Puerto Rico
Aqueduct and Sewer Authority
2022 FISCAL PLAN
Fiscal Years 2022 to 2027

AS CERTIFIED BY THE FINANCIAL OVERSIGHT AND MANAGEMENT BOARD FOR PUERTO RICO | MAY 20, 2022

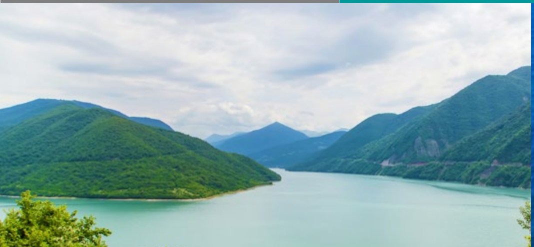


Table of Contents

Exhibits

Tables

Acronyms and other defined terms

2008 Senior Bonds	2008 Senior Revenue Bonds, Series A&B issued on March 18, 2008
2008 Guaranteed Bonds	Revenue Refunding Bonds, Series A&B, issued on March 18, 2008
2008 Bonds	2008 Senior Bonds and 2008 Guaranteed Bonds collectively
2012 Senior Bonds	2012 Senior Revenue Bonds, Series A&B, issued on February 29, 2012
2017 Hurricanes	Hurricanes Irma and María
2020 Senior Bonds	2020 Senior Revenue Refunding Bonds, Series A&B issued on December 17, 2020
2021 Senior Bonds	2021 Senior Revenue Refunding Bonds, Series A&B issued on August 25, 2021
2021/2022 Bonds	2021 Senior Bonds and 2022 Senior Bonds collectively
2022 Senior Bonds	2022 Senior Revenue Refunding Bonds, Series A (forward delivery bonds) to be issued on June 15, 2022
Senior Debt	2008 Bonds, 2020 Senior Bonds, 2021 Senior Bonds and Federal Debt
Certified Fiscal Plan	Puerto Rico Aqueduct and Sewer Authority 2022 Certified Fiscal Plan
AAFAF	Puerto Rico Fiscal Agency and Financial Advisory Authority
ARPA	American Rescue Plan Act of 2021
ASES	Puerto Rico Health Insurance Administration
Authority	Puerto Rico Aqueduct and Sewer Authority
AWIA	America Water Infrastructure Act of 2018
AWWA	American Water Works Association
B	Billion
BANs	Bond Anticipation Notes
BBA	Bipartisan Budget Act
BIL	Infrastructure Investment and Jobs Act of 2021, also known as the Bipartisan Infrastructure Law
CAA	Consolidated Appropriations Act
CARES	Coronavirus Aid, Relief and Economic Security
CDBG-DR	Community Development Block Grants – Disaster Recovery
CDBG-MIT	Community Development Block Grants – Mitigation
CGI	Commonwealth Guaranteed Indebtedness
Commonwealth	Commonwealth of Puerto Rico
CIF	Capital Improvement Fund

CIP	Capital Improvement Program
CSO	Commonwealth Supported Obligations
COR3	Central Office for Recovery, Reconstruction, and Resilience
CRRSA	Coronavirus Response and Relief Supplemental Appropriations
CWSRF	Clean Water State Revolving Fund
DG	Distributed Generation
DOJ	Puerto Rico Department of Justice
DRA	GDB Debt Recovery Authority
DSA	Debt Sustainability Analysis
DWSRF	Drinking Water State Revolving Fund Programs
EPA	Environmental Protection Agency
EPCs	Energy Performance Contracts
EQB	Environmental Quality Board
ERAP	Emergency Rental Assistance Program
ERPs	Emergency Response Plans
ERS	Employees Retirement System of the Government of the Commonwealth of Puerto Rico
FAASt	FEMA Accelerated Award Strategy
Federal Debt	Debt held by EPA (SRFs) and USDA RD
Federal Lenders	EPA and RD
FEMA	Federal Emergency Management Agency
FOMB	Financial Oversight and Management Board for Puerto Rico
FTE	Full-Time Employee
FY	Fiscal Year
GAAP	Generally accepted accounting principles
GDB	Government Development Bank for Puerto Rico
GIS	Geographical information system
Government	Government of Puerto Rico
Governor	Governor of Puerto Rico
HFA	Housing Financing Authority for Puerto Rico
HMGP	Hazard Mitigation Grant Program
HUD	United States Department of Housing and Urban Development
KPIs	Key Performance Indicators
kWh	Kilowatt-Hours

LIHWAP	Low-Income Household Drinking Water and Wastewater Assistance Program
M	Million
MAT	Master Agreement of Trust
MGD	Million Gallons per Day
MHI	Median Household Income
MTBF	mean time between failure
NFMP	Non-Federal Match Program
NPV	Net Present Value
NRW	Non-Revenue Water
OH	Overhead
OMB	Puerto Rico Office of Management and Budget
O&M	Operations and Maintenance
ORF	Operating Reserve Fund
Oversight Board	Financial Oversight and Management Board for Puerto Rico
P3	Public-Private Partnership
P3 Authority	Puerto Rico Public-Private Partnership Authority
P3 Project	Metering System and Customer Service Optimization Project
PAN	Nutritional Assistance Program
PAPPG	Public Assistance Program and Policy Guide
PayGo	Pay-as-you-Go
PFC	Puerto Rico Public Finance Corporation
PM	Project Manager
PMC	Project Management Consortium
PMO	Project Management Office
PMIS	Project Management Information System
PPAs	Power Purchase Agreements
PPE	Personal Protection Equipment
PRASA	Puerto Rico Aqueduct and Sewer Authority
PRDNER	Puerto Rico Department of Natural and Environmental Resources
PRDOH	Puerto Rico Department of Health
PREB	Puerto Rico Energy Bureau
PREPA	Puerto Rico Electric Power Authority
PRHUD	Puerto Rico Department of Housing

PRIFA	Puerto Rico Infrastructure Financing Authority
PROMESA	Puerto Rico Oversight, Management, and Economic Stability Act
PSI	Pounds per Square Inch
PWSIDs	Potable Water System Identification
RD	USDA Rural Development
Regions	Operational Regions
RFC	Raftelis Financial Consultants
RFP	Request for Proposals
RFQ	Request for Qualifications
RRAs	Risk and Resiliency Assessments
R&R	Renewal and Replacement Projects
RSA	Rate Stabilization Account
SA	Robert T. Stafford Disaster Relief and Emergency Assistance Act
SAP	Computer software
SBA	Small Business Administration
SCADA	Supervisory Control and Data Acquisition
SSOMP	Sewer System Operation and Maintenance Program
SOP	Standard Operating Procedure
SIM	Integrated Maintenance System
SPI	Schedule Performance Index
SRF	State Revolving Fund
System	Authority's Public Water Supply and Wastewater System
TANF	Puerto Rico Temporary Assistant for Needy Families
STS	Sludge treatment system
UIA	Unión Independiente Auténtica (Independent Authentic Union)
US	United States of America
USACE	Unites States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
WRF	Water Research Foundation
WRO	Water Recovery Office
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plants

WWPS	Wastewater Pumping Stations

Disclaimer

The Financial Oversight and Management Board for Puerto Rico (the "FOMB," or "Oversight Board") has formulated this 2022 Fiscal Plan based on, among other things, information obtained from the Puerto Rico Aqueduct and Sewer Authority (the "Authority" or "PRASA") and the Commonwealth of Puerto Rico (the "Commonwealth," or "Government").

This document does not constitute an audit conducted in accordance with generally accepted auditing standards, an examination of internal controls or other attestation or review services in accordance with standards established by the American Institute of Certified Public Accountants or any other organization. Accordingly, the Authority, the Commonwealth, and the Oversight Board (together herein, the "Parties") do not express an opinion or any other form of assurance on the financial statements, any financial or other information, the internal controls of the Authority and the information contained herein. Numbers throughout this document may not perfectly reconcile due to rounding.

This 2022 Fiscal Plan is directed to the Governor and Legislature of Puerto Rico based on underlying data obtained from the Government. No representations or warranties, express or implied, are made by the Oversight Board with respect to such information.

This 2022 Fiscal Plan is not a Title III plan of adjustment. It does not specify classes of claims and treatments. It neither discharges debts nor extinguishes liens.

This 2022 Fiscal Plan is based on what the Oversight Board believes is the best information currently available to it. To the extent the Oversight Board becomes aware of additional information after it certifies this 2022 Fiscal Plan that the Oversight Board determines warrants a revision of this 2022 Fiscal Plan, the Oversight Board will so revise it.

For the avoidance of doubt the Oversight Board does not consider, and has not considered, any provision in the 2022 Fiscal Plan as a "recommendation" pursuant to PROMESA Section 205(a). Nevertheless, to the extent that anything in prior Fiscal Plans is ever deemed by the Governor or Legislature or determined by a court having subject matter jurisdiction to be a "recommendation" pursuant to PROMESA Section 205(a), the Oversight Board hereby adopts it in the 2022 Fiscal Plan pursuant to PROMESA Section 201(b), unless such recommendation is directly contrary to specific language in the 2022 Fiscal Plan, in which case the specific language of this Fiscal Plan controls.

Any statements and assumptions contained in this document, whether forward-looking or historical, are not guarantees of future performance and involve certain risks, uncertainties, estimates and other assumptions made in this document. The economic and financial condition of the Authority, Government and its instrumentalities is affected by various legal, financial, social, public health, economic, environmental, governmental and political factors. These factors can be very complex, may vary from one fiscal year to the next and are frequently the result of actions taken or not taken, not only by the Authority or the Government, but also by the Oversight Board and other third-party entities such as the government of the United States. Examples of these factors include, but are not limited to:

- The effect of COVID-19 on the health and well-being of the people of Puerto Rico;

- The economic effects of COVID-19 on the global, United States and Puerto Rico economies which impact the Authority's financial situation and projections;
- The amount of federal aid in response to COVID-19 and the efficacy and speed of disbursement of such aid to the people of Puerto Rico;
- The need to shift resources to create a more resilient public health structure to prevent or mitigate future pandemics;
- The amount and timing of receipt of any distributions from FEMA, USDA and USEPA and private insurance companies to repair damage caused by Hurricanes Irma and Maria and the January 2020 earthquakes;
- The impact of the measures and situation described herein on outmigration; and
- The impact of the resolution of any pending litigation in the Title III cases, including PREPA's and its potential impact on the electricity cost; and
- The impact of geopolitical events outside the control of Puerto Rico and the Authority, including but not limited to, the ongoing conflict between Russia and Ukraine

Because of the uncertainty and unpredictability of these and other factors, their potential impact cannot be reasonably included in the assumptions contained in this document. Future events and actual results may differ materially from any estimates, projections, or statements contained herein. Nothing in this document should be considered as an express or implied commitment to do or take, or to refrain from taking, any action by the Parties or an admission of any fact or future event. Nothing in this document shall be considered as a solicitation, recommendation or advice to any person to participate, pursue or support a particular course of action or transaction, to purchase or sell any security, or to make any investment decision.

By receiving this document, the recipient shall be deemed to have acknowledged and agreed to the terms of these limitations.

This document may contain capitalized terms that are not defined herein or may contain terms that are discussed in other documents or that are commonly understood. You should make no assumptions about the meaning of such capitalized terms that are not defined, and you should consult with the Authority, AAFAF or its respective advisors should clarification be required.

Executive Summary

The Puerto Rico Aqueduct and Sewer Authority (the "Authority" or "PRASA") is committed to providing reliable, affordable, and safe water and wastewater services to the people of Puerto Rico.

Over the past several years, PRASA has made substantial progress implementing measures that have improved its fiscal condition and set the Authority on a path towards fiscal responsibility. However, PRASA has a long road ahead to address the historical challenges that have previously hindered, and continue to affect, its operational performance. Therefore, improvements in key operational areas must be pursued by PRASA, including:


Water losses

Non-revenue water: In addition to the operational issues and inefficiencies in PRASA's treatment and distribution system, the significantly high levels of NRW, estimated at 65%, also presents challenges to its financial condition to the extent the cost of production rises. Recently, PRASA completed installing production meters to properly measure most of its water production at treatment facilities, and now must focus on reducing physical water losses from leakage and overflows as well as reducing commercial losses resulting from inaccurate metering and theft.


Metering and customer service

Accurate metering and effective customer service: PRASA's mechanical customer meters exhibit a high and growing level of inaccuracy and degradation. Dependence on these meters precludes PRASA from properly billing for actual consumption, measuring the scale and impact of NRW, and understanding customer consumption patterns. With the recently completed FEMA grant funding agreement in place, PRASA is now in the process of procuring advanced metering solutions, which is expected to commence with a pilot program as soon as the first quarter of FY23.

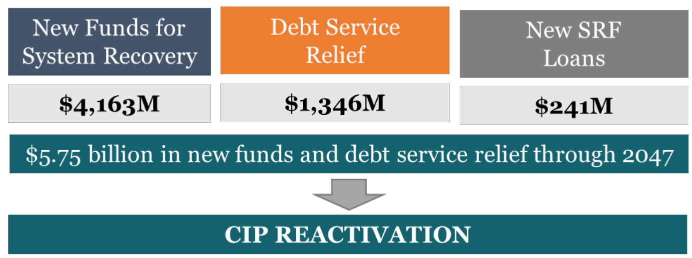

Capital Delivery

Capital delivery: The expected influx of federal grants ($3.7B FEMA award[1]) will allow PRASA's CIP to reach its highest historical level and implement transformational capital improvements to its Systems that can permanently reduce operating costs (including financing costs), generate new revenue, increase resiliency, and most importantly, improve the quality of service and customer experience. It will be crucial that new capital

[1] In connection with this award, PRASA is required to meet a 10% local cost share match of ~$400M. It anticipates meeting this match requirement with CDBG-DR funds, of which $200M has already been obligated. Refer to Chapter 4 (Federal Funds for Disaster Recovery and Resiliency) for greater detail.

projects are executed on-budget and on-schedule to rebuild PRASA's infrastructure to current standards.

PRASA's financial condition has improved materially since 2017 mainly due to the implementation of various revenue enhancing and debt restructuring measures, including modest and gradual rate increases across all customer segments, proactive collection of past-due amounts from government accounts, and various debt restructuring transactions. PRASA's debt restructuring efforts resulted in about $1.3 billion in debt service relief through the debt modification with its Federal Lenders, the 2020 and 2021 refunding agreements for outstanding senior debt, and the executed loan settlement with GDB/DRA. Furthermore, renewed access to SRF Loans in the amount of $241 million and the grant obligation of $3.7 billion in FEMA funds and $200 million in CDBG-DR for a portion of PRASA's local (state) match, are expected to provide the necessary financial support to improve, rebuild, recover, and upgrade critical water and wastewater facilities. With a total $5.75B in new funds and debt service relief, PRASA has a historic opportunity to invest in its infrastructure at a much lower cost than it would otherwise have access to and reduce the prospect of systemic operating deficits over the Certified Fiscal Plan time period. This will promote long-term fiscal responsibility and operational sustainability, which is another step forward in the transformation of PRASA's finances and operations which begun under PROMESA in 2017.



Given PRASA's steady fiscal improvements and given the urgency and priority on improving its System performance, the 2022 Certified Fiscal Plan outlines areas of opportunity largely related to operations and capital investment, such as NRW, capital delivery, and metering infrastructure upgrades. By implementing each of the measures identified herein, PRASA will further improve its financial and operational System conditions, thereby ensuring top-tier water utility standards in the provision of safe, reliable, and affordable water and wastewater services for the people of Puerto Rico.

The 2022 Certified Fiscal Plan provides a roadmap for its fiscal and operational transformation by addressing the following areas of opportunity:

- Collecting sufficient revenues to continue improving fiscal responsibility;
- Eventually, regaining access to credit markets at reasonable interest rates to meet investment needs;
- Executing an aggressive CIP to maintain and upgrade the System's safety, reliability, resiliency, and overall performance;
- Federal funding maximization to allow for low or no-cost financing for the execution of the CIP;
- Implementing a robust action plan to mitigate physical water losses while reducing production as well;

- Investing in water metering infrastructure in a cost-effective manner to address commercial water losses (theft, water metering errors, human error); and
- Implement measures to enable long-term fiscal responsibility, operational efficiency and sustainability, maintenance effectiveness, and asset management.

The 2022 Certified Fiscal Plan outlines several measures that, if successfully implemented, would improve PRASA's financial performance and operational condition. Therefore, the 2022 Certified Fiscal Plan includes measures related to revenue enhancement, cost reduction and operational efficiencies, CIP delivery and federal funding.

These measures must be executed (or continued) by PRASA's PMO and respective management teams to derive a net impact of $995.1 million over the Certified Fiscal Plan period of five (5) years:[2]

1. **Rate Structure Simplification and Adjustments ($369.7 million)**: continue with the scheduled implementation of modest rate increases in FY2023 and beyond—consistent with past Certified Fiscal Plans and standard utility finance practices—and complete the review of the current rate structure with the aim of ensuring adequate cost recovery, simplicity, and affordability in FY2023 and beyond.
2. **Metering Optimization ($75.9 million)**: by replacing existing mechanical meters with more precise smart meter technology, PRASA will be able to measure water consumption more accurately, provide real time information for the benefit of its customers, identify commercial water losses more rapidly, and thus increase billed revenues.
3. **Electricity expense reduction ($52.4 million):** reduce electricity costs through increased efficiency and procurement of additional distributed generation capacity.
4. **Physical water loss reduction ($31 million):** reduce physical water losses through leak reduction, pressure management, monitoring water balances, among others.
5. **New Financing for CIP ($462.4 million between FY2022-2027)**: maximize funding from Federal programs to take advantage of reduced financing costs.

Table 0-1 provides an annual and cumulative summary of PRASA's pre-measures and post-measures financial results. By implementing each of the measures identified in the Certified Fiscal Plan, and through continued commitment to invest in the necessary improvements to its Systems, PRASA projects balanced budgets during the Certified Fiscal Plan Period.

[2] Unless provided otherwise, measure projections cover FY2023 through FY2027

TABLE 0-1: POST-MEASURES FINANCIAL RESULTS FOR FY2022-FY2027, (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Authority Revenues	1,056.4	1,071.8	1,052.1	1,044.4	1,038.4	1,035.2	6,298.3
Senior Debt Service	(247.2)	(248.2)	(250.2)	(247.3)	(249.6)	(248.4)	(1,491.0)
Net Operating Expenses	(738.9)	(822.3)	(834.0)	(850.8)	(863.5)	(881.7)	(4,991.2)
Operating Reserve Fund	(14.6)	(15.7)	(2.9)	(4.2)	(3.2)	(4.6)	(45.2)
Capital Improvement Fund	(123.3)	(195.7)	(196.2)	(88.2)	(64.4)	(97.3)	(765.2)
Pre-Measures Financial Result	(67.7)	(210.1)	(231.2)	(146.2)	(142.3)	(196.7)	(994.3)
Measures Benefit	67.8	210.2	231.3	146.4	142.4	197.0	995.1
Financial Result	0.1	0.1	0.1	0.2	0.1	0.2	0.8

In addition to the quantifiable benefits listed above, the Certified Fiscal Plan also incorporates critical enabling measures—which are essential for the implementation of the proposed measures described herein as well as the efficient and timely execution of its historic CIP investment targets—including:

- **Organization optimization:** gradually adjusting the Authority's workforce size during the Fiscal Plan Period based on the results of a comprehensive productivity and rightsizing assessment.
- **Competitive compensation:** implementing pay-scale reviews and incentives to allow for personnel retention, motivation and new recruitments.
- **Project Management Office (PMO) execution**: establish a PMO tasked and empowered to ensure the successful execution of the measures outlined in the Fiscal Plan and other key internal projects.
- **10-year Master Plan**: update PRASA's 10-year plan with results from the 2020 US Census to provide a long-term roadmap to transform PRASA's systems into a simpler, safer, operationally efficient, and financially sustainable systems and serve to consolidate recommendations from other plans and strategies (e.g., Fiscal Plan, Emergency Response Plans, Climate Change Adaptability Plan).
- **Asset management and maintenance**: properly track and monitor the condition of all PRASA assets and revamp maintenance program from primarily corrective to a more balanced target that promotes higher preventative maintenance practices.
- **Chemical expense stabilization**: conduct an independent assessment on the current challenges, risks, and opportunities within chemical expenditures and consumption and identify a remediation plan to optimize chemical-related expenditures.
- **Interagency debt settlements (with PREPA/LUMA & ERS)**: clear PRASA's balance sheet in FY2023 from aged and disputed outstanding debts with both PREPA and ERS through binding interagency negotiations or alternate dispute resolution methods.

The successful implementation of the measures and initiatives included in the Certified Fiscal Plan is of critical importance, as further demonstrated by the broader demographic and structural environment PRASA currently operates in. Success in this area will largely determine whether the Authority is capable of (i) developing a comprehensive NRW entity-wide plan designed to control water loses, (ii) stabilizing rising operating costs like electricity and chemical expenditures; (iii) investing heavily into its system through its federally-funded CIP; and (iv) gradually transforming the entity's management and administrative practices in line with top-tier combined water utilities. In turn, achieving these strategic objectives will not only bolster the Authority's improved financial state, but it will provide the foundation for PRASA to become a stable and well-performing combined water utility capable of investing capital at sustainable asset replacement levels to provide reliable, affordable, and safe water and wastewater services to the residents of Puerto Rico.

The Certified Fiscal Plan recognizes the generational opportunity to transform its infrastructure in a lasting and cost-effective fashion. For this reason, the Certified Fiscal Plan projects PRASA to deploy billions of federal funds from partners such as FEMA and HUD (CDBG-DR funds), among others, to invest in critical infrastructure such as water quality testing laboratories, advanced metering technology, distribution and sewer pipe replacement, and treatment plant upgrades.

Lastly, this Certified Fiscal Plan reflects the financial and operational goals of PRASA in compliance with the requirements mandated by PROMESA to ensure fiscal responsibility, while prioritizing the delivery of reliable, safe, and affordable water and wastewater services. Provided that the Certified Fiscal Plan is successfully executed, and the financial and operational sustainability objectives are achieved, PRASA will be well positioned to access credit markets at reasonable rates to meet borrowing needs. Thus, enabling it to continue providing the essential water and wastewater services to the residents of Puerto Rico.

1 Introduction

As the sole provider of public water and wastewater services in Puerto Rico, PRASA is committed to providing reliable, affordable, and safe water and wastewater services to the people of Puerto Rico. The Certified Fiscal Plan outlines the actions that will continue PRASA's transformation into a well-performing, safe, efficient, and sustainable water and wastewater utility to benefit the people of Puerto Rico.

1.1 Purpose of this 2022 Certified Fiscal Plan

The Certified Fiscal Plan has been developed with the commitment of delivering reliable, affordable, and safe water and wastewater treatment services while ensuring PRASA's continued fiscal responsibility and operational sustainability. To implement this Certified Fiscal Plan, PRASA must direct efforts, in no particular order, as follows:

Enhance revenues
Reduce expenses
Improve operational performance
Improve customer satisfaction and reduce NRW
Increase water availability and reduce service rationing potential
Execute a timely, on budget CIP that will **maximize federal funding, including recovery funds**

Successful implementation of measures and initiatives to meet these objectives will maintain PRASA on a path towards financial and fiscal responsibility and operational sustainability, establishing the foundation for PRASA to become a top tier utility with access to short-term and long-term credit markets at reasonable rates to meet borrowing needs.

1.2 Changes from Previous Certified Fiscal Plan

The major changes from the prior fiscal plan certified by the Oversight Board on May 27, 2021, are as follows:

1. Focus on the five major measures to be implemented:
    a) Rate adjustments and rate structure simplification
    b) Electricity cost reduction
    c) Non-Revenue water reduction, including both, physical and commercial water losses

   d) CIP execution and delivery
   e) Federal Funds maximization
2. Updated projection period. The Certified Fiscal Plan covers the period from FY2022 though FY2027, which is referred herein as the Certified Fiscal Plan Period.
3. Inclusion of known and preliminary projected impact of the COVID-19 pandemic on PRASA's revenues and collections.
4. Revised projections based on updated information, including electricity rates and macroeconomic assumptions.
5. Incorporation of (i) salary adjustments and incentives, to promote personnel retention and needed recruitment, and (ii) headcount requirements update.
6. Baseline financial projections reflecting the benefits of implemented initiatives and completed debt restructuring transactions[3]:
   a) Implemented annual rate increases from January 2018 until July 2021,
   b) Recent debt refunding agreement closed on August 25, 2021, and
   c) Other initiatives already implemented such as improvement in government collections, revised adjustment policy, cost of service disconnection recovery, health plan adjustments, and preretirement program savings.
7. Elimination of the following initiatives, following public policy and recent FOMB guidelines:
   a) Pension cost reduction,
   b) Christmas Bonus elimination, and
   c) Headcount cap was eliminated for PRASA to focus on recruiting efforts to cover the headcount gap of approximately 250 FTE (incremental FTE from FY2022-FY2027)
8. Inclusion of revised and updated action plans for proposed measures.
9. Updated CIP projections incorporating adjustments in the sources and uses of funds reflecting the obligations of Federal funds for recovery projects.

1.3 Authority's General Information

PRASA is a public corporation and governmental instrumentality of the Government. PRASA owns and operates the public water and wastewater Systems.

1.3.1 Authority's Mission and Vision

PRASA's core mission is to provide high-quality, safe, reliable, and affordable water and wastewater services to the people of Puerto Rico, protecting their health and the environment. To accomplish its mission, PRASA has adopted a vision to become a top-performing utility while

[3] Based on PRASA's ongoing interaction with its stakeholders, including capital markets participants and the Federal Lenders, implemented initiatives are reflected in baseline financial projections to distinguish between completed and pending measures.

continuously exceeding customer expectations and ensuring sustainable water resources management.

1.3.2 History of the Authority

PRASA is an instrumentality of the Government created by Act 40 of 1945 for the purpose of owning and operating the Government's public water supply and wastewater systems. Exhibit 1-1 below provides a timeline of PRASA's history.

EXHIBIT 1-1: THE AUTHORITY'S HISTORICAL BACKGROUND TIMELINE

1945	**Authority created** through Act No. 40-1945
1990–1993	**PRASA state of emergency** declared by Governor • PRASA subsidized by Government (over $400 million annually)
1994	• **Debt downgraded below investment grade**, no capital market access • **Severe drought** impacted Puerto Rico
1995–2004	**PRASA's Management Privatization:** • Operations directed by private operators and performed by both private and PRASA's employees
2004	**Operational restructuring** through Act No. 92-2004 • PRASA management transferred back to public sector • Operations reorganized into five Regions and Infrastructure Directorate
2005–2006	• **Rate increase implemented in two phases** (128% on average across customer segments) • **Elimination of Government subsidies** • **Bond anticipation note** obtained from private banks
2008	**Investment grade rating recovered**, allowing return to capital markets • Master agreement of Trust was created • $1.3 billon in revenue bonds were issued and $284 million in refunding bonds
2008–2012	• **Lines of credit from GDB and BANs** used to finance PRASA's CIP
2012	• **MAT amended** to enhance bondholder protections • **$2.1 billion in revenue bonds** issued by PRASA
2013–2014	• **Credit ratings downgraded** to "non-investment grade" • **Rate increase** of 60% on average across customer segments • **$200 million bond anticipation note** to finance CIP
2015	• **Severe drought** required water rationing plan, resulting in decreased billings
2016	• **PROMESA enacted** in response to Puerto Rico's financial and debt crisis • PRASA was designated as **covered territorial instrumentality** under PROMESA
2017	• **Hurricanes Irma and Maria** caused extensive system damage • **Series of gradual rate increases** adopted from FY 2018 to FY2022
2019	• **Federal debt reprogramming** allowing for re-access to federal funds and debt service savings of $380 million
2020	• **January 2020 earthquakes** caused extensive system damage • **COVID-19 pandemic** caused collection delays due to economic impact • New **$163 million CWSRF loan** dated August 18, 2020 • On December 17, 2020, PRASA issued a limited offering to **refund $1.4 billion** of the 2008 outstanding bonds for savings **of $348 million** in debt service
2021	• **$3.7 billion were obligated by FEMA** on January 8, 2021, for projects to rebuild the Authority's infrastructure after the 2017 Hurricanes • **$1.8 billion** in 2012 Bonds were refunded for savings of **$570 million** in debt service

Beginning in the early 1990s, due to an inability to control operating expenditures and implement consistent, modest rate increases, the Authority's revenues became insufficient to meet all its obligations, including paying debt service on its outstanding revenue bonds. As a result, the Government provided the Authority with subsidies, including direct Government appropriations to fund the Authority's capital projects. In 1994, the Governor declared the Authority in a state of emergency, and its debt was downgraded below investment grade, eliminating the Authority's access to credit markets at reasonable rates to finance its CIP.

Between 1995 and 2004, to improve service and overall efficiency, the Government and the Authority engaged and contracted with private companies to manage, operate, and maintain its System. In 2004, the Government enacted Act 92-2004 and transferred all responsibilities back to the Authority. Post-privatization, and in efforts to allow the Authority to become more autonomous, a two-phased rate increase was implemented in October 2005 and July 2006; the first rate increases in almost 20 years. Implementation of the rate increases allowed the Authority to meet all operational and debt service obligations without the need for Government subsidies, which were discontinued shortly thereafter. However, the Authority still faced challenges in generating sufficient revenues to invest in its CIP. As such, the Authority covered CIP costs through short-term, interim financing until 2008.

In 2008, the Authority recovered its investment grade credit rating and was able to access the credit markets at reasonable rates. The Authority raised $1.3 billion in new senior lien debt in March 2008 to finance its CIP and repay outstanding lines of credit. Also, $284 million of PRASA's 1995 bonds were refunded for a total bond issuance of approximately $1.6 billion.

Once the proceeds of the 2008 Senior Bonds were used for the construction of CIP projects, the Authority resumed financing its CIP with interim lines of credit from GDB and BANs from commercial banks until 2012. In 2012, the MAT was amended to enhance bondholder protections, including providing a gross revenue pledge (i.e., absent an event of default, senior lien debt service would be paid ahead of the Authority's operating expenses). The MAT amendments facilitated the Authority's issuance of its $2.1 billion 2012 Senior Bonds to term out $1.1 billion in BANs and GDB lines of credit, and to provide $350 million in additional CIP funds.

In 2013, a new rate structure was implemented to generate enough revenue to cover all operating needs (i.e., expenses and debt service). In addition, a $200 million BAN was extended to the Authority by a syndicate of local commercial banks to fund its CIP costs until a new, long-term bond issuance could be completed. The bond issuance was expected to be completed during FY2014 but was not executed due to downgrades in the Government's credit ratings, leading to subsequent downgrades in the Authority's credit ratings below investment grade.

The lack of access to credit markets to finance its system improvements, forced the Authority to suspend its CIP and accumulate approximately $150 million in debt to its vendors and suppliers by FY2016[4].

In 2016, the US Congress enacted PROMESA to address the fiscal crisis in Puerto Rico.

PROMESA created the Oversight Board to provide financial and other oversight of the Government and its agencies and instrumentalities, including the Authority by virtue of the Board's designation of PRASA as a covered territorial instrumentality subject to the requirements of PROMESA on September 30, 2016.

In September 2017, Hurricanes Irma and María struck Puerto Rico (the "2017 Hurricanes") and caused devastating and lasting damage to the island. Both hurricanes badly damaged the electric power infrastructure, which in turn affected the continuity of water and sewer services to numerous customers throughout the island. The hurricanes also caused widespread damage to the Authority's infrastructure island wide, some of which is still affecting its operational performance.

Starting in 2016 and through July 2019, the Authority had in place various forbearance agreements that allowed for deferral of payments on its Federal Debt. On July 26, 2019, the Authority and AAFAF consummated definitive agreements that reprogrammed approximately $1 billion in Federal Debt, both SRF and USDA RD. This resulted in $370 million in debt service relief over the next ten years, $30 million in interest forgiveness, and renewed access to potential sources of federal funding for the Authority's CIP. Thereafter, the Authority re-activated regulatory-driven CIP projects.

In August 2020, the Authority obtained its first loan after the 2019 SRF debt modification from the CWSRF program for $163 million at a 1% interest rate with a 30-year maturity. In August 2021, the Authority signed a DWSRF Program financial assistance agreement for a $24 million interest and principal forgiveness subsidized loan and a $22 million, 30-year loan bearing interest at 1% per annum for water projects. In October 2021, the Authority signed a CWSRF Program financial assistance agreement for an $8 million interest and principal forgiveness subsidized loan and a $24 million, 30-year loan bearing interest also at 1% per annum for wastewater projects.

Starting on January 1, 2018, the Authority implemented moderate annual rate adjustments through fiscal year 2022. The last scheduled adjustment in this 5-year rate adjustment plan became effective on July 1, 2021.

On December 17, 2020, the Authority was able to issue the 2020 Senior Bonds to refinance most of its 2008 Bonds through a limited public offering. The issuance of the 2020 Senior Bonds resulted in $350 million in total debt service savings. Also, the new bondholders consented to a MAT amendment that will modify the revenue pledge from a gross revenue pledge to a net revenue

[4] By the end of fiscal year 2018, the Authority was able to pay vendors and suppliers after it commenced in fiscal year 2017 making recurrent deposits to fund its CIP.

pledge. This amendment will become effective when all the remaining senior indebtedness holders, including the Federal Lenders, consent to the change.

On January 5, 2021, after over three years of collaborative work by and among the Authority, COR3 and FEMA, the President of the United States announced a total award of $3.66 billion for infrastructure projects to rebuild PRASA's Systems from the devastation caused by the 2017 Hurricanes. Such funds were obligated by FEMA on January 8, 2021. The amount obligated by FEMA represents the federal government's 90% funding share of the $4.07 billion fixed cost estimate for repairing such damage to the Authority's facilities. As required by this award, the Authority must meet a 10% cost share ("match") requirement for its FEMA-funded permanent work projects (approximately $400 million). The Authority plans to meet its cost-share portion with HUD CDBG-DR grant funds, as they become available. On September 2, 2021, the PRHUD and the Authority entered into a sub-award agreement for $200 million under the CDBG-DR Non-Federal Match Program to fund the half of the state match requirement of the FEMA award.

On August 25, 2021, the Authority issued a portion of the 2021/2022 Bonds in a total principal amount of $1,089.8 million and on June 15, 2022, the Authority expects to issue the remaining 2021/2022 Bonds in a total principal amount of $565.2 million (together, the "Refunding Bonds") to refinance in the aggregate all of the $1,806 million 2012 Senior Bonds (the "Refunded Bonds"). This refunding will result in a total debt service reduction of $570 million. The holders of the Refunding Bonds have also consented to the MAT amendments referred to above.

As previously summarized, during recent years, the Authority has made measurable progress towards reaching fiscal responsibility, as evidenced by its Federal Debt modification and subsequent access to SRF loans, its recent 2008 and 2012 senior revenue bonds refunding, and the obligation of ~$3.7B of disaster recovery funds from FEMA. The Authority must now focus on achieving and maintaining sustainability across all areas of its operation, including management, finances, operations, and capital delivery.

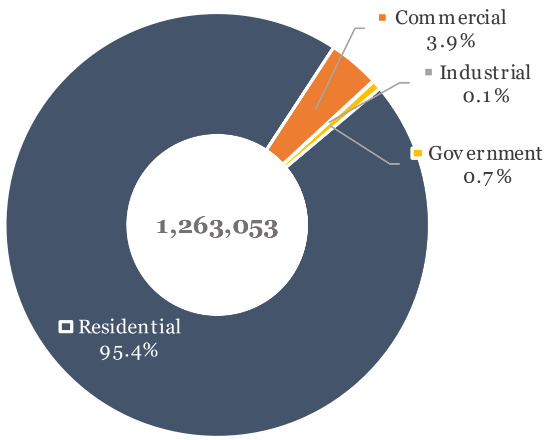
1.4 Overview of the Authority's system

The Authority serves most of Puerto Rico's population, which, based on the 2020 census, as of April 2020 was 3,285,874 residents[5] and millions of tourists every year. The Authority is the sole provider of two distinct services in Puerto Rico—clean water supply and wastewater management—serving approximately 96% and 59% of the population, respectively.[6] As of December 31, 2021, PRASA had 1,263,053 active accounts, of which 95% were residential accounts. Exhibit 1-2 provides a breakdown of customers by category.

[5] Source: US Census Bureau – https://www.census.gov/library/visualizations/2021/dec/2020-resident-population-map.html

[6] Remaining 41% of wastewater service customers use septic tanks and other forms of wastewater disposal (smaller private effluent disposal systems).

EXHIBIT 1-2: CUSTOMER BREAKDOWN BY CATEGORY (AS OF DECEMBER 31, 2021)



The Authority provides water and wastewater services throughout the island, which has an approximate area of 3,535 square miles. Because of Puerto Rico's varied topography, dispersed demographic distributions, and a diverse mix of users, the Authority has a fragmented and localized system of water sources, treatment, and delivery (as shown in Exhibit 1-4 and Exhibit 1-5). While a few facilities serve the large urban centers and several adjacent communities in a single area, most of the Authority's facilities are small in terms of service capacity and coverage.

EXHIBIT 1-3: OVERVIEW OF THE AUTHORITY'S INFRASTRUCTURE SYSTEM[7]

8 dams

112 Filter Plants with 112 intakes, producing ~525 MGD

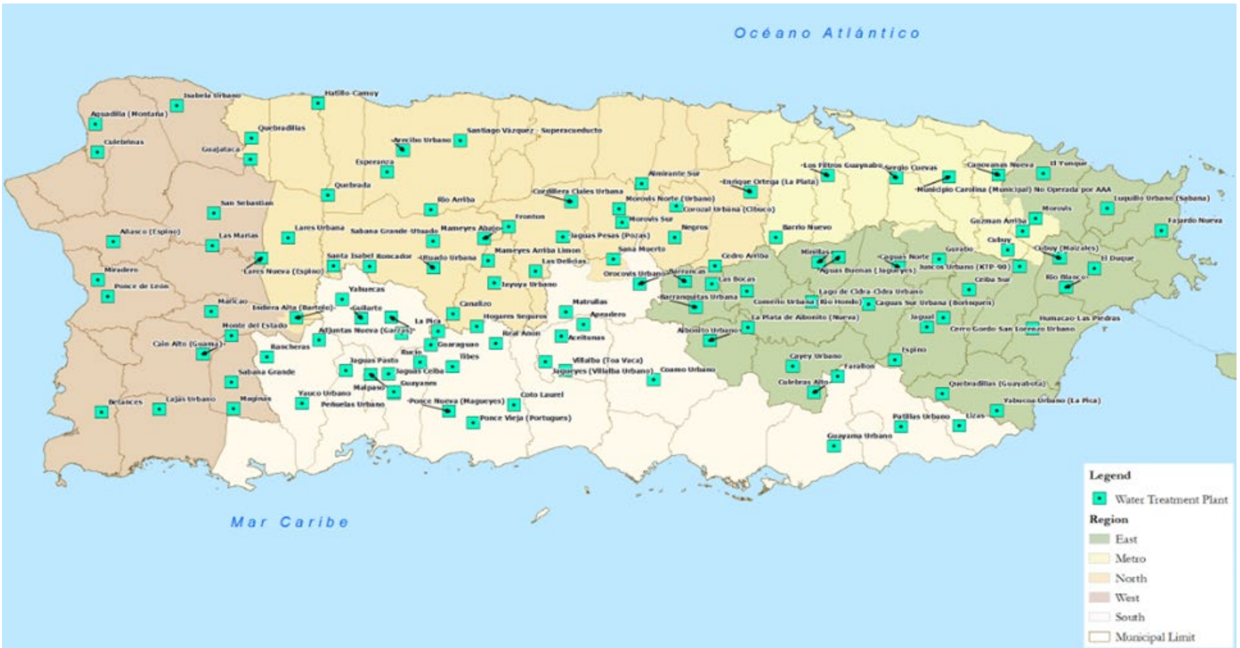
51 Wastewater Plants treating ~200 MGD

Over 3,700 auxiliary facilities:
Tanks - 1,563
Pump Stations – 1,968
Water wells - 244

Over 20,000 miles of pipes

[7] Preliminary information on facilities is retrieved from PRASA's GIS database as of December 31, 2021

EXHIBIT 1-4: PRASA WATER TREATMENT PLANTS[8]



[8] Active facilities as of December 31, 2021, according to PRASA's GIS database.

EXHIBIT 1-5: PRASA WASTEWATER TREATMENT PLANTS[9]

1.5 Governance and Organizational Structure

The Authority's organizational structure and governance model are designed to facilitate the achievement of its mission, implementation of its Certified Fiscal Plan, and improvement of operational efficiency and accountability.

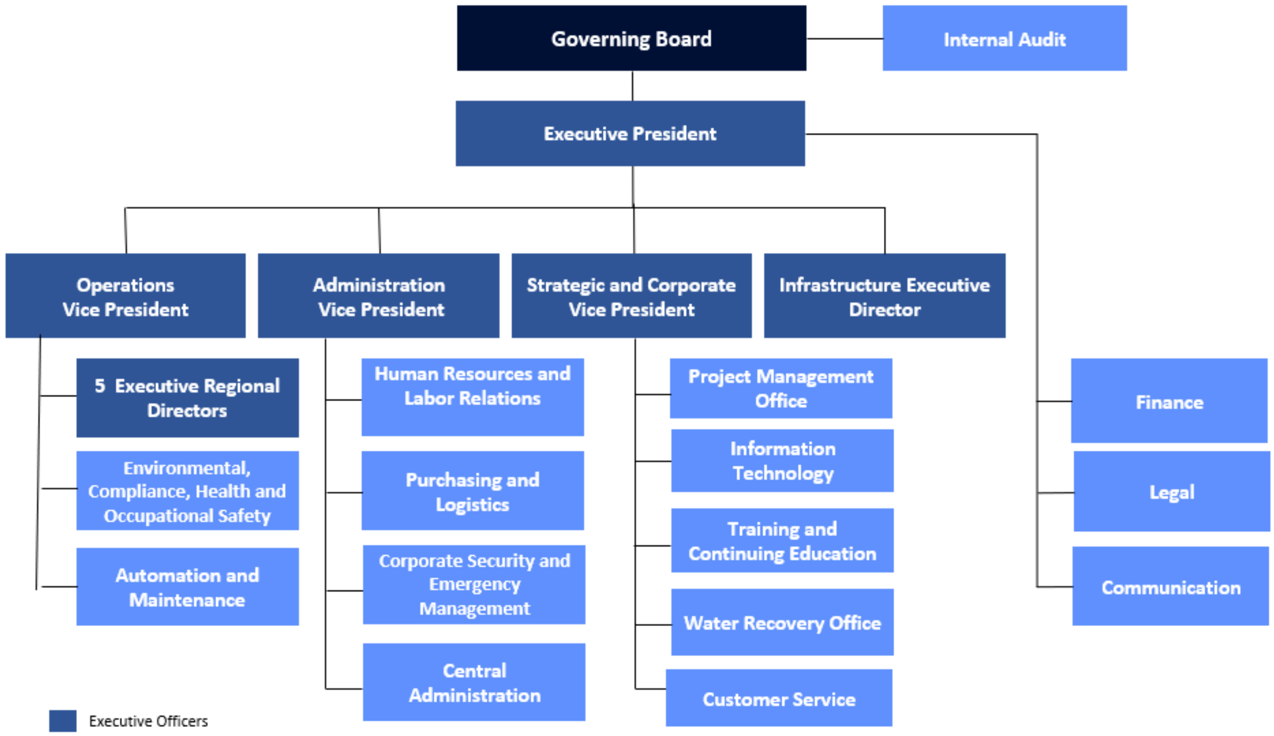
Exhibit 1-6 shows PRASA's current organizational structure. Key departments and offices to highlight are:

- **Infrastructure Department** plans and executes the CIP, in collaboration with, and the support of, the Finance Department.
- **Strategic and Corporate Planning Department** is responsible for the PMO that ensures the successful execution of PRASA's Strategic and Fiscal Plan measures. Its WRO is specifically responsible for all NRW-related measures. This office has also been recently tasked with overseeing the Customer Service office, coordinate efforts with the WRO and implement critical and strategic projects such as meter replacements.

[9] Active facilities as of December 31, 2021, according to PRASA's GIS database.

- **Office of Environmental, Compliance, Health and Occupational Safety** focuses on providing quality water service and oversees compliance requirements related to the Authority's agreements with the USEPA and the PRDOH.

EXHIBIT 1-6: ORGANIZATIONAL STRUCTURE



1.5.1 Governing Board

PRASA has an experienced Governing Board that is independent from direct political influence and has the ability to effectively carry out its duties. Moreover, existing law promotes the board members serving their entire term—and not be replaced due to changes in the Government administrations—which is essential to maintaining consistency and institutional knowledge in decision-making.

Pursuant to Act No. 68-2016, which sets requirements for a diversified and professionalized board, PRASA's Governing Board was restructured to include seven members, consisting of four Independent Directors appointed by the Governor (with advice and consent from the Senate), two ex officio members, and one Consumer Representative, with the following qualifications:

1. One Professional Engineer licensed to practice in Puerto Rico with at least ten years of experience
2. One attorney with at least ten years of experience in Puerto Rico and licensed to practice in the Commonwealth of Puerto Rico
3. One Corporate Finance Specialist with wide knowledge and experience in the field
4. One Professional with expertise in any field related to PRASA's functions

5. The Executive Director of the Mayor's Association (ex officio member)
6. The Executive Director of the Mayor's Federation (ex officio member)
7. One Consumer Representative, a private citizen representing the Authority's customers

Additionally, an AAFAF representative will sit on the Governing Board while the Authority is a covered territorial instrumentality under PROMESA, thus temporarily increasing its size to eight board members as required by Act 2 of 2017.

Members appointed by the Governor are selected from a list of at least ten candidates, vetted by a recognized executive search firm, and evaluated according to objective criteria that includes the professional and educational backgrounds of the candidates.

Members not named by the Governor include the consumer representative, the Executive Director of the Mayor's Association, the Executive Director of the Mayor's Federation and the AAFAF representative. The consumer representative is elected by PRASA's customers through a process under the jurisdiction of the Puerto Rico Ombudsman.

Term lengths for non-ex-officio members are as follows:

- The Consumer Representative serves a three-year term with no term limits.
- The Governor-appointed members serve staggered five-year terms and may only hold office for three terms[10].

PRASA's Governing Board is responsible for making and approving all major decisions taken by the Authority, including overall institutional policies, strategies and programs, operational budget and capital improvement program, executive and key management recruitment and removal, approval of collective bargaining agreements, major procurements and professional services and other contracts that exceed the materiality limits for Executive President approval.

1.5.2 Executive Officers

Executive Officers are appointed by the Governing Board. Having an independent and experienced Board select the Authority's executive leadership further protects the Authority from political influence and ensures only the most qualified individuals are selected for these roles.

The Executive Officers include:

- **Executive President:** The Authority's chief executive officer, based solely on experience, ability, and other qualities that especially enables them to lead the Authority, achieving its strategic mission and vision.
- **Infrastructure Executive Director:** Preferably a Licensed Professional Engineer with experience in activities related to the development and management of infrastructure projects.

[10] Initially, two members were appointed for five years and two members for six years in order to achieve the staggered term requirement. After this, all members were shifted to five-year terms.

- **Five Regional Executive Directors:** For the Metro, North, South, East, and West Regions.
- **Three Vice Presidents:** Operations, Administration, and Strategic & Corporate Planning.

The Executive President, the Infrastructure Director and the Regional Executive Directors, unless appointed on an interim basis, serve five-year terms as established by Act No. 68-2016.

1.6 The Authority's Challenges

Over the past several years, Puerto Rico has faced significant economic and demographic challenges that have adversely affected the Authority, the effects of which have been aggravated by the 2017 Hurricanes, 2020 Earthquakes, and the ongoing COVID-19 pandemic. In addition, the Authority faces major financial, strategic, and operational challenges specific to water utilities.

PRASA faces a specific set of challenges related to the complexity of its Systems and Puerto Rico's economic environment, such as:

- Maintaining large, complex, and capital-intensive facilities (managing over 20,000 miles of pipelines and a combined 163 water and wastewater treatment plants);
- Reducing longstanding and significant volumes of NRW;
- Addressing Systems vulnerabilities to climate change and natural disasters;
- Declining population and water consumption;
- Meeting environmental and safety regulatory requirements, including implementing EPA and PRDOH consent decree and agreements requirements; and
- Maximizing and effectively utilizing available federal funding to enable the restoration of and improvements to the Systems affected by the 2017 Hurricanes and 2020 Earthquakes to industry standards.

While many of these challenges are not unique, the Authority's challenges also represent an opportunity to rebuild better and more resilient Systems for the benefit of Puerto Rico.

2 Pre-Measures Financial Projections

The Pre-Measures Financial Projections consider the Authority's current financial situation and assume the Authority will continue its current state of operations without implementing any new measures to increase revenues or reduce expenses, among other things. The Pre-Measures Financial Projections reflect the Authority's financial needs under a status-quo situation, including the benefits from measures and initiatives that have already been implemented such as the debt modification with the Federal Lenders, the 2020 and 2021 refunding agreements for outstanding senior debt, rate adjustments, as well as other implemented measures described in Section 2.1.

2.1 Recently Implemented Measures

PRASA has successfully implemented several initiatives that had a material beneficial impact on the Authority financial results, which initiatives have been included in the baseline or pre-measures financial projections. They include:

1. **Rate adjustments**: implemented rate increases ranging from 2.5% to 4.5% as scheduled between FY2018 and FY2022 for all customer segments.
2. **Government account collections**: collected past due government receivables and improved government collections.
3. **Pre-retirement program**: reduced payroll costs by incentivizing early retirement for eligible employees.
4. **Electricity Expense Reduction**: reduced energy costs through efficiency measures and low-cost energy benefits from the installation of renewable PPAs back in 2011 and 2012.
5. **Federal Debt modification**: consolidated and modified SRF and USDA RD loans as senior debt and with more favorable repayment terms.
6. **Debt Refunding:** refunding of $3.2 billion of 2008 Bonds and 2012 Senior Bonds resulting in significant debt service savings without extending final maturities of the refunded bonds.
7. **GDB/DRA Loan cancellation:** In November 2020, PRASA fully resolved and retired an outstanding loan with the GDB/DRA, which had a principal balance of approximately $57.5 million for a one-time payment of $20.5 million.

These measures, excluding GDB/DRA loan cancellation, which was not included in projections of prior fiscal plans, have had an $890.5 million positive financial impact from FY2018-FY2022. Table 2-1 summarizes the benefits of the implemented measures.

TABLE 2-1: FINANCIAL RESULTS OF IMPLEMENTED MEASURES (FY2018-FY2022, IN $ MILLIONS)

In $' Millions	FY2018	FY2019	FY2020	FY2021	FY2022 (Projected)	FY2018 to 2022
Revenue Enhancement Initiatives						
Rate Adjustments	13.3	60.3	79.6	101.9	130.0	385.1
Government Account Collections	55.9	72.6	5.9	1.0	20.0	155.4
Cost Saving Initiatives						
Pre-Retirement Program	-	5.9	7.4	7.5	6.7	27.5
Electricity (current PPAs)	0.3	0.4	0.5	0.3	0.8	2.4
Debt Service Reduction						
Federal Debt Restructuring	55.6	32.4	43.4	42.0	40.1	213.6
Debt Refunding (2020 Bonds)	-	-	-	13.0	13.4	26.4
Debt Refunding (2021&2022 Bonds)	-	-	-	-	21.6	21.6
New Financing						
SRF New Loans (received)	-	-	26.2	15.2	17.2	58.6
Total	**125.1**	**171.6**	**163.0**	**180.9**	**249.8**	**890.5**

The projected benefits from the implemented measures shown above have resulted in meaningful, measurable economic benefits over the five fiscal years shown above.

2.1.1 Implemented Revenue Enhancing Measures

PRASA has implemented a series of measures to increase its revenues while attempting to minimize negative impacts on service affordability.

2.1.1.1 Rate adjustments

In 2017, the Oversight Board required PRASA to implement moderate, but consistent multi-year rate adjustments to ensure its costs are fully covered by service revenues. The increase was meant to address years of failure to perform an industry standard practice of consistently revising rates to cover changes in operating costs.

Rate adjustments collected (FY2018 through FY2022)

$385 million

PRASA's current rate structure, set by its Governing Board, provides for an annual rate adjustment of up to 4.5%, up to a cumulative 25% through the application of an "Annual Adjustment Coefficient."[11]

PRASA's Governing Board had approved a moderate rate adjustment schedule for five years between FY2018-FY2022, summarized in Table 2-2 below, which has been fully implemented.

TABLE 2-2: IMPLEMENTED & PROJECTED RATE INCREASES

Type of Client	Jan 1, 2018 (FY2018)	July 1, 2018 (FY2019)	July 1, 2019 (FY2020)	July 1, 2020 (FY2021)	July 1, 2021 (FY2022)
Residential	2.5%	2.5%	2.5%	2.5%	2.5%
Commercial	2.8%	2.8%	2.8%	2.8%	2.8%
Industrial	3.5%	3.5%	3.5%	3.5%	3.5%
Government	4.5%	4.5%	4.5%	4.5%	4.5%

Implemented

Additional rate adjustments after FY2022 are discussed in Section 3.1.1.1.

2.1.1.2 Government Account Collections Improvement

Government accounts recovered receivables (FY2018 through FY2022)

$155 million

The Authority has four different government client categories: (i) Central Government agencies, paid from the General Fund; (ii) public corporations, generally paid from their own revenues; (iii) municipalities; and (iv) Federal agencies. During the last several years, PRASA has worked jointly with the Government to reconcile balances of accounts receivable, speed up their collection process and receive payment of receivables in arrears. As a result of these efforts, PRASA's cumulative collections rate for government accounts from FY2018 to FY2022 averaged just over 100%, with total recovered amounts of $155 million over that time period.

During FY2022, PRASA also experienced a significant recovery of past due amounts in connection with Central Government agencies and public corporations. Although, municipalities' outstanding balances have also been recently reduced, total accounts receivable for municipalities amount to $68 million as of March 30, 2022, which represents nearly 70% of total accounts receivable from government accounts.

[11] PRASA's current rate structure was adopted after the public hearing process of Act 21 and approved by the Governing Board pursuant to Resolution No. 2794 on July 3, 2013 and as amended by Resolution No. 2825, approved on December 18, 2013.

2.1.2 Implemented Cost Saving Measures

PRASA has implemented several cost-reduction measures, including various measures focused on the two largest expense categories: payroll and electricity.

2.1.2.1 Pre-retirement Program

Pre-Retirement Program Savings (FY2018 through FY2022)

$27.5 million

As a result of the fiscal crisis, the Government created a Voluntary Pre-Retirement Program in FY2016.[12] The program provides incentives to certain eligible government employees to voluntarily retire early from service.[13] The program was implemented to reduce the workforce progressively and voluntarily, allowing employees to retire with an orderly transition process. The vacant positions resulting from the retirement program must be closed unless otherwise determined by the OMB.

Over 350 PRASA employees have retired under the program, generating estimated savings for PRASA of $27.5 million through June 30, 2022. Accordingly, PRASA now operates with a base of approximately 4,360 active working employees (refer to Section 3.2.2 – Organization Optimization for more detail)

2.1.2.2 Electricity

Electricity Expense Reduction from PPAs (FY2018 through FY2022)

$2.4 million

PRASA has implemented an Energy Management Program to help manage and reduce its electricity expense. PRASA implemented internal measures at a regional level to reduce electricity consumption, and supply side projects through PPAs to reduce overall electricity cost:

- **Regional Measures:** PRASA has implemented a set of regional level commitments to execute non-capital-intensive energy conservation measures throughout its facilities. Since FY2013, PRASA has reduced its electricity consumption by over 13%, from over 740 million kWh to under 640 million kWh through regional measures such as, facility consolidations, minor repairs, operational optimization and installations improvements, among others.
- **PPAs:** Since 2011 and 2012, PRASA has 10 facilities under a PPA mechanism using photovoltaic energy, producing approximately 11.3 million kWh per year at a $0.15 per kWh blended rate, which is less than rates charged by PREPA/LUMA. Annual savings from these PPAs vary based on PREPA rates. Facilities currently under PPAs along with their associated average annual solar energy production are shown in Table 2-3.

[12] Enacted through Act 211-2015 on December 8, 2015.

[13] Incentives include: 60% payment of average salary, payout of unused vacation and sick days (as per Act 66-2014) and maintaining their health insurance coverage for a term of two years. These incentives are applicable to pre-retired employees and payable by PRASA until each eligible employee reaches full retirement age under ERS's rules.

TABLE 2-3: FACILITIES WITH SOLAR ENERGY

Facility	Million kWh/yr
Yunque WTP	3.43
Arecibo WTP	1.71
Canóvanas WWTP	1.71
Guaynabo WTP	0.86
Aguada WWTP	0.86
Humacao WWTP	0.86
Cayey WWTP	0.86
Culebra WWTP	0.49
Vieques WWTP	0.33
Arcadia WPS	0.19
Total kWh	11.30

Additional reductions in electricity expense as a result of future PPAs and ongoing regional measures to reduce electric consumption are included in Section 3.1.2.1: *Electricity Expense Reduction*.

2.1.3 Debt Service Reduction

PRASA has implemented two debt service reduction measures to date: Federal Debt modification and refunding of most of its outstanding Senior Debt.

In addition, with respect to the PFC debt, the Authority does not assume any payments during the Certified Fiscal Plan Period. The Authority has no legal obligation to pay the PFC debt because such debt is payable solely from legislative appropriations received from the Government. As provided in the MAT, if the Authority is unable to make this payment, the obligation is not cumulative and, therefore, does not carry forward to future periods; failure to make the payments or deposits related to this debt is not an event of default under the MAT.

On January 18, 2022, the U.S. District Court for the District of Puerto Rico entered an order (the "Confirmation Order") confirming the Modified Eighth Amended Title III Joint Plan of Adjustment for the Commonwealth of Puerto Rico, et al. [ECF No. 19813-1] (the "Eighth Amended Plan"), which became effective on March 15, 2022. Under the Eighth Amended Plan, all claims against the Commonwealth arising from or related to indebtedness payable from appropriations of the Commonwealth Legislature are classified as "CW Appropriation Claims" and treated in Class 63 of the Plan. CW Appropriation Claims include, among other things, "all notes from the Commonwealth or its agencies or instrumentalities held by PFC for the repayment of PFC indebtedness." CW Appropriations Claims did not receive a distribution pursuant to the Plan and each such CW Appropriations Claim is deemed discharged. The Confirmation Order further provides that:

> "all laws, rules, and regulations giving rise to obligations of the Debtors discharged by the Plan and [the] Confirmation Order pursuant to PROMESA are preempted

by PROMESA and such discharge shall prevail over any general or specific provisions of territory laws, rules, and regulations. Such preempted laws include, without limitation, laws enacted prior to June 30, 2016, that provide for transfers or other appropriations after the enactment of PROMESA, including transfers from the Commonwealth or one of its instrumentalities to any agency or instrumentality, whether to enable such agency or instrumentality to pay or satisfy indebtedness or for any other purpose, to the extent inconsistent with the Plan's discharge of the Debtors' obligations."

Accordingly, upon the effective date, all such preempted laws are not enforceable to the extent they are inconsistent with the Eighth Amended Plan's discharge of the Commonwealth's obligations. Although the Eighth Amended Plan does not grant a release of the Authority's PFC Notes, as a result of the Eighth Amended Plan's discharge and preemption provisions, there will not be future appropriations related to the PFC indebtedness. As a result, the contingency that would trigger the Authority's contingent obligation to pay the PFC indebtedness once it receives appropriations will not occur. In addition, on January 20, 2022, AAFAF, on behalf of PFC, entered into a Restructuring Support Agreement (the "PFC RSA") with holders of a majority of those certain Series 2011A, Series 2011B, and Series 2012A Commonwealth Appropriation Bonds (the "PFC Bonds"). The PFC RSA contemplates a restructuring and discharge of the PFC Bonds under Title VI of PROMESA. The PFC RSA further contemplates that those promissory notes that were issued to the order of PFC by certain Commonwealth instrumentalities, including by the Authority, for the repayment of the PFC Bonds will be cancelled and extinguished and the Authority will be discharged from any liability arising from or related to such promissory notes. The restructuring contemplated by the PFC RSA remains subject to the occurrence of various conditions, including obtaining the requisite votes required by Title VI of PROMESA and Court approval of the restructuring.

2.1.3.1 Federal Debt Modification

Debt service relief
(FY2018 through FY2022)

$214 million

Historically, the Authority has received federal funds for its CIP through loans from the CWSRF and DWSRF—collectively known as the "SRFs"—and bonds or loans under the USDA RD Program.

On June 30, 2016, the Authority executed a Forbearance Agreement with the PRDOH and EQB (administrators of the DWSRF and CWSRF, respectively). PRASA also signed a short-term Forbearance Agreement under the USDA RD Program. The original Forbearance Agreements were subsequently extended on several occasions, allowing for the deferral of payments due from July 2016 through July 2019, subject to certain conditions and partial payments.

On July 26, 2019, the Authority and AAFAF consummated definitive agreements (the "Agreements") that modified the Authority's debt obligations under the SRF and USDA RD loans, which totaled approximately $1 billion in Federal Debt. The Agreements were approved by the Oversight Board pursuant to Section 207 of PROMESA on July 3, 2019. The benefits of the Agreements to PRASA and the Government include (i) the reduction of interest rates and extension of the amortization periods, resulting in debt service relief to the Authority of approximately $370 million between FY2021 and FY2031 and $214 million from FY2018-FY2022, (ii) the termination of existing Commonwealth guarantees of the Federal Debt, thus reducing overall Government contingent liabilities by approximately $1 billion, and (iii) access to new infrastructure project loans from the SRF and USDA RD Program, including $26 million granted under the SRF program (coupled with increased protection of the interests of the Federal Lenders). The modified Federal Debt was designated as "Other System Indebtedness" on a parity as to payment with other senior debt under PRASA's MAT.

A summary of the modification to the Federal Debt terms is summarized in Exhibit 2-1

EXHIBIT 2-1: MODIFICATIONS TO FEDERAL DEBT TERMS

	Prior to debt modification	After debt modification	Projected Impact (FY21-FY31)
SRF			
Balance	$581M	$596M (including new loans)	$250M
Amortization term	20 years	30 years	
Interest rate	2%	0% for years 1-10/ 1% thereafter	
Annual debt service	$36M	$10M for years 1-10/ $27M thereafter	
RD			
Balance (incl. accrued interests)	$392M	$392M	$120M
Amortization term	40 years	40 years	
Interest rate	4% (average)	2%	
Annual debt service	$24M	$10M for years 1-10/ $17M thereafter	

2.1.3.2 2020 Refunding

On December 17, 2020, the Authority issued its 2020 Senior Bonds in the principal amount of $1,370 million, to refund a significant portion of its outstanding 2008 Senior Bonds (excluding the non-callable 2008 Senior Bonds with a principal balance of $87.2 million that mature on July 1, 2024), and all of the Authority's 2008 Guaranteed Bonds.

2020 Refunding debt service savings (FY2021 through FY2022)

$26 million

The 2020 Senior Bonds bear coupons at rates ranging from 4% to 5% per annum with yields at the time of issuance ranging from 2.5% to 4.5% and maturity dates ranging from July 1, 2021 to July 1, 2047. The issuance of the 2020 Senior Bonds resulted in a reduction in average annual senior debt service of $13 million, total debt service savings to final maturity of approximately $348.2 million or approximately $213.3 million NPV savings, representing 15% of refunded par amount, and the termination of the Commonwealth guarantee over the Authority's 2008 Guaranteed Bonds, that were payable by the Authority on a basis subordinate to its senior debt.

After the Federal Debt modification in July 2019 and the issuance of the 2020 Senior Bonds, no Commonwealth Guaranteed Indebtedness remains outstanding.

Furthermore, each purchaser of 2020 Senior Bonds consented, by its purchase and execution of an investor letter, to certain amendments to the MAT, effective upon the receipt of the written consent of the holders of all outstanding senior indebtedness under the MAT, including the Federal Lenders, that, among other changes, will convert the security for the Authority's revenue bonds under the MAT from a gross revenue pledge to a net revenue pledge.

2.1.3.3 2021 Refunding

On August 25, 2021, the Authority issued its 2021 Senior Bonds in a total principal amount of $1,089.8 million and on June 15, 2022. The Authority expects to complete the issuance of its 2022 Senior Bonds in a total principal amount of $565.2 million to refinance in the aggregate all of the Authority's 2012 Series A and B senior revenue bonds.

2021 Refunding debt service savings (FY2022)

$22 million

The 2021/2022 Senior Bonds bear interest at rates ranging from 4% to 6% per annum with yields at the time of issuance or expected issuance ranging from 1.17% to 3.75% and maturity dates ranging from July 1, 2022 to July 1, 2047.

The proceeds of the 2021/2022 Senior Bonds were or are expected to be used as follow in ($'000):

Refunded Bonds	Transaction	New Series	Refunding Bonds Par	Closing Date
2012A	Tender of a portion of 2012 Series A senior revenue bonds for cash purchase by Authority	2021A	$92,330	August 25, 2021
2012A	Exchange of a portion of 2012 Series A senior revenue bonds for new senior revenue refunding bonds	2021B	$842,410	August 25, 2021
2012B	Current refunding of 2012 Series B senior revenue bonds	2021C	$155,090	August 25, 2021
Remaining 2012A	Forward delivery current refunding of remaining 2012 Series A senior revenue bonds	2022A	$565,180	Expected to be June 15, 2022
			$1,655,010	

The issuance of the 2021/2022 Senior Bonds will result in a reduction in average annual senior debt service of $22 million, total debt service savings to final maturity of approximately $569.7 million or approximately $361.5 million NPV savings, representing 20% of refunded par amount.

Each purchaser of the 2021/2022 Bonds also consented, by its purchase and execution of an investor letter, to certain amendments to the MAT, effective upon the receipt of the written consent of the holders of all outstanding senior indebtedness under the MAT, including the

Federal Lenders, that, among other changes, will convert the security for the Authority's revenue bonds under the MAT from a gross revenue pledge to a net revenue pledge.

2.2 Main Assumptions

The Pre-Measures Financial Projections incorporate the benefit of the measures already implemented as explained previously in Section 2.1.

The main assumptions underlying the four components of PRASA's financial projections—(i) revenues, (ii) expenses, (iii) CIP and (iv) financing and debt service—are explained throughout this Chapter.

PRASA's Pre-Measures Financial Projections presented herein reflect the best projections of future results based on (i) PRASA's current financial situation and (ii) the following general assumptions:

- Service rates as approved in 2013, including rates adjustments in place and implemented until July 1, 2022;
- Payroll costs adjusted to reflect updated headcount and revised pay scales to allow for adequate personnel compensation and retention;
- Electricity cost projected based on rates provided by the Oversight Board on April 13, 2022;
- Expenses based on the FY2022 Amended Budget and the identified needs for FY2023, as adjusted by inflation thereafter, and excluding impact from unknown, extraordinary circumstances;
- Current contractual debt service takes into account the Federal Debt modification completed on July 26, 2019 and the debt refinancing agreements closed on December 17, 2020 and August 25, 2021 including the forward delivery bonds;
- Capital Improvement Program, as updated to reflect current System needs and funding agreements; and
- Macroeconomic indicators as provided by the Oversight Board on February 11, 2022.

A summary of some specific assumptions used to develop the 6-year Pre-Measures Financial Projections are included in Table 2-4.

TABLE 2-4: ASSUMPTIONS SUMMARY TO DEVELOP THE CERTIFIED FISCAL PLAN

Revenues	• **Billings:** Residential, Commercial and Government billings are projected based on macroeconomic and demographic indicators. Industrial billing is projected based on real GNP macroeconomic indicators. Applicable indicators provided by Oversight Board. • **Collections Rate:** 97% reflecting the expected impact from disconnections reactivation during FY2023 and 96% thereafter.
Expenses	• **Payroll and related costs:** Based on average revised cost per FTE, including salary adjustments, and assuming

	the headcount level will increase from 4,700 in FY2022 to 4,950 by FY2027 to properly operate the Systems. • **Electricity:** Based on FY2022 preliminary consumption projections and electricity rates provided by the Oversight Board. • **Other expenses:**[14] Projected based on the adjusted FY2023 needs and subsequently (FY2024-FY2027) the increases were based on the unadjusted FY2023 needs as increased by the projected inflation rates provided by the Oversight Board.
Capital Improvement Program	• **Reconstruction and Recovery Projects:** Estimated cost based on FEMA obligation of funds (for 90% of the total estimate) to address the impact from 2017 Hurricanes to PRASA's infrastructure, assuming the 10% match for such projects will be provided by the CDBG-DR Program. • **Compliance Projects:** Based on agreements with USEPA and PRDOH as expected to be renegotiated. • **Renewal and replacement**: Estimated based on expected needs of the Systems.
Contractual Debt Service	• **Debt Service:** Projected based on current debt service as per amortization tables, reflecting the benefit of the Federal Debt modification, the refunding of a substantial portion of the 2008 Senior Bonds, all of the 2008 Guaranteed Bonds and of all 2012 Senior Bonds and excluding debt service on PFC debt.

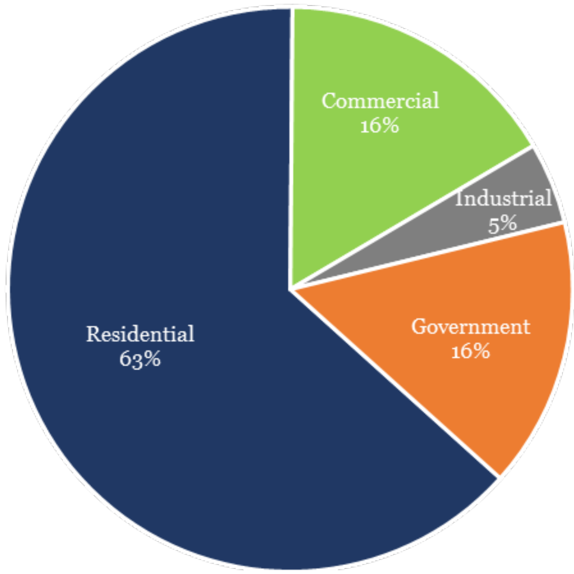
2.3 Revenues

2.3.1 Customers and Revenue Base

As of December 31, 2021, PRASA had 1,263,053 active accounts, of which over 95% were Residential accounts. Residential customers accounted for 63% of the Authority's revenues during fiscal year 2021. Exhibit 1-2 included in Chapter 1 provides the breakdown of customers by category. Billings by customer type during FY2021 are presented in Exhibit 2-2.

[14] To prevent the use of the RSA as a revenue forecasting tool of ~$10.5 million, the FY2023 operating expenditure needs were adjusted by nearly $5.1 million in Other Expenses, $4 million in Maintenance & Repairs, and $1.4 million in Chemicals. However, the unadjusted FY2023 needs were used to project inflation from Fy2024-FY2027.

EXHIBIT 2-2: FY2021 REVENUE BREAKDOWN BY CUSTOMER CATEGORY



2.3.2 *Service Revenue*

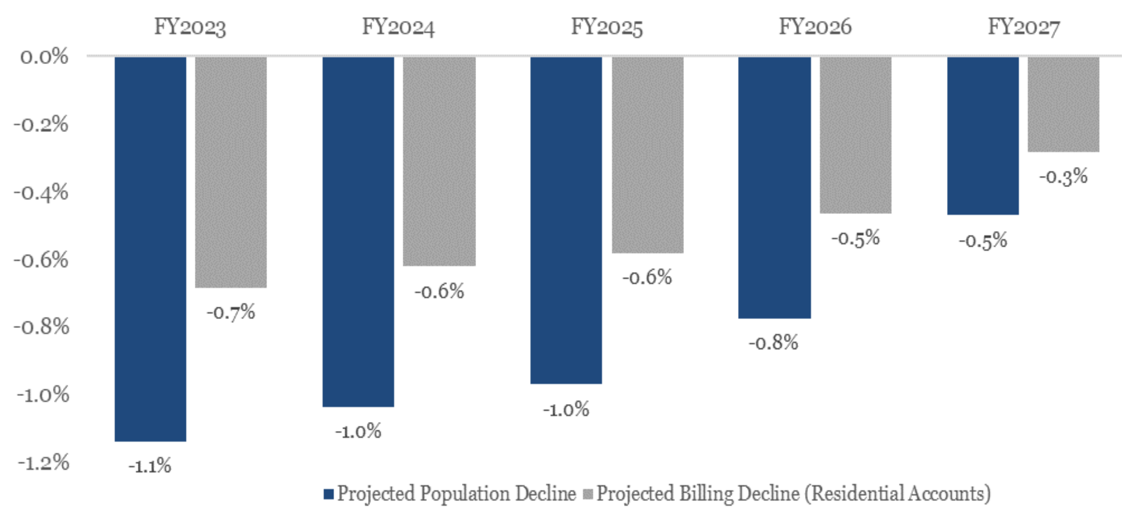
The Authority's service revenues (base fee and service charges) are derived from water and wastewater service billings and are presented net of current subsidies (i.e., PAN, TANF, ASES and Public Housing). Service revenue projections for this Certified Fiscal Plan are based on FY2022's actual and projected billings and are presented based on the current rate structure and adjustments implemented as of FY2022. Pre-measure service revenues do not include future projected rate adjustments as those are included in Chapter 3.

2.3.2.1 *Billing Trend*

Since the 2017 Hurricanes, and more recently due to the impact of the 2020 Earthquakes and the COVID-19 pandemic, revenue projections have been reduced as a result of declines in population, water consumption, and overall levels of economic activity in Puerto Rico.

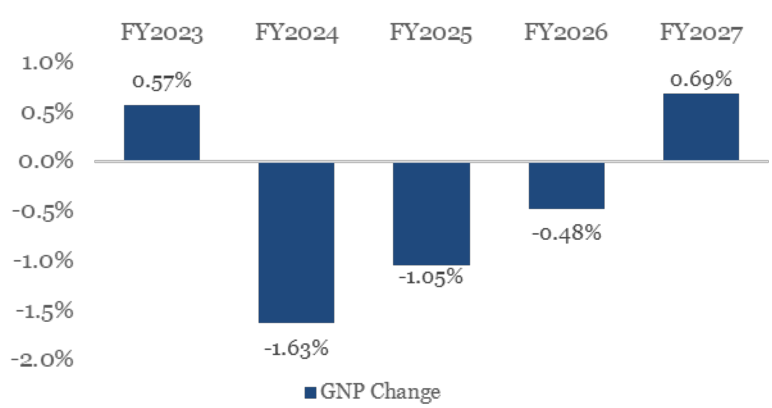
Exhibit 2-3 illustrates the projected population decline as well as the expected reduction in billings.

EXHIBIT 2-3: POPULATION AND RESIDENTIAL BILLINGS TREND[15]



Billings for Industrial accounts are projected using the nominal Gross National Product (GNP) forecast as included in Exhibit 2-4.

EXHIBIT 2-4: GNP GROWTH RATES[16]



[15] Based on the macroeconomic projections in the Commonwealth's 2022 Certified Fiscal Plan as of January 27, 2022.

[16] Based on the macroeconomic projections in the Commonwealth's 2022 Certified Fiscal Plan as of January 27, 2022.

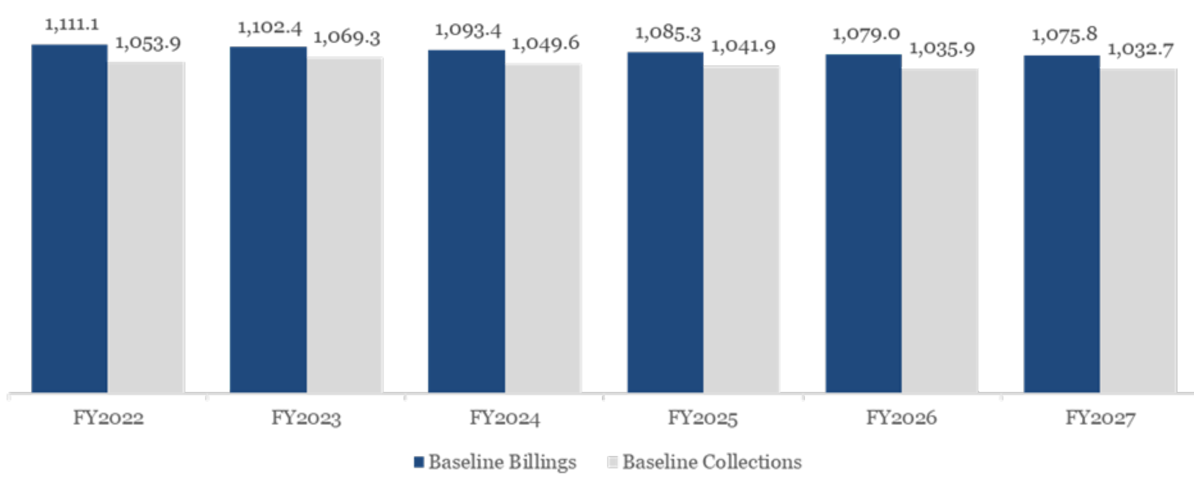
2.3.2.2 Collections Rate

Prior to the 2017 Hurricanes, the 2020 Earthquakes and the current pandemic, PRASA's collection rate historically averaged 96%. PRASA experienced slight increases in its outstanding residential receivables partially driven by the effects of Act 39-2020 enacted in response to the pandemic state of emergency, which did not allow for service disconnections. However, beginning in March of 2022, PRASA reinitiated service disconnections, projecting a 97% collection rate during FY2023 and returning to a 96% collections rate thereafter.

2.3.2.3 Projected Service Revenues

Based on the assumptions set forth above, PRASA's projected service revenues and collections are presented in Exhibit 2-5.

EXHIBIT 2-5: PRE-MEASURES BILLINGS AND COLLECTIONS (IN $ MILLIONS)



2.3.3 Miscellaneous Income

Miscellaneous income includes revenues received mainly from interest income and Developers' Contributions.[17] Based on historical results, miscellaneous income is projected at $2.5 million per year during the Certified Fiscal Plan Period.

2.3.4 Summary of Projected Pre-Measures Revenues

Table 2-5 summarizes projected pre-measures revenues for the Certified Fiscal Plan Period, presented on a cash basis.

[17] Fees paid by developers to connect their projects to the Authority's Systems

TABLE 2-5: PRE-MEASURES PROJECTED REVENUES (IN $ MILLIONS)

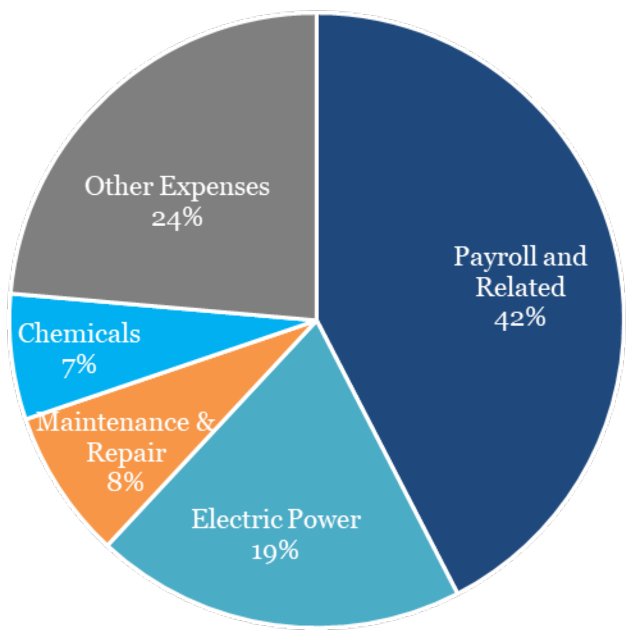
in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Service Collections	1,053.9	1,069.3	1,049.6	1,041.9	1,035.9	1,032.7	6,283.3
Miscelaneous Income	2.5	2.5	2.5	2.5	2.5	2.5	15.0
Total Revenues	1,056.4	1,071.8	1,052.1	1,044.4	1,038.4	1,035.2	6,298.3

The benefit for projected rate adjustments to be implemented in the future is included in Chapter 3 under Revenue Enhancement Measures.

2.4 Expenses

Exhibit 2-6 provides the operating expense breakdown by category. Approximately two-thirds of PRASA's expenses are made up by payroll and electricity costs. Adding operating maintenance & repairs and chemicals, these four cost categories represent approximately 76% of total expenses. Other expenses consist largely of costs directly related to operations, including rentals, security services, insurance, billings and collections related costs, water purchase, sludge disposal, and water transport, among others.

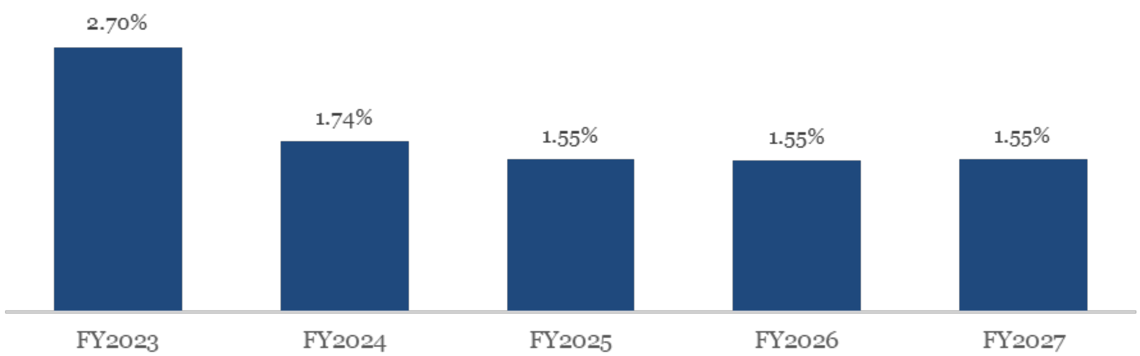
EXHIBIT 2-6: EXPENSE BREAKDOWN BY CATEGORY (FY2022), %



For the Pre-Measures Financial Results, the amended FY2022 budget and identified FY2023 expenses were included and then most of the expenses were increased year-over-year to account for projected inflation. However, PRASA used different assumptions for payroll & related and electricity expenses, which assumptions are further explained below.

Inflation rates used to project expenses (other than payroll & related and electricity expense) are included in Exhibit 2-7.

EXHIBIT 2-7: PROJECTED INFLATION RATE[18]



2.4.1 *Payroll and Related Costs*

PRASA's largest expense category, representing 42% of its annual operating budget, is Payroll and Related Costs. This cost category includes direct labor costs and associated benefits, such as healthcare and pension obligations, and is presented net of capitalized labor costs related to capital projects (estimated at 3.7% of total operational expenses[19] starting in FY2023).

The following main assumptions were applied to develop the Payroll and Related Costs projections:

- Headcount of 4,700 employees for FY2022, increasing by 50 FTE each year thereafter reaching 4,950 employees by FY2027.
- Minimum salaries based on current legislation.
- Implementation of new salary scales starting on July 1, 2022.
- New incentives for critical operational positions to allow for their retention.
- Compliance with Act 26-2017, including the following change in benefits:
  - Maximum overtime factor to 1.5 times[20]
  - Reduction of vacation days to 15 days maximum
- 18 days of sick leave per year maximum as set forth by Act 176-2019
- Healthcare plan costs based on current contract for FY2022 and updated for FY2023 and 2024 taking in consideration the latest RFP process.

[18] Based on the macroeconomic and demographic projections provided by the Oversight Board on February 11, 2022.

[19] Source: PJ Sun LLC Report on Overhead Capitalization.

[20] Prior to Act 26-2017, maximum overtime factor was 2.5 times.

- Pension costs paid through "PayGo" based on the projections provided by the Employees Retirement System (ERS).

2.4.2 Electricity

The cost of electricity represents PRASA's second largest expense and is highly sensitive to fluctuations in electricity rates, which are established by the Puerto Rico Energy Bureau's (PREB). To illustrate, a ±$0.01 variation in the cost per kWh may represent approximately $6.5 million per year in PRASA's annual electricity cost.

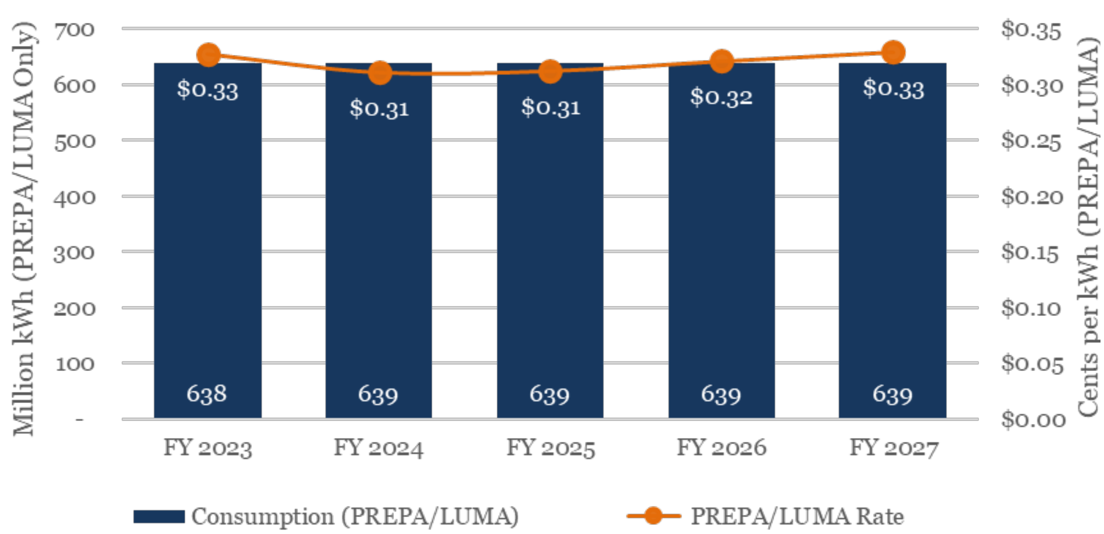
The expected cost of electricity purchased from PREPA/LUMA is based on rates applicable to PRASA during the Certified Fiscal Plan Period, as informed by the Oversight Board. PRASA makes no representations with regards to such rates.

Electricity consumption is presented based on current level of usage, prior to the implementation of any additional savings measures.

PRASA has entered into PPA agreements that set electricity cost at $0.15 per kWh. Currently, PRASA consumes 11 million kWh produced through such PPAs, approximately 2% of its total annual consumption.

Exhibit 2-8 below includes the projected electricity rates of the energy supplied by PREPA/LUMA and PRASA's projected annual consumption supplied by PREPA/LUMA for the Certified Fiscal Plan Period.

EXHIBIT 2-8: PROJECTED ELECTRICITY COSTS AND CONSUMPTION (PRE-MEASURE)



Based on current events, including the ongoing Russia's invasion of Ukraine, the projected cost for electricity, which PRASA expects during the Certified Fiscal Plan Period to continue to be significantly influenced by oil prices, is subject to a high degree of uncertainty and possible material change.

2.4.3 Maintenance and Repair

Maintenance and repair costs are projected at around $60 million per year, representing PRASA's third largest expense category within its operating budget. The maintenance cost includes only external contractor spend for both corrective and preventive maintenance and incremental costs of complying with the SSOMP, as required by the USEPA. FY2022 and FY2023 costs have been projected based on the specific requirements from operations and for subsequent years, PRASA has included an annual increase for this category based on the projected annual inflation rate (see Exhibit 2-7 above).

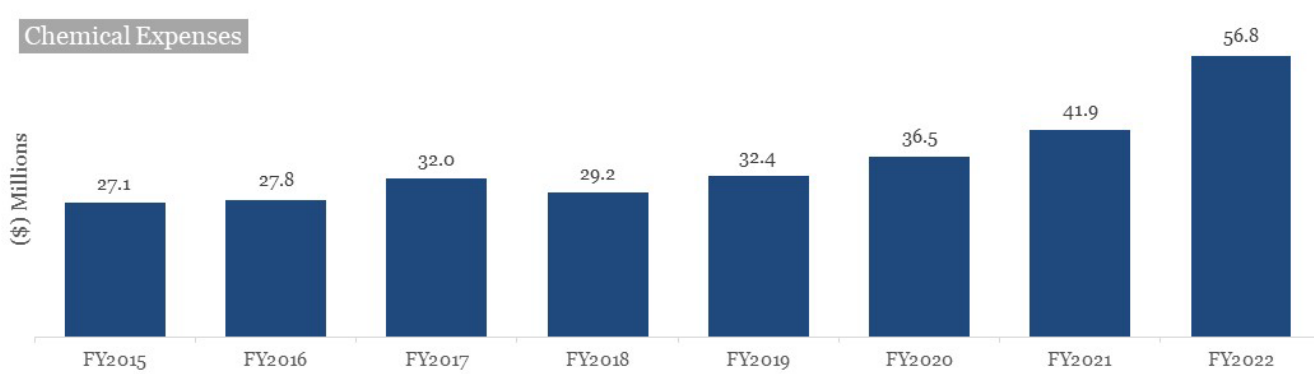
2.4.4 Chemicals

PRASA's chemical expense includes costs for coagulants, flocculants, chlorine, and other chemicals required to properly treat water and wastewater. This expense is projected based on the requirements for treatment and disinfection at PRASA's treatment plants and wells, which is necessary to comply with environmental standards and regulations set by federal and local agencies (e.g., EPA and PRDOH).

PRASA FY2022 and FY2023 projected chemical cost is based on actual identified needs as a base to project future costs. For subsequent years, the Authority has included an annual increase for this category based on the projected inflation rate (see Exhibit 2-7 above).

PRASA's chemical spend has steadily risen since 2015 by nearly $30 million, mainly due to increased chemical costs and also increases consumption to ensure compliance with environmental and health standards. Exhibit 2-9 below outlines historical chemical expenditures from FY2015 to FY2019 per the respective audited financial statements, whereas FY2020 to FY2021 reflects actual spending per Budget to Actuals reporting, and FY2022 includes the proposed Budget amount for chemicals.

EXHIBIT 2-9: HISTORICAL CHEMICAL EXPENSES AND FY22 BUDGET (IN $ MILLIONS)

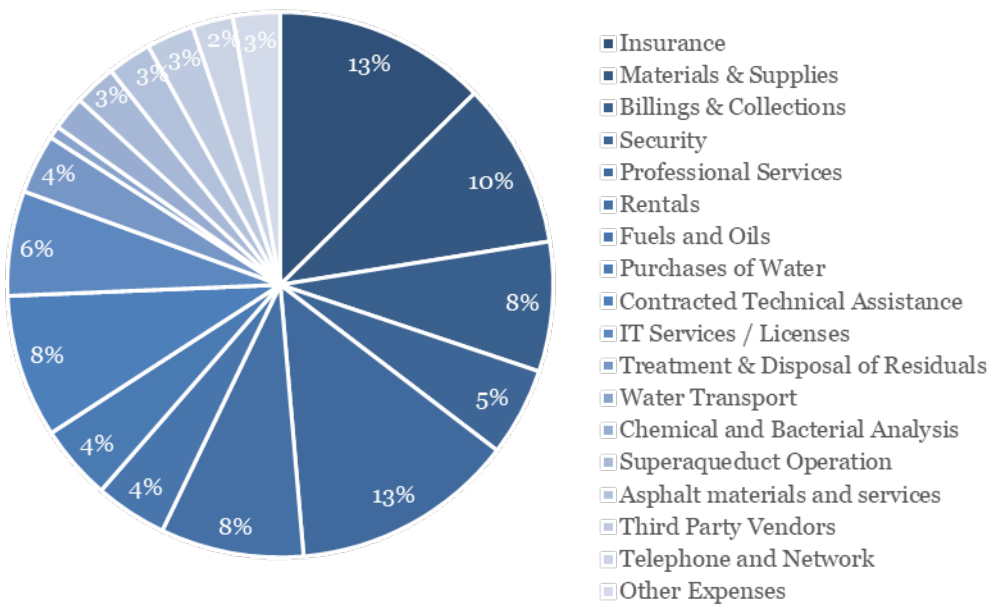


2.4.5 Other Expenses

This expense category includes all other Operating Expenses, at around 24% of the total operating budget, not covered in the prior categories and is increased at the projected inflation rate (see

Exhibit 2-7 above). Exhibit 2-10 included below presents the breakdown of the Other Expenses category.

EXHIBIT 2-10: OTHER EXPENSES BREAKDOWN (FY2022)



2.4.6 *Summary of Projected Pre-Measures Expenses*

Total operating expenses during the Certified Fiscal Plan Period are summarized in Table 2-6.

TABLE 2-6: PRE-MEASURES PROJECTED EXPENSES (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Payroll and Related	320.3	340.2	346.8	358.5	361.1	369.9	2,096.8
Electric Power	149.4	211.4	201.0	201.8	207.4	212.4	1,183.3
Maintenance & Repair	60.9	56.5	61.6	62.5	63.5	64.5	369.5
Chemicals	56.8	56.6	59.0	59.9	60.9	61.8	355.0
Other Expenses	181.8	189.2	197.7	200.7	203.8	207.0	1,180.1
FEMA Reimbursement	(20.0)	-	-	-	-	-	(20.0)
Capitalized Expenses	(10.2)	(31.6)	(32.0)	(32.7)	(33.2)	(33.9)	(173.6)
Operating Expenses, Net	738.9	822.3	834.0	850.8	863.5	881.7	4,991.2

2.5 Capital Improvement Program

One of PRASA's main priorities is the successful and efficient execution of its CIP projects. In the aftermath of the 2017 Hurricanes, a material portion of the CIP was designated for the reconstruction of all critical infrastructure required to achieve compliance with industry standards and protect public health and the environment. Additionally, the CIP also includes projects aimed at meeting mandatory compliance with the 2015 USEPA Consent Decree and the 2006 Drinking Water Settlement Agreement, renew and replace aging infrastructure, Systems optimization and simplification, and technological modernization.

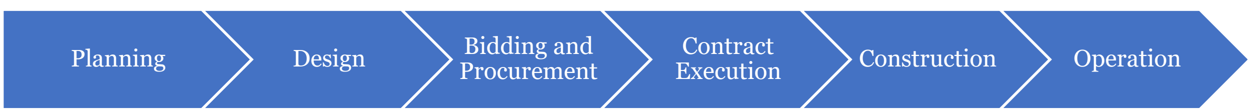
Specific funding matters for CIP reconstruction projects as provided by FEMA are discussed in greater detail in Section 4.2. Given the large number of PRASA's assets eligible for funding, FEMA developed FAASt, an accelerated award strategy, using the cost estimates of a sample of assets to extrapolate the results to the total population of assets. As a result of the FAASt, PRASA agreed to a total award of $4.1 billion with a net obligation of $3.66 billion of FEMA funds for the System's recovery and over $400 million in projected cost share expected to be met with CDBG-DR funds. This federal obligation process required a detailed review of the CIP with the objective of maximizing the award by including new projects and consolidating others.

The Pre-Measures Financial Results do not include any expected bond issuance or external financing for the CIP. Instead, for the baseline projections, the CIP is expected to be financed exclusively through operating revenues and obligated FEMA, ARPA, and CDBG-DR funds. Additional funding from SRF (including BIL Act funding) and USDA RD Programs is incorporated as one of the measures included in Chapter 3.

2.5.1 CIP Phases and Components

Once a project has been developed to the point that it has a clear project charter that formalizes its requirement and existence, the CIP construction projects are implemented through phases, as illustrated in Exhibit 2-11.

EXHIBIT 2-11: CIP PHASES & ACTIVITIES



Costs associated with project construction include direct construction costs, planning, studies, engineering design, inspection, services during construction, owner-controlled insurance, project management, administrative expenses, financing costs and other expenses related and inherent to construction. The CIP cost projections also include a contingency reserve for unexpected costs that could occur during the life cycle of the project. The contingency amount is based on industry guidelines, historical experience, and complexity of the project. If unspent after completion of the project, this reserve is released to be used for other CIP projects.

2.5.2 CIP Projects Classification and Prioritization

PRASA's CIP projects are classified into the following categories:

- **FAASt or Reconstruction & Recovery Projects:** Projects to repair capital infrastructure impacted by the 2017 Hurricanes to industry standards and based on a workplan submitted to FEMA on April 8, 2021, as subsequently updated;
- **Renewal and Replacement (R&R):** Projects aimed at renewing or replacing aging infrastructure at or near the end of its useful life (e.g., pipelines, pumps, motors, etc.);

- **Compliance (Mandatory/Non-mandatory):** Projects required by agreements—including USEPA Consent Decree, PRDOH Drinking Water Settlement Agreement, civil actions, administrative orders, court orders, and other mandatory projects—or those that would be included in future agreements if not completed;
- **Quality:** Projects aimed at increasing the quality of the water and wastewater service provided to customers;
- **Meters[21]:** Including the cost to replace meters to measure water consumption from PRASA's clients as well as master meters to measure water production;
- **Fleet and IT:** Replacement of vehicles in PRASA's fleet and IT infrastructure improvements;
- **Optimization and Emergencies:** Projects to increase efficiency and infrastructure emergencies and contingencies; and
- **Safety and Growth:** Projects to allow for Systems growth and increased security at PRASA's facilities.

A clear and objective project prioritization process is key to identifying critical projects across the CIP portfolio and ensuring the most important projects are prioritized. A well-defined scoring criterion for all capital projects is standard practice across water and wastewater utilities.

Currently, PRASA's prioritization methodology is focused on mandatory compliance projects. PRASA, through its updated 10-year Master Plan, must develop a prioritization methodology for all projects in PRASA's CIP. The implementation schedule for future long-term projects must then be subject to its prioritization position and funds availability.

2.5.3 CIP Projects Status

During April 2022 PRASA had over 226 active projects in different stages for a total investment of $2,951 million as included in Table 2-7.

TABLE 2-7: ACTIVE PROJECTS BY STAGE

Stage	# Projects	Estimated Investment $M	%
Planning/To be Assigned	134	$ 1,792	61%
Design	29	507	17%
Bidding/Contracting	37	441	15%
Construction	26	211	7%
Total	**226**	**$ 2,951**	**100%**

By the end of FY2023 PRASA expects to have over 100 projects under construction. Exhibit 2-12 presents the projections of projects by stage through July 2023.

[21] Metering projects and commercial water losses are jointly addressed under Chapter 3 revenue enhancement measures (Metering Optimization)

EXHIBIT 2-12: ACTIVE CIP PROJECTION FY2021 TO FY2023

2.5.4 *CIP Main Projects*

As of April 2022, the projects included in Table 2-8 are the major ones currently under construction.

TABLE 2-8: MAIN PROJECTS UNDER CONSTRUCTION

Project	Funding Source	Amount	Status	Benefit
Caguas Laboratory	FEMA	$32M	Under Construction, 61% progress	Compliance (Island Wide)
New Dorado Trunk Sewer	CWSRF	$32M	Under Construction, 23% progress	Resiliency and stability in the system for 7,030 families.
Salinas/Guayama Trunk Sewer – Phase 3	CWSRF	$29M	Under Construction, 8% progress	Resiliency and optimization of wastewater system
Ponce Nueva WTP Improvements	DWSRF	$17M	Under Construction, 58% progress	Facility compliance and improvements

The main projects under the design or bidding phases as of April 2022 are included in Table 2-9 below.

TABLE 2-9: MAIN PROJECTS UNDER BIDDING OR DESIGN PHASES

Project	Funding Source	Amount	Status	Benefit
Meter Replacement	FEMA	$330M	Proposals received on March 18, 2022; under evaluation	Reduce Commercial NRW, revenue increase, consumption transparency
Carraízo Dredging	FEMA	$60M	Bid Opening – May 2022	Resiliency of raw water storage capacity
Rehabilitation of Enrique Ortega WTP	FEMA/ CDBG-DR	$73M	Bid Announcement-May 2022	Resiliency and stability in the water system of 114,000 families.
Rehabilitation of Guayama WWTP	FEMA / CDBG-DR	$69M	Bid	Resiliency and improve wastewater treatment process
Rehabilitation Culebrinas WTP	FEMA / CDBG-DR	$42M	Design	Resiliency and stability in the water system of 18,500 families.
Liner Proyecto Los Angeles	FEMA/CDBG-DR	$15M	Bid Award	Resiliency and stability in the water system for 15,000 families in Carolina & Loíza.
Completion of Valenciano WTP	DWSRF	$21M+	Design	Resiliency and stability in the water system of 22,137 families.

2.5.5 CIP Projections

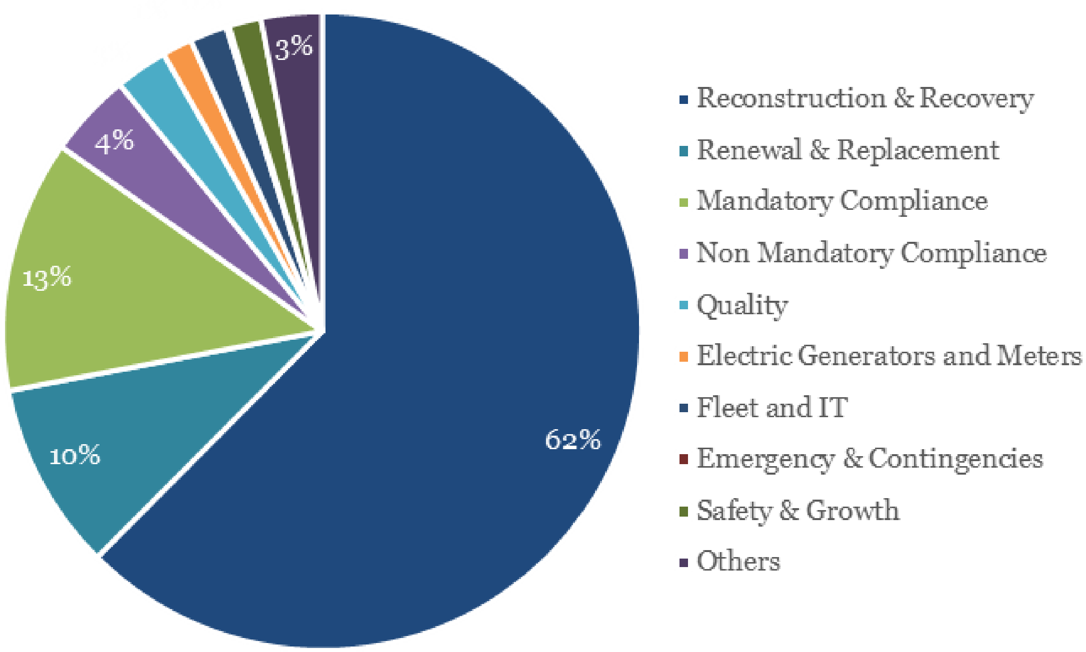
The projected CIP spending during the Certified Fiscal Plan Period is included in Table 2-10 below.

TABLE 2-10: PROJECTED CIP (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Reconstruction & Recovery	61.0	274.2	633.5	661.4	369.0	158.7	2,157.8
Renewal & Replacement	58.9	55.2	54.3	55.2	54.8	51.5	329.8
Mandatory Compliance	44.9	94.8	123.7	93.4	55.0	30.7	442.5
Non Mandatory Compliance	21.4	51.2	40.7	19.5	10.6	3.6	147.1
Quality	19.4	38.7	27.8	3.2	1.7	1.5	92.3
Electric Generators and Meters	18.3	26.6	2.0	-	-	5.5	52.3
Fleet and IT	9.8	23.4	10.0	7.0	7.0	8.0	65.3
Emergency & Contingencies	-	1.0	1.0	1.0	1.0	1.0	5.0
Safety & Growth	8.3	12.5	24.2	9.2	1.7	0.4	56.3
Others	10.8	28.4	24.2	19.7	16.2	7.4	106.6
Total	252.6	606.2	941.3	869.6	517.0	268.3	3,454.9

Exhibit 2-13 illustrates that almost 90% of the CIP is related to Reconstruction & Recovery projects, as well as Renewal & Replacement and Compliance related projects.

EXHIBIT 2-13: CIP BREAKDOWN BY CATEGORY (FY2022-FY2027)



The CIP is assumed to be fully funded by PRASA's operating revenues and reserves in addition to insurance, FEMA, CDBG-DR[22] and ARPA proceeds.

A summary of the pre-measures projected sources for the CIP spending over the Fiscal Plan Period is included in Table 2-11 below:

TABLE 2-11: REQUIRED SOURCES FOR CIP (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Beginning Cash Balance Use	62.4	109.1	50.8	38.8	16.4	-	277.4
FEMA/CDBG Appropriations	61.9	280.3	655.7	703.3	402.5	161.7	2,265.3
ARPA and Other Funds	5.1	21.1	38.7	39.2	33.7	9.3	147.0
Operating Revenues	123.3	195.7	196.2	88.2	64.4	97.3	765.2
Total	252.6	606.2	941.3	869.6	517.0	268.3	3,454.9

2.6 Debt Service and Other Deposits Required Under the Master Agreement of Trust (MAT)

Debt service costs included in the Pre-Measures financial results reflect PRASA's current debt structure and contractual obligations, incorporating the benefits from the Federal Debt modification completed in July 2019, the refunding of a substantial portion of the 2008 Senior Bonds and all of the 2008 Guaranteed Bonds, completed in December 2020, and the refunding of the 2012 Senior Bonds completed in August 2021 (including the forward delivery portion expected to be executed in June 2022), as further detailed previously in this Chapter.

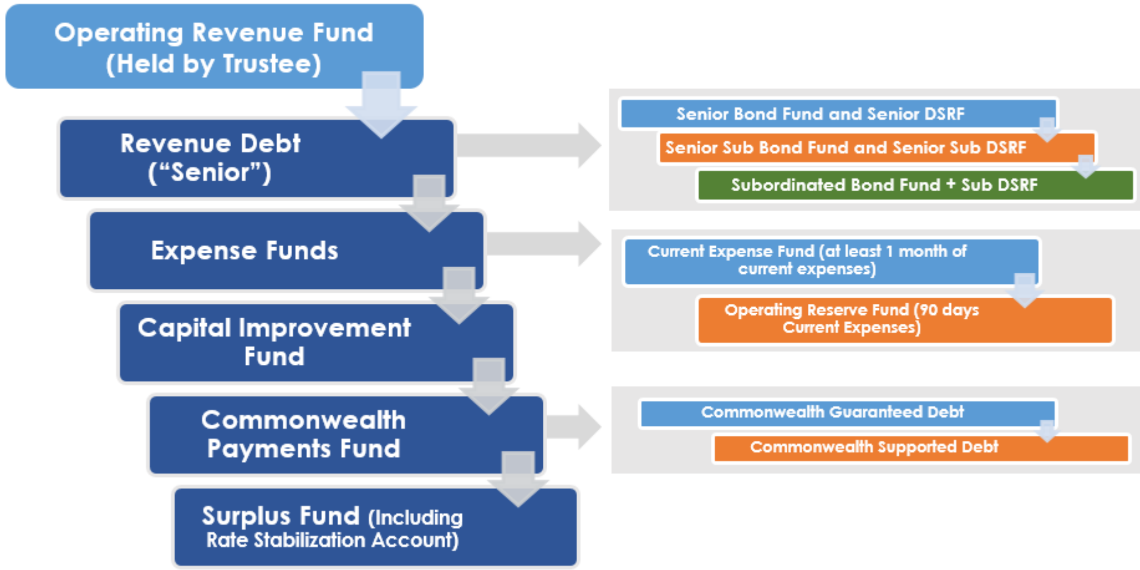
2.6.1 MAT Payment Priorities

The MAT, executed in 2008 and as subsequently amended, establishes the way that PRASA's revenues are to be applied to the payment of debts and the lawful priorities for payment thereof, among other things.

The payment priority of the different levels of debt service and other required deposits under the MAT is presented in Exhibit 2-14.

[22] Assumes the obligation of FEMA funds for 90% of the total Reconstruction and Recovery projects and CDBG-DR Program funds for the local cost share portion of 10%

EXHIBIT 2-14: MAT PAYMENT PRIORITIES[23]



The payment priority established by Article V of the MAT is outlined below:

- **Revenue or Senior Debt**: Currently, all of PRASA's debt, except for the CSO, consists of Senior Debt—including Other System Indebtedness held by the Federal Lenders—which is paid from operating revenues prior to the payment of current expenses.
    - Senior debt service includes payments related to the 2008 Senior Bonds (CABs), 2012 Senior Bonds (FY2022 only), 2020 Senior Bonds, 2021/2022 Bonds, and the Federal Debt.
    - The remaining 2008 Senior Bonds outstanding are entitled to the benefits of a Debt Service Reserve Fund that is currently funded in full and is expected to be released on or before July 1, 2024, subject to certain conditions. The remaining senior debt does not have the benefit of a debt service reserve fund.
- **Expense Funds:** Accounts for two funds to cover operating expenses:
    - Current Expense Fund: On a monthly basis, after the payment of debt service, the Trustee deposits in the Current Expense Fund, at PRASA's request, at least one month and up to three months (90 days) worth of current expense needs.
    - Operating Reserve Fund: PRASA is required to maintain an Operating Reserve Fund equal to three months of current expenses. The Operating Reserve Fund is currently fully funded.

[23] Bondholders consented to amend the MAT to change the revenue pledge from a gross revenue pledge to a net revenue pledge, to become effective when the holders of all senior indebtedness, including the Federal Lenders, consent to the amendment.

- **Capital Improvement Fund:** The amount to be deposited in the Capital Improvement Fund is set forth in PRASA's annual budget and is used to pay for the portion of CIP funded from Authority's revenues. Under the Pre-Measures Financial Projections, the total amount required for the CIP (net of FEMA, CDBG-DR and ARPA proceeds) is expected to be funded solely by PRASA's cash balances and operating revenues. The benefit of expected additional funds for the CIP from SRF and USDA-RD Programs is included as in Chapter 3 (New financing for CIP).
- **Commonwealth Payments Fund**: This fund includes monies available for two additional debt categories. Failure to make the required deposits to the Commonwealth Payments Fund or payments on this debt is not an event of default under the MAT.
  - **Commonwealth Guaranteed Indebtedness (CGI)**: Includes debt issued by PRASA that is guaranteed by the Commonwealth. After the modification of the Federal Debt and the issuance of the 2020 Senior Bonds that refunded all of the 2008 Revenue Refunding Bonds, there is no outstanding debt under this category.
  - **Commonwealth Supported Obligations (CSO):** Includes a portion of the 2011 Series B Bonds issued by PFC in December 2011 to refinance certain outstanding debt related to the construction cost of the North Coast SuperAqueduct. The CSO debt is not a general obligation of PRASA and is payable solely from legislative appropriations. PRASA has been unable to make such payments in recent years because no funds have been appropriated by the Government for such purposes. As stipulated in the MAT, if PRASA is unable to make payments on the PFC debt, the obligation is not cumulative and therefore does not carry forward to future periods. As a result of the Eighth Amended Plan's discharge and preemption provisions, there will not be future appropriations related to the PFC indebtedness. Therefore, the contingency that would trigger PRASA's contingent obligation to pay the PFC indebtedness once it receives appropriations will not occur. (See also Section 2.1.3)
- **Surplus Fund:** After making all required deposits to the funds set forth above and any other fund required under the terms of the MAT, any excess cash can be deposited into the Surplus Fund to be used at the discretion of PRASA. As part of the Surplus Fund, a Rate Stabilization Account (RSA) can be created to cover any operating needs in the future and minimize the need for rate increases.

In connection with the issuance of the 2020 Senior Bonds and the 2021/2022 Bonds, as further explained in Section 1.3.2, PRASA has proposed certain amendments to the MAT to, among other things, change the current order of payments, under which revenues are applied to provide for the payment of current operating expenses ahead of deposits for debt service on outstanding Senior Debt. The holders of the 2020 Senior Bonds and the 2021/2022 Bonds have consented to these amendments. The amendments will become effective upon receipt of written consent of all the holders of Senior Debt, including the Federal Lenders.

2.6.2 Contractual Debt Service

PRASA's debt as of December 31, 2021, excluding CSO debt, is presented in Table 2-12.

TABLE 2-12: OUTSTANDING LONG-TERM DEBT AS OF DECEMBER 31, 2021 (IN $ THOUSANDS)[24]

Debt	**$M**
Senior Bonds	
2008 Series A Bonds (CAB)	67.3
2012 Series A Bonds[25]	638.4
2020 Series A Bonds	1,318.0
2020 Series B Bonds	18.1
2021 Series A Bonds	92.3
2021 Series B Bonds	842.4
2021 Series C Bonds	155.1
	3,131.6
Other Senior Indebtedness	
2019 State Revolving Fund Loans	575.7
2020 State Revolving Fund Loans	16.6
2019 Rural Development Loans	394.5
	986.7
Total Senior Debt	4,118.3

The Authority's Pre-Measure projected debt service during the Certified Fiscal Plan Period is included in Table 2-13:

TABLE 2-13: PROJECTED DEBT SERVICE (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Senior Debt	247.2	248.2	250.2	247.3	249.6	248.4	1,491.0
Commonweatlh Payment Fund	-	-	-	-	-	-	-
Projected Debt Service	247.2	248.2	250.2	247.3	249.6	248.4	1,491.0

[24] Excludes PRASA's note issued to PFC in connection with the refinancing of the construction cost of the SuperAqueduct (although it is included in PRASA's audited financial statements), which note is payable solely from legislative appropriations that have been discharged.

[25] Balance of 2012 Bonds expected to be defeased with the proceeds of the 2022 Senior Bonds to be issued on June 15, 2022.

2.6.3 *Other Deposits Required by the MAT*

Deposits under the baseline scenario that are projected to fund a portion of PRASA's CIP and to maintain the Operating Reserve Fund balance required under the MAT (varying based on the projected level of operating expenses) are included in Table 2-14:

TABLE 2-14: OTHER DEPOSITS REQUIRED BY THE MAT (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Operating Reserve Fund	14.6	15.7	2.9	4.2	3.2	4.6	45.2
Capital Improvement Fund	123.3	195.7	196.2	88.2	64.4	97.3	765.2
Total Other Deposits	138.0	211.4	199.1	92.4	67.6	101.9	810.4

Projected deposits to the ORF assume that PRASA does not make any withdrawals throughout the Certified Fiscal Plan Period. The ORF is projected to be fully funded at the end of each fiscal year during the period covered by the Certified Fiscal Plan.

Deposits to the Capital Improvement Fund reflect the amount required to be deposited in such fund from operating revenues, after beginning balances available for the CIP and projected federal funds, including sources for Reconstruction and Recovery projects, are deducted from the CIP needs.

2.7 Pre-Measures Financial Projections Summary Pre-Measures Financial Projections.

Table 2-15 describes the major assumptions discussed above and used for the development of the Pre-Measures Financial Projections.

TABLE 2-15: SUMMARY OF THE PRE-MEASURES FINANCIAL PROJECTIONS

Revenues	Average Annual Billing Reduction (Residential) FY2023/27	-0.50%
Revenues	Average Collections Rate Residential and Non-Residential Accounts FY2024/27	96%
Revenues	Average Annual Rate Increase FY2024/27	2.00%
CIP	Average Annual CIP FY2023/27 ($M)	$640
CIP Funding	Additional Annual Federal Funds	FEMA, CDBG-DR and ARPA
Expenses	Headcount by FY 2027	4,950
Expenses	Pension Cost	Pay Go
Expenses	Average Electricity Cost per kWh FY2023/27 (cents)	$32.10
Expenses	Average Expenses Growth (inflation) FY2023/27	1.80%
Expenses	Capitalization Rate FY2023/27	3.70%
Debt Service	Debt Service Payments	Contractual debt as reprogrammed and refunded

Table 2-16 included below presents a summary of the Pre-Measures Financial Projections for FY2022-FY2027. A total pre-measures need of $994 million is shown with most of that amount attributable to CIP needs, assuming no external funding or additional federal funds beyond the forecast funds for Recovery and Reconstruction projects as well as funds obligated from the ARPA.

TABLE 2-16: PRE-MEASURES FINANCIAL PROJECTIONS (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Authority Revenues	1,056.4	1,071.8	1,052.1	1,044.4	1,038.4	1,035.2	6,298.3
Senior Debt Service	(247.2)	(248.2)	(250.2)	(247.3)	(249.6)	(248.4)	(1,491.0)
Net Operating Expenses	(738.9)	(822.3)	(834.0)	(850.8)	(863.5)	(881.7)	(4,991.2)
Operating Reserve Fund	(14.6)	(15.7)	(2.9)	(4.2)	(3.2)	(4.6)	(45.2)
Capital Improvement Fund	(123.3)	(195.7)	(196.2)	(88.2)	(64.4)	(97.3)	(765.2)
Pre-Measures Financial Result	(67.7)	(210.1)	(231.2)	(146.2)	(142.3)	(196.7)	(994.3)

The 2022 Certified Fiscal Plan identifies several measures described in the following Chapter to eliminate the projected financial need and allow for PRASA to be financially self-sustainable.

3 Certified Fiscal Plan Measures and Post-Measures Financial Projections

Achieving financial solvency to ensure continued investments in the Systems is one of PRASA's main financial objectives. Moreover, achieving financial solvency through the elimination of structural deficits and the implementation of the measures included herein will equip the Authority with the necessary resources to provide safe, reliable, and affordable water and wastewater services to the people of Puerto Rico. To accomplish these objectives, PRASA has completed the following milestones: (i) implementation of moderate, annual rate increases since 2018; (ii) reprogramming or modification of the terms of the Federal Debt in 2019; (iii) debt service reduction through the refunding of a substantial portion of the 2008 Bonds, and all of the 2012 Bonds in 2020 and 2021/2022, respectively; and (iv) securing $3.66 billion in FEMA funds in 2021 for Systems recovery and reconstruction after the 2017 Hurricanes. In turn, this improved financial state has positioned the Authority to invest additional resources to improve its infrastructure.

Despite its financial improvements, PRASA still faces a host of issues that undermine its long-term operational sustainability. The most recent efforts have centered on measures that promote fiscal responsibility through rate increases, debt restructuring, and improved collection efforts while offering little in operational improvements. PRASA must also focus on improvements and investments to ensure delivery of essential public services, including (i) addressing its high NRW levels and (ii) investing in critical upgrades to its aging Systems through the use and maximization of federal funding.

If operational and capital shortcomings are left unaddressed, PRASA's finances and operations will not be sustainable. Placing an unnecessary burden on the well-being of Puerto Rico's residents and economy, both of which depend on reliable water supply and wastewater treatment. This Chapter summarizes a set of new measures across categories, such as revenue enhancement, cost savings, and new funding for infrastructure projects. In addition to measures that will improve PRASA's fiscal responsibility, several enabling measures have been identified that will help to improve operational performance and project delivery.

If successfully implemented and maintained, the measures outlined in this Chapter will further improve PRASA's financial situation along with operational performance and capital delivery.

3.1 New Measures Summary

PRASA must implement several new measures to ensure PRASA's long-term sustainability and the provision of safe, reliable, and affordable water and wastewater service that the people of Puerto Rico deserve. Four broad categories of measures are incorporated in the Post-Measures Financial Results:

1. **Revenue Enhancement Measures:** measures targeting adequate cost recovery levels executed through future rate adjustments and improvements in billing accuracy.
2. **Expense Reduction Measures**: measures to reduce PRASA's overall spend through operational optimization, mostly by reducing physical water losses and electricity costs.
3. **New Financing for CIP:** securing additional Federal funding to finance the CIP.

4. **Enabling Measures**: measures without tangible financial impact, but important for the successful implementation of this Certified Fiscal Plan and helping further ingrain principles of long-term financial and operational sustainability throughout the organization.

A summary of the expected net benefit for each individual measure is included in Table 3-5, at the end of this chapter.

3.1.1 Revenue Enhancement Measures

PRASA is pursuing two major measures directed at increasing revenues:

- **Rate Structure Simplification and Adjustments**: simplifying the rate structure to ensure simplicity, affordability, and adequate cost recovery and continuing with the implementation of modest rate increases, consistent with standard utility practice.
- **Metering and customer service optimization**: to reduce commercial water losses by replacing old meters with modern meters having no moving parts, addressing theft, improving data quality and improving customer experience and satisfaction.

3.1.1.1 Rate Structure Simplification and Adjustments

As discussed in Section 2.1.1.1, PRASA implemented five moderate rate adjustments during FY2018-FY2022. The implemented rate adjustments are summarized in Table 2-2. However, to continue delivering reliable, affordable, and safe water and wastewater services without reducing critical investments in its System through its CIP, PRASA must ensure adequate revenue levels over time that move the Authority closer toward reaching a full-cost recovery model. In utility management, the full-cost recovery model means generating sufficient revenues to cover all operational and capital obligations and doing so in a manner that aligns revenues with a true and representative cost of service (i.e., drinking water revenues must fully cover costs associated to entire drinking water operations such as treatment, distribution, and capital upgrades if needed).

Act 21 provides uniform procedures for public hearings and process for the Authority to review its rates. As part of the public hearing process, Act 21 mandates engaging an independent examiner to submit a comprehensive report to the Authority's Governing Board. As an initial step, PRASA engaged Raftelis, a third-party expert in utility rate design, to recommend an optimal rate structure aligned with industry standard cost allocation and rate design principles.

The rate structure review included the following objectives:

- Optimal cost recovery;
- Affordability and protection of vulnerable customers;
- Ease of implementation, understanding, and simplicity;
- Fairness and equity between and within customer classes; and
- Conservation incentives.

Based on the recommendations from the Raftelis rate redesign study, dating back to June 29, 2021, PRASA proposed a new rate structure that is currently under review and that adhered to the public hearing and reporting processes conducted by an independent examiner as required by Act 21. The expected schedule for the review and implementation of the new rate structure is included in Exhibit 3-1.

EXHIBIT 3-1: RATE STRUCTURE REVISION TIMETABLE

Raftelis Recommendations

PRASA's originally proposed rate structure simplification was based on recommendations from Raftelis which were designed to be revenue neutral and incorporated a FY2023 adjustment of 2% to the total cost of billed service. It also maintained the ability for PRASA to enact an annual adjustment in future years of up to 4.5% with a 25% cumulative cap, and a 2% minimum annual increase starting in FY2024 and ending in FY2027. If the 25% cumulative rate increase cap is reached, the Authority would then have to prepare a new rate structure and hold public hearings in the same manner as described above.

Independent Examiner Recommendations

However, after conducting the public hearings, a range of material factors – the current inflationary environment, energy price volatility and supply-chain disruptions tied to geopolitical events and other macroeconomic trends – forced PRASA and the independent examiner to reevaluate the magnitude of the rate adjustments.

As such, the preliminary recommendations from the independent examiner include, among others:

- To adopt the simplified rate structure proposed by Raftelis, incorporating only two charges (base and consumption charges)
- Based on current inflationary conditions, to increase the adjustment to the base charge from the previously projected 2% to 5% for FY2023 and to maintain a 2% increase in the consumption charges
- Increase the maximum allowed rate increase "ceiling" from the current 4.5% to 5% and the cumulative rate increase cap from 25% to 30%
- Future rate adjustment of 4% for residential accounts and 5% for non-residential accounts starting in fiscal year 2024.

Certified Fiscal Plan Rate Adjustments

PRASA's Certified Fiscal Plan rate adjustments are based on the independent examiner's preliminary recommendations and takes into account current and expected increases in operational costs such as chemicals and electricity. For FY2023, the Certified Fiscal Plan assumes a 2% annual increase in the consumption charges plus an adjustment of 4.95% to the base charge for all customer segments. For FY2024 and beyond, the Certified Fiscal Plan reflects a 2% annual rate adjustment across all customer segments. Implementing the periodical rate adjustments reflected in the Certified Fiscal Plan will enable PRASA to generate nearly $370 million in incremental revenues between FY2023 to FY2027 and help PRASA meet its objectives of providing clean and reliable water and wastewater services.

These rate adjustments are not only necessary for PRASA to balance budgets and keep up with rising operating costs, but they are also critical to ensure financial solvency and enough liquidity to fund the large and ambitious CIP described in Section 2.5. Failure to implement annual rate revisions or meet incremental revenue targets may undermine the progress achieved by PRASA to date, result in liquidity constraints, and precludes PRASA from investing in its System. Historically, PRASA has relied on suspending annual, forecasted deposits into its CIF to balance their budgets. Given PRASA's current cash reserves, this practice does not materially affect PRASA's finances, operations or CIP in the short term, however there are serious and legitimate concerns on what this might entail for the Authority's long-term prospects, especially on matters of operational sustainability.

As a result, the proposed rate adjustments in the Fiscal Plan provide enough funding for PRASA to meet all its current obligations (operational & deposits), deploy capital as projected in its CIP works schedule, and maintain healthy levels of cash reserves. Lastly, best practices in the water sector[26] suggest that water utilities implementing moderate annual increases were able to stabilize their service revenues and be better positioned to deliver capital projects.

The accumulated projected impact of future rate increases is illustrated in Exhibit 3-2.

[26] Study on rate increases by water and wastewater utilities of 37 of the top 50 U.S. cities as conducted by Bluefield Research in August of 2021.

EXHIBIT 3-2: RATE ADJUSTMENT PROJECTED BENEFITS (IN $ MILLIONS)

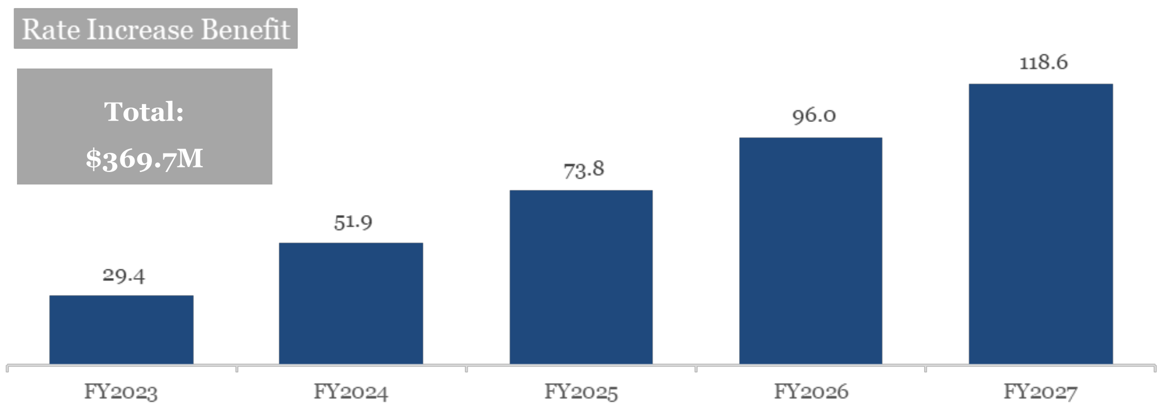


Exhibit 3-3 outlines the key future action items for successful and timely delivery of this measure.

EXHIBIT 3-3: ACTION PLAN FOR RATE ADJUSTMENT MEASURE

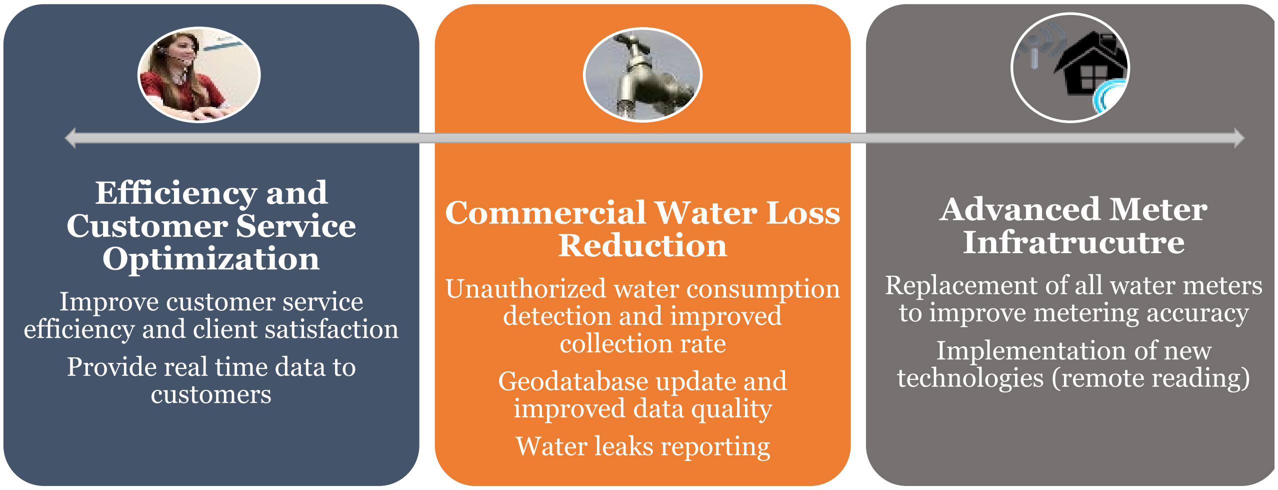
Action Item	Deadline	Owner
Public Hearing Process	31-Mar-22	Independent Examiner
Report from Independent Examiner	20-May-22	Independent Examiner
New rate structure approval	31-May-22	Governing Board
New rate structure implementation	1-Jul-22	Customer Service
Provide status to Oversight Board on PRASA's rate adjustment for FY24	16-Jan-23	VP of Strategic Planning

3.1.1.2 Metering Optimization

With respect to NRW reduction, one of PRASA's main priorities, the Authority analyzed alternative projects to reduce commercial water losses and improve customer experience and satisfaction.

The main objectives of this measure are summarized in Exhibit 3-4.

EXHIBIT 3-4: GOALS FOR METERING & CUSTOMER SERVICE OPTIMIZATION MEASURE



This measure aims to (i) install new, non-mechanical meters (ultrasonic or electromagnetic) capable of allowing for real-time smart meter technologies implementation, (ii) pursue activities that would help decrease commercial water losses and—to a lesser degree—physical water losses, and (iii) improve customer service operation, efficiency and ultimately customers' satisfaction. By increasing the accuracy of water meters, PRASA will be able to transition away from estimated commercial losses and achieve a greater level of precision in its measurements.

Moreover, by reducing the uncertainty of the System's apparent losses (commercial losses), PRASA will be able to recover revenues lost to theft and unmetered usage and determine with greater accuracy the volume of real physical water losses. Ultimately, through this measure, PRASA will be able to appropriately plan its CIP needs and intelligently address the renewal and replacement of its linear (pipe) assets to reduce physical losses.

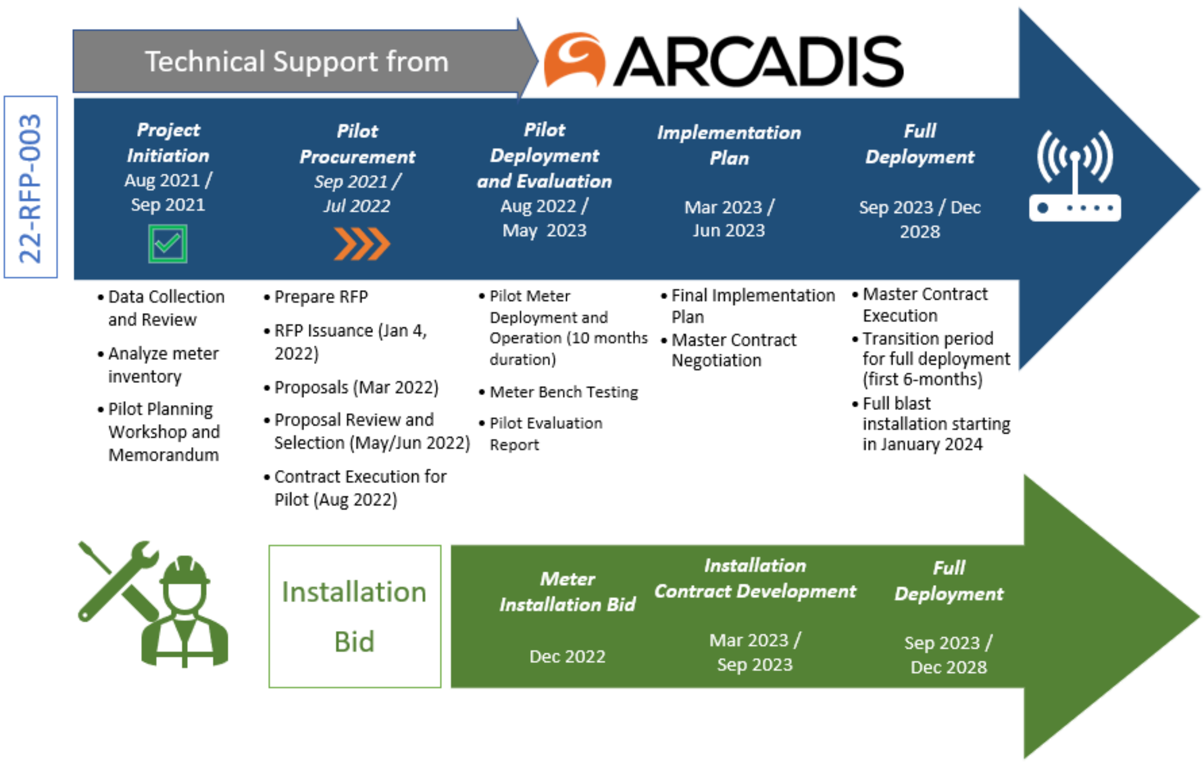
In November 2021, the P3 Authority canceled a P3 project for the optimization of PRASA's metering system and customer experience. The cancelation was mainly due to PRASA's improved financial situation and access to over $300 million in Federal funds for the acquisition and installation of smart meters and related infrastructure.

On January 4, 2022, PRASA, with the support of Arcadis, a technical advisory firm, published an RFP for water meters and advanced metering infrastructure (AMI). As a first step, PRASA intends to implement one or more metering pilot projects, which will include approximately 3,000 meters for each pilot to be installed by the selected Proponents. Then, the results of the pilot projects will be evaluated and will be used to inform the selection of the type of water meters and reading technology that will be deployed across the island. Master contracts will be used to purchase water meters, meter reading technology, integration, and specialized services for the island-wide meter replacement program. PRASA will separately obtain the water meter installation services.

Several proposals in response to the RFP were received on March 18, 2022 and are currently under evaluation. PRASA expects to commence a 3-month test period for the pilot meters. The timeline from pilot start-up, to deployment, operation, and finally close-out, and selection is expected to last 9 to 10 months.

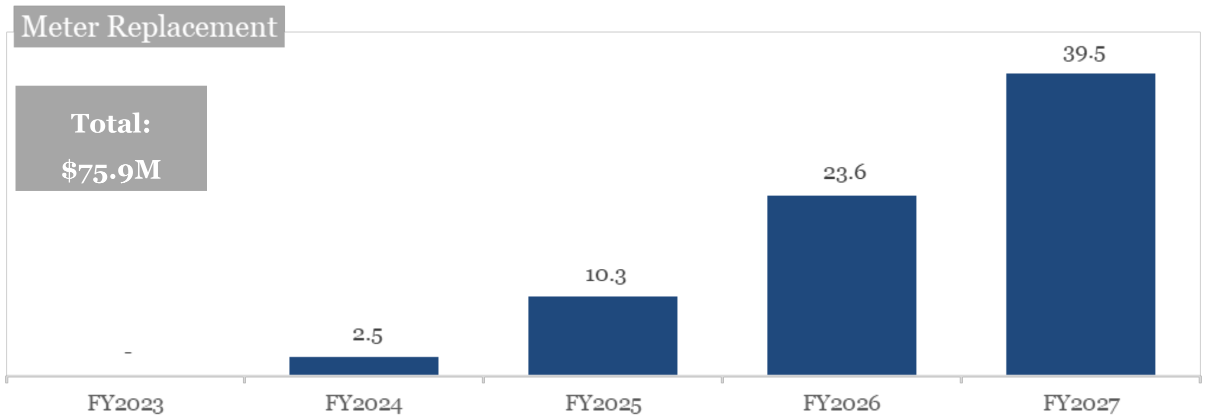
As presented in Exhibit 3-5, the pilot projects are expected to be completed by May 2023 with full deployment expected to commence by June 30, 2023, with a duration of approximately 5 -years.

EXHIBIT 3-5: METER REPLACEMENT PROCUREMENT TIMELINE



This project is expected to improve meter accuracy and precision and therefore increase revenues, allow detection and remediation of unauthorized water consumption and increase efficiency in the customer service area through remote reading, which will allow PRASA to focus resources for NRW loss reduction. Exhibit 3-6 illustrates the projected impact of this measure.

EXHIBIT 3-6: METERING OPTIMIZATION BENEFITS (IN $ MILLIONS)



The Action Plan proposed for this measure is included in Exhibit 3-7

EXHIBIT 3-7: ACTION PLAN FOR METERING OPTIMIZATION MEASURE

Action Item	Deadline	Owner
Proponent selection and contract for Pilot Phase	31-Aug-22	VP of Strategic Planning
RFP for meter installation	31-Dec-22	VP of Strategic Planning
Pilot Deployment and evaluation	30-Jun-23	Technical Advisor
Meter installation contract award	30-Sep-23	VP of Strategic Planning
Master Contract Execution with selected Proponent/s	30-Sep-23	VP of Strategic Planning

3.1.2 Expense Reduction Measures

PRASA must pursue the following measures to reduce operating expenses:

1. **Electricity expense reduction:** reduce electricity costs through increased efficiency and new distributed generation under PPAs.
2. **Physical water loss reduction:** reduce physical water loss through installation, leaks reduction, and pressure management, while improving water production measure to detect major areas of opportunity.

3.1.2.1 Electricity Expense Reduction

Reducing PRASA's second largest operating cost through alternate sources of energy and efficiency measures that have been pursued in the past (see Section 2.1.2.2) must be one of PRASA's top priorities. Given the increasing energy prices, PRASA must proactively work towards identifying, assessing and, to the extent feasible, implementing additional measures to reduce its overall electricity costs (either through reduced or more efficient consumption or through the contracting of cheaper energy supply).

With the goal to reduce electricity costs, in addition to the already implemented PPAs, PRASA must pursue renewable, photovoltaic energy projects as included in Table 3-1. In doing so, PRASA may consider, but not limit itself to the availability federal funds from the CDBG program.

The projects included in Table 3-1 below are derived from a list of projects that were submitted to HUD for CDBG funding. PRASA must pursue these additional projects to obtain up to 42.6 million kWh/yr of photovoltaic energy.

TABLE 3-1: NEW PROJECTED PPAS

Facility	Million kWh/yr	Expected by:
SuperAqueduct RWPS	8.3	FY2024
Bayamon WWTP	5.0	FY2024
Mayagüez WWTP	5.0	FY2025
Fajardo WWTP	4.2	FY2026
Fajardo WTP & RWPS	3.3	FY2026
Carolina WWTP & Torrecillas WWPS	3.3	FY2025
Guayama WWTP	2.5	FY2024
Caguas Laboratory	2.5	FY2025
Barceloneta WWTP	1.7	FY2026
Ponce WWTP	1.2	FY2025
Utuado WWTP	1.2	FY2026
Arecibo Islote WWTP	1.2	FY2026
Caguas WWTP	1.2	FY2026
Santa Isabel WWTP	1.2	FY2026
Hatillo Camuy WWTP	1.0	FY2026
	42.6	

PRASA must also focus on some non-capital-intensive measures for projects to improve overall water resource conservation with the highest potential of savings, which currently is related to the efficiency of the Carraízo reservoir intake pumps. The Carraizo project is mainly focused on managing overall energy demand at intake pumps to eliminate short-term peak demands. PRASA must also maintain measures such as hydraulic modeling analyses and optimization efforts to reduce energy consumption in water distribution and wastewater collection systems. Through these energy consumption reduction measures, PRASA expects to reduce its electricity consumption by 18 million kWh by FY2027.

Similarly, PRASA is also evaluating proposals received for additional renewable/alternate energy, such as waste-to-energy, liquefied natural gas, liquefied propane gas, biogas (anaerobic digestion) and additional photovoltaic energy projects. These projects are being evaluated on a case-by-case basis in order to make an informed decision based on: (i) its viability, (ii) its purpose (savings vs. resiliency), (iii) PRASA's prior experience with different technologies, (iv) applicable regulatory and other requirements and limitations (such as PREPA/LUMA and PREB regulations), (v) the all-in life cycle cost of the project (which must be lower than the avoided PREPA/LUMA cost), and (vi) the financing source (priority given to projects qualifying for available grants).

The actual electricity cost savings produced by this reduction measure will largely depend on the cost of electricity supplied by PREPA/LUMA. Based on current projected electricity rates, the financial impact of this measure is illustrated in Exhibit 3-8.

EXHIBIT 3-8: PROJECTED ELECTRICITY EXPENSE REDUCTION (IN $ MILLIONS)

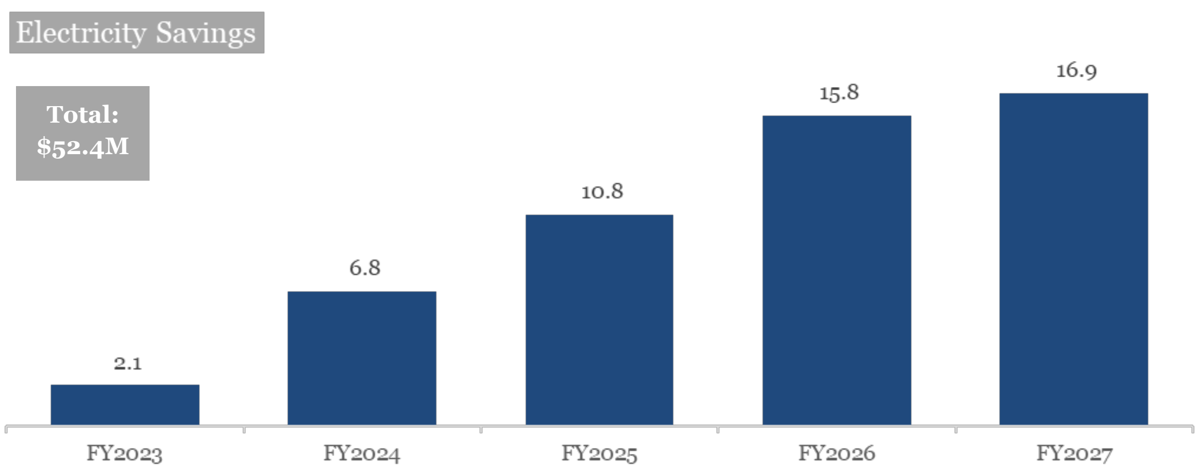


Exhibit 3-9 outlines the key action items for successful and timely delivery of this measure.

EXHIBIT 3-9: ACTION PLAN FOR ELECTRICITY EXPENSE REDUCTION MEASURE

Action Item	Deadline	Owner
Present a plan to develop additional renewable/alternate energy projects, including unsolicited proposals	31-Oct-22	Infrastructure
Present deployment plan for energy projects	31-Dec-22	Infrastructure
Based on list of viable proposals, as determined by PRASA, issue RFP for renewable/alternate energy projects	16-Jan-23	Infrastructure

3.1.2.2 Physical Water Loss Reduction

High levels of physical water losses continue to be one of PRASA's major challenges. Physical losses are due to leaks and breaks throughout the Water System or produced water that fails to reach the customer and therefore is not billed despite incurring a cost of production. By addressing physical water loss levels, PRASA can lower production requirements, thus reducing the strain on its infrastructure and lowering electricity and chemical expenditures. Lastly, these actions would, potentially, reduce the amount of water extracted from the environment, benefiting the broader water resources of the Island.

PRASA's Water Recovery Office (WRO) has the responsibility for guiding the Authority's three main physical water loss reduction programs:

1. **Master Meters**: accurately measuring water production by the installation of water meters at critical water treatment facilities;
2. **Pressure Management**: incorporating pressure management best practices across the distribution network; and
3. **Leak Detection and Reduction**: improving identification, prioritization, and resolution of unreported leaks across PRASA's System.

These three measures are central to achieving PRASA's goal of reducing its water losses and therefore water production. PRASA contracted an external project manager and engineering consultant in June 2020 who has been actively providing support in the execution of these Physical Water Loss reduction measures.

3.1.2.2.1 Master Meters Program

The validation, calibration, or replacement of the meters at water treatment plants and wells (master meters) enables PRASA to obtain accurate information on water production for evaluating and adjusting System performance and to perform water balance calculations.

The goal of this program is to increase the percentage of the Authority's water production that is accurately and reliably measured. As of December 2021, the program replaced or validated 115 master meters at 96 facilities which produce almost 90% of the total potable water throughout the Water System. Currently, the master meters are providing reliable and valuable information on real water production, a key component to more accurately defining the amount of water losses and identify reduction opportunities.

PRASA's goal is to reduce the level of estimated water production to 5% or less. With the expected completion of the master meter installation program by end of FY 2025[27]the Authority will reach this goal.

3.1.2.2.2 Pressure Management Program

Pressure management is one of the most basic and effective tools available to address total water losses. Lowering the water pressure within the System will inevitably reduce leakage, thereby reducing water production requirements. This is especially important in view of the extremely high volume of leakage in PRASA's Water System (~50% - 60%). Therefore, implementing a robust pressure management program is an essential effort to significantly reduce its leakage volumes through other means.

Most of the pressure zones on the Island are designed to operate with a focus on a minimum pressure requirement and not a maximum pressure restriction or limitation, resulting in numerous areas operating with pressure that is higher than optimal. In an effort to align operational approaches with the execution of the pressure management initiative, the WRO has been defining NRW Pressure Zones (NRWPZ). A careful analysis of these zones is then performed to maximize opportunities to reduce physical losses and therefore water production. In addition, the repair, replacement, or installation of new pressure control equipment originally planned in this initiative will allow reducing excess pressure events in the system. [28]

During FY2021, PRASA identified 39 pressure zones to focus the pressure monitoring efforts of adjusted pressure zones. The WRO will visit and monitor the adjusted pressure zones that are required to achieve the MGD reduction goals in this initiative. See Exhibit 3-11 below.

3.1.2.2.3 Leak Reduction Program

Water leaks are one of the main reasons for physical water losses. Leaks can occur in transmission or distribution lines, tanks, and service connections up to the customer meter. An active leak detection program paired with prompt repair is an essential component for lowering and controlling NRW levels.

PRASA has service contracts with external contractors to identify leaks, prioritize underground infrastructure repairs and replacements, and train PRASA teams to perform this work. Moreover, PRASA has specialized equipment used to support this initiative, not only in identifying existing unreported leaks, but for emergency responses to effectively identify affected distribution pipelines. The WRO is responsible for collecting field data on leak occurrences and guiding

[27] Pending master meter installations represent less than 10% of PRASA's water production; due to their smaller scale and large quantity, these pending facilities will be completed within a 2 year time-span to reach the 100% target threshold.

[28] Each PSI lowered is expected to result in 1% reduction of physical water loss; J. Schwaller, Modelling The Effects Of A Large Number Of Leaks In A Water Distribution Network Using The Favad Equation. In Civil Engineering, Water Infrastructure Engineering, M.Sc. Thesis, University of Applied Sciences Karlsruhe. Kalrsruhe, Germany, 2012.

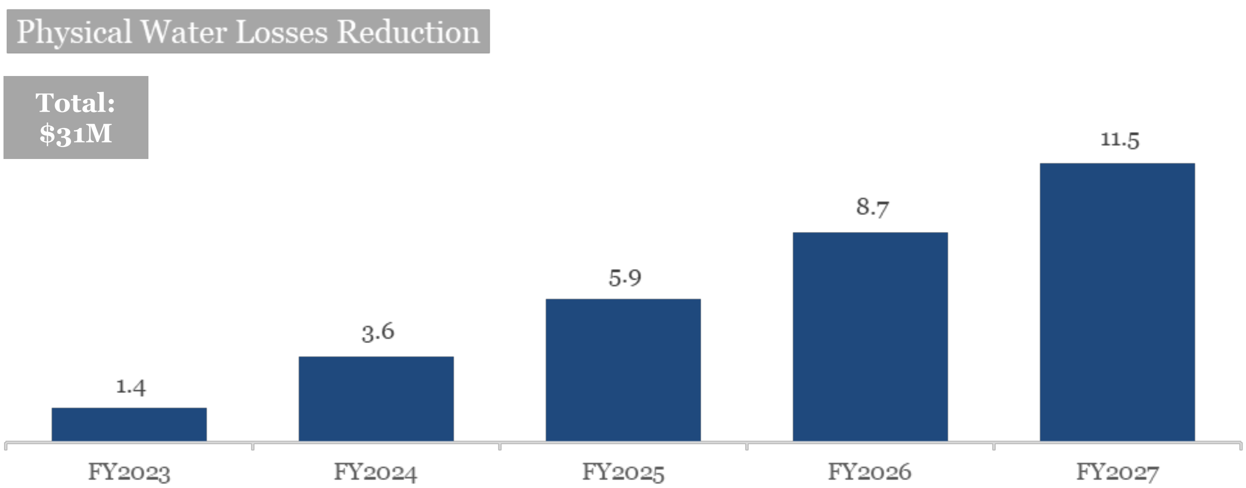
regional teams to make repairs. Additional brigades to detect leaks are budgeted for FY2023 to accelerate the program and increase leak reparations commonly referred to operational brigades.

During the first eight months of FY2022, PRASA analyzed 466 miles of piping to detect water leaks, located 157 leaks, and recovered approximately 5 MGD of water.

3.1.2.2.4 Physical Water Loss Reduction Projected Financial Impact

Exhibit 3-10 shows the estimated financial impact for FY2023-FY2027 from this measure. Depending on the unit cost of chemicals and electricity, total projected savings by FY2027 are estimated to be up to $11.5 million per year, net of the measure's costs.

EXHIBIT 3-10: PHYSICAL WATER LOSS REDUCTION PROJECTED MEASURE IMPACT (IN $ MILLIONS)



For FY2022 the initial costs to install master meters and to start the leak detection measure deployment are greater than the expected return. Net savings are expected starting in FY2023.

3.1.2.2.5 Milestones and Action plan

In order to implement these measures, PRASA established specific goals for each fiscal year, which are summarized in Exhibit 3-11. Chapter 6 of this Certified Fiscal Plan includes a list of KPIs applicable to this initiative to ensure completion of the goals on a timely basis.

EXHIBIT 3-11: GOALS FOR PHYSICAL WATER LOSSES MEASURE

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Master Meters (MM):						
Installed/Calibrated MM	21	28	28	14	TBD	TBD
Production Metered (MGD)	35	10	10	5	-	-
Additional % of Measured Production	6.5%	1.9%	1.9%	0.9%	0.0%	0.0%
Pressure Management:						
Pressure Zones Visits	55	20	20	20	20	20
Average PSI	77.8	76.8	75.8	74.8	73.8	72.8
Recovered MGDs	2.0	2.1	2.1	2.2	2.3	2.3
Leak Detection:						
Recovered MGDs	4.9	6.1	6.7	7.6	7.9	7.9
Total Recovered MGDs	**6.8**	**8.2**	**8.8**	**9.8**	**10.1**	**10.3**
Cumulative Reduction (MGD)	**6.8**	**15.0**	**23.8**	**33.6**	**43.8**	**54.0**

Exhibit 3-12 lays out the actions required for timely and effective delivery of the overall NRW reduction measure.

EXHIBIT 3-12: ACTION PLAN FOR PHYSICAL WATER LOSS REDUCTION MEASURE

Action Item	Deadline	Owner
Define 20 pressure zones to be optimized and monitored during FY2023	30-Jun-22	WRO
Complete a plan to achieve the leak detection goal for FY2023	31-Jul-22	WRO
Leak Detection and Pressure Management Annual Updates (FY2022)	31-Aug-22	WRO
FY2022 Water Balance Submission to FOMB	31-Oct-22	WRO
Complete Master Meters calibration and installation goal for FY2023	30-Jun-23	WRO
Leak Detection and Pressure Management Annual Updates (FY2022)	31-Aug-23	WRO

3.1.3 New Financing for CIP

In addition to the funds obligated by FEMA, CDBG-DR and ARPA, PRASA expects to obtain new financing for CIP from the SRF and USDA-RD.

After the modification of the Federal Debt, PRASA recovered access to future funding from SRF and USDA-RD Programs. Table 3-2 describes the two federal funding programs for which PRASA now qualifies.

TABLE 3-2: FEDERAL FUNDING PROGRAMS

Program	Description
State Revolving Funds (SRF) Loans	• Annual grants from USEPA of around **$30 million** from DWSRF and CWSRF Programs • Commonwealth match of 20% of annual grants provided by PRDOH and PRDNER • The program's Repayment Funds are also available, currently with a balance of around **$195 million** to be assigned through new loans for qualifying projects without a state match requirement • Additionally, BIL will grant new funding for water and wastewater infrastructure projects as further described in Chapter 4. For federal fiscal year 2022, the allocation for Puerto Rico is **$78.4 million** and additional funds are expected during the next 4 years.
Rural Development (RD) Program	• Bond program operated through RD to provide funds for water and wastewater projects in rural areas • Annual allocation for Puerto Rico has been historically around **$10 million**

PRASA's opportunities for funding are limited to the cost of qualifying projects and capped at Puerto Rico's share of the annual appropriation or allocation and repayment funds available through these programs.

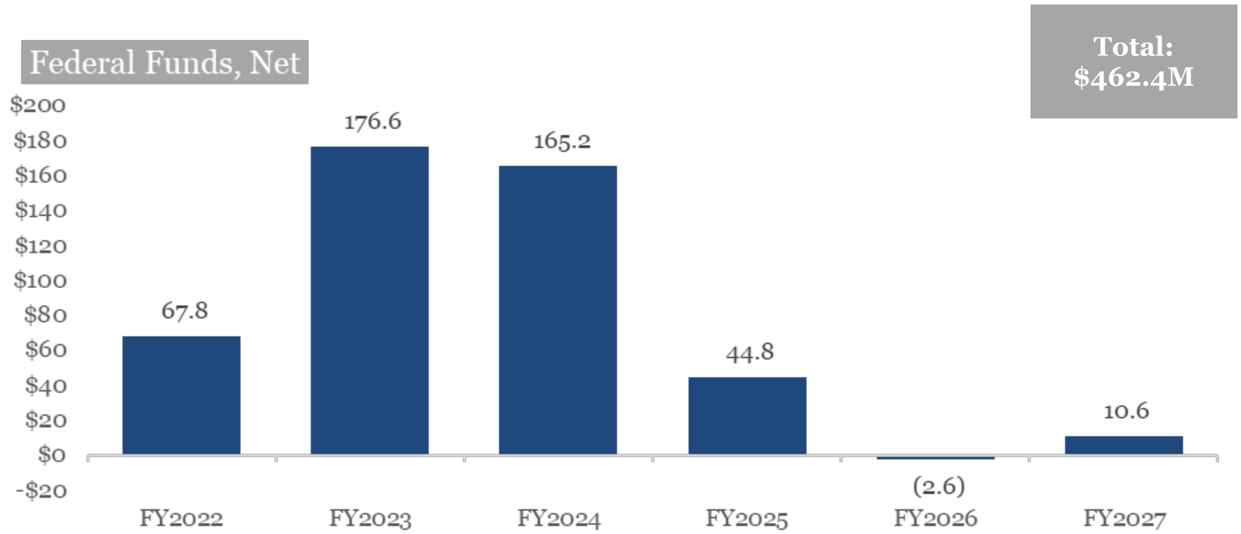
The new funds are projected net of the expected debt service for such funds, calculated assuming 30-year loans at 1% for the SRF Program and 40-year loans at 4% for the USDA RD Program. Table 3-3 presents the expected federal funding and corresponding costs during the Certified Fiscal Plan Period.

TABLE 3-3: EXPECTED FEDERAL FUNDING AND COST (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
SRF Funds	68.4	176.5	173.8	62.1	16.0	29.8	526.7
RD Funds	0.8	6.2	4.3	-	-	-	11.3
SRF DS	(1.3)	(5.9)	(12.5)	(16.8)	(18.0)	(18.7)	(73.2)
RD DS	(0.0)	(0.2)	(0.5)	(0.6)	(0.6)	(0.6)	(2.4)
New Federal Funds, Net	67.8	176.6	165.2	44.8	(2.6)	10.6	462.4

A total of $538 million of federal funds are projected to be received during the Certified Fiscal Plan Period with a net impact after debt service of $462.4 million as presented in Exhibit 3-13.

EXHIBIT 3-13: PROJECTED NEW NET FEDERAL FUNDS MEASURE (IN $ MILLIONS)



The projections included herein may change based on the projects and progress of federally funded capital improvements as well as on annual funding appropriations and availability.

Exhibit 3-14 outlines the key action items for successful and timely delivery of this measure.

EXHIBIT 3-14: ACTION PLAN FOR NEW FINANCING FOR CIP

Action Item	Deadline	Owner
Execute Financial Assistance Agreement for new DWSRF funds - FY2018 Appropriation	31-Jul-22	Finance
Execute Financial Assistance Agreement for new CWSRF funds - FY2021 Appropriation	30-Sep-22	Finance
Execute Loan Agreements for USDA RD funds	TBD	Finance

3.2 Enabling Measures

Beyond the measures discussed above, PRASA is developing additional measures with the goal of improving organizational optimization, allowing for a motivated and efficient workforce to properly perform and execute the measures included in this Certified Fiscal Plan and to ensure the CIP delivery:

- **Organization Optimization:** reach the optimal headcount level while identifying opportunities for personnel training and transfers among departments to maximize FTEs' availability and capacity focused on addressing critical needs.
- **Competitive Compensation:** review pay-scales and implement other incentives for some critical operating positions to promote a better workforce culture and therefore increase employee retention.

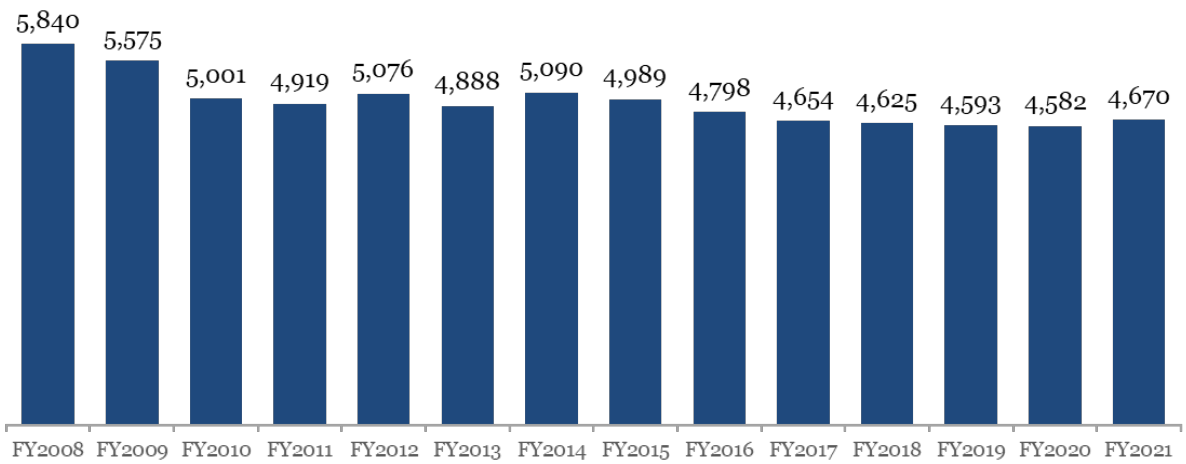
- **Project Management Office (PMO) execution**: the PMO will be responsible for the execution of the measures outlined in the Certified Fiscal Plan and other key internal projects within PRASA such as the Rate Simplification and Adjustments, Metering Optimization, Physical Water Loss Reduction, and other measures under the purview of the Strategic and Corporate Planning Department.
- **10-year Master Plan**: PRASA's 10-year master plan, that is currently under development, will take the recently released 2020 US Census results into account, will provide a long-term roadmap to transform PRASA's Systems into simpler, safer, operationally efficient and more sustainable systems and serve to consolidate recommendations from other plans and strategies (e.g., Fiscal Plans, Emergency Response Plans, Climate Change Adaptability Plan).
- **Asset management and maintenance**: assess the condition of PRASA's organization-wide asset management program in connection with asset tracking activities and efforts to promote a higher proportion of preventive-to-reactive maintenance spend (current ratio is about 14%); this effort is expected to lower the Authority's reliance on more expensive corrective/emergency maintenance.
- **Chemical expense stabilization**: conduct an independent assessment on the current challenges, risks, and opportunities within chemical expenditures and consumption and identify a remediation plan to optimize chemical-related expenditures.
- **CIP Delivery:** to revitalize its infrastructure, the Authority must execute capital projects on time and on budget, while leveraging the assigned and obligated Federal funding for the recovery and reconstruction projects stemming from the 2017 Hurricanes, as well as from the recently approved funding to address the coronavirus pandemic (CARES and ARPA) and an aging water and wastewater system infrastructure (BIL Act).
- **Interagency debt settlements (with PREPA & ERS):** clear PRASA's balance sheet in FY2023 from aged and disputed outstanding debts with both PREPA and ERS through binding interagency negotiations or alternate dispute resolution methods.

3.2.1 Organization Optimization

Since FY2008, the Authority has experienced a headcount reduction of over 1/5 of its personnel. In part, this reduction was exacerbated between FY2016 and FY2017 with over 300 employees accepting the terms[29] of the Pre-Retirement Program. As part of the program, participants, although still on the payroll, do not render any services to the Authority, which means PRASA has fewer active employees. In turn, this increases overtime costs and results in a greater reliance on more expensive third-party services.

[29] Incentives include: 60% payment of average salary, payout of unused vacation and sick days (as per Act 66-2014) and maintaining their health insurance coverage for a term of two years. These incentives are applicable to pre-retired employees and payable by PRASA until the eligible employee reaches full retirement age under ERS's rules.

EXHIBIT 3-15: PRASA HEADCOUNT FY2008-FY2021



During FY2021 PRASA engaged an external consultant, to perform a labor capacity and productivity assessment study to determine PRASA's optimal staffing levels. In January 2022, the selected firm presented its final recommendations, amended to incorporate updates on Customer Service and Infrastructure Department, presenting a need of 5,030 employees, compared with PRASA's actual headcount of 4,627 as of February 14, 2022 (of which 265 employees are under the Pre-Retirement Program). PRASA expects to cover this employee gap, gradually, by:

- Gradually recruiting to cover positions as the pre-retired employees reach full retirement age, increasing personnel availability as positions are filled.
- Recruiting key technical and operating positions such as plant operators, electro-mechanicals, and other workers for operations.
- Filling headcount needs in the Infrastructure, Customer Service and Compliance Departments, among others.

PRASA expects to reach a headcount of 4,950 FTEs by FY2027 as presented in Table 3-4.

TABLE 3-4: HEADCOUNT PROJECTION

	2022	2023	2024	2025	2026	2027
Base Employees	4,362	4,362	4,362	4,362	4,362	4,362
PreRetired Employees	265	253	217	168	127	82
Accum Net Additions	73	135	221	320	411	506
Employees by the end of FY	4,700	4,750	4,800	4,850	4,900	4,950
Annual Additions	**73**	**62**	**86**	**99**	**91**	**95**

The additional 80 employees to reach 5,030 (the level recommended in the staffing study) will be reevaluated based on the results and benefits of the projected headcount additions and the balancing of FTEs with overtime and external resources as well as fleet and other resources availability.

In the short-term, PRASA expects to update and implement SmartTool, a centralized management tool, to administer and manage organizational needs for effective human resources management. Using this tool will allow PRASA to identify opportunities for personnel trainings, movements or transfers among departments to maximize FTE availability and capacity focused on addressing critical needs within the Authority. Such actions will always prioritize overall compliance with safety and health codes as well as the employees' wellbeing. Once the tool is updated, PRASA will have greater visibility regarding areas of need and personnel surpluses to then develop a detailed and systematic recruitment plan.

Also, with the support of an external consultant, PRASA plans to:

- Evaluate absenteeism trends compared with the levels of overtime by region and department to identify strategies to monitor and track the uses of unplanned absenteeism.
- Determine the major reasons for overtime to identify opportunities of reduction, including metrics and personnel utilization goals, and defining the optimal level of overtime versus regular time
- Develop productivity metrics
- Improve personnel processes
- Determine optimal level of internal versus external resources

EXHIBIT 3-16: ACTION PLAN FOR ORGANIZATION OPTIMIZATION MEASURE

Action Item	Deadline	Owner
Update and implement a centralized headcount management tool	31-Dec-22	Human Resources
Develop and submit to the Oversight Board the preliminary recruitment plan	16-Jan-23	Human Resources
Submit to the Oversight Board the development and implementation plan for the overtime and productivity metrics	16-Jan-23	Human Resources
Evaluate absenteeism and overtime to identify areas of opportunities	15-Feb-23	Human Resources
Develop and implement overtime and productivity metrics	31-Mar-23	Human Resources

3.2.2 Competitive Compensation

To maintain a motivated and efficient workforce to operate the overall System, PRASA must review its pay scales and implement incentives for some critical operating positions, such as plant operators, electro-mechanicals and other similar operating positions, as further described in this Section. The additional cost for these measures is included in PRASA's financial projections included herein and must provide for proper and competitive compensation scales for its employees.

3.2.2.1 Pay Scale Review

During 2021, PRASA retained an external firm to evaluate current pay scales among the different labor groups at PRASA with the goal of aligning Authority compensation levels with the broader Puerto Rico labor market and the new minimum salary wages recently announced by the Government, while taking special consideration to critical recruitment and retention issues have plagued PRASA in the past. Public Corporations, such as PRASA, are not part of the Uniform Classification and Compensation Plans developed by the Office of Human Resources Management and Transformation ("OATRH"). Recently, the Governor ordered the Public Corporations to review their employees' classification and compensation plans. Therefore, PRASA's efforts are focused on updating its pay scales in line with the labor market.

Results indicated that when comparing average salaries for PRASA employees with the broader labor market, PRASA salaries are lower than the median. For example, the difference between PRASA's average salaries and average market salaries ranged from 7% to 35% below market. In addition, the study also identified key positions with material salary differences way below the aforementioned range. These facts demonstrate the need for pay scale revisions and help explain the high personnel turnover during the last few fiscal years. High turnover has impacted PRASA's operations, as it is a great challenge to operate the Systems with limited experienced employees and to continuously train new hires that may only remain in their positions for a short period of time.

PRASA expects to implement the new pay scales starting in FY2023, for the benefit all labor groups at PRASA, except for appointed employees. These changes are expected to improve personnel recruiting and retention, which in turn may result in increased operating efficiencies. To measure the efficacy of said increases, the disbursement of future salary increases, staring in FY2024, will be contingent upon PRASA developing and implementing the headcount management tool and the productivity metrics described under Section 3.2.1.

PRASA also anticipates needing to adjust its salary scales based on the minimum salary regulations applicable for Puerto Rico.

3.2.2.2 Labor Relations

To maintain labor relations in good order, in an environment of limited resources and increasing operating costs, PRASA and its largest union, the UIA, reached a Negotiation Agreement (Negotiation Agreement). As a result of the Negotiation Agreement, the Collective Bargaining Agreement with the UIA, which expired in 2015 and was extended until June 30, 2021 pursuant to Act 3-2017, was further extended until the negotiations of a new labor agreement is reached, as provided by Act 9-2021. The Negotiation Agreement provides for the continuing negotiation of the revised pay scales as well as of several incentives that benefit both parties, subject to compliance with PROMESA and PRASA's Certified Fiscal Plan.

The parties, UIA or PRASA failed to provide notice of their intention to negotiate a new labor bargaining agreement at least 90-days prior to July 1, 2022. Since the notification was not received, the labor agreements must be extended for an additional year and successively, each year thereafter.

The parties did, however, negotiate other provisions as included in the Negotiation Agreement such as:

1. The impact on labor condition and salaries for UIA employees in case of a privatization or P3 project implementation will be subject to negotiation.

2. PRASA has the obligation to notify employees of the calendar year administrative recess by December 15 of such year; allowing employees to plan accordingly with the use of their vacation benefits. In addition, to reduce the possibility of unpaid leaves, PRASA will also allow employees with 10 days or less of vacation to remain working during the calendar year administrative recess.
3. The positions identified as difficult recruitment positions are the ones of Licensed Plant Operators and electro-mechanicals. The parties will promote the payment of incentives to such positions to be implemented in FY2023.
4. Payment of a $600 premium pay by June 30, 2022 to recognize UIA employees' commitment during the last years.
5. Payment to active UIA members of Christmas Bonus balances for FY2015 and FY2016, which were legally disputed by UIA, without interest or penalties.

3.2.2.3 Action Plan

The main milestones to implement this measure are presented in Exhibit 3-17.

EXHIBIT 3-17: ACTION PLAN FOR COMPETITIVE COMPENSATION MEASURE

Action Item	Deadline	Owner
Payment of $600 Premium Pay to qualifying employees	30-Jun-22	Human Resources
Implementation of Revised Pay Scales for UIA, HIEPAAA and Managerial Employees	1-Jul-22	Human Resources
Implementation of incentives to licensed Plant Operators	1-Jul-22	Human Resources
Increase of incentives for electro-mechanicals	1-Jul-22	Human Resources
Payment of 2015 Christmas Bonus balance	31-Jul-22	Human Resources
Submit to the Oversight Board a performance review process to measure the efficacy of the proposed salary increases for FY2024	16-Jan-23	Human Resources
Payment of 2016 Christmas Bonus balance	31-Jul-23	Human Resources

3.2.3 PMO Execution

PRASA stablished a PMO under its Vice-President of Strategic and Corporate Planning, to effectively implement and monitor its initiatives and measures, excluding implementation of its CIP. The infrastructure projects' delivery and implementation are under the responsibility of the Infrastructure Department, as further explained in Section 3.2.6.

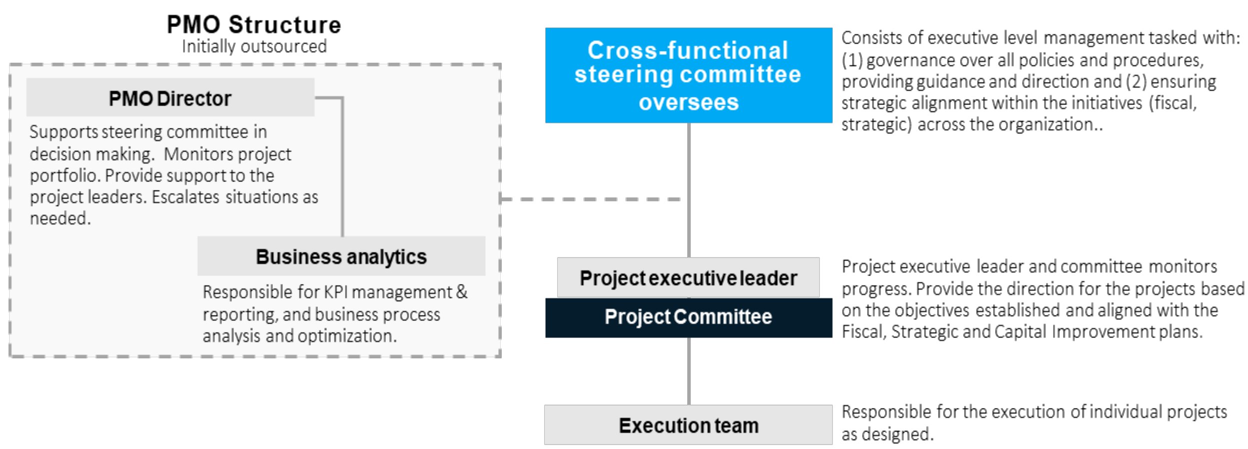
A Cross Functional Steering Committee (or "Steering Committee") at the executive level has been implemented. It is chaired by the Executive President and composed of direct reporting heads of departments, including the three Vice-Presidents. The Steering Committee is responsible for the definition of the strategic initiatives and for monitoring their progress, ensuring alignment across all plans and priorities, and providing oversight, guidance, and direction to ensure the goals of the plans are met in a timely, efficient, and cost-effective manner. The PMO Director serves as the Committee Coordinator.

A PMO Director must be appointed to coordinate efforts across Project Managers and Project Committees (or Sub Committees), provide necessary support to them, monitor, and report on progress, and escalate decisions and issues to the Steering Committee as needed. The Authority must appoint the Director by the end of FY 2022.

The PMO Director and its team, in conjunction with Project Committee Leaders, must define key performance indicators (KPIs) and monitor these to ensure the objectives are being met and their performance is optimal. Throughout the life of the projects, based on actual results, adjustments to goals might be necessary, subject to approval from the initiative's Steering Committee. In turn, each initiative's leader must be accountable for any deviation and is monitored by the Steering Committee.

The PMO governance and structure is shown in Exhibit 3-18.

EXHIBIT 3-18: PMO STRUCTURE



PRASA has implemented several elements for the efficient implementation of its initiatives such as defining measures' owners, creating project committees and execution teams, setting meeting, and reporting cadences, and establishing KPIs for the measures and underlying projects.

Until the PMO Director is assigned, the projects are under the responsibility of each project manager with the guidance of the Steering Committee which meets weekly to follow up on each of the Certified Fiscal Plan initiatives as well as other Authority's internal initiatives.

Key responsibilities of the PMO are summarized in Exhibit 3-19.

EXHIBIT 3-19 RESPONSIBILITIES OF THE PMO

PMO roles	PMO responsibilities
Strategic business planning	1 Evaluate corporate risks and provide guidance to project teams
	2 Develop departmental strategies aligned with PRASA's Fiscal and Strategic Plans
	3 Develop and launch new transformational initiatives
Initiative implementation	4 Direct initiative execution
	5 Support project teams with guidance and alignment
	6 Ensure alignment across departmental stakeholders, goals, and objectives to support project teams
	7 Problem solve and escalate program level bottlenecks, risks, issues, and interdependencies
Transparency, control, and accountability	8 Ensure standardization and tracking of project documentation
	9 Monitor progress and overall performance with a clear set of KPIs and milestones
	10 Provide progress updates and escalate issues to different governance boards

Exhibit 3-20 outlines the key action items for successful and timely delivery of this measure.

EXHIBIT 3-20: ACTION PLAN FOR PMO EXECUTION

Action Item	Deadline	Owner
Appoint permanent PMO Director to support and provide feedback on structural developments, if needed	30-Jun-22	VP of Strategic Planning
Submit final PMO structure, processes, roles and responsibilities to the Oversight Board	31-Aug-22	VP of Strategic Planning
Implement findings on PMO structure assessment	31-Dec-22	VP of Strategic Planning

3.2.4 10-year Master Plan

Every ten years, using the data published in the United Sates Census, PRASA develops its Water and Wastewater Master Plan (Master Plan). The current Master Plan was last completed in 2010 and then revised in 2014 to account for adjusted population projections.[30]

The updated Master Plan must focus on achieving long-term structural integrity, ensuring clean, affordable, and safe water and wastewater provision for the island, while ensuring fiscal responsibility and operational sustainability. As part of the plan, the Authority must create a roadmap for transforming Puerto Rico's water and wastewater infrastructure to a simpler, safer, resilient, operationally efficient, and financially viable system.

The updated Master Plan must incorporate the recommendations of the Certified Fiscal Plan, Emergency Response Plans and the Climate Change Adaptation Plan. Also, the updated Master Plan must incorporate expected amendments to the 2015 Consent Decree, and any agreements with regulatory agencies, including PRDOH, as well as other inputs that have long-term implications on the Systems, including the impact of new federal funds.

The Master Plan must also provide PRASA with an updated prioritization tool to help determine the priority or order of projects in the CIP. Accordingly, PRASA's CIP projects must be developed in accordance with the Master Plan, and the CIP must be constantly updated to be aligned with the System's needs. Of note, the procurement process for the Master Plan has been delayed for over a year due to discrepancies with respect to contract signing parties. However, the final contract is currently underway. Exhibit 3-21 outlines the key action items for successful and timely delivery of this measure.

EXHIBIT 3-21: ACTION PLAN FOR MASTER PLAN MEASURE

Action Item	Deadline	Owner
Finalize selection and contracting with the preferred proponent to develop the Master Plan	31-Jul-22	Infrastructure
Complete the Updated Master Plan	31-Dec-23	Infrastructure
Incorporate findings from Master Plan into the CIP	31-Mar-24	Infrastructure

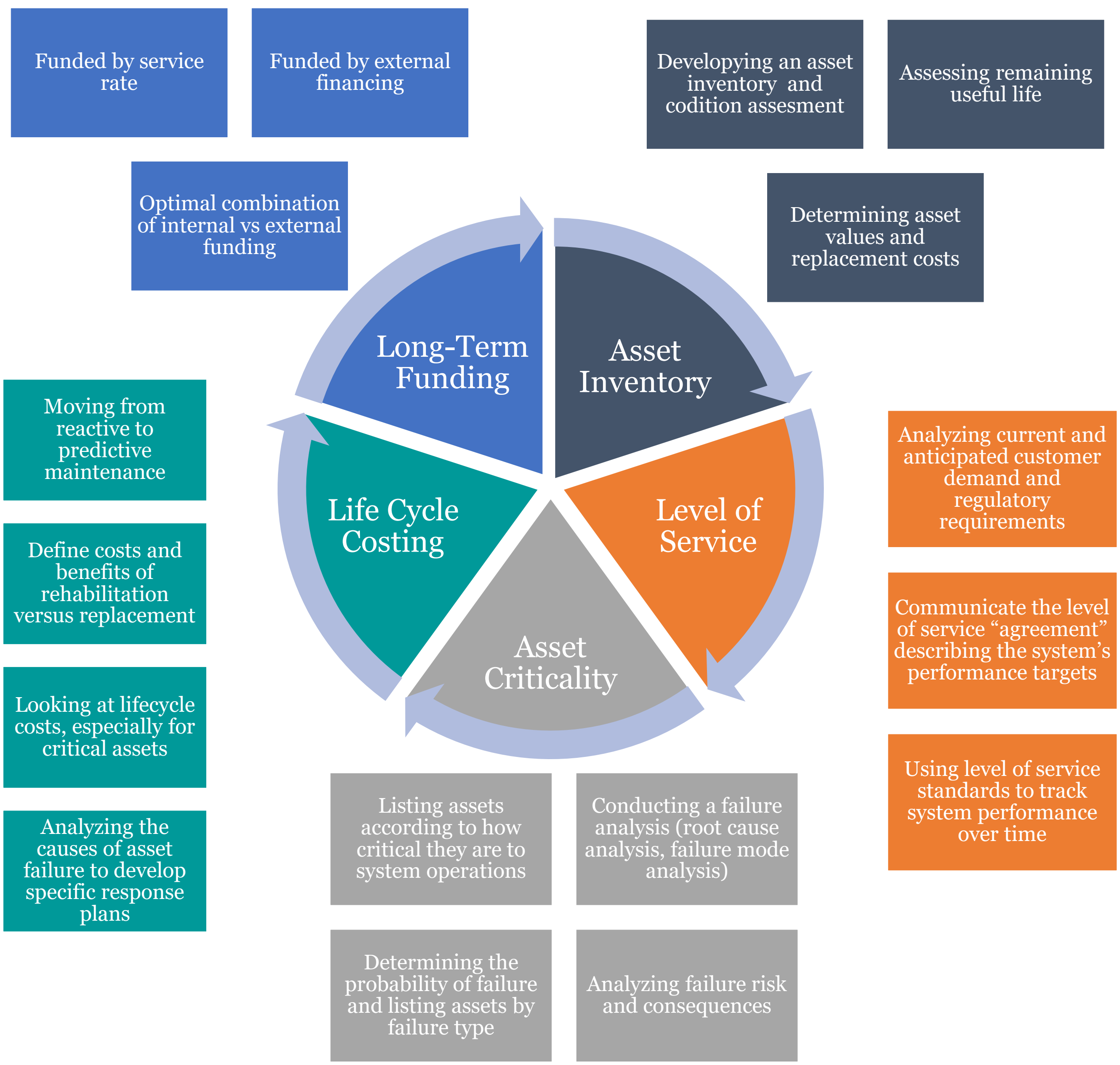
30 Population projection adjustments provided in 2013 by the Puerto Rico Planning Board reflected a reduction in population, as opposed to the data from the 2010 Census which showed an increase, which is attributed in significant part to migration trends from Puerto Rico to the continental United States.

3.2.5 Asset Management and Maintenance

Asset management is the practice of managing capital assets to minimize the total cost of owning and operating them and achieving sustainable infrastructure, while delivering the service level customers expect.

The asset management framework, as defined by the USEPA, consists of 5 core concepts with related activities as included in Exhibit 3-22

EXHIBIT 3-22 ASSET MANAGEMENT 5 CORE CONCEPTS AND BEST PRACTICES



There are many benefits to implementing asset management, including working more efficiently, improving knowledge management, and applying limited finances as efficiently as possible. Asset management will provide guidance on scheduling O&M tasks, and replacement versus repair to minimize service interruptions.

PRASA developed a more formal and established Asset Management Program in FY2021 to properly track and monitor the condition of all PRASA assets. PRASA must execute on the goal of shifting over time from its current, primarily corrective, maintenance strategy to a program that focuses more on systematic, data-driven, preventive maintenance. This shift will help prolong asset life, reduce operating and capital expenditures, improve security and safety, and shorten response time to maintenance and repair needs.

PRASA has collaborated with a consulting partner that specializes in process improvements and project management defining an updated structure of the Maintenance Department to achieve the following goals:

- A new Planning Center of Excellence focused on improved planning processes and external services and supplies monitoring and coordination.
- A systematic approach to project portfolio management and training compliance.
- An improved cycle time tracking system by maintenance activity with clear differentiation between corrective and preventative work.
- A master planning schedule process focused on preventive maintenance plans agreed upon qualified technical resources.
- New and updated Maintenance Department procedures with clear roles and responsibilities in compliance with the operation.
- Redesigned KPIs for asset management and maintenance and improved visualization tools and automation.

Recently PRASA re-launched its predictive maintenance program aimed at anticipating the needs of the Systems by monitoring asset condition and equipment wear during the operational cycle. This allows PRASA's maintenance teams to adjust or intervene prior to reaching equipment failure. Such predictive (or preventative) maintenance approach will allow for reductions in the maintenance frequencies, increasing the MTBF in PRASA's assets, and reducing maintenance and repair costs, thereby increasing the reliability of service levels (as a result of reduced service interruptions).

Adequate metrics coupled with up-to-date cost data will allow the Maintenance Department to make more informed, data-driven decisions on whether to repair or replace an underperforming or failing asset.

Exhibit 3-23 outlines the high-level action plan for successfully delivering this measure.

EXHIBIT 3-23: ACTION PLAN FOR ASSET MANAGEMENT AND MAINTENANCE MEASURE

Action Item	Deadline	Owner
Procure a consultant to evaluate current Asset Management policies and status	31-Jul-22	Maintenance Director
Assessment and report on current Asset Management status and areas of improvements on process, strategies and practices	31-Dec-22	Maintenance Director
Plans to address areas of improvement and implement the consultant's recommendations, subject to financial and other resources limitations	30-Jun-23	Maintenance Director

PRASA must continue monitoring activities already implemented to assure correct and reliable data are being captured from maintenance execution in order to perform analyses on the assets and their conditions to eventually support future decisions.

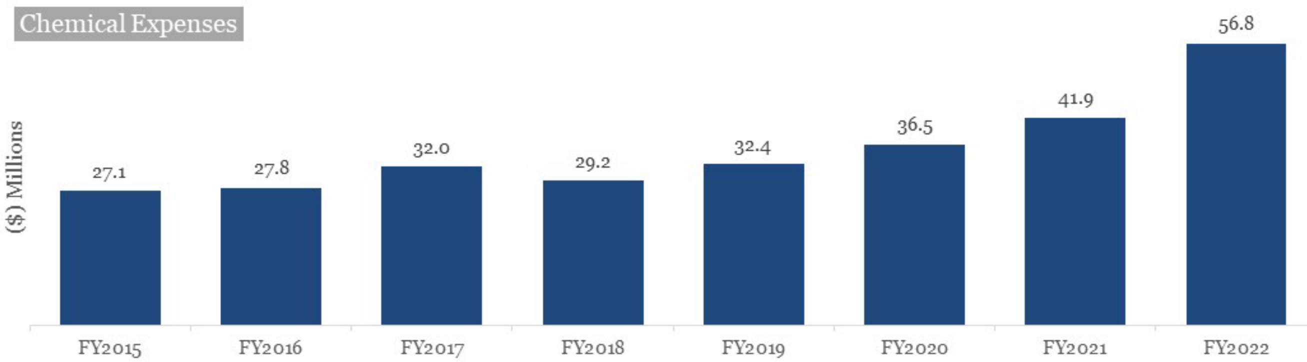
In the longer term, PRASA must develop a full Asset Management Program incorporating the lifecycle assets management into SAP, prioritizing assets under critical condition in the implementation of the preventive and predictive maintenance program.

3.2.6 Chemical Expense Stabilization

Chemicals spend is PRASA's fourth largest operating expenditure, representing nearly $60 million for FY2022. Despite PRASA's current efforts to reduce overall chemical costs through non-capital intensive initiatives such as improved procurement strategies and/or chemical usage, rising input costs associated with chemical production coupled with heightened compliance requirements for water quality, have effectively offset PRASA's efforts to generate savings. Moreover, from FY2015 to FY2022, PRASA's annual chemical budget more than doubled.

Exhibit 3-24 below outlines historical chemical expenditures from FY2015 to FY2019 per the respective audited financial statements, whereas FY2020 to FY2021 reflects actual spending per Budget to Actuals reporting, and FY2022 includes the proposed Budget amount for chemicals.

EXHIBIT 3-24: HISTORICAL CHEMICAL EXPENSES AND FY22 BUDGET (IN $ MILLIONS)



The sharp increase in chemical costs for FY2022 is driven primarily by market factors, including supply and demand, which is outside PRASA's control. However, PRASA must continue to work on options to change chemical consumption at its plants in search for savings, while ensuring water quality and compliance as its chief objectives. In light of these events, PRASA has assigned a task force to closely evaluate the chemical usage at one of the main water treatment plants to identify areas of opportunities and determine whether adjustments could then be scaled to other island-wide facilities. PRASA also expects to issue a request for proposals to have a third-party evaluate the chemical selection process, inventory, costs, purchase strategy, among others, to identify areas of opportunity. The benefit of such initiatives, if any, cannot be determined at this time and therefore no benefits are projected herein. If the evaluation results in the identification of potential benefits, PRASA must then evaluate new measures to address any potential benefits to be included in future fiscal plans.

Exhibit 3-25 outlines the high-level action plan to address chemical expense stabilization.

EXHIBIT 3-25: ACTION PLAN FOR CHEMICAL EXPENSE STABILIZATION

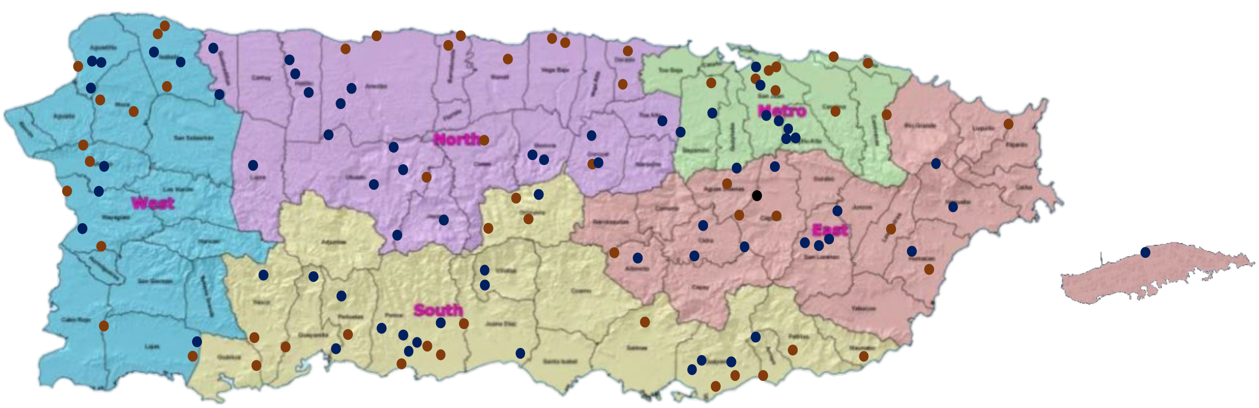
Action Item	Deadline	Owner
Complete procurement and selection of a consultant to evaluate current chemical management practices and provide recommendations	31-Aug-22	VP of Operations
Complete assessment and report to the Oversight Board on areas of opportunity with potential benefits	16-Jan-23	VP of Operations
Develop strategies for implementation as recommended in the consultant's report	31-Mar-23	VP of Operations
Implement recommendations, if applicable	3-Jul-23	VP of Operations

3.2.7 CIP Delivery

A proper execution of the CIP in a timely manner and on budget is essential to take advantage of the multibillion-dollar grant and other funding for recovery and reconstruction projects after the 2017 Hurricanes, as well as from the recently approved funding to address the coronavirus pandemic (CARES and ARPA) and an aging water and wastewater infrastructure (BIL Act).

The total CIP consist of over 500 projects with an estimated investment of $6.5 billion. Currently PRASA has 226 active projects across the island as presented in Exhibit 3-26 with an estimated investment of $2.95 billion.

EXHIBIT 3-26 ACTIVE PROJECTS BY REGION



The work needed to complete the projects and their level of investment, from their planning phase to completion, requires both internal and external personnel. For such purposes the Infrastructure Department structure has been redefined an updated and external support with major multinational engineering firms is under contract.

PRASA's Infrastructure Department reorganization was approved during November and December 2021, to properly to address the incremental needs to execute a CIP at historical levels with an average annual investment over $600 million for the five-year period ending on FY2027.

The new structure includes three main changes:

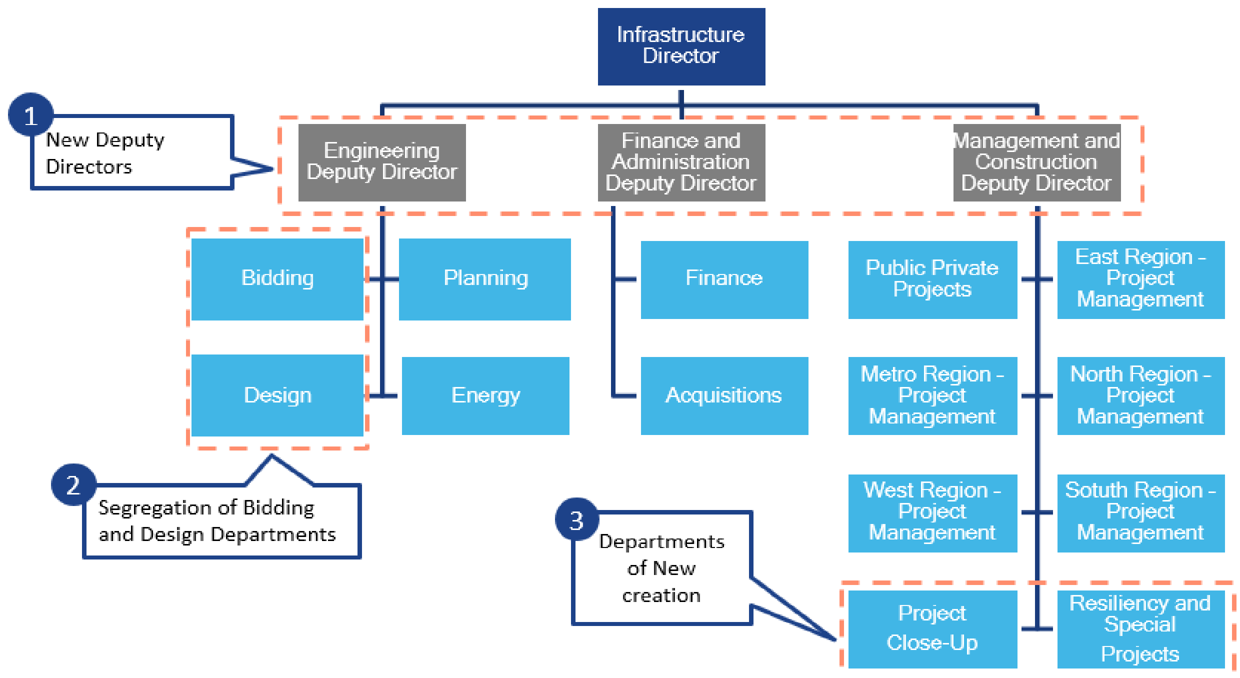
1) Creation of three sub-directorates (Engineering, Administration and Finance, and Management and Construction) under supervision of the Infrastructure Director;

2) Separation of Design and Biddings into two Directorates (Directorate of Design and Directorate of Bidding); and

3) Creation of two new directorates related to Project Management (Directorate for Closing Projects and Directorate for Resiliency & Special Projects).

These main changes are focused on effectively monitoring and managing the implementation of a revitalized and expanded use of PMCs. This revised structure is included in Exhibit 3-27.

EXHIBIT 3-27 INFRASTRUCTURE REVISED STRUCTURE



With the Infrastructure structure changes and by covering the required positions for the department, and with the support of the PMCs, PRASA expects to successfully deliver an aggressive CIP to maximize the available funding and revamp Puerto Rico water and wastewater infrastructure at unprecedented levels.

Project Management Consortiums

Following an RFQ/RFP process, PRASA selected and contracted four firms to each serve as a PMC and assist the Authority in the execution of its CIP. The contracted firms are Black & Veatch Puerto Rico PSC, CH Caribe Engineers PSC, Arcadis Caribe PSC and CSA-Louis Berger JV, LLC. Currently, each PMC has been assigned projects are set forth in Exhibit 3-28.

EXHIBIT 3-28 CIP PROJECTS ASSIGNED BY PMC & ESTIMATED CIP INVESTMENTS

BLACK & VEATCH	Contracted on: November 2020 Assigned CIP Projects: 58 Estimated CIP Investment: $815M
ARCADIS	Contracted on: February 2021 Assigned CIP Projects: 46 Estimated Investment: $511M
CH Caribe	Contracted on: April 2021 Assigned CIP Projects: 55 Estimated CIP Investment: $595M
wsp CSA Louis Berger JV LLC	Contracted on: July 2021 Assigned CIP Projects: 40 Estimated CIP Investment: $667M

A total of 226 CIP projects have been assigned to the PMCs with a total CIP investment estimated at over $2.95 billion.

Partnering with the PMCs will allow PRASA to focus on projects administration and financing with the PMCs supporting the design through construction phases.

CIP Execution Tracking

To track its CIP execution, PRASA established project metrics and monitors compliance and execution through a CIP tracking tool. Moreover, PRASA implemented a new module in SAP (its enterprise operating system) to enable the review and update of its current tracking tool to enhance compliance with expected execution schedules and costs.

The established metrics allow for high level planning and management of the CIP, while the tracking tool provides a detailed tracking of CIP compliance against what was planned.

Typically, the construction phase includes the highest potential for deviations in cost and time. To maintain control of this phase, PRASA keeps monthly track of two industry standard KPIs:

- **Cost Performance Index** (CPI): Measures the cost efficiency of resources committed to the project, evaluating whether the project will be completed on budget.
- **Schedule Performance Index** (SPI): Measures the relationship between the executed work versus the planned work, assessing whether the project will be completed on time.

Metrics have also been established to monitor the compliance with all requirements in each project phase, including five Pre-Construction Metrics, three Construction Metrics and one Closeout Metric

Through this monitoring, PRASA will be able to track the project status and take actions when needed.

3.2.8 Interagency debt settlements (with PREPA/LUMA & ERS)

As of March 30, 2022, PRASA reported nearly $79 million in payable amounts to both PREPA/LUMA and ERS. The payable amounts include both current and disputed billings dating back to 2017. PRASA undertook substantial due diligence and subsequent negotiation procedures to settle the outstanding balances with both entities (PREPA/LUMA and ERS). Notwithstanding the multiple efforts to renegotiate, PREPA/LUMA and ERS have failed to reach a final settlement with PRASA. As a result of these delays, there are material variances in what PRASA estimates as its PREPA/LUMA and ERS accounts payable versus what PREPA/LUMA and ERS report as due by PRASA. PRASA must take all available steps in FY2023 to reengage in negotiations and use any available dispute resolution mechanism to achieve a final settlement agreement.

In line with public policy set forth under Act 22 of 2016 and Act 106 of 2017, which enable debt settlement procedures at PREPA and ERS, respectively, the entities ought to pursue binding negotiations or an arbitration procedure. Exhibit 3-29 outlines the key action items for successfully settling the disputed amounts in FY2023.

EXHIBIT 3-29: ACTION PLAN FOR INTERAGENCY DEBT SETTLEMENTS MEASURE

Action Item	Deadline	Owner
Re-engage PREPA/LUMA in executing a final settlement on disputed balances	31-Aug-22	Executive President
Complete reconciliation process for disputed balances between PRASA and ERS	30-Sep-22	Executive President
Execute a final settlement on disputed balances with ERS	15-Nov-22	Executive President

3.3 Summary of Proposed Measures

The benefit of the five key new measures with financial impact is projected at ~$995 million during the Certified Fiscal Plan Period. A summary of projected net benefit from the New Measures is set forth in Table 3-5.

TABLE 3-5: NEW MEASURES PROJECTED BENEFIT (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Rate Adjustment	-	29.4	51.9	73.8	96.0	118.6	369.7
Meter Replacement	-	-	2.5	10.3	23.6	39.5	75.9
Electricity Savings	-	2.1	6.8	10.8	15.8	16.9	52.4
Physical Water Loss Reduction	-	1.4	3.6	5.9	8.7	11.5	31.0
Federal Funds, Net	67.8	176.6	165.2	44.8	(2.6)	10.6	462.4
Measures Benefit	67.8	209.5	230.0	145.5	141.5	197.1	991.4
Impact in ORF and OH	-	0.7	1.3	0.9	1.0	(0.1)	3.7
Initiatives Benefit, Net	67.8	210.2	231.3	146.4	142.4	197.0	995.1

3.4 Post-Measures Financial Projections

Implementation of the measures outlined in this Chapter will allow PRASA to improve both its financial and operational positions.

Table 3-6 presents the Post-Measures Financial Projections during the 2022 Certified Fiscal Plan Period.

TABLE 3-6: POST-MEASURES FINANCIAL RESULTS (IN $ MILLIONS)

in $'Millions	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY22/27
Authority Revenues	1,056.4	1,071.8	1,052.1	1,044.4	1,038.4	1,035.2	6,298.3
Senior Debt Service	(247.2)	(248.2)	(250.2)	(247.3)	(249.6)	(248.4)	(1,491.0)
Net Operating Expenses	(738.9)	(822.3)	(834.0)	(850.8)	(863.5)	(881.7)	(4,991.2)
Operating Reserve Fund	(14.6)	(15.7)	(2.9)	(4.2)	(3.2)	(4.6)	(45.2)
Capital Improvement Fund	(123.3)	(195.7)	(196.2)	(88.2)	(64.4)	(97.3)	(765.2)
Pre-Measures Financial Result	(67.7)	(210.1)	(231.2)	(146.2)	(142.3)	(196.7)	(994.3)
Measures Benefit	67.8	210.2	231.3	146.4	142.4	197.0	995.1
Financial Result	0.1	0.1	0.1	0.2	0.1	0.2	0.8

In summary, the projections included herein reflect a balanced budget in all years of the Certified Fiscal Plan Period, which is consistent with PROMESA Section 201(b)(1)(d), while ensuring proper maintenance of the system.

4 Federal Funds for Disaster Recovery and Resiliency

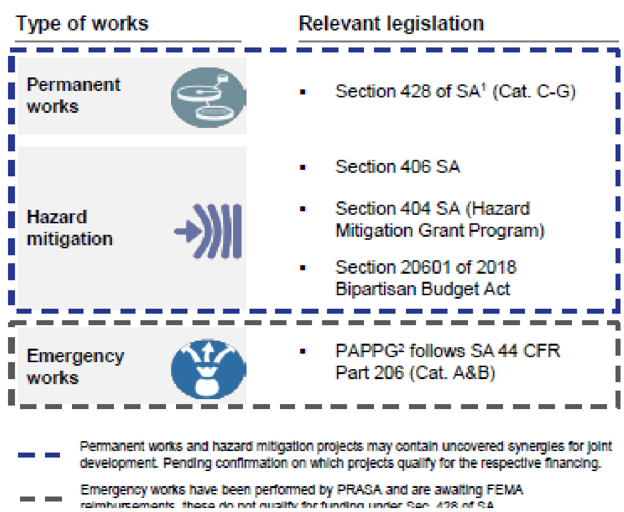
In addition to SRF and USDA RD funds available for qualifying projects, PRASA qualifies for additional funds for recovery efforts in the aftermath of natural and other disasters.

In order to address the damages to PRASA's system and the impact to its operations as a result of the 2017 Hurricanes, as well as the 2020 Earthquakes, and the pandemic, the Authority qualified for federal funding support under various programs further described in this Chapter.

4.1 Disaster Recovery Programs

PRASA's main sources of federal funding identified for disaster recovery are: 1) FEMA's Public Assistance Program; and 2) the HUD's Community Development Block Grant – Disaster Recovery (CDBG-DR) Program. A brief description of these program is included below with a summary of the funding identified, obligated and finally received by PRASA.

FEMA's Permanent and Emergency Work Program: Under the Stafford Act, PRASA receives FEMA funds through COR3, the officially designated grantee of the Government under the Stafford Act. COR3 is a division of the P3 Authority and was created to ensure adequate management and use of federal funds for Puerto Rico's recovery and reconstruction. FEMA's Public Assistance Program addresses both emergency work (e.g., debris removal and emergency protective measures and expenses), and permanent work (e.g., reconstruction to current industry standards of the Authority's Systems to address damages resulting from natural disasters). In addition, FEMA's Hazard Mitigation Program provides funding to improve resiliency for facilities not damaged by the particular disaster.



HUD CDBG-DR Programs: The Community Development Block Grant – Disaster Recovery (CDBG-DR) Program provides annual grants on a formula basis to states (including Puerto Rico), cities, and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons. The program is authorized under Title 1 of the Housing and Community Development Act of 1974, Public Law 93-383, as amended, 42 U.S.C. 5301 et seq. PRDOH is the designated grantee of CDBG-DR funds, while PRASA is the subrecipient, meaning that funds are managed through HUD.

4.2 FEMA's Public Assistance and Hazard Mitigation Programs

4.2.1 *Emergency Works*

Under the Public Assistance Program, FEMA is authorized to provide funding for Emergency Work[31], including emergency protective measures and debris removal. Emergency Works are performed immediately after a disaster to help:

- Save lives;
- Protect public health and safety;
- Protect improved property; or
- Eliminate or lessen an immediate threat of additional damage.

It involves two categories of work that address immediate threats: Category A for debris removal, and Category B for emergency protective measures.

4.2.2 *Permanent Works (Section 428 SA)*

PRASA receives reimbursement for permanent work through FEMA's 428 Alternative Procedures Program. Funding for permanent work is applicable to projects related to restoring facilities through repair or restoration to pre-disaster design, function, and capacity in accordance with codes or standards. Under the Alternative Procedures Program, FEMA will fund all large permanent work projects based on fixed cost estimates.

Specifically related to damages caused by the 2017 Hurricanes, the BBA allows FEMA to provide assistance to restore to industry standards disaster-damaged facilities or systems that provide critical services without regard to pre-disaster condition.

FEMA may approve projects developed based on codes and standards that are widely accepted and used, or best practices that are generally accepted by experts in the industry as long as standards are reasonable. BBA allows for the repair or replacement of components not damaged by the disaster if the work is required to restore the critical service function of the facility or system to an approved industry standard or standards. The pre-disaster condition of damaged or undamaged components is not a factor in determining the eligible scope of work.

PRASA, FEMA, and COR3 have been working collaboratively for years to adequately define the full need of reconstruction projects after the 2017 Hurricanes, size the cost estimates, and determine an efficient way of disbursing and utilizing pertinent federal funding to reconstruct the Systems.

On January 5, 2021, the President of the United States announced a net award of $3.66 billion for infrastructure projects to rebuild PRASA's Systems from the devastation caused by the 2017 Hurricanes. The total amount obligated for permanent work projects has been agreed among

[31] 44 CFR § 206.201(b).

PRASA, COR3, and FEMA pursuant to the FAASt Initiative. This obligation of funds from FEMA does not constitute an authorization for construction, and each project must be submitted to FEMA for eligibility determination and formulation.

As a requirement associated with this funding obligation, FEMA and COR3 required PRASA to submit a work plan, called PRASA's FAASt Workplan, within 90 days of the funding obligation date. PRASA submitted the initial work plan on April 8, 2021. This plan outlines PRASA's proposed investments in its Systems over the next ten years. The Authority is required to update and resubmit and has been updating and resubmitting the work plan to COR3 and FEMA every 90 days after the initial submission.

4.2.3 Public Assistance Hazard Mitigation (Section 406 SA)

Section 406 mitigation measures are funded under the Public Assistance program. This program provides funding for cost-effective measures that would reduce or eliminate the threat of future similar damage to a facility damaged during a disaster. The 406 funding provides discretionary authority to fund mitigation measures in conjunction with the repair of the disaster-damaged facilities, and is limited to the eligible damaged facilities. Section 406 funds should be applied to work on the disaster-damaged facilities when the mitigation measure directly reduces the potential of future, similar disaster, damages to the eligible facility. PRASA expects to initially submit under this program the project included in Table 4-1.

TABLE 4-1: DISASTER RELATED HAZARD MITIGATION (406) PROJECTS (IN $ MILLIONS)

Project	Identified Needs
Dorado WWTP Elimination/Barceloneta WWTP Expansion	$319.6

4.2.4 Hazard Mitigation Grant Program (Section 404 SA)

Funds under Section 404 of the Stafford Act can be used to provide mitigation funding to undamaged parts of a facility or to prevent or reduce damages caused by future disasters. Section 404 mitigation measures are funded under the HMGP.

The Territory or State receives a percentage of the total federal share of the declared disaster damage amount (20%), which it uses to fund projects anywhere in the Territory or State, regardless of where the declared disaster occurred or the disaster type.

Funds under Section 404 grant may be used in conjunction with 406 mitigation funds to bring an entire facility to a higher level of disaster resistance, when only portions of the facility were damaged by the current disaster event.

PRASA has submitted a total of five HMGP 404 Applications with a total requested assistance of $583.7 million as shown in Table 4-2.

TABLE 4-2: HMGP (404) APPLICATIONS (IN $ MILLIONS)

Project	PRASA Application
East Region Water System Improvement (Valenciano)	272.3
Bauta Tunnel	246.4
Enrique Ortega La Plata Generators for RWI	20.9
Salinas WTP	27.0
San Sebastián WWTP Elimination	17.1
	583.7

Additionally, PRASA expects to submit the Casey new reservoir and WTP under this program with a total investment estimated at $580 million.

4.3 HUD CDBG Programs

HUD provides flexible grants to help cities, counties, territories and states to recover from Presidentially-declared disasters, especially in low-income areas, subject to the availability of supplemental appropriations. In response to Presidentially-declared disasters, Congress may appropriate additional funding for the CDBG Program as Disaster Recovery grants to rebuild the affected areas and provide money to start the recovery process. Since CDBG-DR assistance may fund a broad range of recovery activities, HUD can help communities and neighborhoods that otherwise might not recover due to limited resources.

Each CDBG-DR activity, including CDBG-MIT (Mitigation), must meet the following criteria: a) address a disaster-related impact (direct or indirect) in a Presidentially-declared disaster area; b) be a CDBG-DR eligible activity; and c) meet a CDBG-DR national objective. The national objectives include: i) benefit low-and moderate-income persons; ii) aid in the prevention or elimination of slums or blight, or; iii) meet community development needs having a particular urgency.

4.3.1 HUD CDBG-DR Program

CDBG-DR funding supplements other Federal recovery assistance programs administered by FEMA, the Small Business Administration (SBA), and USACE. CDBG-DR funds cannot duplicate funding available from federal, state or local governments, private and non-profit organizations, insurance proceeds, or any other source of assistance and can be applied to fund the local match requirement – NFMP. NFMP uses CDBG-DR funds to provide a separate grant to meet the local cost share requirement for other federal programs, including FEMA and consists of three sub-programs:

- FEMA Public Assistance (PA) Match,
- FEMA Individual Assistance (IA) Match,
- HMGP Global Match.

Most of FEMA funding for permanent works requires a state match of 10% of the total amount. The Authority plans to meet its cost-share portion with CDBG-DR Program funds, as they become available. Under the NFMP, the Authority has $406.9 million in eligible costs from the FAASt obligation and additional costs from the Section 404 and 406 programs to cover the state match needs for funding under FEMA Programs.

In the event that these funds are not available, PRASA must identify alternate options to cover the required local cost share obligation.

On September 2, 2021, PRDOH and the Authority entered into a sub-award agreement for $200 million under the CDBG-DR NFMP to fund the state match of the FEMA FAASt award.

Under CDBG-DR Program, in June 2021, $2 billion were assigned for electric power system enhancements and improvements for Puerto Rico and the U.S. Virgin Islands. CDBG-DR funds for electrical power system improvements provide a unique and significant opportunity for Puerto Rico and the USVI to carry out strategic and high-impact activities to address necessary expenses and mitigate disaster risks to their electrical power systems; improve system reliability, resiliency, efficiency, and sustainability; and address each system's long-term financial viability. Even though most of the Puerto Rico portion of these funds is expected to be assigned for PREPA, PRASA requested $63 million from this program to finance equipment and installation for solar energy projects at 15 sites (approximately 45 million kWh of generation capacity), which represents approximately 7% of its annual electricity consumption, as included in Table 3-1 included in Chapter 3.

4.3.2 HUD CDBG-MIT Program

CDBG-MIT Program is a unique and significant opportunity for eligible grantees to use this assistance in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.

The program defines mitigation as activities that increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, injury, damage to and loss of property, and suffering and hardship by lessening the impact of future disasters.

The CDBG-MIT Program applies for costs not covered or in excess of funding available from the FEMA Public Assistance Non-Disaster Related Hazard Mitigation (Section 404) Program. Therefore, availability of these funds will be subject to Congressional appropriation of funds under Section 404.

4.4 Consolidated Appropriations Act

On December 27, 2020, the CAA was enacted, providing coronavirus emergency response and relief funds.

Section 533 of the CAA provides for $638 million to prevent, prepare for, and respond to the coronavirus pandemic, including necessary expenses for grants to carry out the LIHWAP to assist low-income households, particularly those with the lowest incomes, that pay a high proportion of household income for drinking water and wastewater services, by providing funds to owners or operators of public water systems or treatment works to reduce arrearages of and rates charged to such households for such services.

The funds are be allotted to a State (including Puerto Rico) based on the following (i) the percentage of households in the State with income equal to or less than 150 percent of the Federal poverty line, and (ii) the percentage of such households in the State that spend more than 30 percent of monthly income on housing.

ARPA also assigned funding for the LIHWAP as explained in Section 4.5.2. PRASA requested funding allocated to Puerto Rico for the benefit of qualifying low-income households' clients through the Office of Administration for the Families Socioeconomic Development (ADSEF by its acronym in Spanish). On February 1, 2022, ADSEF was notified the LIHWAP State Plan for Puerto Rico was approved.

Additionally, Section 501 of the 2021 CAA provides up to $25 billion to assist households that are unable to pay rent or utilities under the Emergency Rental Assistance Program (ERAP). Subsequently, on March 11, 2021, ARPA increased the amount for such program by $21.55 billion. As of April 20, 2022, PRASA received $12.2 million applied to outstanding balances for water and wastewater services of qualifying beneficiaries through the PRHUD.

4.5 American Rescue Plan Act

ARPA was signed into law by President Biden on March 11, 2021. It provides additional relief to respond to the continued impact of COVID-19 in the United States and its territories.

ARPA provides $1.9 trillion in total stimulus, building upon the $2.2 trillion, CARES Act and the $910 billion CRRSA Act.

ARPA allocated $350 billion to states (including Puerto Rico), territorial and local governments, to address revenue losses, increased expenses, and unforeseen budget gaps due to COVID-19.

A summary of ARPA provisions that are deemed relevant to the Authority is included below. As discussed further below, a total of $195 million of ARPA funds for infrastructure projects has been included in the Certified Fiscal Plan.

4.5.1 State and Local Assistance

Under Subtitle M, Section 9901 of ARPA, Coronavirus State and Local Fiscal Recovery Funds of $350 billion are allocated to state, territorial and local governments to remedy this mismatch between rising costs and falling revenues stemming from the COVID-19 public health emergency.

The funds must be spent by December 31, 2024 and can be used for the following purposes:

- Respond to the COVID-19 public health emergency and its negative economic impacts;
- Provide premium pay to eligible workers performing essential work during the COVID–19 public health emergency;

- Replace revenue that was lost, delayed, or decreased as a result of the COVID-19 public health emergency; and
- Make necessary investments in water, sewer, or broadband infrastructure.

The aid allocation to the U.S. Territories[1] amounted to $6.67 billion ($4.5 billion for the States and $2.17 billion for local governments). U.S. Territories appropriation was allocated as follows:

- 50% to be allocated equally among the territories, and
- 50% to be allocated to each territory proportionally based on population.

Puerto Rico was allocated $2.47 billion to the central government (its allocation as a U.S Territory) and $1.5 billion to municipalities (the allocation for local governments).

Governor Pierluisi subsequently released his spending plan for the $2.47 billion allocation which included the following allocations to PRASA:

- On September 14, 2021, PRASA received $7.5 million to provide premium pay to its essential employees working in-person during the pandemic and complying with the parameters required by the applicable guidelines.
- On December 1, 2021, $65 million were assigned for PRASA's infrastructure projects. On February 15, 2022, an additional $130 million was allocated to PRASA under ARPA for projects related to "Caño Martín Peña Program". These amounts have been taken into account in the financial projections included herein. Table 4-3 includes the list of projects to be funded with such funds.

TABLE 4-3: ARPA FUNDS ALLOCATED FOR PRASA PROJECTS – (IN $ MILLIONS)

Project	Municipality	Allocation Date	Allocation to PRASA
Naranjito WTP	Naranjito	01-Dec-21	54.88
Improvements Santa Rita Sanitary Sewer System	Fajardo	01-Dec-21	6.37
Ceiba Norte and Gurabo Abajo Juncos Sanitary Sewer System	Juncos	01-Dec-21	1.25
Improvements to La Piedra & Pasto Viejo Distribution Systems	Cayey	01-Dec-21	2.50
Improvements to Pajita Falcon Water Supply System	Aguas Buenas	01-Dec-21	0.44
Caño Martin Peña Program	San Juan	15-Feb-22	130.00
Total ARPA Allocation for Infrastructure			**195.43**

[1] Includes American Samoa, Guam, Northern Mariana Islands, Puerto Rico, the U.S. Virgin Islands

PRASA must pursue additional funding, but no guarantee can be given that any additional funds will be received, and, therefore, only the funds already allocated were included in the Certified Fiscal Plan projections.

4.5.2 Water and Sewer Utilities

Allocation of funds under ARPA specifically for water and sewer utilities includes $500 million for water assistance grants to states and territories (including Puerto Rico) “to assist low-income households, particularly those with the lowest incomes, that pay a high proportion of household income for drinking water and wastewater services”. The Government will provide the funds under this provision to “owners or operators of public water systems or treatment works to reduce arrearages of, and rates charged to such households for such services”.

This funding supplements the one provided by the CAA for LIHWAP. From both Acts, a total of $5.1 million has been allocated to Puerto Rico. As mentioned previously, PRASA requested funding allocated to Puerto Rico for the benefit of qualifying low-income households’ clients. On February 1, 2022, ADSEF was notified that the LIHWAP State Plan for Puerto Rico was approved

4.5.3 Other Provisions

ARPA provided additional funding of up to $9.96 billion to provide relief to most vulnerable homeowners under the Homeowner Assistance Fund (HAF) to prevent mortgage delinquencies and defaults, foreclosures, loss of utilities or home energy services, and displacement of homeowners experiencing financial hardship after January 21, 2020. Funds from the HAF may be used for assistance with mortgage payments, homeowner’s insurance, utility payments, and other specified purposes. The law prioritizes funds for homeowners who have experienced the greatest hardships, leveraging local and national income indicators to maximize the impact.

In April 2021, $75.6 million was assigned for Puerto Rico. The program is still in the development process, and the Authority is unable at this time to project how much of this amount will be allocated for the Authority’s benefit.

In addition, other benefits from ARPA are expected to benefit Puerto Rico’s economy such as unemployment benefits, funds for education, healthcare, and small businesses. Furthermore, economic impact payments of up to $1,400 for individuals (or $2,800 for joint filers, plus $1,400 for each dependent) are included under the ARPA, which also includes provisions to expand the Child Tax Credit, Earned Income Tax Credit, and extends the availability of the Employee Retention Credit for small businesses through December 2021 (subsequently amended to September 2021).

4.6 Infrastructure Investment and Jobs Act

In November 2021 , the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58 (IIJA) was signed into law by President Biden. BIL allocates $550 billion in new spending over the next five years, divided between improving the surface-transportation network (including roads and bridges, public transit, and electric vehicles) and core infrastructure, which includes water infrastructure. IIJA will provide more than $50 billion to address aging water infrastructure, providing funding to replace lead pipes, upgrade water treatment facilities, address emerging contaminants in small and disadvantaged communities, and ensure that water systems are resilient for the future.

The funding will be administered through programs managed by USEPA, and the funding will be divided as follows:

- $20+ billion for safe drinking water
- $15 billion to replace lead pipes
- $12+ billion to ensure clean water for communities and
- $1.8 billion to protect regional waters, including $135 million for additional water improvements.

TABLE 4-4: IIJA FUNDS FOR WATER PROJECTS – (IN $ BILLIONS)

Program	Objective	Funding Source	Grant	Loan	State Match	Amount (B)
Drinking Water	Lead Service Line Replacement	DWSRF	49%	51%	No	15.0
	Drinking Water Infrastructure	DWSRF	49%	51%	10%	11.7
	Addressing Emerging Contaminants	DWSRF	100%	0%	No	4.0
	Addressing Emerging Contaminants in Disadvantaged Communities	SUDC[32]	100%	0%	No	5.0
Clean Water	Waste and Storm Water Infrastructure	CWSRF	49%	51%	10%	11.7
	Addressing Emerging Contaminants	CWSRF	100%	0%	No	1.0
						48.4

The IIJA also provides for an additional $2 billion in funding for regional water protection, including estuaries and other specific projects.

On December 2, 2021, USEPA notified the Government that the estimated allocation to Puerto Rico will be $78.4 million for FY2022, the first-year allotment of the total 5-year funding to be provided under the IIJA. On March 8, 2022, USEPA published the guidelines to request these funds. PRASA has assumed that a portion of the projects qualifying for SRF funds will be financed with these proceeds.

[32] Small, Underserved, and Disadvantaged Communities Program

4.7 Funding Status

The total federal funds for (i) Reconstruction and Recovery projects after the 2017 Hurricanes and 2020 Earthquakes, (ii) Coronavirus relief, and (iii) water and wastewater infrastructure funds identified, obligated and received as of April 20, 2022 are presented in Table 4-5.

TABLE 4-5: IDENTIFIED, OBLIGATED AND RECEIVED FEDERAL FUNDS (IN $ MILLIONS)

	Program	Funding Source	Identified Amount ($M)	Obligated/ Approved ($M)	Received ($M)
Reconstruction and Recovery	Emergency Work (Cat A&B)	FEMA (PA)	$ 207.1	$ 207.1	$ 185.7
	Permanent Work (FAASt, Section 428)	FEMA (PA)	3,662.7	3,662.7	16.1
	Disaster Related Hazard Mitigation	FEMA (406)	319.6	-	-
	Non Disaster Related Hazard Mitigation (HMGP)	FEMA (404)	1,163.7	3.4	-
	CDBG – DR (Non Federal Match Program)	HUD	406.9	200.0	1.2
	RD - Harvey, Irma and Maria Grant	RD	24.7	24.7	19.4
	Hurricanes Recovery Funds		**$ 5,784.6**	**$ 4,097.9**	**$ 222.4**
Coronavirus Relief Funds	Cares Act	OMB	$ 2.1	$ 2.1	$ 1.4
	Infrastructure Projects (Naranjito, Sta Rita, etc)	ARPA	79.9	65.4	-
	Caño Martin Peña	ARPA	130.0	130.0	-
	Premium Pay	ARPA	7.5	7.5	7.5
	LIHWAP	ARPA/CAA	5.0	-	-
	ERAP – Emergency Rental Assistance	HUD	TBD	12.2	12.2
	Mortgage Assistance Program	HFA	TBD	-	-
	Total Coronavirus Relief Funds		**$ 224.6**	**$ 217.3**	**$ 21.1**
Infrastructure Funds	CWSRF	EPA	195.0	195.0	40.5
	DWSRF	EPA	46.0	46.0	18.4
	RD - Rural Utility Services (ULOs)	RD	22.0	-	-
	CDBG-DR Electrical Power Systems	HUD	63.3	-	-
	Total Funds for Infrastructure Projects		**$ 326.3**	**$ 241.0**	**$ 58.9**
	TOTAL		**$ 6,335.5**	**$ 4,556.2**	**$ 302.4**

A total of $6.3 billion of federal funding have been identified, of which $4.5 billion has been obligated. The amounts presented in the table above are subject to projects' final needs, eligibility, cost-benefit analysis and program funds availability.

Other than the Emergency and Permanent Work programs funding, no additional funds have been obligated. Therefore, this Certified Fiscal Plan only assumes available and already obligated or clearly identified funding from the various federal programs and the projected cost share from the CDBG-DR program for Permanent Works.

5 Long-Term Fiscal Responsibility and Operational Sustainability

Since FY2016, PRASA has been able to fund some of its CIP needs with the savings achieved through the implementation of measures included in prior fiscal plans. For example, at the beginning of FY2020, PRASA successfully modified its Federal Debt. Furthermore, in November 2020, the Authority was able to settle a non-secured loan with the GDB Debt Recovery Authority for $20.5 million resulting in over $55 million in savings against the asserted claims. Subsequently in December 2020, PRASA was able to issue via a limited public offering approximately $1.4 billion in its 2020 Senior Bonds, achieving $350 million in total debt service savings. This was followed in August 2021, with the issuance of the 2021 Senior Bonds to similar investors that, coupled with the expected issuance of its 2022 Senior Bonds in June 2022, will refinance in the aggregate of all the Authority's 2012 Senior Bonds and result in total debt service savings of $570 million. The 2020 and 2021/2022 senior debt refinancing agreements resulted in the Authority obtaining the written consent of the holders of almost all of the Authority's outstanding senior bonds[33] to modify the MAT to convert the current pledge of revenues to pay senior debt service, from a gross revenue pledge to a net revenue pledge, subject to obtaining the written consent of the Federal Lenders to such change.

PRASA currently pays its operating expenses, debt service obligations, and the non-federally funded portion of critical CIP projects with operating revenues. The capital-intensive nature of water utility operations will require, in the long term, restoring PRASA's access to the credit markets at reasonable rates to raise the necessary funding for CIP costs not covered by federal grants and low-cost loans. As a result of the recent obligation by FEMA of $3.66 billion for recovery projects and the availability of significant other federal grant and other funding described in Chapter 4, the need to access the credit markets for CIP financing may not be required in the near-term, placing PRASA in a stable financial situation that should allow it to improve the condition of the Systems and the Authority operations for the benefit of the people of Puerto Rico.

Although no such issuances are expected for the Certified Fiscal Plan Period, in future years PRASA's CIP may be partially financed through the issuance of long-term debt, subject to market conditions and need, if it helps to distribute the financial burden of major capital works to customers across a longer time period and maintain affordable current rates while funding performing essential work on the System.

[33] The remaining 2008 Senior Bonds that were not refinanced (the holders of which have not consented to the MAT pledge modification) will mature on July 1, 2024.

5.1 Plan for Maintaining Long-Term Fiscal Responsibility

To maintain long-term financial sustainability, PRASA must seek to (a) implement measures outlined in Chapter 3 to build on the improvements in financial and operational performance to date and to mitigate future demographic, economic, environmental/climate, and fiscal challenges in the Commonwealth and (b) maximize federal funding from the programs described in Chapter 4 or any additional program or funding that may become available.

PRASA is committed to building on its past accomplishments particularly in the area of further improvements to the condition of its Systems, increasing operational efficiencies and timely and on budget implementation of its CIP. These areas are expected to be properly addressed as a result of the projected inflow of federal funds to cover (with appropriate contributions from PRASA's internal funds) its CIP needs, allowing for a more robust infrastructure and a more efficient and resilient water and wastewater systems.

Table 5-1 *s*ets forth key steps being taken by PRASA that demonstrate its commitment to long-term fiscal responsibility through meaningful and measurable actions.

TABLE 5-1: PLAN TO RESTORE COST-EFFECTIVE CAPITAL MARKET ACCESS

Authority action plan		STATUS
Implementation of Measures in the Certified Fiscal Plan	• Ensure implementation of measures discussed in Chapter 3 through the management and oversight of the Steering Committee	In progress
Federal Funds Maximization	• Maximize FEMA funds for Systems recovery and reconstruction in a manner consistent with best industry practices. • Maximize use of lower cost funding resources, such as SRF program or USDA RD bonds, by ensuring project compliance with these programs • Identify and maximize funding of other federal program as described in Chapter 4 or any additional funding that may become available.	In progress
Systems health, service area, and economy	• Ensure long-term planning by updating the Authority's Master Plan, ten-year CIP, and Emergency Response Plan	In progress
Financial strength of operations	• Update budgeting efforts to comply with or exceed MAT covenant requirements, particularly covenants that obligate PRASA to consider capital as well as operating expenses (including operating revenue deposits to the CIP Fund) • Publish long-term financial projections (Fiscal Plans) • Quarterly interim financial results and key operational information	Implemented

Authority action plan		STATUS
	• Maintain balance in ORF (at least 90 days of cash on hand)	
Rate setting process and regulatory compliance	• Establish and implement timely, systematic annual rate increases from FY2024 and onward, consistent with industry best practices, economic factors, and feedback from key stakeholders • Ensure affordability is taken into consideration for any change to the rate structure and adjustments	In progress
Strength and independence of governance	• Limit turnover of key decision makers by continuing current succession process • Compliance with Act No. 68-2016: (i) a diversified, independent, and professionalized Governing Board and (ii) Executive Officers appointment by the Governing Board complying with specific requirements and (iii) specific terms for non-ex-officio Governing Board members and key executive officers.	Implemented
Operational and financial management assessments	• Develop and implement disclosure best practices, including: ○ Operational and financial measure tracking ○ Timely publication of audited financial statements ○ Quarterly interim operating reports ○ Annual consulting engineer reports • Provide progress reports on Certified Fiscal Plan implementation (detailed in Chapter 6, "Reporting requirements")	In progress
CIP delivery	• Ensure efficient execution of capital projects through capital delivery optimization including (but not limited to) performance tracking, PMC support, establishing portfolio-wide project prioritization criteria, and schedule compliance & execution as described in Section 3.2.5.	In progress

5.2 Debt Sustainability Analysis

A DSA is intended to provide a framework for assessing PRASA's long-term capacity to pay debt service under the terms of the MAT. PRASA's debt levels need to be consistent with industry standards in order to ensure credit market access for future new money borrowings to fund, when needed, ongoing infrastructure investment, and/or refunding opportunities for savings. As described in this Certified Fiscal Plan, PRASA is focused on executing a set of financial, operational, and non-financial measures that will allow it to regain credit market access at reasonable rates. The following debt sustainability analysis describes PRASA's capacity to pay current and projected debt within the constraints of the MAT.

The DSA includes implied debt capacity based on a range of interest rates, cash flow availability, and assumed 30-year term and level debt service. The level of sustainable debt for PRASA, as shown in Table 5-2 below, ranges from $2.8 billion to $6.9 billion, inclusive of existing outstanding bonded debt, depending on the assumed borrowing rate and the level of post-measures cash flow available for debt service.

TABLE 5-2: SENSITIVITY ANALYSIS – IMPLIED DEBT CAPACITY (IN MILLIONS)

Illustrative Annual Cash Flow Available for Debt Service		**$200**	**$250**	**$300**	**$350**	**$400**
Borrowing Cost	**4.00%**	$3,458	$4,323	$5,188	$6,052	$6,917
	5.00%	$3,074	$3,843	$4,612	$5,380	$6,149
	6.00%	$2,753	$3,441	$4,129	$4,818	$5,506

6 Reporting Requirements

As part of monitoring progress of the Certified Fiscal Plan measures, PRASA is required to submit periodic reports to FOMB and, on occasions, to the public. Table 6-1 lists these reports and their frequency.

TABLE 6-1: REPORTS TO BE PRESENTED

Report type	Detail	FOMB reporting timing	Public reporting timing
Budget to actuals (B2A)	Tracking of budgeted to actual spend per budget certification agreement with FOMB: • Explanation for material variances for YTD (>10% and >$1 million or > $10 million) • Accounts receivable by type of client (residential, commercial, industrial, and governmental) • Schedule with amounts owed by each government client • Government collections and payment plans (top-15) • Collections by customer segment • Monthly headcount roll forward and by function • Monthly profit and loss statement	• Monthly reporting after budget is certified • Quarterly, PROMESA Section 203 reporting after budget is certified	• Quarterly
Liquidity	Cash flow report: • actual and projected cash flows for the FY, including Current Expense Fund beginning and final balances • Total cash balance by account, available upon FOMB request	• Monthly	• Monthly (cash flow actuals)

Report type	Detail	FOMB reporting timing	Public reporting timing
Measures	Certified Fiscal Plan measures' status, schedule, and fiscal impact	• Based on each measure's initiative due dates	• N/A
CIP: implementation tracking	CIP monthly progress reports, tracking tool and actual spend to date	• Project-level reporting: monthly	• N/A
Water quality KPIs and environmental compliance	• Summary of KPI dashboard, including monitoring and health-based violations • Detailed compliance reports, by plant, available upon FOMB request	• KPI reports: quarterly	• Annual Consumer Confidence Report
Water Balance	Publish water balance in accordance with AWWA M36 standards to summarize the following components: • Water supply, • Water consumption, and • Water losses	• Annual	• Annual
FEMA	Provide updates on FEMA Federal funding, particularly on the following: • summary of YTD FEMA disbursements for permanent works	• Quarterly FAASt status and summary of disbursements	• Quarterly

6.1 Monthly KPIs for Measures

The following Table 6-2 identifies the critical KPIs to be tracked monthly and start date of tracking such measures. All start dates are assumed to be August 15th of listed Fiscal Year unless otherwise listed or modified by FOMB through prior authorization.

TABLE 6-2: NEW MEASURE KPIs

Measure	KPI	Frequency	Start Date
Rate Adjustment	Financial Impact of Measure	Monthly	FY2023
	Meters replaced (starting in FY2024)	Quarterly	FY2024

Measure	KPI	Frequency	Start Date
Metering Optimization	Increase in revenues due to meter replacement (starting in FY2024)	Semi-Annually	FY2024
Electricity Expense Reduction	Track energy consumption vs. annual targets	Quarterly	FY2023
	Resources (internal & external) invested towards electricity expense reduction efforts (in $dollars)	Quarterly	FY2023
	Energy from new PPAs	Monthly	FY2024
Physical Water Loss Reduction-Overall	Annual Water Balance including real and apparent losses	Annual 30 days after FY end	FY2023
	Infrastructure Leakage Index (ILI)	Annual 30 days after FY end	FY2023
	Resources invested in Physical Water Loss measures (internal & external)	Quarterly	FY2023
Physical Water Loss Reduction-Master Meters	Measured and estimated average production (in MGDs)	Quarterly	FY2023
	Master Meters Installations	Quarterly	FY2023
	Master Meters needed to be replaced and number replaced / installed	Quarterly	FY2023
	Investment in Master Meters	Quarterly	FY2023
	Water production measured (as % of total water production)	Quarterly	FY2023
Physical Water Loss Reduction-Pressure Management	Number of pressure zones visited	Monthly	FY2023
	MGDs saved due to pressure management	Monthly	FY2023
Physical Water Loss Reduction-Leaks Detection	Unreported Leaks Pre-Located	Monthly	FY2023
	Average Leaks per Mile	Monthly	FY2023
	Average Pressure Zones Visited per Region	Monthly	FY2023
	Unreported Leaks Pinpointed	Monthly	FY2023
	Average MGDs Loss per Pinpointed Leaks	Monthly	FY2023
	Average Leak Cost per Day (Leakage Cost)	Monthly	FY2023
	Percentage (%) of pipelines replacement from goal	Quarterly	FY2023
	Leak Mean Time to Repair	Monthly	FY2023
	MGDs saved due to leaks repaired	Monthly	FY2023

Measure	KPI	Frequency	Start Date
	Percentage (%) of Identified Leaks Repaired	Monthly	FY2023
	Number of tanks repaired	Monthly	FY2023
CIP tracking	Cost Performance Index	Monthly	FY2023
	Schedule Performance Index	Monthly	FY2023
New Federal Funds	Federal Funds Received	Monthly	FY2023

7 Risks and Mitigating Strategies

As a large and complex utility operating in an uncertain environment, PRASA's implementation of its key measures is subject to risks and unforeseen events, many of which are outside of the Authority's control. Table 7-1 summarizes an analysis of the key risks that have been identified as having the potential to impact or delay PRASA's Certified Fiscal Plan implementation and the corresponding mitigation strategies. However, it is worth noting that this outlook is based on the best information available as of the date of preparation of this Certified Fiscal Plan, and over time PRASA may become aware of additional existing risks or new risks may arise that could significantly affect the Authority's financial and/or operational performance, including actions by Local or Federal Government and/or the US Congress.

TABLE 7-1: RISKS TO FISCAL PLAN IMPLEMENTATION AND MITIGATING STRATEGIES

Risk category	Potential impacts	Mitigating Strategies
Natural disasters	**Catastrophic natural disasters** – Events such as droughts, floods, pandemics, hurricanes, and earthquakes could have significant financial and operational impacts, including system failures, water rationing, and environmental noncompliance. The severity of some of these events and their impacts on the Authority may be exacerbated over time due to climate change.	• Emergency Response Plans and a Climate Change Vulnerability Study and Adaption Plan in place; ensuring plans are integrated into operations and capital requirements are integrated into the updated Master Plan. • Keep ORF fully funded.
Revenue risks	**Decreased demand** – Decreases in population and reduced consumption among customers are expected to reduce revenues during the Certified Fiscal Plan Period. The economic effects of COVID-19 may further affect revenue projections.	• The selected meter replacement program must focus on increasing the precision of water consumption and billings.
	Lower collections rates – Collections rates may be lower than forecast due to overall inability of customers to pay for services, resulting in decreased revenues. The economic uncertainty caused by COVID-19 has increased the possibility of lower collection rates.	• Keep ORF fully funded. • Increase and enhance digital payment options and collection capabilities. • Offer payment plans to eligible customers. • Service disconnection restart after Act-39 application expired
Expenditures and Regulatory Risks	**Major change in Systems performance** – A decrease in Systems performance (e.g., major infrastructure failure, water quality crisis) due to deteriorating Systems conditions may significantly increase operating and capital expenses to address issues.	• Keep ORF fully funded. • Ensure CIF is funded to appropriate levels to address CIP project outlays and potential emergency projects not identified at the time of this Certified Fiscal Plan. • Maximize federal funding to materially improve the Systems condition, rebuilding it to industry standards.

Risk category	Potential impacts	Mitigating Strategies
	Changes in payroll legislation – Payroll expenses account for over 40% of projected operating expenses. Changes in payroll legislation, including changes to the state or federal pay scales and minimum wages, may materially impact PRASA's largest cost component, the execution of right-sizing measures, capacity and PRASA's salaries competitiveness and employee's retention in a high demand labor market.	• Payroll expense projections were calculated applying Act No. 26-2017 but Act 3-2017, which extended the labor agreements due dates, expired on June 30, 2021. PRASA executed a Negotiation Agreement with UIA providing for the negotiation of revised pay scales, among others. • Incorporation of the impact of updated pay scales and incentives for critical positions into the financial projections included herein
	Changes in electricity rate costs – Electricity accounts for around 20% of projected operating expenses. Variations of $0.01/kWh can lead to annual expense variances of $6.5 million.	• Closely monitor the implemented energy efficiency and electricity consumption reduction measures. • Seek more renewable energy alternatives as described in this Certified Fiscal Plan.
	Availability of contracted resources to execute the CIP as planned – The recent inflow of FEMA and other federal funds will increase demand of contractors and materials which will create challenges to execute the CIP as planned, regarding both timing and cost. Additionally, changes to salaries in the construction industry and increased prices of commodities and other raw materials may further increase the CIP projected costs and therefore create incremental financing needs.	• Attract contractors to PRASA projects through timely payment and long-term contracting. • Close monitoring of CIP implementation and timely correction of deviation when possible. • Use of CIP Tracking tool and Project Management tool. • Frequent revisions to reflect material CIP changes to adjust timing or the required needs of funding, when applicable.
	More stringent environmental regulations – Changes in environmental legislation (e.g., more stringent drinking water standards) may increase overall expenses for chemical and lab usage, in addition to possible requirement of mandated project costs.	• Prioritize projects to address environmental compliance and agreement of a new Consent Decree, adapted to PRASA's updated situation and condition. • Frequent revisions to reflect material CIP changes to adjust timing or the required needs of funding, when applicable.
Financing Risks	**Reduction in federal funds availability or timing delays – either** would require additional self-funding for the CIP or interim financing to cover any shortfalls or delays in the federal funding disbursement process	• Maintain a healthy balance in the CIP Fund to allow for the required payments to contractors prior to receipt of federal funds. • Proper and efficient management of federal funds requests and documentation, including the reorganization of the Infrastructure Department to address the increased volume of projects federally funded. • Accessing the capital market for interim financing, as needed

Risk category	Potential impacts	Mitigating Strategies
Operational Risks	**Management capability** – Lack of capability to execute and fully deliver on assigned measures in the Certified Fiscal Plan. If benefits are not achieved and/or fall short of targets that could negatively affect the financial projections included herein.	• Ensure PMO has a clear oversight role over the Certified Fiscal Plan measures and the ability to escalate problems to the appropriate decision-making parties. • Ensure continuous and consistent monitoring of KPIs and milestones for all measures identified in the Certified Fiscal Plan, so that the PMO has the ability to measure and report progress, identify roadblocks, and address them in a timely manner.
	Coordination gaps – Some measures require coordination across many functional groups, agencies, and stakeholders. There is a risk that a lack of coordination prevents the full implementation of measures in a timely manner, which would delay the Certified Fiscal Plan objectives of long-term financial and operational sustainability.	• Assign clear owners for each measure and establish an operating model for cross-department collaborations under the PMO. • Maintain fluid and continued communication with federal and local agencies, such as FEMA, EPA, PRDOH, PRDNER, PRHUD and RD, etc.
	Workforce availability – Personnel recruiting challenges due to the lack of resources and below market salary levels can impact PRASA's operations and the provision of adequate service.	• Gradually achieve appropriate headcount level, resulting from the Organizational Capacity Study • Implement adjustments to the compensation structure to allow for competitive salaries to reduce employee turnover and improve competitiveness of PRASA in the labor market.

8 Conclusion

This Certified Fiscal Plan reflects the financial and operational goals of PRASA in compliance with the requirements mandated by PROMESA to ensure fiscal responsibility and access to credit markets at reasonable rates, while prioritizing delivery of reliable, safe, and affordable water and wastewater services. In providing these essential services, the Authority must also prioritize compliance with applicable federal and local environmental and other regulations, safeguarding the health of the population, and protecting the environment.

As shown throughout this Certified Fiscal Plan, PRASA has made material progress in stabilizing its finances, while it recognizes there are still ample areas for improvement to address NRW, stabilize rising operational costs, and ensure proper CIP execution while properly maintaining Systems' infrastructure.

The inflow of federal funds for critical CIP projects and PRASA's improved financial condition are expected to allow PRASA to leverage a unique opportunity to ensure it achieves and maintains long-term fiscal responsibility, operational sustainability, and a reliable and resilient infrastructure.

Recent 2020 Census data confirm a sustained decline in population and hence a potentially lower revenue base for PRASA. Failure to implement the financial and operational measures outlined in this Certified Fiscal Plan would require PRASA to rely on more aggressive rate increases to compensate for a declining revenue base or reduce its contributions to the CIP to maintain balanced budgets and financial stability. For an entity that is reliant on capital-intensive works to maintain, and potentially improve, its performance, finally having the financial wherewithal for capital execution at its disposal, PRASA recognizes the historic opportunity to transform and upgrade its System.

To reinvigorate PRASA as a sustainable utility the full implementation of the comprehensive fiscal and operational measures outlined in this Certified Fiscal Plan is essential. Provided that all the Certified Fiscal Plan measures are implemented in an efficient and timely manner, PRASA will be able to achieve its objectives of long-term fiscal responsibility and operational sustainability, thus enabling the sustained provision of reliable, affordable, and safe water and wastewater services to the people of Puerto Rico.

Appendix

Consolidated Action Plan

Initiative	Action Item	Deadline	Owner
Rate Simplification & Adjustment	Public Hearing Process	31-Mar-22	Independent Examiner
Rate Simplification & Adjustment	Report from Independent Examiner	20-May-22	Independent Examiner
Rate Simplification & Adjustment	New rate structure approval	31-May-22	Governing Board
Competitive Compensation	Payment of $600 Premium Pay to UIA employees	30-Jun-22	Human Resources
PMO	Appoint permanent PMO Director to support and provide feedback on structural developments, if needed	30-Jun-22	VP of Strategic Planning
Physical Water Loss	Define 20 pressure zones to be optimized and monitored during FY2023	30-Jun-22	WRO
Competitive Compensation	Implementation of Revised Pay Scales for UIA, HIEPAAA and Managerial Employees	1-Jul-22	Human Resources
Competitive Compensation	Implementation of incentives to licensed Plant Operators	1-Jul-22	Human Resources
Competitive Compensation	Increase of incentives for electromechanics	1-Jul-22	Human Resources
Rate Simplification & Adjustment	New rate structure implementation	1-Jul-22	Customer Service
Asset Management	Procure a consultant to evaluate current Asset Management policies and status	31-Jul-22	Maintenance Director
Competitive Compensation	Payment of 2015 Christmas Bonus balance	31-Jul-22	Human Resources
Master Plan	Finalize selection and contracting with the preferred proponent to develop the Master Plan	31-Jul-22	Infrastructure
New Financing for CIP	Execute Financial Assistance Agreement for DWSRF funds - FY2018 Appropriation	31-Jul-22	Finance

Initiative	Action Item	Deadline	Owner
Physical Water Loss	Complete a plan to achieve the leak detection goal for FY2023	31-Jul-22	WRO
Metering Optimization	Proponent selection and contract for Pilot Phase	31-Aug-22	VP of Strategic Planning
PMO	Submit final PMO structure, processes, roles and responsibilities to the Oversight Board	31-Aug-22	VP of Strategic Planning
Physical Water Loss	Leak Detection and Pressure Management Annual Updates (FY2022)	31-Aug-22	WRO
Interagency Debt Settlements	Re-engage PREPA/LUMA in executing a final settlement on disputed balances	31-Aug-22	Executive President
Chemical Expense Stabilization	Complete procurement and selection of a consultant to evaluate current chemical management practices and provide recommendations	31-Aug-22	VP of Operations
New Financing for CIP	Execute Financial Assistance Agreement for new CWSRF funds - FY2021 Appropriation	30-Sep-22	Finance
Interagency Debt Settlements	Complete reconciliation process for disputed balances between PRASA and ERS	30-Sep-22	Executive President
Electricity Cost Reduction	Present a plan to develop additional renewable/alternate energy projects, including unsolicited proposals	31-Oct-22	Infrastructure
Physical Water Loss	FY2022 Water Balance Submission to FOMB	31-Oct-22	WRO
Interagency Debt Settlements	Execute a final settlement on disputed balances with ERS	15-Nov-22	Executive President
Metering Optimization	RFP for meter installation	31-Dec-22	VP of Strategic Planning
Asset Management	Assessment and report on current Asset Management status and areas of improvements on process, strategies and practices	31-Dec-22	Maintenance Director
Electricity Cost Reduction	Present deployment plan for energy projects	31-Dec-22	Infrastructure

Initiative	Action Item	Deadline	Owner
Organization Optimization	Update and implement a centralized headcount management tool	31-Dec-22	Human Resources
PMO	Implement findings on PMO structure assessment	31-Dec-22	VP of Strategic Planning
Chemical Expense Stabilization	Complete assessment and report to the Oversight Board on areas of opportunity with potential benefits	16-Jan-23	VP of Operations
Organization Optimization	Develop and submit to the Oversight Board the preliminary recruitment Plan	16-Jan-23	Human Resources
Organization Optimization	Submit to the Oversight Board the development and implementation plan for the overtime and productivity metrics	16-Jan-23	Human Resources
Competitive Compensation	Submit to the Oversight Board a performance review process to measure the efficacy of the proposed salary increases for FY2024	16-Jan-23	Human Resources
Electricity Cost Reduction	Based on list of viable proposals, as determined by PRASA, issue RFP for renewable/alternate energy projects	16-Jan-23	Infrastructure
Rate Simplification & Adjustment	Provide status to Oversight Board on the analysis to assess financial needs	16-Jan-23	VP of Strategic Planning
Organization Optimization	Evaluate absenteeism and overtime to identify areas of opportunities	15-Feb-23	Human Resources
Organization Optimization	Develop and implement overtime and productivity metrics	31-Mar-23	Human Resources
Chemical Expense Stabilization	Develop strategies for implementation as recommended in the consultant's report	31-Mar-23	VP of Operations
Metering Optimization	Pilot Deployment and evaluation	30-Jun-23	Technical Advisor

Initiative	Action Item	Deadline	Owner
Asset Management	Plans to address areas of improvement and implement the consultant's recommendations, subject to financial and other resources limitations	30-Jun-23	Maintenance Director
Physical Water Loss	Complete Master Meters calibration and installation goal for FY2023	30-Jun-23	WRO
Chemical Expense Stabilization	Implement recommendations, if applicable	3-Jul-23	VP of Operations
Competitive Compensation	Payment of 2016 Christmas Bonus balance	31-Jul-23	Human Resources
Physical Water Loss	Leak Detection and Pressure Management Annual Updates (FY2023)	31-Aug-23	WRO
Metering Optimization	Meter installation contract award	30-Sep-23	VP of Strategic Planning
Metering Optimization	Master Contract Execution with selected Proponent/s	30-Sep-23	VP of Strategic Planning
Master Plan	Complete the updated Master Plan	31-Dec-23	Infrastructure
Master Plan	Incorporate findings from Master Plan into the CIP	31-Mar-24	Infrastructure
New Financing for CIP	Execute Loan Agreements for RD funds	TBD	Finance