funded projects across Puerto Rico including:
 - *Five initial streetlight projects* as part of LUMA's \$1 billion Community Streetlight Initiative in the municipalities of Guanica, Lajas, Aguada, Maunabo and Luquillo—in less than three months, LUMA has installed over 12,000 streetlights.
 - *One critical transmission line repair project* to reduce the potential for future outages.
 - *Eight distribution pole replacement projects* to increase the reliability and resiliency of the electric grid.

In addition to the projects initiated, approved, and under construction, LUMA has also taken the following FEMA-related actions:

- LUMA has submitted a critical EMS (emergency management system) project to FEMA for approval, which is the first phase of transforming the system operations control center with state-of-the-art technology and software to modernize the way Puerto Rico's energy grid is monitored and managed.

¹ Black start refers to restarting the grid after an island-wide blackout. The other procedures referenced above are related to managing energy generation to provide reliable power.

² At the time of our latest filing to the Puerto Rico Energy Bureau ("PREB"): the number of initiated projects stood at 206. Of those, 204 projects have a FEMA FAAST number and two were awaiting confirmation.

³ At the time of our latest filing to the PREB: 19 projects had received FEMA approval. This represents \$756.5 million and includes the equipment and materials for projects.

- Received approval for \$656M to procure long-lead material, mainly grid equipment including breakers, transformers, and reclosers.
- Developed four proposals of Hazard Mitigation for non-damaged infrastructure that COR3 is reviewing before submission to FEMA, which would represent \$900 million for deployment of technologies, including an advanced metering infrastructure, an advanced microgrid project, and mobile microgrids to enable renewable energy and make communities resilient.
- Taken in totality, over the coming months and years, FEMA-funded projects that are being directed by LUMA will not only represent the largest capital energy program in Puerto Rico's history, it will represent the largest ever funded by the federal government to repair and rebuild an electric system across any state and/or territory. As a result, LUMA is excited by the significant progress that has been made to date that will, as more FEMA projects begin construction, strengthen and transform the long-term future of Puerto Rico's energy grid.

B. Working Closely with FEMA on Emergency Preparedness

In addition to moving forward critical federally funded infrastructure projects, LUMA continues to prioritize emergency preparedness and taking the necessary steps and actions to be able to respond to hurricanes and other emergencies.

Given the historic impact of Hurricane Maria and the lasting effects it has had on the people of Puerto Rico, LUMA has made preparing for emergency events, like hurricanes, a daily and year-round priority.

As part of our emergency preparedness efforts, we have worked closely with FEMA, PREMB and ESF 12 and other partners to establish and adopt industry emergency preparedness standards. Among the actions we have taken include the following:

- *Establish Emergency Response Plan:* In May, LUMA submitted its 2022 Emergency Response Plan (ERP) to the Puerto Rico Energy Bureau as part of its continuous effort to plan, prepare for and respond to the major emergencies and the 2022 hurricane season.
 - LUMA's 2022 ERP outlines the actions LUMA takes in an emergency event and helps direct the company's response, recovery and restoration efforts.
 - More specifically, the ERP addresses how LUMA responds to any emergency, including hurricanes, earthquakes or any other major event that impacts the electric power system.
- *Adopt Industry Best Practices:* The LUMA ERP follows industry best practices for emergency response and follows the National Incident Management System as established by the Federal Emergency Management Agency (FEMA).
 - The National Incident Management System framework establishes a standardized Incident Command System (ICS) which is used across industries and is the basis for LUMA's ERP.
- *Emergency Preparedness, Training & Readiness:* LUMA has undertaken extensive efforts to improve preparedness, training, and readiness, including:
 - *Emergency Preparedness:*
 - Three emergency preparedness tabletop exercises completed with FEMA and DOE/ESF 12/PREPA/PREMB and other local stakeholders.
 - Procuring and maintaining a fleet of 1,800 vehicles available to support emergency response efforts.
 - Installing equipment in the LUMA Emergency Operations Center and purchasing supplies for emergency operations.
 - *Emergency Training:*
 - Completing more than 8,000 hours of ICS training.
 - Completing an Emergency Operations Center mock drill based on Category 4 Hurricane making landfall on May 12, 2022, with 75 attendees.
 - *Emergency Readiness:*
 - To date, LUMA maintains a total on-hand inventory of T&D equipment and materials available for daily operations and emergencies amounting to \$130 million including:
 - 21,000 poles
 - 17 million feet of cables
 - 3,200 transformers
 - 58,000 LED luminaries
 - 154,000 insulators
 - 1,800 switches/breakers
 - 29,000 crossarms
- As part of our more than 3,000 employees, LUMA has 1,300 transmission and distribution workers across Puerto Rico who are trained and available to re-

spond to serious emergencies, in addition to resources from contractors and mutual aid.

- We also have established mutual aid agreements with the Caribbean Electric Utility Services Corporation (CARILEC), Edison Electric Institute (EEI) and the American Public Power Association (APPA) for response to critical events in cases where additional resources for restoration and response become necessary.
- We have also been working with US DOE on development of a Storm Damage Prediction Tool for estimating material needs. The Storm Damage Prediction Tool helps forecast storm damage to transmission and distribution infrastructure.

V. NEW OUTAGE REDUCTION AND RESPONSE INITIATIVE (ORRI)

All of us at LUMA share our customers' frustration with outages and the reliability of Puerto Rico's fragile electric system, which has suffered from years—if not decades—of mismanagement and neglect.

To address these sincere concerns, LUMA has undertaken a series of additional actions to build on the progress we have made, reduce the impact of outage events, and improve our response when such outages occur.

The new initiative launched by LUMA, named the Outage Reduction and Response Initiative (ORRI), is part of an increased operational activity designed to reduce customer outage duration by 55 million Customer Minute Interruptions (CMI) in the next 90 days—which will represent a 20% improvement for highly impacted customers.

The seven key organizational and operational actions that define ORRI include:

- Establishing a New LUMA Outage Reduction Task Force that will Lead ORRI and the Operational Effort to Reduce Outages Across the System.
- Increasing Outage Response Crews and Resources.
- Enhancing Vegetation Management to Target Critical Areas.
- Installing New Automated Devices to Reduce the Number of Customers Impacted.
- Increasing Inspections of Critical Substations and Lines that Serve Essential Services Like Hospitals and Work with these Facilities to Assess Status of Back-up Generation and Resiliency.
- Expanding Aerial Patrols of Key Lines with Thermal Imaging to Identify and Repair Potential Failure Points.
- Accelerating Inspections of Substations to Identify and Address Issues.

Since the new initiative was launched on August 24, 2022, LUMA teams have already accomplished the following:

- *Formed the Outage Reduction & Response Initiative task force*, which includes a cross-functional LUMA team who have initiated an action plan designed to improve outage response and address the root cause of outages.
- *Increased utility and vegetation crew numbers* by onboarding 201 additional highly trained utility workers to help improve overall outage response and target areas for reliability improvement.
- *Installed 24 new automation devices* in San Juan, Ponce and Humacao, which are innovative devices used to detect outages within milliseconds, shorten outage duration and reduce the number of customers that experience an outage.
- *Cleared hazardous vegetation* from 69 miles of critical lines identified as impacting frequent outages, in addition to the 700 miles cleared of vegetation this year across transmission and distribution powerlines.
- *Completed critical aerial inspections and thermal imaging of 262 miles of key lines* using special thermography equipment used to inspect key equipment.
- *Completed inspections and performed thermal imaging of 16 critical substations.*
- *Launched essential services outreach* to hospitals and the hospital association to determine areas impacting their energy reliability and discuss the status of their backup generation.

Over the coming weeks and months, LUMA will continue to take additional actions and expand on current programs and efforts in order to improve the reliability of the energy grid. While we are transparent about the fact that challenges in the reliability of the energy grid will remain given the years and decades of neglect it has suffered, LUMA will focus with greater urgency on the goal of addressing the root cause of outages and advancing projects that will improve the reliability and resiliency of the island's electric system.

VI. CONCLUSION

Looking forward, it is more important than ever that all of us work together to achieve what the Puerto Rican people deserve given the many hardships they have suffered from poor financial and operational stewardship under the past operator: a better energy future that moves Puerto Rico forward. In the face of ongoing challenges, all of us at LUMA—the more than 3,000 women and men of our workforce—remain more committed than ever to this goal.

We believe that the energy future we are building in Puerto Rico will, over the coming months and years, close the chapter on the failures of the past operator and usher in a new era in which the energy grid is not only more reliable and more resilient, but serves the energy needs of Puerto Rico for generations to come.

ATTACHMENTS

The following attachments are retained in committee files and are available online at <https://docs.house.gov/meetings/PW/PW13/20220915/115108/HHRG-117-PW13-Wstate-BahramiradS-20220915.pdf>, beginning on page 12:

- FEMA Projects
 - 9/12/22—FEMA Project Progress
- Progress Summary
 - 6/30/22—A Year of Progress
- Fuel Cost Adjustment
 - Fuel Cost Adjustment Bill Insert
- Pre-LUMA System and Facility Conditions Deck
- Videos
 - LUMA Progress Videos

Ms. TITUS. Thank you, Doctor. I hope as an engineer you appreciated my previous comment about pencil ready and not just shovel ready.

Ms. BAHRAMIRAD. Indeed, I did, Congresswoman.

Ms. TITUS. Thank you.

Mr. Colón?

Mr. COLÓN-ORTIZ. Good morning, Chairman DeFazio, Chairman Titus, Ranking Member Graves, and members of the committee, and also to our Congresswoman González-Colón for allowing me to testify before you today. My name is Josué Colón, and I was appointed as executive director of PREPA in September 29 of last year.

PREPA is a public power corporation of the government of Puerto Rico and the sole provider of electric power on the island. Our system consists of generation, transmission, and distribution systems including six main powerplants in four locations that generate and transfer base load power throughout the electrical grid.

In addition to these main powerplants, PREPA owns and operates simple cycle combustion turbines as well as hydroelectric stations around the island. Approximately 70 percent of the power generating capacity of Puerto Rico is located along the southern coast of the island, whereas approximately 50 percent of the electric power consumption is located in the northeastern coast in the San Juan metropolitan area.

PREPA relies on our transmission lines that traverse the island, generally running south to north over mountainous terrain, to deliver electricity to almost 1 million customers in the San Juan metropolitan area. Therefore, even a small disruption in the transmission lines can cause a loss of power to a large segment of the population of Puerto Rico.

On the morning of September 20, 2017, 14 days after the passage of Hurricane Irma and before PREPA could finish power restora-

tion work required as a result of that hurricane, Hurricane Maria directly impacted Puerto Rico, causing a total blackout. Emergency power restoration efforts after Hurricane Maria lasted more than 1 year. PREPA received the help and support of the Federal Government, several utilities from the mainland, and also contractors. FEMA ultimately awarded more than \$1.9 billion in Public Assistance for emergency work, for which PREPA is grateful.

When these extreme storms moved across Puerto Rico, PREPA's grid was already vulnerable due to the bankruptcy process that was initiated during the summer of 2014. Our fiscal situation was the worst-case scenario under which any electric utility could face two category 5 hurricanes in a period of 2 weeks. After these hurricanes, conditions were further aggravated by the devastating 2020 earthquakes and also by the pandemic of COVID-19.

PREPA is now in the permanent reconstruction phase of recovery. Our partnership with FEMA and other Federal partners has led to some tremendous progress. In September 2020, FEMA announced the FEMA Accelerated Awards Strategy, or FAAS, process and guidance, which allows critical infrastructure projects to be grouped together in order to expedite the energy grid work in Puerto Rico. This provides a faster and more flexible process for the application of Federal funds needed to increase the reliability and resiliency of Puerto Rico infrastructure.

Through FAAS, FEMA has obligated over \$9.5 billion in Public Assistance for permanent reconstruction work. This amount represents 90 percent of the total estimated cost of the permanent works and is complemented with a cost share of 10 percent amounting to more than \$1 billion that will be covered by local funds from the government of Puerto Rico and CDBG-DR funds.

So far, 38 scopes of work have been submitted to FEMA for approval, and close to \$183 million will be disbursed to PREPA in the near future. This funding will be used to rebuild substations, distribution and transmission lines, and repair or replace generation assets for suitable and reliable power for the long-term future.

In addition to FEMA 428 funds, FEMA obligated approximately \$1.5 billion in Federal funds under the Hazard Mitigation Grant Program or FEMA 404 funds for permanent work on the electrical generation and water infrastructure. FEMA's support of PREPA recovery has been invaluable to our people, but it has not been without challenges. PREPA's path ahead will be focused on ensuring the proper expenditure of its Federal grants that will be used to create a modern, reliable, efficient, and resilient energy system.

Our goal is to ensure, through the partnership with our transmission and distribution system operator, that we will build an electric system that can adequately withstand any future storm. Such a monumental rebuilding project will take time. We ask that this committee continue to support Puerto Rico and FEMA in this long-term endeavor.

PREPA continues to strive for the full obligation and execution of its recovery and reconstruction projects to achieve a resilient, stable energy system that our 3.2 million U.S. citizens living in Puerto Rico can depend on. The use of those Federal funds will promote economic opportunity for our citizens, goals that we are con-

fidant are shared by FEMA, this Congress, and the rest of the Federal Government.

Those are my words. Thank you.

[Mr. Colón-Ortiz's prepared statement follows:]

Prepared Statement of Josué A. Colón-Ortiz, Executive Director, Puerto Rico Electric Power Authority

I. ACKNOWLEDGMENTS

Good morning, Chairman DeFazio, Ranking Member Graves, members of the Committee, and our Resident Commissioner Congresswoman González. Thank you for the opportunity to appear before you today to discuss the Puerto Rico Electric Power Authority's experience regarding the recovery and reconstruction of Puerto Rico's electric system in the aftermath of Hurricanes Irma and María. My name is Josué A. Colón Ortiz. I am an engineer and the Executive Director of the Puerto Rico Electric Power Authority, since September 29, 2021.

The Puerto Rico Electric Power Authority (referred to as "PREPA" in Puerto Rico) is a public corporation and governmental entity of the Commonwealth of Puerto Rico, created pursuant to Law 83 of May 2, 1941, with the duty of providing electric power in a reliable manner, contributing to the general welfare and the sustainable future of Puerto Rico, and maximizing the benefits and minimizing the social, environmental, and economic impacts.

PREPA is the sole provider of electric power in Puerto Rico, including the islands of Vieques and Culebra. Our system consists of generation, transmission, and distribution systems including six main power plants in four locations that generate and transfer base load power throughout the electrical grid. In addition to these main power plants, PREPA owns and operates simple cycle gas turbine stations in the cities of Mayagüez and Arecibo, 18 peaking units located in remote sites, as well as hydroelectric stations located around the main Island. For various reasons, including geographical factors and major changes to industrial, commercial, and residential population distribution since the system was originally established, approximately 70% of the power generating capacity of Puerto Rico is located along the Southern coast of the main Island, while approximately 50% of the electric power consumption is in the Northeastern coast, especially in the San Juan metropolitan area. As currently configured, PREPA relies on its transmission lines that traverse the Island, generally running South to North over mountainous terrain, to deliver electricity to almost 1 million residents in the San Juan metropolitan area. Therefore, even a small disruption in the transmission lines can cause a loss of power to a large segment of the population of Puerto Rico, the primary business and commercial center of the main island, most of the governmental offices and buildings, the airport, and the Port of San Juan.

II. BACKGROUND

Puerto Rico is an archipelago of the Antilles located between the Caribbean Sea and the Atlantic Ocean, essentially in the typical path of storms and hurricanes that form just off the West coast of Africa and move West Northwest along the Atlantic Ocean towards the continental United States. It is very common for these storms and hurricanes to first reach the Antilles at the Caribbean Sea. The best example of Puerto Rico's exposure to the path of major weather disturbances is the hurricane map of Figure 1 in Annex 1 which shows recorded storms and hurricanes that crossed or impacted the archipelago since 1852.

The most recent recorded major hurricanes affecting Puerto Rico occurred in 2017. During the evening of September 6, 2017, Hurricane Irma passed about 50 nautical miles to the north coast of Puerto Rico as a category 5 hurricane. Figure 2 in Annex 1 shows the closest location of Hurricane Irma from the coast of Puerto Rico.

As can be seen in the radar image of Figure 2, Hurricane Irma affected almost all of Puerto Rico. According to the National Hurricane Center Tropical Cyclone Report, Hurricane Irma, September 24, 2021¹, Hurricane Irma had the following characteristics when it passed near Puerto Rico:

¹ https://www.nhc.noaa.gov/data/tcr/AL112017_Irma.pdf.

- The highest wind speed reported in Puerto Rico was about 55 miles per hour with gusts of 74 miles per hour at San Juan. Tropical storm force winds were experienced across all of Puerto Rico.
- Heavy rains were experienced across all of Puerto Rico. Maximum inundation levels of 1 to 2 feet above ground level occurred along the coast of Puerto Rico, with the city of Arecibo being the location with the highest water level.

These tropical storm force winds and heavy rains impacted Puerto Rico's electrical infrastructure causing interruptions of the power service to almost all customers in the archipelago. The Puerto Rico Electric Power Authority or PREPA started the emergency restoration works just after the passage of Hurricane Irma, which lasted more than two weeks.

On the morning of September 20, 2017, fourteen days after the passage of Hurricane Irma and before PREPA could finish the power restoration work required as a result of Hurricane Irma, Hurricane María directly impacted Puerto Rico. According to the National Hurricane Center's Tropical Cyclone Report, Hurricane María, February 14, 2019², "María's center crossed the southeast coast of Puerto Rico near Yabucoa around 1015 UTC (6:15 A.M., local time), and the hurricane's maximum winds at that time were near 135 knots (~155 miles per hour), i.e., just below the threshold of category 5 intensity. The hurricane's center crossed the island, roughly diagonally from southeast to northwest, for several hours and emerged into the Atlantic around 1800 UTC (2:00 P.M., local time). By that time, María had weakened after interacting with the land mass of Puerto Rico and its maximum winds were estimated to be 95 knots (~109 miles per hour)." Figure 3 in Annex 1 shows the landfall of Hurricane María on the southeast coast of Puerto Rico.

The Hurricane María Report mentioned above also stated, among others, that:

- In Puerto Rico, winds of category 5 intensity were almost certainly felt at some elevated locations on the island.
- Maximum flood levels of 6 to 9 ft above ground level were registered along the coasts of Humacao, Naguabo, and Ceiba municipalities, levels of 3 to 5 ft occurred along the coast of Northeastern Puerto Rico, especially in the municipalities of Ceiba and Fajardo, and levels of 2 to 4 ft occurred along much of the northern coast of Puerto Rico.
- Heavy rainfall occurred in Puerto Rico, where one location had a storm total of nearly 38 inches, river discharges at many locations in the island were at record or near record levels, and severe flooding and mud slides affected most of the island, with the most significant flooding associated with the La Plata River.

These extreme weather conditions devastated Puerto Rico, including its electrical infrastructure, causing a total blackout of the system, and interrupting the power service to all customers in Puerto Rico. The emergency power service restoration efforts after the passage of Hurricane María lasted more than one year, including areas that did not have power due to the passage of Hurricane Irma. A collapsed transmission and distribution system (T&D System), no power, no water, no communications, airports, and most of our main and secondary roads closed due to the debris and damages, were some of the dire circumstances under which our recovery and reconstruction process began, with help and support of the U.S. Federal Government and several utilities and contractors from the mainland in conducting these efforts. However, the road to the permanent reconstruction of the transmission and distribution of power is still in its initial stages.

III. DISASTER DECLARATIONS

On September 10, 2017, the Commonwealth of Puerto Rico received a Presidential declaration of a major disaster (FEMA-4336-DR) due to the passage of Hurricane Irma, under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act"). For this disaster, the Federal Emergency Management Agency or FEMA obligated approximately \$17.5 million in Categories A and B funds for the reconstruction of the electrical infrastructure, of which PREPA has received reimbursements of about \$15.1 million.

Due to the passage of Hurricane María, the Commonwealth of Puerto Rico received a Presidential declaration of a major disaster (FEMA-4339-DR) on September 20, 2017, under the authority of the Stafford Act. For this disaster, FEMA obligated approximately \$1.9 billion in Categories A and B funds for the reconstruction of the electrical infrastructure, of which PREPA has received reimbursements of about \$1.6 billion.

² https://www.nhc.noaa.gov/data/tcr/AL152017_María.pdf

The President separately declared emergencies and major disasters for both Hurricanes Irma and María. This created some initial confusion at first identifying and assigning damage to each storm separately. FEMA's eventual decision to put all Hurricane Irma work under Hurricane Maria helped tremendously streamline and bypass this confusion.

IV. RECONSTRUCTION OF PUERTO RICO'S ELECTRICAL AND WATER INFRASTRUCTURE

In September 2017, Hurricanes Irma and María decimated PREPA's electrical grid, causing an island-wide blackout. The transmission and distribution network infrastructure suffered the most damage: over 2,700 transmission poles or structures were damaged, and 92% of inspected substations were affected, with 41% of substations suffering major damage.³ About 75% of the distribution system circuits were damaged, while certain generation units also suffered significant damage.⁴

Furthermore, PREPA's water assets, including its irrigation systems, dams, reservoirs, and hydroelectric plants, suffered damage due mostly to Hurricane María. In particular, the Patillas and Guajataca dams suffered structural damage, and all reservoirs accumulated significant amounts of sediment. In addition, debris that typically is dragged by heavy rains affected other components of the hydroelectric system.

It is important to note that PREPA serves a unique population. Puerto Rico has been identified as a disadvantaged community by the Justice 40 Climate and Economic Justice Screening Tool. Unemployment and poverty are above the 90th percentile for many communities. Unlike the continental United States, there are no alternative power options for critical facilities in Puerto Rico. All schools, hospitals, communications, and emergency providers rely daily on the ability of PREPA's lines to deliver sufficient power to provide those critical services necessary to save lives, protect public health and safety, and protect the improved property across the Island from mold.

Particularly vulnerable is the capital of San Juan with an estimated population of over 300,000. As discussed above, the San Juan metropolitan area receives the energy mainly from the power plants on the South coast of the main island. The northeastern portion of the Island around the San Juan area is growing the most rapidly in population and is the most vulnerable to power outages due to the current concentration of generation on the southern portion of the island. Until the permanent hurricane restoration work is completed, or at least substantially advanced, the San Juan metropolitan area will remain vulnerable to reoccurring power outages.

Further, most of the Island's medical facilities are also found in this vulnerable region. But the need for reliable power is a safety concern beyond just producing power for critical facilities. Streetlights need to stay lit, residents need to bathe children and cook food, and businesses need to be able to open their doors and provide services and commodities. Power is the lifeline to recovery and basic human needs.

When these extreme storms moved across Puerto Rico, PREPA's grid was already vulnerable due mainly to its fiscal challenges and the unique design characteristics as I mentioned earlier.

V. BANKRUPTCY IMPACT ON RECOVERY

During the summer of 2017, and two months before the passage of Hurricanes Irma and María, PREPA started a bankruptcy process under Title III of the Puerto Rico Oversight, Management, and Economic Stability Act of 2016 ("PROMESA"), which was enacted by the Federal Government to oversee Puerto Rico's debt restructuring.

Pursuant to PROMESA, the Puerto Rico Fiscal Oversight and Management Board ("FOMB") provides oversight and is charged with approving the Fiscal Plan required under PROMESA. The entity responsible for drafting that Fiscal Plan is the Fiscal Agency and Financial Advisory Authority (or its acronym in Spanish, "AAFAF"). AAFAF is an executive agency of the Government of Puerto Rico.

Our fiscal situation was, without a doubt, the worst-case scenario under which any electric utility could face two category 5 hurricanes in a period of two weeks.

³PREPA Central Office for Recovery, Reconstruction and Resiliency, Energy System Modernization Plan.

⁴Puerto Rico Energy Resiliency Working Group, Build Back Better.

VI. OTHER DISASTERS IMPACT ON RECOVERY

As the U.S. Federal Government is well aware, after these disastrous hurricanes, conditions were further aggravated by two (2) additional Presidentially declared major disasters: the 2020 seismic activity that impacted the Southern region of Puerto Rico, including important PREPA generation assets in the area where most of our Island's energy generation takes place, and the global pandemic, health crisis and consequential economic issues caused by COVID-19.

PREPA's situation was not isolated, as other infrastructure of the Commonwealth of Puerto Rico, which was also under the PROMESA Title III process, was severely damaged, like roads, highways, bridges, and water supply facilities. The typical FEMA Public Assistance program contemplates individual assessments, estimates, and scope of work for individual projects—a process in our case proved to be incredibly slow due to the extensive damage not only to PREPA but to all infrastructure across the Island.

Given these scenarios, the U.S. Federal Government amended the FEMA policy procedures to provide a speedier and more flexible process for the application of federal funds to execute the permanent works needed to increase the reliability and resiliency of Puerto Rico's essential infrastructure. In 2020, FEMA announced the FEMA Accelerated Awards Strategy or "FAASt" process, which allows critical infrastructure projects to be grouped together to expedite the energy grid work in Puerto Rico.

In addition to approving the FAASt process, the U.S. Federal Government provided additional support by increasing the federal cost share for the Hurricane Maria disaster FEMA-4339-DR from 75% to 90%. Federal funds available for permanent work have a cost-sharing structure, which requires the applicant for federal funding to use its own funds for part of the project. Typically, FEMA provides 75% of the investment and the remaining 25% is provided by the local government. Increasing the federal contribution to 90% resulted in a decrease of the local share that the Commonwealth of Puerto Rico, including PREPA, must cover for the reconstruction projects to 10%. In the process of allocating federal funds for the reconstruction of the Puerto Rico power grid, PREPA was able to cover part of its 10% cost-share with funds from the Community Development Block Grant ("CDBG") Program⁵, specifically the Disaster Recovery grant or CDBG-DR funds.

While FEMA prepared the FAASt process, in the summer of 2019, PREPA began formulating initial scopes of works for permanent work necessary for the reconstruction of the electrical system of Puerto Rico as a result of the damages suffered by Hurricanes Irma and Maria. On September 24, 2020, FEMA obligated about \$9.5 billion in FEMA 428⁶ funds for PREPA, which in turn submitted its work plan along with eight initial scopes of work to FEMA, on December 7, 2020. Then, on March 26, 2021, the Puerto Rico Energy Bureau (Energy Bureau) issued a Resolution and Order conditioning that all projects to be executed with federal funds shall be submitted for Energy Bureau's approval.

The Energy Bureau, as Puerto Rico's electric system regulator for all energy-related matters, has been deeply involved in the reconstruction process. Before formally submitting a project for the consideration of FEMA and the Central Office for Recovery, Reconstruction, and Resiliency ("COR3"), PREPA must obtain regulatory approval from the Energy Bureau to ensure consistency with applicable laws and regulations. This requirement applies to the request for all federal funding for development projects in the energy sector.

Transformation of PREPA

Considering the vulnerable position that the electric power transmission and distribution system was before the storm events, and the devastating blow it took during the hurricanes, Puerto Rico embarked on a process to transform PREPA from a vertically organized utility into a corporation composed of different subsidiaries, facilitating the participation of the private sector in the operations and maintenance of the electrical infrastructure in Puerto Rico. This transformation's goal is to increase the resiliency and reliability of Puerto Rico's power system and maximize the use of modern and new technology to deliver a lower costing electricity service to all customers in Puerto Rico. As a first step, the Government of Puerto Rico entered

⁵The CDBG Program is managed by the U.S. Department of Housing and Urban Development (HUD).

⁶Under Stafford Act § 428, Public Assistance Alternative Procedures, FEMA may award fixed cost grants for large permanent work projects, rather than on an actual cost basis. See Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work, FEMA-4339-DR-PR (Feb. 10, 2020), https://devrecovery.pr.gov/tp3/documents/PAAP_Guide_for_Permanent_Work_DR_4339_PR_V3_2_10_2020_FINAL_508.pdf.

into an operation and maintenance contract with LUMA Energy, LLC (“LUMA”), which became the Operator of PREPA’s transmission and distribution system on June 1, 2021.

Before this transition, PREPA had already prepared a total of 73 initial scopes of work, 68 for the transmission and distribution system and other facilities and five in the areas of generation, hydroelectric, dams, reservoirs, and irrigation systems. As of that date, there were already 46 scopes of work approved by the Energy Bureau and with assigned FEMA numbers of placeholders to continue the formulation process for obligation, 41 for the transmission and distribution system, and five for generation and water assets.

PREPA has continued developing scopes of work and undertaken the required actions to conduct repairs, rehabilitation, mitigation, and permanent works in its generation system and water assets. This has been accomplished with the support of the U.S. Federal Government, provided through the different federal funding programs made available to Puerto Rico. Regarding the transmission and distribution system and other facilities, since June 1, 2021, PREPA has delegated to LUMA, the responsibility of developing the repairs, reconstruction, rehabilitation, and modernization of such systems, including following the processes of project formulation and reimbursement requests.

VII. FEDERAL FUNDS FOR RECONSTRUCTION AND REHABILITATION WORKS

The devastation caused by Hurricanes Irma and María in Puerto Rico, only a couple of weeks apart, paved the way for a historic obligation of federal funds from the Public Assistance program to Puerto Rico under FEMA’s Public Assistance Alternative Procedures, commonly known as FEMA 428 funds. Of these funds, over \$9.5 billion are destined for the reconstruction works related to PREPA’s electrical and water infrastructure. This amount, which represents 90% of the total estimated cost of the permanent works to be executed, is complemented by a cost share of 10% amounting to more than \$1 billion. The 10% cost share program under Community Development Block Grant Section Energy Grid Rehabilitation and Reconstruction Cost Share Program (ER1), estimated cost of the permanent works to be executed, is complemented with a cost share of 10% to be covered partially with funds CDBG-DR Program up to \$500 million and funds from the commonwealth of Puerto Rico.

The permanent works total cost was initially estimated at approximately \$10,704.76 million. Subtracting an estimated insurance contribution of \$193.75 million from this amount results in a total estimated cost of \$10,511.01 million, of which 90% equals approximately \$9,459.91 million and the remaining 10% approximately \$1,051.10 million.

Specifically, this funding will be used to rebuild the electrical infrastructure and repair or replace essential components of the electrical system that are to be hardened and modernized, for more resiliency and for providing sustainable and reliable power for the long-term future of Puerto Rico.

Given the above, the total amount of assigned federal and local funds to execute permanent works under the Public Assistance program is approximately \$10.5 billion. PREPA estimates that its insurers will contribute nearly \$194 million to the works under this program, for a final estimated investment of approximately \$10.7 billion. From the insurance contribution of \$193.75 million, approximately \$184.06 million are allocated to the transmission and distribution system and other facilities, and about \$9.69 million are allocated to the Guajataca dam repair project of the generation system and water assets area. It is noted that claims to the insurance companies are still in process and, thus, these amounts are subject to changes.

In addition to the FEMA 428 Funds, FEMA obligated approximately \$1.5 billion in federal funds under the Hazard Mitigation Grant Program (HMGP) or FEMA 404 funds for conducting permanent works on the electrical generation and water infrastructure.

Therefore, currently, there is a total of approximately \$12.2 billion assigned for the reconstruction of PREPA’s electrical system and water infrastructure in FEMA 428, FEMA 404, insurance, and local funds. The following chart shows the initial allocation of these funds:

Asset	Operator	FEMA 428	FEMA 404	Total
		in millions	in millions	in millions
Buildings	LUMA	\$ 125.09		\$ 125.09
Substations	LUMA	781.89		781.89
Distribution	LUMA	5,499.84		5,499.84
Transmission	LUMA	2,642.13		2,642.13
Generation	PREPA	108.95	853.20	962.15
IT/Telecomms	LUMA	685.93		685.93
Dams, Irrigation and Reservoirs	PREPA	860.93	658.53	1,519.46
		\$ 10,704.76	\$ 1,511.73	\$ 12,216.49
Insurance reduction		\$ 193.75		\$ 193.75
Local Share		\$ 1,051.10		\$ 1,051.10
Federal Share		\$ 9,459.91	\$ 1,511.73	\$ 10,971.64

Currently, PREPA is allocating approximately \$1.2 billion for permanent works on the generation system and water assets, which results in about \$8.2 billion of FEMA 428 funds for works on the transmission and distribution system and other facilities. The latter federal funds, when added to the estimated insurance contribution of \$184 million and the local cost share of \$913 million result in a current total of about \$9 billion of funds for projects for the transmission and distribution system and other facilities. The following chart provides a summary of the current allocation:

Asset	Operator	FEMA 428	FEMA 404	Total
		in millions	in millions	in millions
Transmission, Distribution, and Other Facilities	LUMA	\$ 9,313.21		\$ 9,313.21
Generation	PREPA	502.70	853.20	1,355.90
Dams, Irrigation and Reservoirs	PREPA	888.85	658.53	1,547.38
		\$ 10,704.76	\$ 1,511.73	\$ 12,216.49
Insurance reduction		\$ 193.75		\$ 193.75
Local Share		\$ 1,051.10		\$ 1,051.10
Federal Share		\$ 9,459.91	\$ 1,511.73	\$ 10,971.64

The current allocation responds to the need of repairing Puerto Rico's generation system and water assets to assure a reliable, safe, and resilient energy and water supply. In particular, the current limitations on the dependable generation available to supply the energy demand in Puerto Rico are confirmed by the need to run emergency generating units, including the new mobile generators at the Palo Seco power plant, after the earthquakes of January 2020 and last year's major load shedding events caused by the lack of generation capacity. In addition to the FEMA 428 and FEMA 404 funds assigned to the generation system and water assets, PREPA applied to the Puerto Rico Department of Housing for the assignment of approximately \$300 million in CDBG-DR funds for the retrofit of PREPA's hydroelectric generating units. This, under Section Electrical Power Reliability and Resilience Program (ER2) of CDBG electrical system optimization action plan.

Annex 2 of this document includes a detailed list of fifty-seven (57) projects to be developed on the generation system and water infrastructure, of which a summary follows⁷:

⁷ The shown quantities are estimates and the numbers are rounded.

Projects Amounts (Millions)				Quantity of Projects			
Funds Type	Water Assets	Generation System	Total	Funds Type	Water Assets	Generation System	Total
FEMA 428 ⁽¹⁾	\$ 888.85	\$ 502.70	\$ 1,391.55	FEMA 428	18	20	38
FEMA 404	658.53	853.20	1,511.73	FEMA 404	2	2	4
CDBG-DR	0.00	300.00	300.00	CDBG-DR	—	15	15
Total	\$ 1,547.38	\$ 1,655.90	\$ 3,203.28	Total	20	37	57

⁽¹⁾ The quantities shown for this funds type include FEMA 428 funds, the insurance contribution, and the cost share.

Under the Public Assistance program, to date, FEMA has obligated approximately \$182 million through the FAAS process, approving eleven (11) Project Worksheets or PWs submitted by PREPA for repairs to its power generation plants at Aguirre, Costa Sur, Palo Seco, San Juan, Mayagüez, and Cambalache. These 11 projects group 65 scopes of work approved by the Energy Bureau for the repair of PREPA's generating units. PREPA completed 1 of these 11 projects and has requested reimbursement for an amount of \$18 million, of which \$15.9 million were received in reimbursements. In addition, PREPA is in an advanced stage of construction works in other three of the 11 projects. The three projects that PREPA has in an advanced stage are in the San Juan power plant (PWs 10615 and 10608), that total \$62.4 million and are over 60% of completion; and Cambalache Power Plant Permanent Repairs (PW 10607) that total an amount of \$2 million in which PREPA has an 85% of completion of the total work. For these three PWs, PREPA has already submitted the request for reimbursement to COR3.

11 Approved Project work sheet (PW) for Generating Units Repairs

PW#	Location	Project Title	#SOW	Fund	Asset	Project Formulation Status	FEMA Approval	Date of Completion	Percentage of Completion
10571 ..	Aguirre	FAAS Aguirre Power Plant Infrastructure Projects 001.	4	428	Generation	Approved	3,031,265	Apr-23	19%
10568 ..	Aguirre	FAAS Aguirre Power Plant 002 Units 1 & 2 Projects.	4	428	Generation	Approved	14,937,046	Aug-23	43%
10622 ..	CC	FAAS Aguirre Power Plant 003 Combined Cycle.	5	428	Generation	Approved	5,405,870	Jun-23	17%
10615 ..	San Juan	FAAS San Juan 001—Units 5 & 6.	12	428	Generation	Approved	60,080,016	Mar-24	60%
10608 ..	San Juan	FAAS San Juan Power Plant—Auxiliary Infrastructure.	9	428	Generation	Approved	2,368,247	Jan-23	67%
10702 ..	Costa Sur	FAAS Costa Sur Permanent Repairs 5 & 6.	20	428	Generation	Approved	42,299,739	Oct-24	20%
10694 ..	Costa Sur	FAAS Costa Sur Permanent Repairs.	2	428	Generation	Approved	1,250,000	Nov-22	16%
10606 ..	Palo Seco	FAAS Palos Seco Steam Plant Unit 3—4.	11	428	Generation	Approved	28,774,423	Jan-24	36%
10609 ..	Palo Seco	FAAS Palo Seco Steam Plant Permanent Repairs.	2	428	Generation	Approved	3,495,578	Jun-24	20%
10607 ..	Cambalache	FAAS Cambalache Power Plant Permanent Repairs.	4	428	Generation	Approved	2,038,588	Jun-24	85%
10455 ..	Mayaguez	FAAS Mayaguez Hydro-Gas Power Plant Permanent Repairs.	1	428	Generation	Approved	18,192,583	Jul-22	100%

PREPA will submit for FEMA approval 4 additional Project Worksheets amounting approximately \$176.35 million, which group 37 scopes of work for the repair of

the generating units 7, 8, and 10 in San Juan and unit 1 at Cambalache, once it gets the approval of 6 scopes of work that are currently under the reconsideration of the Energy Bureau, as the regulator already approved 31 from the total of 37 scopes of work that make up the 4 Project Worksheets. The Energy Bureau denied the six scopes of work mentioned above in its resolution and order on June 4, 2022. After that order, PREPA submitted two reconsideration motions requesting the approval of these six scopes of work for the repairs of generating units. Currently, PREPA continues assessing the condition of its power plants to prepare additional scopes of work to complete the repairs of all its generating units.

In the case of the water assets projects, PREPA already received approval from the Energy Bureau and FEMA for eighteen (18) initial scopes of work and two (2) application packages for approximately \$1,547.38 million that are currently in the architecture and engineering phase, which is required by FEMA before approving the corresponding Projects Worksheets of this type of project.

It is noted that FEMA obligated a Project Worksheet amounting approximately \$486 million for architecture and engineering design services to be utilized in the development of detailed scope of works to be submitted to FEMA for approval. PREPA is using these funds to procure architecture and engineering design services to develop detailed scopes of work for its dams, hydroelectric system, and irrigation systems. Once the architecture and engineering phase is complete, PREPA will submit the resulting documents to FEMA for the approval of the construction Project Worksheets. In the case of the water assets projects, the Project Worksheets will amount to nearly \$889 million in FEMA 428 funds and \$658.53 million in Hazard Mitigation Grant Program or FEMA 404 funds.

Regarding the approved FEMA 404 funds for new generation amounting \$853.20 million, PREPA submitted a reallocation strategy of such funds for the Energy Bureau's approval on August 2, 2022. Annex 3 of this document includes, among other motions, a copy of PREPA's motion requesting the Energy Bureau's approval, which is currently under evaluation provided by the Energy Bureau. This Annex also includes PREPA's motions requesting the Energy Bureau's approval for the repair of generating units and conversion to natural gas. Out of the \$853.20 million, \$280.82 million are currently assigned for emergency-generation or simple cycle combustion turbines, \$5 million for engineering studies of a new combined cycle in the North of Puerto Rico, and \$567.38 million for the new combined cycle project.

After analyzing the development of these projects considering the current needs of Puerto Rico's power system, PREPA determined to redistribute the available FEMA 404 funds, in particular the \$572.38 million approved by FEMA, as follows:

FEMA 404 Funds Purpose	Estimated Cost
	in millions
Emergency Generation Peaker Units	\$ 490.00
Costa Sur and Yabucoa Black-Start Units	190.00
Fuel Conversion of San Juan Units 7 to 10	138.50
Small-scale residential PV with storage	34.70
Total	\$ 853.20

The feasibility studies of the current projects for the new generation mainly resulted in that, even though a new combined cycle at San Juan or Palo Seco power plants is feasible and recommended from an engineering point of view, this construction is a long-term project, as it will take about ten (10) years to be completed. In addition, the original estimated cost of \$572.38 million was calculated in 2020 dollars and, when updated to reflect 2023 dollars and inflation, resulting in approximately \$723.6 million. This means that there are insufficient funds to develop the combined cycle project, as there is a deficiency of \$151.22 million. Given PREPA's current power generation struggles, and that the development of the combined cycle project is a long-term effort, PREPA must execute short- and medium-term measures to improve the existing thermal generation assets.

Considering the constraints described above, PREPA found that, even though the construction of the combined cycle in the North is feasible and beneficial for the electrical system, there are not enough funds for completing the project and there are more imperative actions to be taken on the short- and medium-term, for which the combined cycle project approved funds can be used. These actions include those needed to keep the existing thermal generating units operational and in service to supply the energy demand in Puerto Rico, support the reliable and safe integration of renewable energy, and provide the energy needed during the restoration of the

electrical service after major events. It is essential that the generating units' operation comply with all environmental regulations.

Therefore, PREPA submitted to the Energy Bureau that the combined cycle project would be delayed until sufficient funds are available and its assigned funds of \$572.38 million would be allocated to the above-mentioned projects:

- *Emergency Generation Peaker Units*—This generation project is the second one approved by FEMA to be funded with FEMA 404 funds. The original project estimate was \$280.82 million in 2020 dollars, but considering inflation, the estimate of executing this project is a minimum of \$490 million. Hence, it is needed to add funds to this project for executing it.
- *Costa Sur and Yabucoa Black-Start Units*—Currently, this project is defined under the Public Assistance program with an original FEMA 428 funds assignment of \$90.4 million. However, this estimate was updated to account for the inflation and the recent disruption in the supply chain, resulting in a new estimate of \$190 million. Hence, it is needed to add funds to this project for execution. This project was previously approved by the Energy Bureau.
- *Fuel Conversion of San Juan Units 7 to 10*—This project has the main purpose of keeping the steam units in the San Juan Power Plant operational and in service, burning natural gas as their main fuel. The fuel conversion of these units will allow them to achieve environmental compliance with the Sulfur Dioxide (SO₂) State Implementation Plan in the Non-Attainment area of San Juan and the Mercury and Air Toxics Standards (MATS) rule. On February 11, 2022, PREPA submitted this project for the evaluation of the Energy Bureau.
- *Small-scale residential PV with storage*—PREPA intends to invest the remainder of the \$572.38 million after executing the projects detailed above, if any, on the installation of PV plus storage systems behind the meter of customers located at those sectors where the power service was restored last after Hurricane María. Currently, the remaining amount is estimated at about \$34.7 million.

This amount does not consider what could potentially be hundreds of millions of dollars in additional funding for hazard mitigation measures as allowed by the Public Assistance program under the Stafford Act, and such measures will be part of each project's scope of work to be developed. While the Public Assistance program or FEMA 428 is focused on attending to damages caused by a disaster, FEMA 404 funding is used to provide protection to undamaged parts of a facility or to prevent or reduce damages caused by future disasters.

Project Number	Project Title	Asset	Approved Amount	Reimbursed
4339-0010	Simple Gas Turbines	Generation	280,822,500	268,437
4339-0012	Early Warning System	Dams	100,000,000	—
4339-0008	North Generation	Generation	572,377,050	363,095
4339-0010	Patillas Dams	Dams	558,530,000	—
			\$ 1,511,729,550	\$ 631,532

Furthermore, PREPA is completing the formulation of the following projects related to the 2020 earthquakes, mostly focused on one of PREPA's most important generation power plant known as Costa Sur, which are sure to positively impact the generation-side of PREPA's operations:

Project Number	Project Title	Asset	Estimated Cost	Approved Amount	Reimbursed
171513	Costa Sur Work Completed	Generation	3,444,365	3,444,365	—
171515	Costa Sur Buildings	Generation	3,623,083	529,036	—
171512	Costa Sur Tanks	Generation	5,071,207	5,660,599	—
171517	Costa Sur Discharge Channel	Generation	6,700,000	66,576	59,919
			\$ 18,838,655	\$ 9,700,577	\$ 59,919

Permanent Work Assets	Scopes of Works	Project Amount	Approved Funding	Pending Funding	Reimbursed
		in millions	in millions	in millions	in millions
New Generation Units	4	943.6	853.2	90.4	0.3
Aguirre Power Plant	3	29.5	18	11.5	0.7
Aguirre Combined Cycle	1	5.3	5.4	-0.1	
San Juan Power Plant	4	133.5	62.4	71.1	
Costa Sur Power Plant	2	40.8	40.8	0	0.3
Palo Seco Power Plant	4	96.3	32.3	64	0.8
Cambalache Power Plant	2	38.5	2	36.5	
Mayaguez Power Plant	1	18.2	18.2	0	15.9
Repairs to Peaking Units—Islandwide	1	50.2	0	50.2	
Hydroelectric Units—Islandwide	15	300	0	300	
Dams, Reservoirs, Irrigation Channels	20	1547.4	0	1547.4	
	57	3203.3	1032.3	2171	18

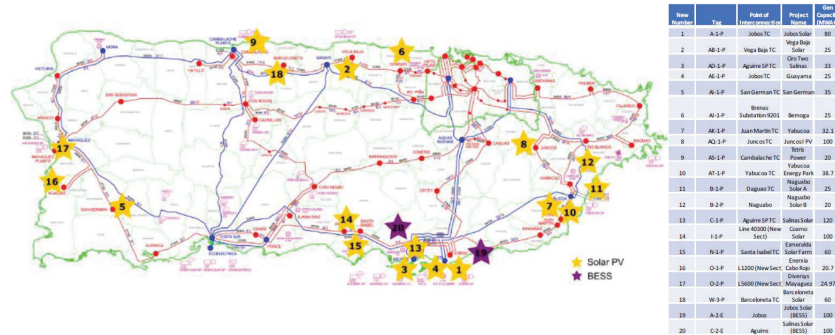
VIII. PATH AHEAD

PREPA's path ahead will be focused on ensuring the proper expenditure of its Federal grants that will be used to create a modern, sustainable, reliable, efficient, and resilient energy system. Our goal is to ensure, through the partnership with LUMA, that we are building an electric system that can adequately withstand any future storm. It is imperative that we provide the people of Puerto Rico with a more reliable system that has fewer and shorter outages, if any, and at a reasonable cost.

We believe that doing so, will jumpstart a long-term revitalization of the Puerto Rican economy. Reliable power means more investment in the Island and support for economic development.

We recognize, however, that taking on such a monumental rebuilding project will take time. We ask that this Committee continue to support Puerto Rico and FEMA in this long-term endeavor. FEMA should be encouraged to continue to make timely, reasonable, and flexible decisions to support this unique recovery.

Regarding PREPA's renewable energy initiatives, 18 solar photovoltaic ("PV") projects, totaling 844.47 MW, have been submitted by PREPA for regulatory approval. In addition to reaching the execution of 18 solar PV PPOAs amounting to 844.47 MW, PREPA executed two (2) contracts for energy service storage agreements ("ESSA") totaling 100 MW each, for a four-hour duration utility-scale battery energy storage project that is co-located and operationally integrated with two of the solar PV PPOA's for Incentive Tax Credit (ITC) compliance. PREPA is currently negotiating six (6) additional ESSAs, which are currently under review by LUMA. The illustrations and tables in Annex 4 provides further details regarding PREPA's renewable energy initiatives.



IX. CONCLUSION

PREPA continues to strive for the full obligation and execution of its recovery and reconstruction projects, which will allow for a better, more resilient Puerto Rico and ultimately achieve a stable energy system that our 3.2 million U.S. citizens living in Puerto Rico can depend on. The use of federal funds will not only reduce costs but will create better economic opportunities for our people, all of which are goals

that we are confident are shared by FEMA, this Congress, and the rest of the federal government.

Ms. TITUS. Thank you very much, Mr. Colón.

We will now begin with questions. I will recognize each Member for 5 minutes of questions. I will start by asking questions first myself.

I have heard a lot of references to inflation and the impact of inflation on getting equipment, on the supply chain, on the cost today, but I haven't heard so much about the pandemic. I think we need to acknowledge—I think, Mr. Currie, you asked: Who could have anticipated this level of inflation?

Who could have anticipated the pandemic? We need to acknowledge that the pandemic has contributed to the inflation, and also, having to manage two disasters at the same time, one in healthcare and one, infrastructure, certainly caused the problem. So, when you talk about what has contributed maybe to the length of time or the inability to get this done more, well, expeditiously, I guess, let's be sure we keep that in mind and don't just blame it on inflation.

The purpose of the hearing is to really come with something substantive that Congress can do to make the situation better. And some of you have mentioned things—Ms. Williams-Octalien, I think you said that you were concerned about the waiver of the local match requirement in areas where the devastation is so great and you don't have that underpinning of a good fiscal system anyway. That is one thing that we ought to look at.

Another thing was, you mentioned the lack of qualified personnel to oversee some of these projects. What could we do to help with that?

Another thing was, in addition to section 428 and the problems that causes because of the estimates maybe being overrun, is there anything that we can do to address the reimbursement-based assistance program for recipients or applicants with few financial resources?

I would just ask you all to give us something specific that we can take back and look at legislation or regulation or something we can actually accomplish aside from what the Agency is trying to do and those things that I mentioned from your testimony.

You want to start?

Ms. WILLIAMS-OCTALIEN. Thank you for the question, Madam Chair. I think one of the first things that we have been looking at is the issues relative to capacity and the ability to have contractors and personnel to be able to do the work in a Territory. FEMA commissioned a RAND study that said that if every able-bodied Virgin Islander was engaged in the recovery, we would need 5,000 more workers in order to get this done.

One of the areas that we are looking at is our neighboring Caribbean islands, where we have resources there that may be able to come to the Territory but, of course, they would need legislation because they are countries of their own. But creating those opportunities for our neighboring Caribbean residents to come to the Virgin Islands to be able to assist with the recovery is an area that we believe can get some attention and provide some relief.

Mr. LABOY. Thank you.

From our perspective, I would like to highlight three particular items. It has been mentioned, the low level of disbursements and that there is a reality that the Federal regulation limits advances. We have to remind everyone that our recovery, once FEMA obligates funds, is based on reimbursement.

So, Puerto Rico, for example, we have a huge challenge in terms of accessing cash. Let's use as an example the municipalities. They have thousands of large projects that are based on reimbursement. If they don't have the cash, they cannot do the work; therefore, they cannot come to COR3 and ask for reimbursement. Same thing with the public corporations. That has been a major issue because it is limited by regulation.

And let me give you another important aspect of that. FEMA adopted 2 CFR in 2014, and that is the limitation before that. The regulation previously adopted allowed for 50 percent advancements after obligations. So, imagine Puerto Rico being under bankruptcy, no cash, no access to capital, how will we be able to push forward permanent work projects if there is no cash, and then you have to rely on reimbursements?

That is the reason why we came up with this creative program called Working Capital Advance. It was instituted 2 months ago. It was first in place for municipalities, then expanded to the power authority, and then to the water authority, and soon will be expanded to the Puerto Rico Department of Education, and then public housing.

That is the reason why you have seen a major increase in disbursements, because in the last 2 months, we have been advancing 25 percent of the obligated money by FEMA.

The second ask, I will say, is that we mentioned the match, the global flexible match, for Public Assistance. Although FEMA has granted us to apply the global match for the FAASt projects, which is a major advancement, there is a restriction in the Stafford Act that has been integrated as a limitation to apply global match for the whole recovery. Therefore, that could be an opportunity to go back to the Stafford Act and take a look at that.

And number three, the FAASt implementation. I think the FAASt was a novel, great idea to accelerate the obligation of funds, the availability of a budget, to have certainty. And it was approved, remember, in September 2020. This is for PREPA, for the Department of Education, also obligated in September 2020; and for PRASA, the water authority, January 2021; and for public housing, January 2022.

But the implementation of the FAASt is one of the greatest lessons learned, because I think it was stated before that you have to go back individual project by project and resubmit that to FEMA. And FEMA has to make sure that it complies with the environmental and historic preservation statutes at the Federal level and also look at opportunities for hazard mitigation measures.

I have to say that in the last 6 months there has been a major improvement in the FAASt implementation, but at the beginning, it was very, very challenging. I will give you an idea. Last year, zero projects were approved for the energy reconstruction. Today, actually, we have 47, and we expect to have 100 before the end of

the year. So, that is a major improvement, but at the beginning, it was very challenging.

And the last comment I want to make is about capacity. I think that the gentleman from GAO mentioned something very important. We recognized that when we enter in COR3 in 2021, January, that is why we dedicated a lot of resources and time for 2021, for the most part, and part of 2022, to increase capacity through the municipalities, the agencies, and the NGOs that are receiving money from FEMA for their repairs.

I will tell you this, in the beginning, there was a risk. I will admit that. But 20 months later, the capacity has been increasing dramatically in a good way. We feel very confident that now the municipalities can execute, and they have the full support of COR3 because we provide the technical assistance to ensure that the procurement is done right, that the projects are executed, and that they comply with all the Federal FEMA requirements.

Thank you.

Ms. TITUS. Thank you.

Mr. Webster?

Mr. WEBSTER OF FLORIDA. Yes. Thank you, Chair.

Mr. Currie, of the work you have done reviewing the recovery efforts, are there any key provisions or lessons that have been learned that could be used in future responses and recovery in other disasters?

Mr. CURRIE. Yes, sir. First of all, the situation in Puerto Rico and USVI is so unique, just given their fiscal situation when the disasters hit, that other than some of the other Territories in the Pacific, I am not sure I can draw a parallel to other States. Because one of the biggest challenges, Mr. Laboy just summarized it extremely well, is that, unlike Florida or Nevada or Mississippi or any other State, when there is a disaster, they have the ability to front the funds through loans or bonds or things like that, so they can do debris removal, start the repairs and things like that, and then get reimbursement later.

I think the biggest lesson learned for me with this is that, first of all, maybe not rolling out a brandnew program that even FEMA itself or the Federal Government hasn't tested in a disaster like this. I think that was the biggest challenge. I think upfront, there were a lot of mismatched expectations, and I think both Puerto Rico and Virgin Islands were under the assumption that these section 428 disbursements were going to be funds that would be provided once they got to some sort of agreement. That has not been the case.

It is just a promise of funding, and as Mr. Laboy said, even though you got to those agreements, there is a back and forth that is going to go on for many more years about individual projects. So, I think the question has come up of, should we have just used that process to begin with instead of putting all that work upfront to come to some of these upfront cost estimates? So, that is one lesson learned.

Mr. WEBSTER OF FLORIDA. Thank you very much.

Director Williams-Octalien, the USVI Water and Power Authority has received a significant amount of funding since the 2017 hurricanes. However, it seems that they have planned a transition to

solar energy, despite outstanding obligations for the existing liquid propane gas system.

What is the USVI doing to ensure existing obligations are met and that Federal funding is being used to support rebuilding that will integrate into the existing power capabilities?

Ms. WILLIAMS-OCTALIEN. Thank you for that question. The Water and Power Authority has developed a transformational plan that includes the various sources of energy in trying to move our archaic dependency on fossil fuel into more renewables. We have utilized all of the Federal funding sources, including the Public Assistance to its mitigation, as well as the Hazard Mitigation Grant Program, and also the CDBG funding program, recovery program, in order to transform. It is a combination of developing composite poles, undergrounding, microgrid projects, battery energy projects, as well as the new generation projects that we have had that will transform the Water and Power Authority to more efficient fuels.

So, we have developed this overall plan that is working together with the Water and Power Authority. The first project that is really going to impact us is a new generation project of the powerplant on the island of St. Thomas that we are expecting the batteries to come online in the first quarter of next year, allowing to impact not only our energy reliability in the Virgin Islands, but also our effectiveness in terms of keeping the power on and keeping the cost down.

You may be aware, the Virgin Islands has some of the highest energy costs in the Territory, so the recovery funds have been chartered and directed towards making sure that we address not only reliability, but cost in shift—being able to load shift from—to our end battery energy solutions, as well as moving back and forth in terms of keeping the power on in the Territory.

Ms. TITUS. Thank you, Mr. Webster.

Ms. Norton?

Ms. NORTON. Thank you, Madam Chair.

Mr. Laboy, although FEMA approved 95 percent of Public Assistance projects for Puerto Rico's recovery, after 5 years, much of this reconstruction has yet to be completed and, in many cases, not even yet begun.

What are the challenges that hinder reconstruction efforts, and what is COR3 doing to ensure timely progress on approved projects?

Mr. LABOY. Thank you. When we started this role in 2021 January, FEMA had obligated about \$13.5 billion worth of permanent projects. And they continue to obligate permanent work funds until today. That number went from \$13.5 billion to close to \$22 billion in about 20 months.

The challenge that we saw at that point, it was that there was already enough money obligated, and we wanted to get these projects going to get into construction. But the reality is that, once the project is obligated, there are multiple steps that the municipality or the agency needs to take into account in order to see that project into construction. In the case of the FAAS projects, PREPA, PRASA, and the Department of Education, they need to develop scopes of work.

I think that there was this expectation in 2020 that when FEMA obligated the funds for PREPA and the Department of Education, the next day there would be projects, shovels in the ground. That was never the case because that obligation never authorized construction. It was just a budget. Then, PREPA and the Department of Education, and later PRASA, have to go project by project, submit scopes of work to FEMA to go through the whole, entire process evaluation, and then get the approval so then they can go to construction.

In the case of the municipalities, in the beginning, we saw certain gaps for capacity. We addressed those gaps because we did a lot of training, and we provided a lot of technical assistance and tools, and then started to see much progress on the municipalities' projects. Then again, the cash strap, the cash limitation. That is why we were able to implement the Working Capital Advance, and for the last 2 months, it has been a total success, because most of the funds that we have been able to disburse for permanent work, the majority have been disbursed for the last 2 months because of the Working Capital Advance.

There is also another challenge that we saw, is that for the section 428, the fixed-cost estimate, aside from the rising cost of construction and the inflation impact, the reality is that they provide an opportunity to do things differently, to actually build back better, to provide opportunities to submit improved projects or even alternate projects. The issue is that, every time you want to do that, you have to go back to FEMA. So, in every instance, the way you look at it, for the most part, you have to go back to FEMA to get an approval, whether you are versioning the project worksheet, whether you are changing the scope of work, whether you are improving the project, whether you are proposing an alternate project, or in the case of the FAASt, every time that you develop a project, you have to submit a scope of work.

In the case of the energy infrastructure, it is even more complicated, because they need the approval of the independent energy regulator. So, before even going to FEMA, after 2020, every project, even today, has to go to the Puerto Rico Energy Bureau, get their blessing, and after that, then, develop the scope of work, submit it to FEMA, and then from FEMA, get the approval for construction.

Now, the good news is that we have overcome basically almost all of those challenges since 2021. That is why we are very optimistic that there is really a pathway for the road to recovery because of the number of projects that we have in construction, the projects that have been completed, and the projects we expect to be in construction in the years to come.

So, certainly, there are still challenges. I will say that the rising cost is something that we need to monitor closely, number one. Number two, the availability of skilled labor, it is very important; and then keep addressing the cash gap. Once we do all those three, I think that the future looks even more optimistic, from our point of view. But I will say that the contrast has been really 180 degrees in the right direction.

The support has been there from FEMA. I will say that we are very appreciative about the support, and that is why we are seeing

this progress. But there is a lot of work that remains to be done to continue this momentum.

Ms. NORTON. I must say, Madam Chair, that this process needs to be streamlined.

But my time has expired, and I yield back.

Ms. TITUS. Thank you. I think you are exactly right.

Miss González-Colón?

Miss GONZÁLEZ-COLÓN. Thank you, Madam Chair.

I want to begin by something Mr. Laboy just brought, the suggestion about Stafford Act amendments. And to that end, I have H.R. 2017 before this committee, which includes an extension of the global match and other measures to ease these procedures. And I think this bill, after being in the Virgin Islands, being in Puerto Rico, and managing decisions for the last 5 years, between FEMA and the Government agencies as well, it is a way to put this money that has been approved by Congress in the right hands to work. So, I encourage—you can see it, and we are ready to work with you and this committee to try to ease the situation.

So, having said that, there is another issue regarding opportunities, and that is the Working Capital Advance that will allow the government of Puerto Rico to use it for FAASt projects, specifically for schools and public housing on the island as well. So, those are opportunities that if we can—of course, that is a question to FEMA that we are going to be submitting in writing to see if we can have that Working Capital Advance and manage the reimbursement situation. We have got a hospital that Congress allocated funding to Vieques that has not been built because of the lack of funds, and the island is still waiting for that.

But I want to make my questions now to LUMA. Last April, we were in a total blackout due to equipment malfunction. And since then, we have repeated interruptions on the island, sometimes involving hundreds of thousands of customers being without power, including me, right. Just to make that clear, I go to my house every weekend, and I am one of the people that suffers this directly, and I don't have a generator.

So, this situation is not involving disasters, and that is my main concern. People in Puerto Rico always expect those interruptions to happen during May to September, to November, due to the hurricane season. So, you must have known the condition of the grid when you took over, and honestly, we don't see improvement.

I read your numbers and your briefing today to this committee. And actually, you brought more information than ever before LUMA has said to the public in Puerto Rico regarding the electric grid on the island. And you were hired, actually, to fix the problem.

So, my question to you would be: What is the estimated time for the grid to be up to date and ready to be considered up to current standards? And how much of that will rely on FEMA funding?

Ms. BAHRAMIRAD. Congresswoman, that is an excellent question. I would answer that it has already improved. Since we took over, as I mentioned in my testimony, the design of the system was extremely poor. The foundational standards and the models that every utility around the country, they have it in order to scope the projects right, never existed. So, we had to go out. And as I stated,

scoping the project needs to be done per data, sound engineering, and science. And that is something that we have taken seriously.

Miss GONZÁLEZ-COLÓN. And what is the estimated time to have the system up to standards?

Ms. BAHRAMIRAD. Yes. So, as of in the past 15 months, the system reliability has improved by 30 percent.

Miss GONZÁLEZ-COLÓN. So sorry to interrupt. I have just got 1 minute. If I can know, what is going to be the specific time that Puerto Rico will have an updated system? Can you have that number?

Ms. BAHRAMIRAD. This is a journey, Congresswoman. As—

Miss GONZÁLEZ-COLÓN [interrupting]. One year? Two years? Five years? Ten years?

Ms. BAHRAMIRAD. The importance of FEMA projects is that it is going to help continuing and building on the progress that has been made. As I stated, the frequency of the outages has improved by 30 percent, and the projects in the pipeline—

Miss GONZÁLEZ-COLÓN [interrupting]. You are an engineer, right?

Ms. BAHRAMIRAD. I am. I have a Ph.D. in electric power systems.

Miss GONZÁLEZ-COLÓN. So, you do plans for the future. My question here is: What is the timeline for having the power grid on the island fixed? That is the simple question. Is it 1 year? Two years? How many months?

I know that you rely on Federal funding to make part of that progress. Do you have that timeline?

Ms. BAHRAMIRAD. In the upcoming months and years, I can commit to you that the reliability of the system is going to be—

Miss GONZÁLEZ-COLÓN [interrupting]. So, you don't have that data that I am asking for?

Ms. BAHRAMIRAD. What I can share with you is that the number of projects that are currently in the pipeline of FEMA, and every single one of them is going to improve the reliability of the system.

Miss GONZÁLEZ-COLÓN. OK. We don't have a timeline of when the system is going to be ready. I just want that answered.

How many personnel are in the field right now actually rebuilding the grid?

Ms. BAHRAMIRAD. So, we have 3,428 employees at LUMA, and over 1,300 of them work in the field. But this is a team sport. The people in the field that work from substations, restoration, and commissioning transmission and distribution, they get supported by dispatchers, by the operation control center and others, and they work very hard to restore the system.

Miss GONZÁLEZ-COLÓN. So, if we—I mean, if you have the personnel there, and right now we are in hurricane season as we speak, my question is: How long will it take for you to use the mutual agreements LUMA may have at this time—if there is a hurricane this weekend, how long will it take for you to bring people to the island to fix this?

Ms. BAHRAMIRAD. There has been a lot done in terms of preparation for hurricanes that I am very happy to share with you. I have been very closely monitoring what has been going on today, and as you might have heard, Tropical Storm Fiona, the current maximum sustained wind of 50 miles per hour is—

Miss GONZÁLEZ-COLÓN [interrupting]. Sorry. I know that. I don't have enough time. My question is: The mutual assistance agreements that you have in place, when are they going to be arriving to the island, and with whom do you have mutual assistance agreements right now?

Ms. BAHRAMIRAD. Oh, we have a number of mutual agreements in place. We have established an agreement with Caribbean Electric Utility Services Corporation, Edison Electric Institute, and American Public Power Association. I have been in calls with every single one of them making sure that there is a process in place. And if an issue happens, they are going to be providing support and assistance as part of the process.

Miss GONZÁLEZ-COLÓN. What is the deployment time for them to reach the island?

Ms. BAHRAMIRAD. So, it depends on the forecast of the hurricane. We make calls to those mutual assistance agencies, and we inform them. I can tell you that today, our team in the morning, they have made those calls. And depending on how the storm or hurricane approaches the island, we will inform them, in collaboration with PREMB and FEMA, ESF 12, COR3 and a number of other governmental agencies.

In addition to that, there are 120 assets and units deployed as part of our preparedness commitment to the island, and it is ready for the line workers to be flown to the island and help with the restoration of the system.

Miss GONZÁLEZ-COLÓN. Ma'am, I know my time has expired. I will submit a lot of questions for the record, and we should know why we should have LUMA continuing in charge of the grid. I am really concerned about the outages in the island, even when there is no disaster onsite. So, I am really concerned about that.

Thank you, Madam Chair. I yield back.

Ms. TITUS. Thank you. I am sure there will be a number of questions submitted to the record, and we will pass them on to you all. I appreciate the answers.

I have allowed almost everybody to go over the 5 minutes because this information is so important. And rather than stopping you and coming back and doing a second round, I think it makes sense just to get the answers as we go.

We will now go to Mr. García.

Mr. GARCÍA OF ILLINOIS. Thank you, Madam Chair.

This is a question for Director Currie. A number of low-income households are forced to move from their communities in order to receive reconstruction aid due to the lack of mitigation projects in hazard areas. Even if flooding never occurred before, during, or after the hurricanes, too many are denied help to rebuild their homes, and no mitigation alternatives are given.

My first question is this: In your opinion, has FEMA taken the needed steps to consistently integrate hazard mitigation into its recovery process, and has there been effective planning on the project together with other agencies such as HUD to effectively attend to the needs of the most vulnerable populations in Puerto Rico?

Mr. CURRIE. Quick answer is, no, I don't think enough mitigation has been incorporated into the programs. And part of that is because of the way the programs were managed in the past. Most of

these programs were designed to rebuild infrastructure the way it was before, not to build past current condition for the future. So, I think they have gotten better over the last 5 years or so, but there is a long way to go.

And then, to answer your second question about low-income communities, I mean, one of the things we have reported on is that FEMA and HUD and others all have not done a very good job of considering the impact of these programs, specifically on these communities and how the capacity of these communities impacts the recovery. And we have made several recommendations to try to get these agencies to think a little bit more about the impact and how these programs can be targeted to help these communities.

Because every community is different. I think some communities have a huge level of capacity and a lot of resources to manage recovery and a lot of staff, and others don't. And that is not just the case in Puerto Rico and VI, but that is the case in certain parts of the States as well.

Mr. GARCÍA OF ILLINOIS. Thank you for your candid answer, disappointing as it may be.

My second question is a two part. Has the GAO developed and published the Disaster Resilience Framework to support analysis of Federal opportunities to facilitate and promote resilience to natural disasters, part 1? And part 2 is, has it been applied to Puerto Rico and with what conclusions?

Mr. CURRIE. Yes, sir. The answer to the first question is yes. We have issued a Disaster Resilience Framework, and the idea behind that is that we think that resilience should be built in by decisions by policymakers at all levels throughout the process, including before, during, and after a disaster. These disasters are terrible, but they also damage a lot of infrastructure and provide an opportunity to rebuild that. There really would be no other way you could get this much funding at one time. So, it is a tremendous opportunity. So, yes, we have done that, sir.

And I am sorry, your second question, again?

Mr. GARCÍA OF ILLINOIS. The second part was: Have these lessons been applied to Puerto Rico and with what conclusions?

Mr. CURRIE. Well, I think Congress went a long way in doing this in the BBA and trying to build this into the recovery from the very beginning, recognizing that we weren't just going to be able to rebuild the way things were. We needed to rebuild past preexisting condition. However, I just don't think, because of some of the complexity and the bureaucracy of these processes, it has been easy to incorporate resilience into the recovery thus far.

So, one of my biggest concerns is that, to speed up recovery, we are going to bypass some of the resilience measures that we could build in, which are a lot more complicated to implement.

Mr. GARCÍA OF ILLINOIS. Thank you.

And cognizant of my time, I want to switch gears and ask Executive Director Laboy the following question regarding Vieques. The hospital is taking too long to build back. People are dying or having to abandon their communities due to the lack of specialized medical care in Vieques, and now even in Fajardo. And the provisional infirmary that has been put up in place is crassly insufficient.

What are the main obstacles to advance the reconstruction of the hospital, and has COR3 identified other more effective ways to provide medical service to the people of Vieques while the hospital is built back completely? And if not, what is hindering you from doing so?

Mr. LABOY. Thank you, Congressman García. That is an excellent question.

The first thing is that FEMA obligated the funds for the Vieques hospital early in January 2020. And sadly, the municipal leadership at the time probably had some challenges of how to move forward with the processes that need to be in place after the funds are obligated.

The good news is that when Governor Pierluisi took office in January 2021, about the same time that I also entered COR3, it was clear that the hospital was going to be a top priority. So, we devised a strategy to do the conceptual design of the hospital, present it to FEMA, get the approval from FEMA, and from there, also secure funding. At that point, the obligation was about \$39 million for the Federal share. After we were able to proceed with the adjustments of insurance, it was actually increased to \$43 million.

We worked together with the State agency that dedicates its efforts on infrastructure projects, and together, the good news is that the old facility was demolished, finally. Actually, it was demolished about 1 or 2 months ago. And now, the design-build or the request for proposals to finish the design for the new hospital and also to construct the new hospital is already published, and we are receiving the different proposals from the contractors.

So, it will be awarded according to the Federal procurement that applies to this, and then secure the final permitting, and then begin construction. It is right now running on schedule. And it is expected that it finally will begin construction at the end of December this year maybe, but most likely it will be early January 2023. And it is going to be built in phases, and the last phase should be operational before the end of 2024.

The obstacle I will say that something related to Mr. Currie. I think that once the funds were obligated to the municipality of Vieques, I think that there was a gap in terms of execution, the capacity to execute on the municipal side. Once it changed administration, the new major was able to work together with COR3, work together with the Pierluisi administration, and things have been turned around positively. Now, it is going to be a reality. Construction is going to start very soon, and we hope that by 2024, the people of Vieques will have what has been deserved, which is access to healthcare.

If I may, Chairman Titus, one question that Congresswoman González-Colón mentioned about the plans for the grid. For the record, LUMA and PREPA have to submit to FEMA and COR3 every quarter 90-day plans for the projects, and they also submitted a 5-year plan to FEMA and COR3. So, there is a 5-year plan for projects associated with the reconstruction of the grid.

Mr. GARCÍA OF ILLINOIS. And, Mr. Laboy, with the services until the hospital is built and operational?

Mr. LABOY. That is something that has been delegated to the Department of Health. It is a top priority, and they have right now

a plan, an executed plan, that while the hospital is being built and hopefully before 2024, it is going to be operational; in parallel, the Department of Health has to secure the services for healthcare in the municipality of Vieques and also Culebra, because Culebra also benefits from these services. So, it has been appointed to the Department of Health to ensure that it happens.

Mr. GARCÍA OF ILLINOIS. Madam Chair, thank you for your indulgence. I yield back.

Ms. TITUS. Thank you, Mr. García.

Well, thank you to our witnesses. We have heard that you just can't build back to the way it was. It makes no sense. With climate change, there is not going to be fewer hurricanes. We can expect there may be more, so to build back to the old standards just won't do. We have got to build back better and take that mitigation into consideration.

Also, we heard a lot about the renewable energy moving to cleaner energy as part of this administration's emphasis. Another part of the administration's agenda is an across-Government emphasis on justice. And that can be economic justice, can be environmental justice, can be social justice. So, as we look at building back, we need to keep that always in the forefront to be sure that it is built back with consideration of environmental justice so some areas don't benefit and others are left behind.

Well, we thank you very much. This has been very interesting and something that we needed to do.

Thank you, Miss González-Colón, for helping us with this.

I would like to ask unanimous consent that the record of today's hearing remain open until such time as our witnesses have provided answers to questions that will be submitted in writing.

I also ask unanimous consent that the record remain open for 15 days for any additional comments and information submitted by the Members or by the witnesses that you would like to have included in the record.

Without objection, so ordered.

And the subcommittee stands adjourned.

[Whereupon, at 12:05 p.m., the subcommittee was adjourned.]

SUBMISSIONS FOR THE RECORD

Prepared Statement of Hon. Sam Graves, a Representative in Congress from the State of Missouri, and Ranking Member, Committee on Transportation and Infrastructure

Thank you, Chair Titus.

This hearing is timely, given we are now 5 years out from the devastation that struck Puerto Rico and the U.S. Virgin Islands with hurricanes Maria and Irma.

As FEMA's committee of primary jurisdiction, we have worked over the years on a bipartisan basis to improve our Nation's emergency management system.

While there have been reforms and improvements to FEMA processes, there is still a lot that needs to happen to speed up recovery from disasters and build in mitigation.

I look forward to hearing the updates from our witnesses, including progress and challenges, and your suggestions on how we can better streamline and speed up the process.

I look forward to hearing from our witnesses today.

Thank you, Chair Titus. I yield back.

Statement of Dawn Bauman, CAE, Senior Vice President, Government and Public Affairs, Community Associations Institute, Submitted for the Record by Hon. Dina Titus

ABOUT COMMUNITY ASSOCIATIONS INSTITUTE AND THE COMMUNITY ASSOCIATION HOUSING MODEL

CAI is the only international membership organization dedicated to inspiring professionalism, effective leadership, and responsible citizenship in homeowner associations, condominium associations, and housing cooperatives. At CAI, we believe homeowner and condominium associations and housing cooperatives (collectively, community associations) should strive to exceed the expectations of their residents. We work toward this goal by identifying and meeting the evolving needs of the professionals and volunteers who serve associations, by being a trusted forum for the collaborative exchange of knowledge and information, and by helping our members learn, achieve, and excel.

CAI and its 64 chapters provide education, tools, and resources to the volunteers who govern community associations and the professionals who support them. CAI's 43,000 members include community association volunteer leaders (homeowners), community managers, association management firms, and other professionals who provide products and services to associations. CAI's vision is reflected in community associations that are preferred places to call home.

The community association housing model is prevalent across the nation and is a growing component of the national housing stock. According to the Foundation for Community Association Research, 74 million individuals have chosen to make one of America's 355,000 community associations their home.¹ Residents are attracted to community associations for many reasons including access to amenities, proximity to schools, and a stronger sense of community. All community association homeowners pay regular assessments to fund the governance activities of their association.²

¹ Foundation for Community Association Research: *Statistical Review 2020-2021*. Available at https://foundation.caionline.org/wp-content/uploads/2021/07/2021StatsReview_Web.pdf.

² All community associations have three defining characteristics: (1) membership is mandatory and automatic for all owners; (2) certain legal documents bind all owners to be governed by the

Continued

COMMUNITY ASSOCIATIONS AND DISASTER RECOVERY

In the wake of a major natural disaster, many community association homeowners discover their neighborhood is not eligible for the full measure of federal disaster response and recovery resources. Rules governing the Federal Emergency Management Agency's (FEMA) Public Assistance Program and Individuals and Households Assistance Program are designed to support disaster recovery in traditional, non-community association neighborhoods. This disparity forces association homeowners to absorb significant debris removal costs and prevents the use of Individuals and Households Assistance for repairs to essential common elements in condominium and cooperative buildings. In areas of our nation where housing laws, practices, and traditions vary from those anticipated by Stafford Act programs, federal disaster assistance can be delayed or inaccessible. CAI supports updating the Stafford Act's Public Assistance Program and the Individuals and Households Assistance Program to effectively reach our fellow citizens where they live. This is all the more critical when housing systems differ from those contemplated or accommodated by policymakers when the Stafford Act was enacted and its implementing regulations were written.

Community associations are a new model of housing for our nation, evolving and growing over the past 30 years. Because the community association housing model was not anticipated by policymakers when first designing disaster assistance programs, association homeowners in all states and territories of the U.S., and the District of Columbia face large special assessments as their community association seeks funds to recover from natural disasters.

Community associations lack the resources of a municipal government, and the sole source of funds are association residents. Community association insurance products frequently contain exclusions and special conditions regarding debris removal. Policy exclusions and limits can lead to lower insurance claims, leaving condominium homeowners to fund disaster debris removal and repairs to essential common elements like roofs, HVAC systems, and elevator machinery. Non-association homeowners do not receive a special tax assessment from their municipal government to fund debris removal costs. Non-association homeowners may use Individuals and Households Assistance to fund uninsured repairs to their home's roof, HVAC system, and utility access points. These disaster recovery program disparities extend the misery of a natural disaster for community association residents and increase recovery costs for community association disaster victims.

H.R. 5298, THE DISASTER ASSISTANCE EQUITY ACT OF 2021

Rep. Jerry Nadler and Rep. David Rouzer introduced H.R. 5298, the Disaster Assistance Equity Act of 2021, to address the disparities in federal disaster assistance available to community association residents compared to non-association residents. H.R. 5298 allows municipal governments to be reimbursed by FEMA for debris removal activities in planned communities when a State or local government finds that disaster debris in a planned community threatens life, public health and safety, or the economic recovery of the community. H.R. 5298 further allows condominium and cooperative homeowners to use Individuals and Households Assistance to fund repairs to essential building elements damaged by a major natural disaster.

H.R. 5298 enjoys bipartisan support because the legislation treats disaster victims fairly. The legislation allows all disaster victims access to essential services on an equal basis. H.R. 5298 also enjoys bipartisan support based on the growth of the community association housing model—the places we choose to live are changing. Federal disaster response and recovery statutes must accommodate this change.

Had H.R. 5298 been law when hurricanes Irma and Maria struck Puerto Rico and the U.S. Virgin Islands, community association residents—condominium association homeowners and residents in particular—could have funded a portion of the difference between insurance claims and repair costs with Individuals and Households Program repair assistance. As it was, condominium associations and homeowners faced significant gaps between insurance claims payments and amounts required to restore their homes to habitable status.³ H.R. 5298 would have allowed condominium homeowners to reduce the gap between insurance claims and amounts necessary to repair condominium buildings. Condominiums in San Juan, Puerto Rico

community association; and (3) mandatory lien-based assessments are levied on each owner to fund association operations and services. There are three basic forms of community associations: condominiums, cooperatives, and planned communities.

³Francis Robles and Patricia Mazzei, "After Disasters, Puerto Ricans Are Left with \$1.6 Billion in Unpaid Insurance Claims," *The New York Times*, February 6, 2020. Available at <https://www.nytimes.com/2020/02/06/us/puerto-rico-insurance-tsunami.html>

remain in various states of disrepair, which can lead to threats to human life and health and depress the economic recovery of the region.⁴

CAI urges Congress to enact H.R. 5298. Providing all homeowners access to the same disaster benefits notwithstanding differences in housing traditions and forms is not special treatment—it's the right thing to do.

⁴Jack Hanks, “Surfside condo collapse should be a lesson for Puerto Rico” *Orlando Sentinel*, July 06, 2021. Available at <https://www.orlandosentinel.com/opinion/guest-commentary/os-op-condo-collapse-lessons-for-puerto-rico-20210706-ndlrjwmi4jhj5fuhu7ypbfwqka-story.html>

APPENDIX

QUESTIONS FROM HON. DINA TITUS TO ANNE BINK, ASSOCIATE ADMINISTRATOR,
OFFICE OF RESPONSE AND RECOVERY, FEDERAL EMERGENCY MANAGEMENT AGENCY

Question 1. It has been 5 years since Hurricane Maria and Irma struck Puerto Rico and the U.S. Virgin Islands. Although FEMA has obligated billions of recovery funds to both locations, very little construction has started and full recovery remains a distant goal.

Although FEMA is primarily responsible for approving funding for obligation, what actions, if any, has FEMA taken to assist the governments of Puerto Rico and the U.S. Virgin Islands with the disbursement of funding?

ANSWER. The Federal Emergency Management Agency (FEMA) is aware of the liquidity issues affecting the Government of Puerto Rico and is working to obligate projects as quickly as possible. FEMA is coordinating with the Central Office for Recovery, Reconstruction and Resiliency (COR3) to expedite the implementation of projects. This assists the Commonwealth with expediting its Requests for Proposal/contracts process.

FEMA is supportive of COR3's Working Capital Advance program, which aims to provide the liquidity that sub applicants need to execute contracts and begin construction work. The Working Capital Advance program originally sought to provide municipalities with a 25 percent advance of FEMA obligated funds for permanent projects, the program will now provide up to 50 percent of working capital per project, based on need, for immediate liquidity to advance recovery forward.

According to COR3, approximately 2,132 recovery projects are under construction and roughly 1,190 are complete. Some of the most vulnerable municipalities have the largest funding amounts obligated and reconstruction activities in their communities are underway. Several roads in Barranquitas, Jayuya, Orocovis, and other mountain towns are already repaired or rebuilt, providing residents with safe access routes.

Loiza, one of the most disadvantaged towns on the island, has completed projects like parks and community centers. These community centers and recreational spaces are the cornerstones of many of the island's neighborhoods. The Juan F. "Cheo" Lopez Baseball Park in Camuy, a town in central Puerto Rico, held its first night game in four years with the help of FEMA's obligation, which included funds to repair its lighting system. More than 1,000 families in the remote towns of Hormigueros and Aibonito now have repaired basketball courts with an allocation of over \$2.2 million for several facilities. The Felix Millán stadium in Yabucoa has been demolished. The bid proposal request for the construction of the new stadium is expected to occur between January and March 2023. More than a baseball stadium, this facility is a local icon and the flagship of the municipality.

Once funds are obligated, those funds are available to COR3 to manage and provide to subrecipients, as appropriate. COR3 is solely responsible for ensuring that reimbursements for recovery projects meet the statutory, regulatory, and programmatic requirements established by FEMA. As the unprecedented recovery continues, FEMA is providing a historic level of support to Puerto Rico, both financially and in the form of technical guidance. Through continuous interaction and communication with COR3 and subrecipients, FEMA can clarify documentation requirements and conditions to help avoid delays and ensure project formulation processes can move forward. Likewise, FEMA, through its Office of Chief Counsel and in close coordination with the Procurement Disaster Assistance Team, has provided detailed procurement compliance review to COR3 as part of its technical compliance assistance. The intent behind this type of review is that projects meet not only federal contracting requirements, but state and local ones as well.

FEMA and its federal partners will continue to provide technical assistance to COR3 and all subrecipients to ensure recovery continues to move forward. To this end, FEMA has an active multi-year interagency funding agreement with the U.S.

Department of Energy (DOE). Under this agreement, DOE—together with FEMA—is providing technical assistance to the Commonwealth to identify, review, and prioritize electric grid solutions. Through this collaboration, the focus is on increasing grid resilience for Puerto Rico communities in line with the Government's goal of reaching 100 percent renewable electricity in the next 25 years. Known as PR100, the overall community-driven study is led in close collaboration with DOE. PR100 also aims to improve power sector resilience and increase access to more affordable energy and cleaner air. The Puerto Rico Technical Coordination Team and the PR100 Advisory Group meet monthly to discuss progress and next steps related to this unprecedented study. FEMA remains committed to continue working closely with the Government of Puerto Rico to advance long-term recovery.

Response Regarding U.S. Virgin Islands (USVI) Recovery:

FEMA is aware of the liquidity issues affecting the Government of the Virgin Islands and is working to obligate projects as quickly as possible. FEMA is coordinating with the Office of Disaster Recovery (ODR) and Virgin Islands Territorial Emergency Management Agency (VITEMA) to expedite the implementation of projects. This assists the territory with expediting their Requests for Proposals/contracts process. Once funds are obligated, those funds are available to the Grantee to manage and provide to subrecipients, as appropriate.

- Public Assistance: As of September 15, 2022, FEMA has obligated \$4.3 billion and the Territory has expended/drawn down nearly \$2.4 billion.
- Hazard Mitigation Grant Program (HMGP): FEMA has obligated \$138.2 million. The Territory has expended \$18.4 million of HMGP funding as of September 14.
 - FEMA has designated another \$324.6 million in HMGP funding for phase 2 project construction and strategic funds management to assist the territory.

Much of the funding obligated under HMGP is phased to provide funding for engineering design; upon phase 1 completion of design, FEMA reviews the scope and cost to provide approval to proceed to construction. Due to Territorial contracting processes and availability of contractors, many of the engineering designs have longer-than-usual timelines. FEMA has supported the Territory in expediting the phase 1 engineering required for many complex projects including supporting the Territory's consolidation of engineering design for transportation and drainage projects under the Department of Public Works. In contrast to the aforementioned process in Puerto Rico, ODR provides Territorial disbursement packages to FEMA for review, these include sub-recipient invoices. FEMA provides concurrence to the Territory to allow reimbursement of project costs in a timely manner.

To assist in expediting the project scoping and implementation, FEMA meets at a minimum twice weekly with the Territory to provide guidance and technical assistance. For large priority projects (428 Public Assistance Alternative Procedures), FEMA and VITEMA have established a bi-weekly project management meeting to address questions and track the development of the projects. In addition, for projects with funding that would be derived from FEMA and its federal partners such as U.S. Department of Housing and Urban Development and United States Army Corps of Engineers, the FEMA Interagency Recovery Coordination office coordinates with the other agencies in support of the Territory to assist in expediting project actions. We also continue to meet with the Territory to assist in moving projects forward including collaboration with the USVI Department of Natural Resources to support the territorial sub applicants.

Question 2. Municipalities and agencies in Puerto Rico have raised concerns about costs increases due to inflation. This is of particular concern for projects with fixed costs estimates under Public Assistance alternative procedures and FAAsT. Some officials have noted that they will not be able to repair all damages originally identified.

- 2.a. Please explain the extent of cost overruns that FEMA has observed for launched FAAsT projects in Puerto Rico. What actions may FEMA take if actual costs of FAAsT projects consistently exceed estimates on which FEMA awards are based?

ANSWER. To date, FEMA has not seen any examples of project cost overruns for the FEMA Accelerated Awards Strategy (FAAsT) projects in Puerto Rico. FEMA continues to work with the Government of Puerto Rico to address any concerns they may have regarding cost overruns.

FEMA recognized early on that inflation, supply chain, and job market issues would have major impacts on the recovery in Puerto Rico and USVI. As a result, FEMA includes cost factors in every fixed cost estimate for all Public Assistance Section 428 projects. This includes a specific adjustment for inflation over the length

of the project, and a separate adjustment called the Future Price Factor (FPF) to account for anticipated changes to labor, materials, and equipment costs associated with the anticipated shock to Puerto Rico's and USVI's construction industry over the time. These factors are regularly updated based on changing conditions, and each fixed cost estimate is developed and mutually agreed upon by the Recipient, Subrecipient, and FEMA. Additionally, as part of the flexibility of Section 428 projects, the Government of Puerto Rico (Recipient) or Subrecipient may use all or part of the excess funds to cover overruns on other Section 428 projects under the same applicant.

Once an agreement is reached, adjustments to the fixed-cost estimate are limited to insurance adjustments, adjustments for approved Scope of Work changes associated with Section 406 Hazard Mitigation proposals or the outcome of a Bipartisan Budget Act (BBA)-related appeal.

2.b. Please explain the extent the concern for cost overruns has delayed the obligation of alternative procedure projects in the USVI.

ANSWER. To date, FEMA has not seen any examples of project cost overruns for Section 428 projects in the USVI. However, FEMA has been informed of instances where obligated amounts exceeded the public requests for proposals, with the difference serving to benefit the subrecipient. FEMA continues to work with the USVI to address any concerns they may have regarding cost overruns.

FEMA recognized early on that inflation, supply chain, and job market issues would have major impacts on the recovery in Puerto Rico and USVI. As a result, FEMA includes cost factors in every fixed cost estimate for all Public Assistance Section 428 projects. This includes a specific adjustment for inflation over the length of the project, and a separate adjustment called the FPF to account for anticipated changes to labor, materials, and equipment costs associated with the anticipated shock to Puerto Rico's and the US Virgin Islands' construction industry over the time. These factors are regularly updated based on changing conditions, and each fixed cost estimate is developed and mutually agreed upon by the Recipient, Subrecipient, and FEMA. Additionally, as part of the flexibility of Section 428 projects, the USVI may use all or part of the excess funds to cover overruns within each 428 project.

In addition, FEMA and the USVI have agreed to engage in a Dispute Resolution process to address any disagreements in the Section 428 project's Scope of Work and/or Cost, prior to the fixed cost estimate being accepted.

2.c. In FEMA's estimate, has the required use of Alternative Procedures for most large-scale recovery projects in Puerto Rico proved successful?

ANSWER. Alternative Procedures provides applicants with the most flexibility in order to successfully recover, including applicants in Puerto Rico recovering from Hurricanes Irma and Maria. This flexibility, when paired with historic investments in FEMA Public Assistance funding for Puerto Rico's recovery—including the largest permanent work project ever obligated (\$9.5 billion)—will drive a successful recovery for Puerto Rico.

2.d. Would FEMA again require the use of Alternative Procedures for large-scale projects for a major disaster, particularly those with severity comparable to Hurricane Maria?

ANSWER. Regardless of the size of an incident, FEMA continues to encourage all applicants as the first option to consider Section 428 Alternative Procedures for all large permanent work projects in order to simplify the delivery of assistance and ensure the ability of Applicants to drive their own recovery. Under this process, Section 428 Alternative Procedures are considered for all large Permanent Work Projects. This ensures Applicants have awareness of the opportunities and benefits provided by the Alternative Procedures, including: flexibility in meeting post-disaster recovery needs, as opposed to being limited to rebuilding back to what existed prior to the disaster; ability to share funds across all Alternative Procedures Permanent Work Projects; ability to retain and use excess funds to reduce risk and improve future disaster operations (subject to timely closeout); and eligibility for cost-effective hazard mitigation on Replacement Projects. Applicants will be able to agree to a fixed cost estimate or choose to pursue funding under standard, actual cost procedures.

2.e. Hurricane Fiona likely caused additional damage to some 428 projects for which funds have already been obligated. How will FEMA work with COR3 and applicants to adjust the scope of work for these projects? Will FEMA consider adjusting the obligations for these projects if necessary?

ANSWER. FEMA and the COR3 are developing an action plan to address Hurricane-related disaster damage caused by Hurricane Fiona to facilities that were pre-

viously damaged by Hurricane Maria or by the earthquakes and had repair work funded under Section 428 of the Robert T. Stafford Relief and Emergency Assistance Act (Stafford Act). While FEMA cannot adjust the scopes of work or funding amounts for Section 428 projects obligated under previous disasters, FEMA is making sure that the Applicants receive additional funding to address the damages specifically caused by Hurricane Fiona as long as this work is also eligible for Public Assistance. The Puerto Rico Joint Field Office and Joint Recovery Office will continue to provide a coordinated effort to address challenges as appropriate.

Question 3. While progress has been made to obligate funds for PA projects in Puerto Rico and the US Virgin Islands very little reconstruction work has begun. The territories and RAND have expressed concern regarding the shortage of contractors available in the territories compared to the number of recovery projects.

To what extent, and in what industries, has FEMA observed shortfalls in local industry and contractor availability critical to the completion of federally funded recovery projects?

What specific actions, if any, could FEMA take to mitigate the severity of these shortfalls?

ANSWER. There is a limited pool of professional services available in Puerto Rico and USVI, including engineering, architecture, and construction services. While there are a few larger construction companies, the labor pool is also extremely limited, with contractors/subcontractors vying for the same persons to perform work.

There are more than 2,450 projects under construction across Puerto Rico and the US Virgin Islands. FEMA bases any observations on information provided by the Governments of Puerto Rico and USVI and studies like the mentioned RAND report. The RAND report indicates a projected shortfall of about 40,000 construction workers, particularly foremen, plumbers, and electricians.¹ While this issue falls under the purview of the Governments of Puerto Rico and USVI, FEMA participates in discussions with government and industry stakeholders, including the Puerto Rico Department of Commerce, to identify ways to help the Government of Puerto Rico address this challenge.

Question 4. How has FEMA's interpretation of the authorities in the BBA changed since its implementation in 2018? Congress intended that this authority to enable FEMA to approve alternative procedure projects without consideration for pre-disaster damage.

Is this consistent with FEMA's current interpretation of their authority?

Would FEMA recommend Congress provide authorities like what was included in the Bipartisan Budget Act of 2018 to expedite the recovery of future catastrophic disasters?

ANSWER. FEMA interprets and uses the authority provided by section 20601 of the BBA as broadly as possible to support the recovery in USVI and Puerto Rico. FEMA first put out FEMA Recovery Policy FP-104-009-5, Implementing Section 20601 of the 2018 BBA Through the Public Assistance Program, in September 2018, then, after Congress further amended the provision in 2019, FEMA updated and released version 2 of the policy in September 2019. Version 2 further expanded on the flexibilities provided in section 20601 and explicitly stated that FEMA would maximize the supplemental assistance made available through this special authority to improve recovery outcomes for Puerto Rico and USVI.

Given the state of the infrastructure, particularly the electrical grids, in Puerto Rico and the U.S. Virgin Islands prior to the catastrophic impacts of Hurricanes Irma and Maria, section 20601 of the BBA was critical to allow FEMA to support the restoration of critical facilities and systems in these territories in a resilient manner.

FEMA does not believe that any amendments to its Public Assistance authorities are necessary to expedite recovery from future events. If that changes, we will work with Congress to pursue any such amendment.

Question 5. Does FEMA recommend Congress provide the agency any additional authorities to aid the recovery in Puerto Rico following Hurricane Fiona. For example, does FEMA recommend that Congress expand BBA authorities?

¹Strong, Aaron, Jeffrey B. Wenger, Isaac M. Oppen, Drew M. Anderson, Kathryn A. Edwards, Kyle Siler-Evans, Jessie Coe, and R. J. Briggs, Future Price Forecasting in the Wake of Large-Scale Disasters: The Case of Puerto Rico After Hurricane Maria. Homeland Security Operational Analysis Center operated by the RAND Corporation, 2022. https://www.rand.org/pubs/research_briefs/RBA1116-4.html.

ANSWER. FEMA believes its current Public Assistance authorities are sufficient to support a resilient recovery from Hurricane Fiona in Puerto Rico. If that changes, we will work with Congress to pursue any such amendment.

Question 6. USVI recovery is often overshadowed by the recovery in Puerto Rico. What are the unique challenges that USVI faces and what steps are needed to address them?

ANSWER. FEMA acknowledges that the needs in the USVI are unique and separate from those in Puerto Rico. For example:

- The United States Census reported that the 2020 population of the USVI (spread across all the islands) was 87,146. The total cost estimate for the USVI is \$14.3 billion, of which only \$4.2 billion is already obligated (31 percent). Per capita, that breaks down to \$164,000 per person in the USVI (for comparison, Puerto Rico's per capita cost estimate is \$11,000).
- According to the Bureau of Economic Analysis, the 2020 Gross Domestic Product (GDP) of the USVI was only \$4.2 billion.
- The GDP of Puerto Rico, a measure of its overall economy and capacity to recover, is larger than approximately a dozen states. In addition, the USVI reports a lack of project management capacity. Individual government agencies, such as the Office of Disaster Recovery or the Housing Finance Authority manage grants and various funding streams. However, due to the lack of project management capacity, there are delays to major infrastructure improvements. Additionally, capacity remains a challenge across government agencies. For instance, The Department of Public Works, or Waste Management Authority are tasked with their day-to-day responsibilities while also implementing additional disaster-related projects.

To this end, the USVI has enlisted the services of consultants to assist in the recovery from Hurricanes Irma and Maria.

Question 7. The Governor Juan F. Luis Hospital is a critical hospital in the U.S. Virgin Islands and FEMA had determined that it should be replaced (a process known as 'determination of prudence for replacement'). What is the status of construction and replacement for this hospital?

ANSWER. The proposed replacement cost estimate and schedule for this hospital are being formulated. Several outstanding items have recently been agreed to, including number of rooms, size of rooms and specific industry standards to upgrade the facility. The current challenge is the length of time the applicant anticipates it will take to complete the construction. Updates to construction schedules/timelines have been ongoing, and FEMA continues to review and validate submitted scope of work and costs. We expect to see an updated construction schedule in October 2022, and upon review completion the FEMA-validated estimate will be provided to the Juan F. Luis Hospital for consideration.

Question 8. In 2020, RAND estimated that USVI faced a shortage of more than 5,000 workers needed to efficiently implement recovery efforts. What assistance, if any, do you think may FEMA provide to the USVI to mitigate this shortfall?

What authorities, if any, should Congress consider to ensure the availability of a qualified, sufficient workforce to execute recovery in the USVI?

ANSWER. FEMA cannot provide direct workforce assistance to the USVI. However, management costs are provided to the Recipient and Subrecipients that can be used to secure technical assistance to support USVI in identifying and securing an additional qualified workforce.

Should Congress request Technical Drafting Assistance on legislative proposals, FEMA would be happy to provide it.

Question 9. USVI stakeholders report that "[a]s more projects are put out to bid, it is becoming a frequent occurrence for bids to exceed the obligated project costs for FEMA funding." Has FEMA and/or ODR observed consistent, significant cost shortfalls in FEMA PA awards as projects are put to bid?

ANSWER. To date, FEMA has not seen any examples of project cost overruns for Section 428 projects in the USVI. However, FEMA has been informed of instances where obligated amounts exceeded the public requests for proposals, with the difference serving to benefit the subrecipient. FEMA continues to work with the USVI to address any concerns they may have regarding cost overruns.

Question 10. To date, how much money has been obligated for Alternative Procedures projects in the Virgin Islands? How much of the obligated funds has been disbursed?

ANSWER. As of September 15, 2022, FEMA has obligated \$870 million in Alternative Procedures 428 projects to the USVI. A total of \$7.4 million have been dis-

bursed/drawn down, with \$862.9 million remaining available to be disbursed/drawn down by USVI.

Question 11. How many Fixed-Cost Estimates have been completed in the Virgin Islands by now, and how many need to be completed?

ANSWER. As of September 15, 2022, 127 Fixed-Cost Estimates have been accepted for a total of \$870 million. There are 77 Fixed-Cost Estimates remaining to be accepted, representing approximately \$6.8 billion.

Question 12. What is the status of the request of the Virgin Islands for adjustment of the Future Price Factor to be incorporated into Fixed-Cost Estimates to ensure that the actual costs of permanent rebuilding on the islands are captured?

ANSWER. FEMA completed the study to develop an FPF in July 2019. Following the study, FEMA has incorporated the FPF into its Fixed Cost Estimates. Recognizing that future price conditions change, the FPF is updated quarterly.

Question 13. Why did FEMA reverse its previous approval of permanent rebuilding projects for roads in the Virgin Islands? The revisiting of projects already approved has slowed the recovery locally.

ANSWER. As FEMA's Public Assistance program is, generally, a reimbursement program, each project needs to be reviewed for eligibility individually and FEMA is unable to issue blanket approvals and did not do so for USVI. Upon reviewing the submissions, there were 39 road projects that were determined to be eligible (approximately \$60MM in funding) and 41 road projects that were determined to be ineligible.

Question 14. In its most recent annual report, ODR raised concerns that the most recent Building Cost Index reflected construction costs rising by more than 17%, with no corresponding increase in FEMA's cost estimating model for the USVI. Has FEMA observed such cost increases, and what specific actions has FEMA taken to update cost estimate models to ensure that PA awards accurately estimate the specificities of local costs in USVI and inflation?

ANSWER. In anticipation of impacts to the local economy and fluctuations in labor, material, and equipment costs, FEMA provides a quarterly update of the FPF that utilizes data received from several sources, including the USVI Bureau of Economic Research and the USVI Department of Labor, resulting in a City Cost Index (CCI). The CCI for the USVI, allocated to each island, is applied to projects as a percentage which increases project costs in anticipation of potential cost overruns.

Question 15. What, if any, actions may FEMA take in the case that Applicants in USVI report significant, widespread cost overruns?

ANSWER. FEMA recognized early on that inflation, supply chain, and job market issues would have major impacts on the recovery in Puerto Rico and USVI. As a result, FEMA includes cost factors in every fixed cost estimate for all Public Assistance Section 428 projects. This includes a specific adjustment for inflation over the length of the project, and a separate adjustment called the FPF to account for anticipated changes to labor, materials, and equipment costs associated with the anticipated shock to Puerto Rico and USVI's construction industry over the time. These factors are updated quarterly based on changing conditions, and each fixed cost estimate is developed and mutually agreed upon by the Recipient, Subrecipient, and FEMA. Additionally, as part of the flexibility of Section 428 projects, the Government of Puerto Rico (Recipient) or Subrecipient may use all or part of the excess funds to cover overruns on other Section 428 projects under the same applicant.

Question 16. Will FEMA approve campus-wide prudent replacements under circumstances which involve a mix of badly damaged buildings, and damaged but repairable buildings, within a single campus of a critical facility like a school or a hospital?

ANSWER. FEMA may not approve campus-wide prudent replacements. In adherence to FEMA policy (per BBA Policy FP-104-009-5 V2), each facility/building is considered individually unless it is part of a system (electric, water, communications).

Question 17. In part due to its experience in the islands following Hurricanes Irma and Maria, FEMA has decided not to use the Sheltering and Temporary Essential Power (STEP) Program during future disaster recovery efforts. How does FEMA plan to address emergency sheltering needs in the event of future major disasters in communities that face challenges and circumstances like those in Puerto Rico and the Virgin Islands after Hurricanes Maria and Irma?

ANSWER. FEMA may provide financial and direct assistance for disaster-caused housing needs not covered by insurance or provided by any other source as part of

the Housing Assistance provision of the Individuals and Households Program. Financial housing assistance is funding provided to eligible applicants for temporary lodging expenses, rental of temporary housing or repair or replacement of a damaged primary residence. Direct housing assistance may also be provided as Direct Temporary Housing Assistance in the form of transportable temporary housing units (recreational vehicle or manufactured housing unit), Multi-Family Lease and Repair, and Direct Lease and Permanent Housing Construction.

FEMA also provides technical assistance for the development of sheltering plans with our state, Tribal, and territorial partners. As part of this pre-incident support, FEMA Individual Assistance staff in the Region 2 Caribbean Area Division are based in Puerto Rico and USVI to support mass care planning. For example, USVI has the USVI Mass Care Pandemic Implementation Plan that identifies sheltering methods and prioritization for certain types and levels of events. And Puerto Rico has developed a Mass Care Annex, which includes details on how Puerto Rico implements congregate sheltering missions and captures lessons learned and best practices.

Question 18. What specific actions has FEMA taken to ensure sufficient emergency housing will be available if needed?

ANSWER. Puerto Rico and USVI face unique housing challenges due to their geographic location. In addition to the strategies previously mentioned, FEMA took the below actions prior to the 2022 hurricane season to help to meet survivor needs and provide assistance more effectively and consistently:

- Established informed and consistent Enhanced Applicant Services to provide proactive and targeted case work for disaster survivors. This will help to ensure that survivors in Puerto Rico and USVI can navigate the recovery process, maximize assistance from FEMA, and are provided with necessary referrals for additional unmet needs from other partners and disaster case management.
- Established Direct Housing Implementation Teams comprised of employees with experience implementing direct housing missions to ensure timely and consistent implementation of direct temporary housing for disaster survivors. The teams are ready and operational for deployment in the 2022 hurricane season. These teams will also help to ensure disaster survivors are provided with disaster case management services earlier in their recovery through the modern Disaster Case Management approach. In disasters where these teams have been deployed, the time to award for State, Tribal, and Territorial Federal awards has been significantly decreased.

Sheltering support available prior to an incident includes technical assistance and training to strengthen and enhance jurisdictional capacity to support sheltering activities. Available technical assistance from FEMA includes:

- An analysis of mass care operations, incorporating best practices and lessons learned into preparedness activities.
- Advising shelter operators of applicable laws such as the Americans with Disabilities Act.
- Developing of contracts, pre-scripted mission assignments, agreements, and other mechanisms to provide resources, programs, and services for sheltering during disaster response activities.

Also, the National Mass Care Strategy provides a unified approach to the delivery of mass care services by establishing common goals, fostering inclusive collaborative planning and identifying resource needs to build a national mass care capacity that engages the whole community, including underserved and vulnerable populations. Part of the National Mass Care Strategy outlines sheltering activities that include identifying facilities, providing life sustaining and essential services, and supporting the closing of shelters and placement of shelter residents into longer-term housing solutions. These activities include:

- Congregate shelters to include schools, churches, community centers and armories.
- Non-congregate shelters to include hotels, cruise ships, dormitories, converted buildings, staying with friends and family or other facilities with private sleeping spaces.

QUESTIONS FROM HON. SHARICE DAVIDS TO ANNE BINK, ASSOCIATE ADMINISTRATOR, OFFICE OF RESPONSE AND RECOVERY, FEDERAL EMERGENCY MANAGEMENT AGENCY

Question 1. It is my understanding that some number of recovery projects are experiencing delays in receiving funding. Some of these projects were submitted more than a year ago. These projects could provide critical energy resiliency for hospitals, grocery stores, hotels, food distribution centers, and hotels—all of which are essen-

tial in the wake of natural disasters like hurricanes and earthquakes. In your estimation, what is causing the delay in approving and administering funding for these projects, and what can the Federal government do to speed up these projects?

ANSWER. The repair or replacement of facilities (e.g., sewer replacement, hospital replacement) are technical and complex. FEMA continually analyzes its processes to be as efficient and effective as possible. Once an applicant submits the Scope of Work for a specific project, the typical turnaround time for funds to be approved is on average, 70 days.

In USVI, FEMA's Interagency Recovery Coordination has strengthened the long-term recovery with stronger coordination and collaboration among multiple federal partners. Economic Development Agency continues to provide workshops and webinars in collaboration with national and local agencies, business, and nonprofit organization. The IRC group, in partnership with Small Business Administration, Virgin Island Economic Development Authority, and Small Business Development Center, hosted a workshop to present information on the Surety Bond Guarantee Program. This resulted in a significant increase in issuance of surety bonds from August 2021 to May 2022—resulting in a net increase of more than \$7 million in Surety Bond Guarantees issued. In Puerto Rico, the FAASt, has helped to streamline recovery by allowing critical infrastructure projects to be grouped together to expedite energy grid work in Puerto Rico. FEMA has provided, and will continue to provide, technical assistance to applicants and sub applicants to help accelerate these projects.

Question 2. Are there any legislative changes that we could make to improve this process?

ANSWER. FEMA does not believe that any amendments to its Public Assistance authorities are necessary for expediting recovery from future events. If that changes, we will work with Congress to pursue any such amendment.

QUESTIONS FROM HON. DANIEL WEBSTER TO ANNE BINK, ASSOCIATE ADMINISTRATOR, OFFICE OF RESPONSE AND RECOVERY, FEDERAL EMERGENCY MANAGEMENT AGENCY

Question 1. A key goal of disaster funding is to help States rebuild their infrastructure following a disaster. Recognizing the benefit to the taxpayer of mitigation, Congress authorized funding to ensure States could build in mitigation as they rebuild existing infrastructure². However, mitigation is different than funding completely new and duplicative infrastructure. Building in mitigation is building back existing infrastructure to more resilient standards. For example, despite the United States Virgin Islands' (USVI) existing Liquid Propane Gas (LPG) system, FEMA may be pushing for USVI to transition to solar in the rebuilding.

1.a. Is FEMA encouraging USVI and any other grantees to convert to solar or any other energy source than what they had existing prior to disaster? If so, how and please provide citations to authorities on which such actions are based.

ANSWER. FEMA's role is to support the priorities of USVI and guide them on how they can leverage FEMA funding. FEMA is coordinating with the USVI on its territory-wide mitigation strategy to establish alternate generation, including solar and wind power, to reduce dependency on fossil fuel, diversify power generation and resilience, and to lower costs to the consumers who pay some of the highest electrical rates in the world. The authorities allowing FEMA to fund these types of actions are found in sections 404 and 406 of the Stafford Act and codified under 44 CFR §§ 206.226(e) and 206.434(d). Under the HMGP, FEMA includes the funding of microgrids as an approved mitigation action. A microgrid is a self-sufficient energy system that serves a discrete geographic footprint, such as a college campus, hospital complex, business center or neighborhood. Within microgrids are one or more kinds of power generation technologies (e.g. solar panels, wind turbines, combined heat and power, generators) in addition to energy storage, typically from batteries.

1.b. What is FEMA's role and what are its policies on funding new systems rather than rebuilding and fixing the ones that exist? Please provide copies of relevant policies.

ANSWER. FEMA's Public Assistance Program provides several options for restoring disaster-damaged infrastructure. If an applicant determines that the public welfare is not best served by restoring the function of a damaged facility, it may decide to replace it with a different facility. This is called an Alternate Project. In other cases, an applicant may decide it wants to make improvements to a facility beyond repairing the disaster damage. This could include replacing the facility with a new facility that serves the same function (e.g., replacing a damaged elementary school with a

²See 42 U.S.C. §5133; 42 U.S.C. §5172; 42 U.S.C. §5189f; 42 U.S.C. §5170c

new elementary school). This is called an Improved Project. In both cases, these are decisions the applicant and FEMA make to serve the community's needs. Eligible funding in both cases is capped based on what it would have cost to repair the disaster damage (44 CFR § 206.203(d), FEMA Public Assistance Program and Policy Guide (PAPPG Version 3.1 Chapter 2.VII).

In some cases, the damage to a facility is so extensive that FEMA and the applicant work together to determine whether it could be eligible for replacement instead of repair. This is referred to as the repair vs. replacement determination (50 percent Rule, 44 CFR § 206.226(f)). However, even if replacement is determined to be the more prudent approach, the applicant can still choose to repair the facility, but FEMA will limit the eligible cost to the estimated cost to repair or replace, whichever is less.

In other instances, federal/state/local laws would prohibit substantial work from taking place in disaster-prone areas or a facility may be subject to repetitive heavy damage. In those cases, FEMA may approve a relocation out of the disaster damaged area, which would typically involve reconstructing the facility in an alternate location (44 CFR § 206.226(g);), PAPPG Version 3.1 Chapter 2.VII).

- 1.c. What funding has FEMA provided to USVI for new solar systems? Were these systems damaged by the hurricanes or are they new systems? If new, did FEMA assess the necessity of new systems given existing power generation capability?

ANSWER. FEMA has obligated over \$10.5 million for the design phase (Architectural/Engineering (A/E) obligations) for three new microgrids under the USVI Disaster Declaration for Hurricane Maria (FEMA-4340-DR-VI).

1. *STX St Croix: DR 4340-0063: \$4,486,720 A/E Obligated; 100 percent Federal Share under HMGP (404)*

The first of these three microgrids is located on St Croix. The purpose of the Western St. Croix Microgrid Project is to provide a stable and resilient alternative energy source to the western portion of St. Croix. The microgrid will be designed and constructed to operate with the existing Water and Power Authority grid, including an 18 megawatt (MW) solar power generation photovoltaic plant and a 20MWh battery energy storage system (BESS). The estimated project cost is approximately \$130 Million.

2. *STT St Thomas: DR 4340-0064: \$4,352,634 A/E Obligated; 100 percent Federal Share under HMGP (404)*

The second microgrid located in St Thomas includes wind turbine power generation. The purpose of the St. Thomas Bovoni Eastern BESS & Microgrid project is to provide an alternative energy source to a portion of southeastern St. Thomas, currently only serviced by the Randolph Harley Power Plant. The proposed HMGP project will include the construction and installation of a 9.9 MW wind power generation plant and battery energy storage system. This system would cost approximately \$116 million, of which FEMA's HMGP anticipates funding approximately \$59 million of this microgrid; the wind turbines would be funded through a partnership between USVI Water and Power Authority and a corporate partner.

3. *STJ St John Microgrid: \$1.8 million A/E Obligated; 90/10 percent cost share (approx. \$1.62 M Federal Share) under Public Assistance 406 funding*

A third microgrid on St John is also approved for design. This microgrid will be funded under section 406 of the Stafford Act, under the Public Assistance Program section 406 hazard mitigation, to include a solar array for power generation. This project is currently approved for design and is projected to cost \$15 million. The hybrid microgrid would consist of the installation of two previously approved 4-MW stand-alone generators, two 2-MW solar arrays, and two 2-MW / 8-MW lithium-ion battery energy storage system (BESS). The microgrid would mitigate future similar damage by ensuring continued power and reducing damage experienced to critical facilities due to a loss of power during and after similar natural disasters. In a July 6, 2020 response letter, FEMA granted approval for the Architectural and Engineering component of the project.

QUESTIONS FROM HON. JENNIFFER GONZÁLEZ-COLÓN TO ANNE BINK, ASSOCIATE ADMINISTRATOR, OFFICE OF RESPONSE AND RECOVERY, FEDERAL EMERGENCY MANAGEMENT AGENCY

Power Grid:

Question 1. FEMA has allocated \$9.5 Billion in Federal Funding for the rebuilding and upgrading of the Puerto Rico Electric Grid, and is working with the Department

of Energy in the PR100 study to determine the best way to achieve 100% renewables goal.

1.a. What can you tell us briefly about the status of FAASt funding, and the timelines involved?

ANSWER. In 2020, FEMA announced the FAASt, which allows critical infrastructure projects to be grouped together in order to expedite energy grid work in Puerto Rico. As one of the largest and most complex disasters in FEMA history, Hurricane Maria provided an opportunity to implement FEMA's FAASt to help streamline recovery projects.

Due to the volume of inspections and the time required to finalize cost estimates for the disaster-damaged assets of the Puerto Rico Electric Power Authority (PREPA), FEMA and COR3 agreed to use a Statistical Sampling Methodology to arrive at fixed cost estimates.

This led to the obligation of four FAASt projects. \$9.4 billion for PREPA, \$3.6 billion for the Puerto Rico Aqueduct and Sewer Authority, \$2 billion for the Puerto Rico Department of Education, and \$554 million for the Puerto Rico Public Housing Administration.

The FAASt approach provides a recovery budget from which Applicants can plan their long-term recovery. Unlike the standard procedures that govern Public Assistance projects, in which the awards are based on the costs of the actual work undertaken, the FAASt approach allowed for the acceptance of an initial Fixed Cost Estimate, where the awards were capped based on up-front and mutually agreed-to estimates of the cost of the work to be done. This approach reduces costs, encourages timely completion of Public Assistance projects, and allows Applicants to complete projects on basis of need rather than pre-disaster design. FEMA is currently working with COR3 and the Government of Puerto Rico to look for opportunities of improvement in the post-award processing of the recovery projects' scopes of work and the addition of mitigation funds.

The FAASt project obligation for the energy sector required PREPA to submit a workplan to COR3 and FEMA within 90 days of project obligation and provide an update every 90 days thereafter. The plan requires a list of projects to be submitted to FEMA for evaluation along with the Subrecipient's priorities. The initial plan and the subsequent updates have been presented in a timely manner. FEMA has provided, and will continue to provide, technical assistance to help expedite recovery.

1.b. Have the Action Plans and the quarterly reviews been presented in a timely manner?

ANSWER. Yes, the action plans and quarterly reviews have been presented in a timely manner.

1.c. How many projects have been submitted? How much funding do they represent?

ANSWER. As of September 15, 2022, a total of 77 Scopes of Work have been sent from PREPA/LUMA Energy (LUMA) to FEMA. Of the 77 submitted, 45 have already been approved, representing roughly \$1.3 billion. The 32 Scopes of Work that have not yet been approved are either under review by FEMA or require additional information from PREPA/LUMA so that the project can be processed. The funding can vary on these projects until a complete Scope of Work is provided and the project is signed.

These scopes of work are part of FEMA's FAASt, where FEMA obligated a \$9.5 billion budget from which PREPA can plan its recovery projects. This funding does not include the additional funding available for hazard mitigation. Once an energy FAASt subproject is approved, the funds that correspond to that scope of work are transferred from the original "donor" project, which is the \$9.5 billion obligation, to the subproject.

1.d. Is LUMA in any way involved in determination of use of this funding?

ANSWER. Yes, PREPA authorized LUMA, its Operator, to act as its agent in connection with any federal funding requests related to the Transmission and Distribution System submitted to FEMA. Though LUMA is very involved, the ultimate responsibility on energy grid projects lies with PREPA as the Subrecipient. This is related to all FEMA funding streams to be used for grid recovery, rebuilding, or mitigation, not just FAASt projects.

1.e. Counting not just the FAASt funding but also all FEMA funding streams to be used for grid recovery or rebuilding or mitigation: How many electric grid projects have been submitted, obligated, approved, and disbursed for? What is the total amount under each stage as of today?

ANSWER. In total, 137 electric grid projects have been obligated for PREPA for over \$11.4 billion (including just over \$1.9 billion in emergency protective measures

during the initial response after Hurricane María in 2017 and 2018). As of September 15, 2022, according to COR3's Transparency Portal, COR3 has disbursed over \$1.67 billion to PREPA.

Each project approved by FEMA must have the prior approval of the Puerto Rico Energy Bureau, which at the same time must be consistent with the Puerto Rico Integrated Resource Plan.

Energy Policy:

Question 2. Groups in the Island and mainland have demanded that FEMA deny funding to anything that is not distributed renewables, or even that Congress should command that.

Is it within the purview of FEMA to impose energy policy directly or through denial of funding?

Is it wise to micromanage this from DC, or should that be subject to Puerto Rico's resources plan, and following the science?

ANSWER. The use of non-renewable energy sources is not a factor in determining eligibility for FEMA's Public Assistance Program funding for the repair and restoration of disaster-damaged facilities.

Question 3. Are there any FEMA funds obligated or allocated to Puerto Rico at any risk of being clawed back or of being lost because the work is not done? If so, we would require specifics of which are most time critical.

ANSWER. There are no funds from FEMA that are currently obligated or allocated to Puerto Rico, which are at risk of being lost because the work was not complete. In September 2022, FEMA approved another extension for the Period of Performance for all Permanent Work Projects for Maria until March 20, 2023. Time Extensions for Emergency Work (Cat A & B) projects are reviewed on a case by case basis. The only conditions in which funds may be at risk is if the entity fails to comply with the US Constitution, federal statutes, regulations, or the terms and conditions of the federal award.

Small Projects:

Question 4. Mayors in towns in Puerto Rico bring up a need for enabling communities to attend to immediate needs for so-called "small projects" that can be managed through simplified procedures. Today that is a project under \$124,000 which with rising costs is now too easily exceeded.

Does the agency support HR 5641, the SPEED Recovery Act, recently passed in the House, that increases to \$1 million the threshold for eligibility for assistance for what qualifies as a small project under the Stafford Act?

ANSWER. Simplifying the Public Assistance Program is an Agency priority. To that end, on August 3, 2022, FEMA published a final rule raising the small project threshold to \$1 million, to be adjusted for inflation annually thereafter. Subsequently, on October 10, 2022 the SPEED Recovery Act was enacted into law, also directing FEMA to raise the small project threshold to \$1 million.

Question 5. Not just with the electricity issue, but with every other area of rebuilding: There is concern that with inflation, supply chain and job market issues that have developed in the past 3 years, the estimates upon which obligations were made may no longer suffice for completion of the work for which they were approved.

How is this to be addressed, how should it be addressed, how CAN it be addressed?

Are we stuck with "this is what you have, do what you can?" Or will it be required to change the rebuilding plans and potentially delay even more the start of work?

ANSWER. FEMA recognizes that inflation, supply chain, and job market issues would have major impacts on the recovery in Puerto Rico and USVI. As a result, FEMA includes cost factors in every fixed cost estimate for all Section 428 projects. This includes a specific adjustment for inflation over the length of the project, and a separate adjustment called the FPF to account for anticipated changes to labor, materials, and equipment costs associated with the anticipated shock to Puerto Rico's and USVI's construction industry over the time. These factors are updated quarterly based on changing conditions, and each fixed cost estimate is developed and mutually agreed upon by the Recipient, Subrecipient, and FEMA. Additionally, as part of the flexibility of Section 428 projects, the Government of Puerto Rico (Recipient) or Subrecipient may use all or part of the excess funds to cover overruns on other Section 428 projects under the same applicant.

Question 6. Mayors in rural Puerto Rico continue to address us questions about rebuilding of local road and bridge infrastructure. I want to ask the agency to pro-

vide a substantive, municipality by municipality report on FEMA-funded road and bridge reconstruction: location, funding, status, obligation date.

ANSWER. A municipality-by-municipality report is attached. For supplemental information please check out the COR3 website: Puerto Rico Disaster Recovery Transparency Portal—COR3 (pr.gov).

[Editor's note: The municipality-by-municipality report is retained in committee files.]

Payments and Chargebacks:

Question 7. When FEMA makes a mistake in granting aid, and reverts the decision then requires the grant to be given back, how do we deal with a victim who is unable to pay back, when they may have already spent the aid to rebuild? HR 539, by Mr. Graves of Louisiana and Ms. González-Colon, is pending in the Senate and designed to prevent that.

What steps is FEMA taking to ensure that decisions on approval of both public and individual assistance is done both promptly and accurately?

ANSWER. FEMA is required to take action to identify and recover improper payments, whether made in error or obtained by fraud. FEMA employs a deliberate process to recover payments where disaster assistance was given to applicants who were not eligible for some or all the money they received. This process was developed to minimize the burden on the applicant to the greatest extent possible.

If/when FEMA determines assistance was given to applicants who were not eligible for some or all of the money received, FEMA program staff notifies the applicant in writing and with a phone call of their potential debt and their right to appeal the decision. After the applicant exhausts their appeal rights, or the period to appeal the debt expires, a debt is then officially established. The applicant then receives a letter from the FEMA Finance Center to provide information on next steps available to them and their repayment options. These next steps include requesting payment arrangements, compromise, and/or a waiver of the debt. FEMA may compromise the value of the debt, up to the full amount, when it determines it cannot collect the debt because of an applicant's inability pay. FEMA considers special factors like the applicant's age, income and health in making its determination. If the applicant does not qualify for a full compromise, FEMA will review an applicant's waiver request. Where an overpayment was based on FEMA's error and there was no fault by the applicant, FEMA will grant a waiver where collection of the debt would be against equity and good conscience.

Question 8.a. There is a perception in Puerto Rico recovery that different parties move slowly out of not daring to act without absolute certainty that FEMA approves and will not change a decision, or not being sure if the BBA 2018 provisions for "building back better" really extend to the sites being inspected.

ANSWER. The majority of FEMA assistance is provided via automated processes, based on information provided by individuals when they register for assistance, and checked against eligibility criteria. Some forms of assistance do require manual review and processing. Staff that process these forms of assistance receive training, undergo quality control reviews, have automated pop ups and error checks in the processing system and have access to various technical assistance and support groups to help prevent errors.

Question 8.b. How can we make it easier for those on the front line to feel sure that their decisions will stand?

ANSWER. The Office of Response and Recovery's Field Operations Directorate is working on building a workforce readiness cycle that accounts for sustained increases in operational tempo. Part of this initiative includes a focus on improved training and qualification, which will help FEMA employees feel more prepared for deployment to disaster sites.

Every recovery is unique, and FEMA works closely with survivors on a case-by-case basis for individual assistance, and a project-by-project basis for public assistance, to ensure needs are met and recovery is supported. Should Congress request Technical Drafting Assistance on bills like HR539, FEMA would be happy to provide it.

GAO Reports:

Question 9.a. GAO reported that workforce-related issues impacted the quality of recovery services. In *January 2022*, GAO identified factors limiting FEMA's workforce readiness of high turnover rates, burnout due to increased pace of disasters, and low morale have made it challenging for FEMA's workforce to implement the COVID-19 funeral assistance program.

How has FEMA addressed these findings?

How can Congress help the Agency do so better?

ANSWER. FEMA is working on multiple initiatives to address the findings of the Government Accountability Office (GAO) report. The Office of Response and Recovery's Field Operations Directorate is leading the charge on building a workforce readiness cycle that accounts for sustained increases in operational tempo. More specifically, this initiative is focusing on ensuring effective recruitment and retention, improved training and qualification, predictable deployment and demobilization, and support for our workforce with adequate rest/reset periods during and between deployments for development and retention.

Additionally, as part of the FEMA Administrator's Annual Planning Guidance, Individual Assistance is implementing a workforce modernization strategy. This work focuses on increasing the staff to meet the demand for most minor to moderate disasters without the need for just in time augmentation staffing solutions. On an annual basis, 80 percent of disasters are classified as a Type II or Type III event.

Despite its challenges, COVID-19 Funeral Assistance was an extraordinary form of assistance provided during an unprecedented pandemic. FEMA developed a specific structure to implement COVID-19 Funeral Assistance which required additional requirements for the workforce and additional training. As a result of this work, FEMA has been able to provide \$2.8B to more than 551,000 individuals for COVID-19 Funeral Assistance.

FEMA continues to identify opportunities and resources necessary to invest both in our workforce and technology advancements necessary to serve our survivors.

Question 9.b. In a report on recovery efforts in Puerto Rico of *May 2021*, GAO made two recommendations: (1) That FEMA should, in coordination with the Government of Puerto Rico and other federal agencies, identify and assess risks to the remainder of the recovery, including internal and external factors such as capacity to carry out projects. For example, taking into consideration if we have the resources to start and finish projects within a time limit or if more time is needed. (2) That FEMA should identify potential actions to manage risks to the remainder of Puerto Rico's recovery and continuously monitor risks.

Same questions: what follow-up has there been to these recommendations?

How can Congress help the Agency do better?

ANSWER. GAO recommended that the FEMA Administrator, in coordination with the Government of Puerto Rico and relevant federal agencies:

- **Recommendation 1:** Identify and assess the risks to the remainder of Puerto Rico's recovery, including internal and external factors, such as Puerto Rico's capacity to carry out projects.

FEMA's Response: FEMA concurred with this recommendation and in March 2021, FEMA Region 2, in coordination with the Federal Disaster Recovery Coordinator and the Government of Puerto Rico, started a formal risk assessment process modeled after FEMA's enterprise risk management framework. FEMA also coordinated with relevant federal agencies, as appropriate, while continuing the risk assessment process to identify and assess the risks to the remainder of Puerto Rico's recovery, including internal and external factors.

Status: FEMA leadership from Region 2, Headquarters, and the Joint Recovery Office, met with COR3 leadership for a weeklong summit. During this conference, FEMA introduced the Risk Framework Plan and updated implementation deadlines outlined in Region 2's "Interim Milestones" within the approved September 2022 Estimated Completion Date (ECD) extension memo request. The ECD for this work is March 31, 2023.

- **Recommendation 2:** Identify potential actions to manage the risks to the remainder of Puerto Rico's recovery and continuously monitor risks.

FEMA's Response: FEMA concurred with this recommendation, and through its risk assessment process FEMA Region 2 identified potential actions to manage risks to the remainder of Puerto Rico's recovery. FEMA Region 2 will also develop a process to ensure continuous monitoring of risks.

Current Status: FEMA continues to collaborate with the Government of Puerto Rico to provide viable solutions to risks identified in the Risk Framework Plan and develop a plan for consistent updates to monitor risk. The ECD for this work is March 31, 2023.

FEMA has identified the following Interim Milestones in the execution of the Framework:

Interim Milestones	Estimated Completion Date
1. Risk management Stakeholder Meeting with COR3	August 30, 2022—Complete.
2. Plan Management Efforts: Update all deadlines in draft	October 30, 2022—Complete.
3. Adopt Plan and Continuous Update Schedule	January 30, 2023.

During the next quarter, Region 2 will conduct working sessions with COR3 to finalize the Framework, coordinate and monitor the execution of mitigation strategies.

Question 10. A complaint we have received is that there are times when denials of assistance are caused by some incomplete documentation at an early stage of the process, but that is not notified until after the denial.

How can we update processes so that when there are necessary documents missing, they are requested it immediately, instead of waiting until late in the process?

ANSWER. FEMA continually reviews our policy and processes to remove barriers to FEMA programs through a people-first approach. As part of this effort, FEMA implemented policy and procedural changes that reduced administrative burden, enhanced access to disaster assistance and expanded eligibility for marginalized and underserved populations. Some of these key changes included re-evaluating automated third party data matching verification for identity, utilizing past disaster data from FEMA's system of record to verify occupancy and ownership, authorized inspectors to view and approve occupancy and ownership verification documentation, expanded the forms of documentation to prove ownership and occupancy, and allowed as a last resort self-certification of occupancy and ownership for mobile homes and travel trailers and self-certification of ownership for heirship properties.

In addition to these changes, FEMA is also working to make further enhancements to the determination process as part of the next update to FEMA's Individual Assistance Program and Policy Guide. FEMA anticipates that this Guide will be sent out for public comment in Spring 2023. As part of FEMA's ongoing efforts to remove barriers and improve the service provided to survivors, FEMA also established informed and consistent Enhanced Applicant Services to provide proactive and targeted case work for disaster survivors for the 2022 Hurricane Season. This ensures that survivors can navigate the recovery process, maximize assistance from FEMA and be provided with necessary referrals for additional unmet needs from other partners.

Question 11. Should Congress work towards creating a "one stop" process for disaster response and recovery? So that individuals and entities governments can submit all their information just once, in one format, be told right then if it is all in order, and not have to keep submitting different applications with different information and different timelines to different agencies?

What would be possible obstacles to such an action?

ANSWER. Should Congress wish to propose such language, FEMA would be happy to provide technical drafting assistance. For example, FEMA has provided technical drafting assistance on H.R. 8416, the Disaster Survivors Fairness Act, since it was introduced in the House in July 2022. Possible obstacles to legislation creating a "one stop" process is that Congress has authorized many different types of programs responsive to response and recovery from a disaster, and such authorities drive different information and documentation requirements.

Additionally, FEMA is working to simplify programs and reduce barriers to improve customer experience and deliver simple, seamless, and secure delivery of federal assistance. In part, this includes work to simplify the registration process through simple, plain language, needs-based forms to apply for assistance.

Question 12. As we speak, we are watching out for a tropical storm which could leave large segments of isolated populations without electric power, especially the case in our rural areas.

A concern that has been raised about procurement requirements is if the technological advancements may be faster than the process for including some technologies in the agencies' approved lists, or the items that ARE in the approved lists may not be available at the time of need. For example light portable solar power capabilities, flexible panels and such to power communications equipment.

Can we count on DHS and FEMA to enable local first responders and local governments the capability of purchasing state-of-the-art solar power products that would be available but may not be in the pre-approved list, if they meet the performance requirements, the made in America requirements and so forth?

ANSWER. Yes. When contracting for Presidentially declared emergencies and disasters, FEMA follows Federal Acquisition Regulation Part 18 and either sets aside

procurements for local area businesses or includes an evaluation preference whenever possible and practicable.

Additionally, The Stafford Act ensures local businesses are given preference during emergencies, and provides for local area set-asides to ensure that contractors in disaster areas are given preferences to federal contracts in response to a major disaster or emergency. FEMA's Office of the Chief Component Procurement Officer is committed to using local firms in disaster areas to the maximum extent practicable. As set forth in FAR 26.204, 42 U.S.C. 5150(b)(1) requires that, subsequent to any Presidential declaration of a major disaster or emergency, any expenditure of Federal funds, under an emergency response contract not awarded to a local firm, must be justified in writing in the contract file.

QUESTIONS FROM HON. DINA TITUS TO CHRIS P. CURRIE, DIRECTOR, HOMELAND SECURITY AND JUSTICE, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Question 1. Liquidity constraints among Public Assistance Program Applicants in the U.S. Virgin Islands and Puerto Rico have been a longstanding concern.

1.a. What specific actions has FEMA taken to ensure that funding is available to Applicants to launch obligated projects? What additional actions could FEMA take towards this end?

ANSWER. In our body of work on disaster recovery in the U.S. Virgin Islands (USVI) and Puerto Rico, we have identified difficulties in providing initial construction funding for projects due to funding liquidity constraints and FEMA's actions to address them. Specifically, in our May 2021 report, we identified risks that could affect construction of recovery projects in Puerto Rico due to financial austerity measures its government put in place beginning in August 2015.¹ To address these risks, we recommended in our May 2021 report that, in coordination with the government of Puerto Rico and relevant federal agencies, FEMA identify and assess the risks to the remainder of Puerto Rico's recovery, including internal and external factors, such as Puerto Rico's capacity to carry out projects. In addition, we recommended that FEMA identify potential actions to manage the risks to the remainder of Puerto Rico's recovery and continuously monitor risks.

In response, the U.S. Department of Homeland Security (DHS) reported that FEMA, in coordination with the government of Puerto Rico, started a formal risk assessment process modeled after FEMA's enterprise risk management framework. FEMA reported that it completed its risk assessment process in November 2021. The agency has also taken additional steps toward addressing these recommendations by drafting a risk assessment plan for Puerto Rico's disaster recovery and developing plans to review it with Puerto Rico government officials before its anticipated adoption in January 2023. Further, FEMA has set risk assessment related goals for FEMA personnel involved in the grant funding process for Puerto Rico. As part of our ongoing work, we plan to identify and report on FEMA's actions to address challenges to providing initial construction funding for recovery projects in Puerto Rico.

In addition, we reported in May 2021, that to help address challenges and expedite obligations, FEMA implemented changes to the Public Assistance program in Puerto Rico by instituting a new award strategy, known as FEMA's Accelerated Award Strategy (FAASt), for certain recipients (August 2019). FAASt allows these recipients to use a sample of the information needed to extrapolate costs and develop a fixed cost estimate for permanent work projects. This is different from the non-accelerated approach where the costs for each damaged site are calculated to create the fixed cost estimates.

Using the accelerated award strategy, FEMA approved \$10.7 billion, \$4.2 billion, and \$2.35 billion in fixed cost estimates for Puerto Rico's Electric Power Authority, Aqueduct and Sewer Authority, and Department of Education, respectively, and obligated \$9.46 billion, \$3.66 billion, and \$2.06 billion in federal share, respectively as of January 15, 2021. Under this approach, the obligation of the fixed cost estimate works as a recovery budget rather than authorization for construction of projects. Puerto Rico agencies must still submit documentation to FEMA for review and approval of individual projects. This is different from the non-accelerated approach where projects are approved along with the obligation of funds.

In our ongoing work, our preliminary observations are that the FAASt process has permitted obligation drawdowns for architecture and engineering studies and design work prior to the construction of projects. This allows for the reimbursement of grant subrecipients earlier in the grant process and affords the opportunity for sub-

¹ GAO, *Puerto Rico Recovery: FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery*, GAO-21-264 (Washington, D.C.: May 19, 2021).

recipients to reuse funds in subsequent phases of recovery. We plan to monitor and report on FAAS funding obligations and disbursements for recovery projects as part of our ongoing work.

- 1.b. What authorities, if any, should Congress consider to address the strains that FEMA's reimbursement-based assistance model places on Applicants with few financial resources?

ANSWER. We have not specifically examined this issue; however, our body of work on disaster recovery has identified opportunities for Congress to streamline the appropriation of disaster recovery funding—specifically the Department of Housing and Urban Development's (HUD) Community Development Block Grant Disaster Recovery (CDBG-DR) funding. In March 2019, we reported that, due to the lack of permanent statutory authority, CDBG-DR appropriations require HUD to customize grantee requirements for each disaster in Federal Register notices—a time-consuming process that has delayed the disbursement of funds.² The ad hoc nature of CDBG-DR has created challenges for CDBG-DR grantees, such as lags in accessing funding and varying requirements. CDBG-DR grantees have also experienced administrative challenges not related to the lack of permanent statutory authority, such as challenges with grantee capacity, procurement, and improper payments. HUD officials, at the time, said that permanently authorizing CDBG-DR would allow HUD to issue permanent regulations for disaster recovery.

We recommended that Congress should consider legislation establishing permanent statutory authority for a disaster assistance program administered by HUD or another agency that responds to unmet needs in a timely manner and directing the applicable agency to issue implementing regulations. A bill introduced and passed by the House of Representatives in the 116th Congress, HR 3702, would have permanently authorized the CDBG-DR program. However, after referral to the relevant Senate committee, the bill did not advance.

QUESTIONS FROM HON. SHARICE DAVIDS TO CHRIS P. CURRIE, DIRECTOR, HOMELAND SECURITY AND JUSTICE, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Question 1. It is my understanding that some number of recovery projects are experiencing delays in receiving funding. Some of these projects were submitted more than a year ago. These projects could provide critical energy resiliency for hospitals, grocery stores, hotels, food distribution centers, and hotels—all of which are essential in the wake of natural disasters like hurricanes and earthquakes.

- 1.a. In your estimation, what is causing the delay in approving and administering funding for these projects, and what can the Federal government do to speed up these projects?

ANSWER. Our body of work on disaster recovery in the USVI and Puerto Rico has identified several factors related to recovery project approval and the obligation of funds that could contribute to delays in construction. In May 2021, we reported that grant subrecipients' in Puerto Rico lack of expertise to develop Public Assistance projects had resulted in the need for additional coordination with FEMA officials or hiring contractors, which could delay the process.³ At the time, we said that this could specifically affect projects being developed by Puerto Rico's Electric Power Authority, Aqueduct and Sewer Authority, and Department of Education under FEMA's Accelerated Award Strategy (FAAS) procedures that had been obligated and required completion within 5 years. Additionally, FEMA officials told us that this lack of expertise could also affect grant subrecipients' ability to incorporate mitigation and resilience efforts into Public Assistance projects or Hazard Mitigation Grant Program projects.

Further, we reported that Puerto Rico's fiscal condition at the time made it difficult for grant subrecipients to provide initial funding to begin construction on projects. Because the Public Assistance grant program is a reimbursement program and grant subrecipients must provide initial funding for projects before seeking reimbursement, many projects had been approved and obligated, but work on the projects had not started. To begin construction, we reported that grant subrecipients could use other federal funding sources, such as HUD's Community Development Block Grant Disaster Recovery (CDBG-DR) funds, or request advance payments from Puerto Rico's Central Office of Recovery, Reconstruction, and Resiliency (COR3) to access initial funding for a project. However, FEMA and Puerto Rico officials said these options were unlikely to fully address the need for funding. In addition, officials said that even after funds had become available, Puerto Rico would

²GAO, *Disaster Recovery: Better Monitoring of Block Grant Funds Is Needed*, GAO-19-232 (Washington, D.C.: Mar. 25, 2019).

³GAO-21-264

likely face risks finding the capacity to handle the sheer number of projects needing construction due to the simultaneous need to procure labor, equipment, and materials to start construction.

As we mentioned in our September 2022 testimony based on our preliminary observations from our ongoing work, another contributing factor to delays in approving funds includes difficulties between FEMA and grant applicants in reaching agreement on scopes of work for Public Assistance projects. For example, grant subrecipients stated that they have experienced challenges getting approval from FEMA to make improvements to a project beyond damages sustained from Hurricane Maria and having them covered by Public Assistance funding.

Our body of work has not included an examination or recommendations related to how the federal government can speed up disaster related projects; however, as part of our ongoing work, we plan to identify and assess the actions FEMA is taking to address challenges to Puerto Rico's disaster recovery.

1.b. Are there any legislative changes that we could make to improve this process?

ANSWER. We have not identified any legislative additions or changes that Congress should consider to improve FEMA's obligation process for Public Assistance and Hazard Mitigation Grant Program projects.

QUESTIONS FROM HON. JENNIFFER GONZÁLEZ-COLÓN TO CHRIS P. CURRIE, DIRECTOR, HOMELAND SECURITY AND JUSTICE, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Question 1. Not just with the electricity issue, but with every other area of rebuilding: There is concern that with inflation, supply chain and job market issues that have developed in the past 3 years, the estimates upon which obligations were made may no longer suffice for completion of the work for which they were approved.

1.a. How are such considerations addressed today?

ANSWER. As part of our ongoing work, our review includes meeting with FEMA and Puerto Rico officials to obtain their perspective on challenges to recovery, such as rise of inflation and supply chain issues affecting the fixed cost estimates developed under Public Assistance alternative procedures. Further, we plan to identify and report on FEMA's actions to address these challenges. As we stated in our September 2022 testimony, Puerto Rico agency officials that we have interviewed thus far have stated concerns that inflation will increase the cost of executing projects and exceed FEMA's grant obligations for some projects. In addition, some grant subrecipients we have interviewed have said that they have started to see increases in the cost of some basic supplies, such as concrete. FEMA officials have told us that Public Assistance fixed cost estimates accounted for escalation in costs, but they are monitoring for cases of project cost increases that exceed 50 percent of the original fixed-cost estimate.

Further, as mentioned in our September 2022 testimony, FEMA is developing a risk management plan to monitor and mitigate risks to recovery in the USVI and Puerto Rico, such as insufficient construction supplies in Puerto Rico for grant subrecipients to complete recovery projects. According to FEMA officials, they anticipate adoption of this plan in January 2023.

1.b. Is there a better way this could be addressed? What can Congress do? How do we prevent the recovery from falling short?

ANSWER. Our prior work has not included an examination or recommendations related to the impact of inflation on obligations based on fixed cost estimates under the Public Assistance Alternative Procedures; however, as part of our ongoing work, we plan to identify and assess the actions FEMA is taking to address challenges to Puerto Rico's disaster recovery.

1.c. Puerto Rico municipalities and even state government offices do not have the cash flow or the credit to support a reimbursement-based process. Is there an alternative that still safeguards taxpayer funds?

ANSWER. We have not specifically examined alternative approaches to FEMA's reimbursement-based process for Public Assistance projects. However, in our ongoing work, our preliminary observations are that FEMA has allowed certain flexibilities to disburse funding for certain aspects of a Public Assistance project. Specifically, our preliminary observations are that FEMA's Accelerated Award Strategy (FAAST) process has permitted obligation drawdowns for architecture and engineering studies and design work prior to the construction of projects. This allows for the reimbursement of grant subrecipients earlier in the grant process and affords the opportunity for subrecipients to reuse funds in subsequent phases of recovery. Additionally, according to FEMA and COR3 officials we spoke with, COR3 disburses all Pub-

lic Assistance funds for small projects that FEMA has obligated directly to the sub-recipient (effective August 3, 2022, the threshold of small projects was increased from \$132,800 to \$1,000,000 for unobligated projects for major disasters and emergencies declared on or after March 13, 2020).⁴

GAO Reports:

Question 2.a. GAO reported that workforce-related issues impacted the quality of recovery services. In *January 2022*, GAO identified factors limiting FEMA's workforce readiness of high turnover rates, burnout due to increased pace of disasters, and low morale have made it challenging for FEMA's workforce to implement the COVID-19 funeral assistance program.

2.a.i. How has FEMA addressed these findings?

ANSWER. The increased frequency and cost of disasters and FEMA's support of numerous efforts outside of its normal core responsibilities present challenges to FEMA's workforce. Some of FEMA's key workforce challenges related to turnover, burnout, and morale, along with the steps FEMA has taken to address them are listed below:

- *Staffing shortages.* As we stated in our January 2022 testimony, FEMA has faced a number of staffing challenges that can affect the agency's ability to achieve its mission to help people before, during, and after disasters. While our current recommendations do not directly address these challenges, we have ongoing work examining FEMA's hiring and staffing processes. We expect to report on this work in spring 2023.
- *Workplace culture and morale.* In recent years, there have been concerns about FEMA's workplace culture and climate, specifically regarding harassment and discrimination, which can affect workforce morale and retention.⁵ In December 2020, FEMA issued its first action plan for culture improvement, which has since been incorporated into other strategic planning efforts. Since issuing this plan, FEMA has taken various steps to implement its culture improvement efforts. For example, FEMA's senior leaders held town halls to address FEMA's culture improvement initiatives and engaged with FEMA's employee groups to discuss how they can help build employee engagement. To ensure continuity and to determine the effectiveness of its efforts, we recommended that FEMA designate an individual or entity responsible for oversight, and establish goals and measures for its cultural improvement efforts.⁶ FEMA concurred with this recommendation, stating that it plans to address these recommendations through its Diversity, Equity, Inclusion, and Accessibility Strategic Plan, which is currently being drafted.

2.a.ii. How can Congress help the Agency do so better?

ANSWER. Our body of work on this issue has not identified any actions Congress should consider taking in relation to employee turnover, burnout, or morale. However, to further explore these issues, we are currently conducting work related to FEMA's recruitment and hiring.

Question 2.b. In a report on recovery efforts in Puerto Rico of *May 2021*, GAO made two recommendations: (1) That FEMA should, in coordination with the Government of Puerto Rico and other federal agencies, identify and assess risks to the remainder of the recovery, including internal and external factors such as capacity to carry out projects. For example, taking into consideration if we have the resources to start and finish projects within a time limit or if more time is needed; and (2) that FEMA should identify potential actions to manage risks to the remainder of Puerto Rico's recovery and continuously monitor risks.

2.b.i. Same questions: what follow-up has there been to these recommendations?

ANSWER. In response to our May 2021 report, DHS reported that FEMA, in coordination with the government of Puerto Rico, started a formal risk assessment process modeled after FEMA's enterprise risk management framework. FEMA will also identify potential actions to manage risks to the remainder of Puerto Rico's recovery

⁴ See 87 Fed. Reg. 47359 (Aug 3, 2022).

⁵ In 2018, FEMA began an investigation into allegations of harassment and misconduct by a senior executive within the agency. In 2019, FEMA commissioned a survey from the RAND Corporation to estimate the prevalence of harassment and discrimination. In its 2020 report, the RAND Corporation estimated that 29 percent of FEMA employees experienced discrimination or harassment related to sex, gender, or race/ethnicity in the previous year. See RAND Corporation, *Harassment and Discrimination on the Basis of Gender and Race/Ethnicity in the FEMA Workforce* (2020).

⁶ GAO, *FEMA Workforce: Additional Actions Needed to Help Prevent and Respond to Discrimination and Harassment*, GAO-23-105243 (Washington, D.C.: Oct. 20, 2022).

through its risk assessment process, and will develop a process to ensure continuous monitoring of risks.

In November 2021, FEMA reported that it completed its risk assessment process,⁷ and based on this assessment, is developing a risk management plan that summarizes the risk management process and mitigation measures FEMA will implement to address the assessment findings. According to DHS, once completed, this plan will identify potential actions to manage risks to the remainder of Puerto Rico's recovery, and FEMA Region 2 will develop a process to ensure continuous monitoring of risks. This plan is currently in draft form, and FEMA expects its adoption in January 2023. According to FEMA, the agency is in the process of collaborating with its partners to review and assess solutions to the risks identified in the plan.

2.b.ii. How can Congress help the Agency do better?

ANSWER. Our body of work on this issue has not identified any actions Congress should consider to assist the agency in its mission in Puerto Rico.

Question 3. Should Congress work towards creating a "one stop" process for disaster response and recovery? So that individuals and entities governments can submit all their information just once, in one format, be told right then if it is all in order, and not have to keep submitting different applications with different information and different timelines to different agencies?

What would be possible obstacles to such an action?

ANSWER. We have not specifically examined cross-agency collaboration and requirements for parallel applications submitted by individuals and government entities. In our ongoing work, we plan to examine and report on challenges grant recipient face obtaining approval for and starting construction on disaster recovery projects, which may include information on FEMA's application processes for Public Assistance and Hazard Mitigation Grant Program funds. Additionally, we have ongoing work examining the federal government's approach to disaster recovery, and actions Congress or federal agencies can take to provide a more efficient and effective approach to disaster recovery. We expect to issue our report in mid-November 2022.

Question 4. Passed in committee and before the Senate are HR 2020 to require the Office of Management and Budget to make available quarterly reports on the flow and use of recovery funds; and HR 2016 plans for streamlining and consolidating information collection and preliminary damage assessments. Are these measures that would be of use in improving recovery processes?

ANSWER. We have not specifically examined the potential effects of these bills on disaster recovery processes nor has our body of work on disaster recovery grants provided related recommendations. As part of our ongoing work, we plan to identify and report what actions FEMA has taken since fiscal year 2021 to address challenges and risks to providing initial construction funding for projects, which may include information on challenges and outcomes related development of fixed cost estimates under FEMA's Public Assistance Alternative Procedures.

Generally, we would support a bill that streamlines the federal disaster funding processes and any regulatory requirements across agencies and which provides additional oversight and transparency. Our ongoing work may include information on reforms the federal government can make to its disaster recovery. Specifically, we are currently examining the federal government's approach to disaster recovery and actions Congress or federal agencies can take to provide a more efficient and effective approach to disaster recovery. We expect to issue our report in mid-November 2022.

QUESTIONS FROM HON. DINA TITUS TO ADRIENNE L. WILLIAMS-OCTALIEN, DIRECTOR,
OFFICE OF DISASTER RECOVERY, U.S. VIRGIN ISLANDS

Question 1. Liquidity constraints among Public Assistance Program Applicants in the U.S. Virgin Islands and Puerto Rico have been a longstanding concern.

1.a. What specific actions has FEMA taken to ensure that funding is available to Applicants to launch obligated projects? What additional actions could FEMA take towards this end?

⁷This risk assessment process included an environmental scan to assess the degree to which the Agency already had a risk framework, establishment of working groups across FEMA (including headquarters and Region II), validation of risks, and a prioritization of risks, among other actions.

- 1.b. What authorities, if any, should Congress consider to address the strains that FEMA's reimbursement-based assistance model places on Applicants with few financial resources?

Question 2. Are there any ways in which FEMA is not making full use of the additional statutory authorities provided to expand the scope of rebuilding in Puerto Rico and the Virgin Islands under the Bipartisan Budget Act of 2018 and the Disaster Relief Act of 2019?

Question 3. What are the new recovery challenges today that Congress has not been made aware of previously? For example, how are inflation and supply chain and labor shortages affecting your recovery?

Question 4. FEMA Administrator Criswell visited the USVI in August 2022. What topline messages did the USVI government convey in Administrator Criswell's visit about the status of recovery efforts or about how FEMA can better assist USVI in recovery efforts? Did FEMA commit to working with the USVI to address those topline messages?

Question 5. Do you believe the authorities provided in the BBA should be expanded to include roads? If the BBA covered roads what impact would this have to the recovery in USVI?

Question 6. Due to liquidity constraints in USVI it is Congress's understanding that the majority of USVI's CDBG-DR funding will be directed to cover the non-federal cost-share for FEMA PA projects. What community development projects might have USVI used this money for if the federal cost share for FEMA projects was raised to 100%?

ANSWERS to Questions 1–6. Answers were not received at the time of publication. If answers arrive after publication, they will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTION FROM HON. SHARICE DAVIDS TO ADRIENNE L. WILLIAMS-OCTALIEN,
DIRECTOR, OFFICE OF DISASTER RECOVERY, U.S. VIRGIN ISLANDS

Question 1. It is my understanding that some number of recovery projects are experiencing delays in receiving funding. Some of these projects were submitted more than a year ago. These projects could provide critical energy resiliency for hospitals, grocery stores, hotels, food distribution centers, and hotels—all of which are essential in the wake of natural disasters like hurricanes and earthquakes. In your estimation, what is causing the delay in approving and administering funding for these projects, and what can the Federal government do to speed up these projects? Are there any legislative changes that we could make to improve this process?

ANSWER. An answer was not received at the time of publication. If an answer arrives after publication, it will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTIONS FROM HON. DANIEL WEBSTER TO ADRIENNE L. WILLIAMS-OCTALIEN,
DIRECTOR, OFFICE OF DISASTER RECOVERY, U.S. VIRGIN ISLANDS

Question 1. The USVI Water and Power Authority (WAPA) has received a significant amount of funding since the 2017 hurricanes. However, it seems the USVI is planning to transition to solar energy despite outstanding obligations for the existing Liquid Propane Gas (LPG) system.

- 1.a. What is the USVI doing to ensure existing obligations for LPG are met?
- 1.b. How is the USVI using Federal funding to support rebuilding and repairing USVI's existing power capability?
- 1.c. Are effects important from the standpoint of disaster mitigation, for example, the effects on floodplains, considered in the event of new solar development? Please explain.

ANSWERS to Questions 1.a., 1.b., & 1.c. Answers were not received at the time of publication. If answers arrive after publication, they will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTIONS FROM HON. DINA TITUS TO HON. MANUEL LABOY, EXECUTIVE DIRECTOR, CENTRAL OFFICE FOR RECOVERY, RECONSTRUCTION, AND RESILIENCY, PUERTO RICO

Question 1. Liquidity constraints among Public Assistance Program Applicants in Puerto Rico have been a longstanding concern.

- 1.a. What specific actions has FEMA taken to ensure that funding is available to Applicants to launch obligated projects? What additional actions could FEMA take towards this end?
- 1.b. What authorities, if any, should Congress consider to address the strains that FEMA's reimbursement-based assistance model places on Applicants with few financial resources?

Question 2. Are there any ways in which FEMA is not making full use of the additional statutory authorities provided to expand the scope of rebuilding in Puerto Rico under the Bipartisan Budget Act of 2018 and the Disaster Relief Act of 2019?

Question 3. FAASt awards account for nearly \$16 billion in PA obligations, for four Applicants. However, COR3 data reflects disbursement of \$200 million (1.3%) for these Applicants' hurricane recovery projects.

- 3.a. What accounts for this disparity, and what actions, if any, can COR 3 or FEMA take to expedite these critical projects?
- 3.b. What actions have FEMA and the government of Puerto Rico taken in recognition of cash flow limitations that may be limiting these disbursements, particularly as the Public Assistance program is generally reimbursable only?

ANSWERS to Questions 1–3. Answers were not received at the time of publication. If answers arrive after publication, they will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTION FROM HON. SHARICE DAVIDS TO HON. MANUEL LABOY, EXECUTIVE DIRECTOR, CENTRAL OFFICE FOR RECOVERY, RECONSTRUCTION, AND RESILIENCY, PUERTO RICO

Question 1. It is my understanding that some number of recovery projects are experiencing delays in receiving funding. Some of these projects were submitted more than a year ago. These projects could provide critical energy resiliency for hospitals, grocery stores, hotels, food distribution centers, and hotels—all of which are essential in the wake of natural disasters like hurricanes and earthquakes. In your estimation, what is causing the delay in approving and administering funding for these projects, and what can the Federal government do to speed up these projects? Are there any legislative changes that we could make to improve this process?

ANSWER. An answer was not received at the time of publication. If an answer arrives after publication, it will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTIONS FROM HON. JENNIFFER GONZÁLEZ-COLÓN TO HON. MANUEL LABOY, EXECUTIVE DIRECTOR, CENTRAL OFFICE FOR RECOVERY, RECONSTRUCTION, AND RESILIENCY, PUERTO RICO

Question 1. There is concern that with inflation, supply chain and job market issues that have developed in the past 3 years, the estimates on which obligations were made may no longer suffice for completion of the work for which they were approved.

- 1.a. How is this to be addressed, how should it be addressed?
- 1.b. Puerto Rico municipalities and even state government offices do not have the cash flow or the credit to support a reimbursement-based process. Is there an alternative that still safeguards taxpayer funds?

Question 2. Factions in the Island have demanded that FEMA deny funding to anything that is not distributed renewables, or even that Congress should command it. Is it wise to micromanage this from DC, or should that be subject to Puerto Rico's resources plan, and the needs determined on the ground?

Question 3. For a long-time during recovery there have been complaints about contractors or providers not receiving payment in a timely fashion. Has there been an improvement in the promptness of processing payment for contractors of municipalities and other subrecipients? Can you quantify the rate of this improvement?

Question 4. The first draft fiscal restructuring plan for PREPA was rejected earlier this year and is being worked on as we speak. How does the completion or not of that fiscal restructuring affect or not affect the recovery plans in the long term?

ANSWERS to Questions 1–4. Answers were not received at the time of publication. If answers arrive after publication, they will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTIONS FROM HON. SHARICE DAVIDS TO SHAY BAHRAMIRAD, PH.D., SENIOR VICE PRESIDENT OF ENGINEERING, ASSET MANAGEMENT, AND CAPITAL PROGRAMS, LUMA ENERGY

Question 1. It is my understanding that some number of recovery projects are experiencing delays in receiving funding. Some of these projects were submitted more than a year ago. These projects could provide critical energy resiliency for hospitals, grocery stores, hotels, food distribution centers, and hotels—all of which are essential in the wake of natural disasters like hurricanes and earthquakes. In your estimation, what is causing the delay in approving and administering funding for these projects, and what can the Federal government do to speed up these projects? Are there any legislative changes that we could make to improve this process?

ANSWER. As stated in our testimony, when LUMA assumed operations of Puerto Rico's transmission and distribution system, one of our highest priorities was to work together with FEMA, the Puerto Rico Energy Bureau, the Puerto Rico Public-Private Partnership Authority, the Central Office for Recovery, Reconstruction and Resiliency ("COR3") and PREPA to develop and advance a series of federally funded infrastructure improvement projects to transform and modernize Puerto Rico's energy system.

In 16 months, LUMA has advanced FEMA projects in Puerto Rico at a historic pace—a stark comparison to the previous five years under the prior operator.

A. FEMA Reconstruction Projects

As of October 15, 2022, LUMA has initiated 239 projects with FEMA¹, representing more than \$6 billion worth of federally funded projects. In contrast, only 35 project submissions for T&D repairs related to Hurricane Maria had even been made before LUMA assumed operations on June 1, 2021.

- Obligated FEMA Projects: LUMA has received, to date, FEMA approval for 37 critical infrastructure projects² including:
 - 27 distribution projects that will address critical infrastructure, such as streetlights and pole replacement, targeting the municipalities of San Juan, Arecibo, Mayaguez, Caguas, Bayamon and Carolina to reduce outages and increase the reliability of the electric system.
 - Four transmission reconstruction projects, including those targeting Line 2200, Line 13300 and Line 6700 that will help improve the critical energy infrastructure that delivers energy across the island.
 - Five substation modernization projects that will address the critical role played by substations in helping deliver energy to communities across Puerto Rico beginning in the municipalities of Cataño, Vieques, Culebra, Manati and Costa Sur.
 - A critical EMS (emergency management system) project to FEMA, which is the first phase of transforming the system operations control center with state-of-the-art technology and software to modernize the way Puerto Rico's energy grid is monitored and managed.
- FEMA Projects Under Construction: LUMA has started construction on 18 FEMA funded projects across Puerto Rico including:
 - Five initial streetlight projects as part of LUMA's \$1 billion Community Streetlight Initiative in the municipalities of Guanica, Lajas, Aguada, Maunabo and Luquillo—in less than three months, LUMA has installed over 12,000 streetlights.
 - One critical transmission line repair project to reduce the potential for future outages.
 - Twelve distribution pole replacement projects to increase the reliability and resiliency of the electric grid.

¹At the time of our latest filing to the Puerto Rico Energy Bureau ("PREB"): the number of initiated projects stood at 206. Of those, 204 projects have a FEMA FFAST number and two were awaiting confirmation.

²At the time of our latest filing to the PREB: 19 projects had received FEMA approval. This represents \$756.5 million and includes the equipment and materials for projects.

In addition to the projects initiated, approved, and under construction, LUMA has also taken the following FEMA-related actions:

- Received approval for \$656 million to procure long-lead material, mainly grid equipment including breakers, transformers, and reclosers.
- Developed four proposals of Hazard Mitigation for non-damaged infrastructure that COR3 is reviewing before submission to FEMA, which would represent \$900 million for the deployment of technologies, including an advanced metering infrastructure, an advanced microgrid project, and mobile microgrids to enable renewable energy and make communities resilient.

Taken in totality, over the coming months and years, FEMA-funded projects that are being directed by LUMA will not only represent the largest capital energy program in Puerto Rico's history, but it will also represent the largest ever funded by the federal government to repair and rebuild an electric system across any state and/or territory. As a result, LUMA is excited by the significant progress that has been made to date that will, as more FEMA projects begin construction, strengthen and transform the long-term future of Puerto Rico's energy grid.

B. Working Closely with FEMA on Emergency Preparedness

In addition to moving forward with critical federally funded infrastructure projects, LUMA continues to prioritize emergency preparedness and taking the necessary steps and actions to be able to respond to hurricanes and other emergencies.

Given the historic impact of Hurricane Maria and the lasting effects it has had on the people of Puerto Rico, LUMA has made preparing for emergency events, like hurricanes, a daily and year-round priority. As part of our emergency preparedness efforts, we have worked closely with FEMA, PREMB and ESF 12 and other partners to establish and adopt industry emergency preparedness standards. Among the actions we have taken include the following:

- *Establish Emergency Response Plan:* In May 2022, LUMA submitted its 2022 Emergency Response Plan (ERP) to the Puerto Rico Energy Bureau as part of its continuous effort to plan, prepare for and respond to the major emergencies and the 2022 hurricane season.
 - LUMA's 2022 ERP outlines the actions LUMA takes in an emergency event and helps direct the company's response, recovery, and restoration efforts.
 - More specifically, the ERP addresses how LUMA responds to any emergency, including hurricanes, earthquakes or any other major event that impacts the electric power system.
- *Adopt Industry Best Practices:* The LUMA ERP follows industry best practices for emergency response and follows the National Incident Management System as established by the Federal Emergency Management Agency (FEMA).
 - The National Incident Management System framework establishes a standardized Incident Command System (ICS) which is used across industries and is the basis for LUMA's ERP.
- *Emergency Preparedness, Training & Readiness:* LUMA has undertaken extensive efforts to improve preparedness, training, and readiness, including:
 - *Emergency Preparedness:*
 - Three emergency preparedness tabletop exercises were completed with FEMA and DOE/ESF 12/PREPA/PREMB and other local stakeholders.
 - Procuring and maintaining a fleet of 1,800 vehicles available to support emergency response efforts.
 - Installing equipment in the LUMA Emergency Operations Center and purchasing supplies for emergency operations.
 - *Emergency Training:*
 - Completing more than 8,000 hours of ICS training.
 - Completing an Emergency Operations Center mock drill based on Category 4 Hurricane making landfall on May 12, 2022, with 75 attendees.
 - *Emergency Readiness:*
 - To date, LUMA maintains a total on-hand inventory of T&D equipment and materials available for daily operations and emergencies amounting to \$130 million including:
 - 21,000 poles
 - 17 million feet of cables
 - 3,200 transformers
 - 58,000 LED luminaries
 - 154,000 insulators
 - 1,800 switches/breakers
 - 29,000 crossarms
- As part of our more than 3,000 employees, LUMA has 1,300 transmission and distribution workers across Puerto Rico who are trained and available to re-

spond to serious emergencies, in addition to resources from contractors and mutual aid.

- We have established mutual aid agreements with the Caribbean Electric Utility Services Corporation (CARILEC), Edison Electric Institute (EEI) and the American Public Power Association (APPA) for response to critical events in cases where additional resources for restoration and response become necessary.
- We have also been working with US DOE on the development of a Storm Damage Prediction Tool for estimating material needs. The Storm Damage Prediction Tool helps forecast storm damage to transmission and distribution infrastructure.

C. FEMA Process Improvements

The topic of FEMA project delays was a main conversation driver at the September 15 hearing. The information provided by other witnesses was very illustrative of the current challenges faced by the Government of Puerto Rico regarding project deliveries.

As discussed during the hearing, a major obstacle to recovery in Puerto Rico is the inability to quickly access working capital. This is of particular importance to large infrastructure and construction projects.

As an example, the Public Assistance program is generally structured as a reimbursement program that requires the recipient and subrecipients to have enough liquidity at hand to begin expensing funds, an issue Puerto Rico also faced following the hurricanes of 2017.

In past disaster events, including those managed by recipients in the States of Louisiana, Mississippi, Texas, and Florida following major hurricanes in 2004, 2005, and 2008, there was greater flexibility with respect to recipients' authority to provide advance funding to subrecipients. During these older events, the applicable financial management regulations contained in 44 C.F.R. Part 13 allowed "advances to Subrecipients in the amount of 50 percent of the funds obligated by FEMA under Public Assistance subgrants."

However, changes in federal regulations made it more difficult to provide the financial support that subrecipients in Puerto Rico needed to begin the substantial recovery effort. Specifically, 2 C.F.R. 200.305(b)(1) provides that, "Advance payments to a non-Federal entity must be limited to the minimum amounts needed and be timed to be in accordance with the actual, immediate cash requirements of the non-Federal entity in carrying out the purpose of the approved program or project."

Although the introduction of the FEMA Accelerated Award Strategy ("FAAST") has allowed FEMA to expedite the obligation of funds, it did not authorize any related construction and required that all projects needed to be formulated through FEMA's National Delivery Model by submitting detailed scopes of work for environmental and historic preservation compliance, and to request additional funding on a project-basis for hazard mitigation measures.

Furthermore, COR3 has recently released a new funding support program available to subrecipients, implemented specifically to provide a mechanism to advance the federal share of funds for approved permanent work projects under FEMA's Public Assistance related to Hurricane Maria and the earthquake disaster.

D Potential Avenues of Support from Congress

According to COR3, Puerto Rico currently has 9,186 time extension requests pending with FEMA. Historically, FEMA has set relatively short time extensions that are unrealistic. Congressional support encouraging FEMA to grant longer time extension requests would go a long way to provide stability to subrecipients and all stakeholders.

Furthermore, according to the Public Assistance Program and Policy Guide (PAPPG) (FP 104-009-02), FEMA must review each Public Assistance project to ensure the work complies with applicable federal Environmental and Historic Preservation (EHP) laws and their implementing regulations, and applicable Executive Orders. Congress should explore alternatives to expedite the review process and obligate as many projects as possible in light of the fifth anniversary of the hurricanes of 2017.

QUESTIONS FROM HON. JENNIFFER GONZÁLEZ-COLÓN TO SHAY BAHRAMIRAD, PH.D., SENIOR VICE PRESIDENT OF ENGINEERING, ASSET MANAGEMENT, AND CAPITAL PROGRAMS, LUMA ENERGY

Question 1. FEMA has allocated \$9.5 Billion in Federal Funding for the rebuilding and upgrading of the Puerto Rico Electric Grid, and is working with the Department of Energy in the PR100 study to determine the best way to achieve 100% renewables goal.

1.a. What can you tell us briefly about the status of FAASt funding, and the timelines involved?

ANSWER. The Puerto Rico Energy Power Authority (“PREPA”) funds under FAASt were obligated in September 2020. According to information provided by COR3, under FAASt, FEMA has obligated a federal share of \$9.5 billion for PREPA, \$3.7 billion for PRASA, and \$2.1 billion for the Department of Education:

These subrecipients have collectively submitted 90 scopes of work for validation by FEMA and \$222.8 million has been disbursed. Notably, the projects that will be executed under FAASt by PREPA will be critical for renewable energy integration to ensure sustainability and resiliency in future disasters. (See Figure 4 in Appendix).

LUMA is currently focused on preparing Detailed SOW and cost estimates for T&D projects that currently have both PREB approval and FEMA project numbers.

Please see LUMA’s September 16, 2022, submission to PREB³ for tables that show the current set of projects, by asset category, along with the estimated timing for Detailed SOWs submittals to COR3 and FEMA.

The estimation of project submission timing noted in the September 16th submission is based on the best information available to LUMA at the time of filing our latest PREB report. LUMA is focused on meeting or exceeding the project submission estimates listed in the table below.

1.b. Have the Action Plans and the quarterly reviews been presented in a timely manner? Please document.

ANSWER. LUMA has regularly presented plans to stakeholders including PREB, COR3, and FEMA. Since LUMA has commenced service, we have submitted an update to the ten-year infrastructure plan, originally filed on July 6, 2021. Additionally, on May of 2022, we submitted a five-year plan to stakeholders.

For the 10-year infrastructure plan, we submit 90-day plan updates at 90-day intervals. Since LUMA began operations in June 2021, we have submitted 90-day plan updates on: September 21, 2021, December 21, 2021, March 18, 2022, June 17, 2022, and September 16, 2022.

1.c. How many projects have been submitted? How much funding do they represent? Please provide a breakdown.

ANSWER. As of October 15, 2022, LUMA has initiated 239 projects with FEMA⁴, representing more than \$6 billion worth of federally funded projects. In contrast, only 35 T&D project submissions had even been made before LUMA assumed operations on June 1, 2021.

1.d. Is LUMA in any way involved in determination of use of this funding?

ANSWER. Yes, with the support of stakeholders including COR3 and FEMA, LUMA develops scopes of work (“SOWs”) for the use of FAASt program, which is aimed to rebuild the transmission and distribution grid. These SOWs are submitted to PREB who ensures the projects are in compliance with the 10-year plan and the Integrated Resource Plan. In addition, LUMA has been identifying funding opportunities including from FEMA, the Department of Energy, and the Department of Housing and Urban Development to support the increased adoption of renewable energy and energy efficient technologies that can enhance the resiliency, sustainability, and affordability of energy in Puerto Rico.

Question 2. Counting not just the FAASt funding but also all FEMA funding streams to be used for grid recovery or rebuilding or mitigation:

How many electric grid projects, whatever the funding source, have been submitted, obligated, approved, and disbursed for? What is the total amount under each stage as of today? Please provide a breakdown.

ANSWER. As of October 15, 2022, 239 projects have been initiated in the FEMA process. Their approval would lead to \$5.3 billion⁵ from the FAASt program, and an incremental \$750M from the Hazard Mitigation program.

Of those 239 projects, 37 have been obligated by FEMA to fund their execution. Those projects represent \$220 million of spending and an additional \$655 million has been obligated by FEMA to advance long lead material. An additional forty

³ <https://energia.pr.gov/wp-content/uploads/sites/7/2022/09/20220916-MI20210002-Motion-Submitting-LUMA-September-2022-90-Day-Plan-Update-w-Exhs.pdf>

⁴ At the time of our latest filing to the Puerto Rico Energy Bureau (“PREB”): the number of initiated projects stood at 206. Of those, 204 projects have a FEMA FAASt number and two were awaiting confirmation.

⁵ The 239 initiated projects represent over \$6 billion in funds if including funding from the Hazard Mitigation Program.

projects are awaiting obligation determinations by FEMA. These projects represent an additional \$1.4 billion in spending. The remaining 162 are in the initiated stage and represent \$4.4 billion in spending.

Additionally, LUMA develops SOWs under Sections 404 and 406 to support further hazard mitigation, hardening, resilience, and sustainability objectives. For example, LUMA has proposed several technology and sustainability focused projects for submission to FEMA under Section 404—Hazard Mitigation to further enable renewable energy and energy efficiency. Each of the following projects represent opportunities to transform and modernize the electric grid and were initially proposed in March and May of 2022:

1. *AMI Deployment*

AMI is the foundation of a clean energy grid, including residential energy generation (e.g., solar panels and batteries) and electric vehicles, by providing visibility to customers and the utility about the availability of electricity and energy usage, which can improve both reliability, energy efficiency, and customer choice.

2. *Energy Storage for Resilience*

This entails the deployment of 100 MW of battery energy storage in five locations to integrate additional renewable generation and enhance resilience.

3. *Vieques and Culebra Submarine Cable*

Deploying a new submarine cable in a looped fashion would meet reliability and resilience goals.

4. *Vieques and Culebra Microgrid*

A microgrid that would provide incremental resilience and sustainability for the close to 10,000 residents who live in smaller islands within Puerto Rico. This would include advanced control capabilities, sensors, and switching capabilities. The microgrid will allow us to move towards a demonstration of 100% renewable islands.

5. *Two Community Microgrids*

These additional microgrid projects would serve communities that would benefit from enhanced resilience, sustainability, and equity. This would serve as the start of a microgrid program pipeline that could be deployed in additional communities. Incorporates community involvement in design.

6. *Mobile Microgrids*

These mobile microgrids will support the rapid increase of service in the case of a disruptive event, enhancing community resilience.

Overall, approval of these projects would significantly support Puerto Rico's sustainability and resilience goals and achieve much needed grid modernization for the island. In addition to specific technologies, LUMA utilizes data-driven, engineering-based designs that leverage industry best practices to enable energy efficiency and increase hosting capacity to support the integration of affordable renewable energy.

Question 3. Who will own title to the goods and equipment, such as tools and vehicles, acquired by LUMA using the FEMA funding, for the reconstruction of the electric grid: LUMA Energy or PREPA?

ANSWER. The goods and equipment will be owned by PREPA.

Question 4. What is the planned rebuilding timeline? Provide an outline of projected milestone dates for submissions, designs, starts of work and expected completions per the presented Action Plans. Not of past progress: of future goals that are to be reached, what are the programmed milestones on the way, and the time projection (year, quarter) for that in the plan.

ANSWER. LUMA submitted a 5-year Plan to FEMA and COR3 which provides an overview of LUMA's current project portfolio for Transmission, Distribution, Substations, and Building's asset categories.

This plan includes a summary and timing for projects to be initiated in each of the next five years, the number of detailed SOWs to be submitted to COR3 and FEMA for review, the targeted construction starts for each project and the completion date for each.

Moreover, LUMA continually submits Project Plans to FEMA, COR3 and PREB every 90 Days which outlines LUMA's activities over the previous period and focus areas during the upcoming period.

This document captures an overview of the key next steps and progress made on FEMA-funded projects for the Puerto Rico electrical system. his plan also includes target dates for upcoming FEMA submissions and construction start milestones for FEMA projects. or reference, please review LUMA's submission to PREB on September 16, 2022.⁶

⁶ <https://energia.pr.gov/wp-content/uploads/sites/7/2022/09/20220916-MI20210002-Motion-Submitting-LUMA-September-2022-90-Day-Plan-Update-w-Exhs.pdf>

Thank you for the opportunity to provide additional insight into LUMA's work to rebuild Puerto Rico's energy grid.

QUESTION FROM HON. DINA TITUS TO JOSUÉ A. COLÓN-ORTIZ, EXECUTIVE DIRECTOR,
PUERTO RICO ELECTRIC POWER AUTHORITY

Question 1. The Puerto Rico Electric Power Authority (PREPA) received a FAAST award in September 2020 for approximately \$9.5 billion. In April 2022, FEMA reported that PREPA had not submitted individual transmission and distribution projects and had submitted “only 5” detailed scopes of work for substation and generation projects—a necessary step before work may begin.

What is the current status of PREPA's project approvals? What, if any, actions has FEMA taken to help expedite PREPA's project approvals?

ANSWER. An answer was not received at the time of publication. If an answer arrives after publication, it will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTION FROM HON. SHARICE DAVIDS TO JOSUÉ A. COLÓN-ORTIZ, EXECUTIVE
DIRECTOR, PUERTO RICO ELECTRIC POWER AUTHORITY

Question 1. It is my understanding that some number of recovery projects are experiencing delays in receiving funding. Some of these projects were submitted more than a year ago. These projects could provide critical energy resiliency for hospitals, grocery stores, hotels, food distribution centers, and hotels—all of which are essential in the wake of natural disasters like hurricanes and earthquakes. In your estimation, what is causing the delay in approving and administering funding for these projects, and what can the Federal government do to speed up these projects? Are there any legislative changes that we could make to improve this process?

ANSWER. An answer was not received at the time of publication. If an answer arrives after publication, it will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

QUESTIONS FROM HON. JENNIFFER GONZÁLEZ-COLÓN TO JOSUÉ A. COLÓN-ORTIZ,
EXECUTIVE DIRECTOR, PUERTO RICO ELECTRIC POWER AUTHORITY

Question 1. There is concern that with inflation, supply chain and job market issues that have developed in the past 3 years, the estimates on which obligations were made may no longer suffice for completion of the work for which they were approved.

How is this to be addressed, how should it be addressed?

Question 2. Factions in the Island have demanded that FEMA deny funding to anything that is not distributed renewables, or even that Congress should command it. Is it wise to micromanage this from DC, or should that be subject to Puerto Rico's resources plan, and the needs determined on the ground?

Question 3. The first draft fiscal restructuring plan for PREPA was rejected earlier this year and is being worked on as we speak. How does the completion or not of that fiscal restructuring affect or not affect the recovery plans in the long term?

Question 4. FEMA has allocated \$9.5 Billion in Federal Funding for the rebuilding and upgrading of the Puerto Rico Electric Grid, and is working with the Department of Energy in the PR100 study to determine the best way to achieve 100% renewables goal.

4.a. What can you tell us briefly about the status of FAAST funding, and the timelines involved?

4.b. Have the Action Plans and the quarterly reviews been presented in a timely manner? Please provide documentation.

4.c. How many projects have been submitted? How much funding do they represent? Please provide a breakdown.

4.d. Is LUMA in any way involved in determination of use of this funding?

Question 5. Counting not just the FAAST funding but also all FEMA funding streams to be used for grid recovery or rebuilding or mitigation:

How many electric grid projects, whatever the funding source, have been submitted, obligated, approved, and disbursed for? What is the total amount under each stage as of today? Please provide a breakdown.

Question 6. What is the planned rebuilding timeline? Provide a breakdown of projected/expected milestone dates (year, quarter) for starts and completions per the presented Action Plans.

Question 7. Who will own title to the goods and equipment, such as tools and vehicles, acquired by LUMA using the FEMA funding, for the reconstruction of the electric grid: LUMA Energy or PREPA?

ANSWERS to Questions 1–7. Answers were not received at the time of publication. If answers arrive after publication, they will be made available online at the House of Representatives Document Repository at <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=115108>.

