



Autoridad de
Energía Eléctrica

2023 Certified Fiscal Plan for the Puerto Rico Electric Power Authority

As certified by the Financial Oversight and Management
Board for Puerto Rico on June 23, 2023



Disclaimer

The Financial Oversight and Management Board for Puerto Rico (the “FOMB,” or “Oversight Board”) has formulated this Fiscal Plan based on, among other things, information obtained from the Puerto Rico Fiscal Agency and Financial Advisory Authority (“AAFAF”), Puerto Rico Electric Power Authority (“PREPA”), the Government of Puerto Rico, its instrumentalities and agencies (collectively, the “Government”).

This Fiscal Plan is directed to the Government and Legislature of Puerto Rico based on underlying data obtained from the Government.

This 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.

AAFAF, PREPA, the Government, the Oversight Board, and each of their respective officers, directors, employees, agents, attorneys, advisors, members, partners or affiliates (collectively, the “Parties”) make no representation or warranty, express or implied, to any third party with respect to the information contained herein and all Parties expressly disclaim any such representations or warranties. The Government relied on preliminary information and unaudited financials for 2022, as provided to the Oversight Board. As such, the Parties have made certain assumptions that may materially change once those financial statements are fully audited.

The Parties do not owe or accept any duty or responsibility to any reader or recipient of this document, whether in contract or tort, and shall not be liable for or in respect of any loss, damage (including without limitation consequential damages or lost profits) or expense of whatsoever nature of such third party that may be caused by, or alleged to be caused by, the use of this document or that is otherwise consequent upon the gaining of access to this document by such third party.

This Fiscal Plan may be amended from time to time, as appropriate at the sole discretion of the Oversight Board. This 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 Fiscal Plan that the Oversight Board determines warrants a revision of this Fiscal Plan, the Oversight Board will so revise it.

For the avoidance of doubt, the Oversight Board does not consider and has not considered anything in this Fiscal Plan as a “recommendation” pursuant to PROMESA Section 205(a). Nevertheless, to the extent that anything in this Fiscal Plan is ever deemed by the Governor or Legislature or determined by a court having subject matter jurisdiction to be a “recommendation” pursuant to Section 205(a), the Oversight Board hereby adopts it in the 2023 Fiscal Plan pursuant to PROMESA Section 201(b).

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 (AICPA) or any other organization. Accordingly, the Parties do not express an opinion or any other form of assurance on the financial statements or any financial or other information or the internal controls of the Government and the information contained herein.

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. The economic and financial condition of the

Government and its instrumentalities are affected by various legal, financial, social, public health, economic, environmental, governmental, and political factors. These factors are 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 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 the COVID-19 pandemic on the health and well-being of the people of Puerto Rico;
- The impact of the Russian invasion of Ukraine and resulting geopolitical risks on, among other things, costs associated with providing electric services;
- The short-term economic effects of COVID-19 on the global economy and the economies of the United States and Puerto Rico as they relate to Puerto Rico's tax revenue and budget;
- The longer-term economic ramifications of behavioral changes caused by COVID-19 (i.e., reduced travel, increased work from home, reduced activity in large gathering places, etc.);
- The amount of federal government aid provided to U.S. states and territories (including Puerto Rico), as well as the efficacy and speed of disbursement of such aid;
- The need to shift resources to create a more resilient structure to prevent or mitigate future pandemics;
- Any future actions taken or not taken by the United States government related to Medicaid or the Affordable Care Act;
- The amount and timing of receipt of any distributions from the Federal Emergency Management Agency (FEMA), U.S. Department of Housing and Urban Development (HUD)'s Community Development Block Grant-Disaster Recovery (CDBG-DR) Program and private insurance companies to repair damage caused by Hurricanes Irma, Maria, Fiona and the major earthquakes that occurred in January 2020;
- The amount and timing of receipt of any additional amounts appropriated by the United States government to address the funding gap described herein;
- The timeline for completion of the work being done by PREPA to repair PREPA's electric system and infrastructure and the impact of any future developments or issues related to the reconstruction and modernization of PREPA's T&D electric system and infrastructure by LUMA and the legacy generation O&M procurement process on Puerto Rico's economic growth;
- The impact of outmigration and declining population; and
- The timing and impact of the resolution of PREPA and Puerto Rico's Title III cases and related litigation.

Because of the uncertainty and unpredictability of these factors, their impact cannot be 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 an express or implied commitment of facts or future events; provided, however, that, the Government is required to implement the measures in this Fiscal Plan and the Oversight Board reserves all its rights to compel compliance. Nothing in this document shall be considered 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 capitalized terms that are not defined, and you should refer questions to AAFAF (fiscalplanforpuertorico@aafaf.pr.gov) or the Oversight Board (comments@promesa.gov) in the event clarification is required.

The PREPA Certified Fiscal Plan incorporates the macroeconomic and demographic projections developed for and presented in the 2023 Certified Fiscal Plan for Puerto Rico as certified by the Oversight Board on April 3, 2023, in order to comply with Section 201 of PROMESA. Incorporating such projections does not imply a representation by PREPA of the validity or reasonableness of the underlying assumptions or results.

List of Acronyms and Key Terms

A&E	Architectural & Engineering
A/C	Air Conditioning
AAFAF	Autoridad de Asesoría Financiera y Agencia Fiscal de Puerto Rico (Puerto Rico Fiscal Agency and Financial Advisory Authority)
Acción Group or Acción	Acción Group, LLC
ACD	Automated Call Distribution
Act 120-2018	Puerto Rico Electric Power System Transformation Act
Act 17-2019	Puerto Rico Energy Public Policy Act
Act 211-2018	Act for Implementation of the Puerto Rico Public Service Regulatory Board Reorganization
Act 57-2014	Puerto Rico Energy Transformation and RELIEF Act
Act No. 83	PREPA's Enabling Act
ADC	Actuarially Determined Contribution
ADMS	Advanced Distribution Management System
AES	AES Puerto Rico, parent company AES Corporation., an Independent Power Producer
AG	Aguirre Generating Unit
AICPA	American Institute of Certified Public Accountants
AMI	Advanced Metering Infrastructure
AP	Accounts Payable
APPA	American Public Power Association
Approved IRP	Action Plan and Preferred Integrated Resource Plan
AR	Accounts Receivable
ASG Auction Board	Auction Services Group Auction Board
BBA	Bipartisan Budget Act of 2018
Bunker C Fuel	Fuel oil used by marine vessels
CAA	Clean Air Act
CAIDI	Customer Average Interruption Duration Index
CARILEC	Caribbean Electric Utility Services Corporation
CBDG-MIT	Community Development Block Grant Disaster Recovery - Mitigation
CDBG	Community Development Block Grant
CDBG-DR	Community Development Block Grant Disaster Recovery
CEMIN	Customers Experiencing Multiple Interruptions
CHP	Combined Heat and Power
CILT	Contribution in Lieu of Taxes
CO ₂	Carbon Dioxide
COLA	Cost-of-Living Adjustment
Commencement	The date at which LUMA started operations of the T&D system

Commonwealth	Commonwealth of Puerto Rico
Confirmation Hearing	Hearing to consider the confirmation of the Plan for PREPA's exit of Title III
COR3	Central Office of Recovery, Reconstruction, and Resiliency
COVID-19	Coronavirus Disease 2019
CS	Costa Sur Generating Unit
CSR	Customer Service Representatives
CTPR	Consolidated Telecom of Puerto Rico, LLC
DART	Days Away Restricted or Transferred
DER	Distributed Energy Resource
DG	Distributed Generation
DHS	Department of Homeland Security
Diesel	Light Distillate No. 2 Light Oil
DNER	Department of Natural and Environmental Resources of Puerto Rico
DOE	Department of Energy
DR	Demand Response
DSA	Debt Sustainability Analysis
DSO	Days Sales Outstanding
EAF	Equivalent Availability Factor
EE	Energy Efficiency
EI	Edison Electric Institute
EHP	Environmental and Historical Preservation
EIA	[United States] Energy Information Administration
EM&V	Evaluation, Measurement and Verification
EMS	Energy Management System
EOC	Emergency Operation Centers
EPA	Environmental Protection Agency
EPM	Enterprise Project Management
ERP	Emergency Response Plan
ERS	Employee Retirement System
ETR	Estimated Time of Restoration
EV	Electric Vehicles
FAAST	FEMA Advanced Award Strategy Initiative
FCR	First Call Resolution
FEMA	Federal Emergency Management Agency
FEMA 404 HMGP	Federal Emergency Management Agency Hazard Mitigation Program
FEMA PA 406	Federal Emergency Management Agency Public Assistance Program that funds mitigation measures for permanent work

FEMA PA 428	Federal Emergency Management Agency Public Assistance Program authorizing alternative procedures for Public Assistance Program under Sections 403(a)(3)(A), 406, 407 and 502(a)(5) of the Stafford Act
FERC	Federal Energy Regulatory Commission
FFS	Findings of Failure to Submit
Final Order	PREB's Final Resolution and Order
FOMB	Financial Oversight and Management Board for Puerto Rico
FOMC	Federal Open Market Committee
Front-End Transition	Period of time from and including the Effective Date of T&D OMA to and excluding Service Commencement Date
FY	Fiscal Year
GASB	Governmental Accounting Standards Board
GDB	Government Development Bank for Puerto Rico
GDP	Gross Domestic Product
GenCo	Comprises existing PREPA-owned generation resources; to be operated and maintained by one or more private operators
Genera or Genera PR	Genera PR LLC
Generation OMA	Generation Operations and Maintenance Agreement
GNP	Gross National Product
GridCo	Comprises transmission and distribution, customer service, and administrative functions of PREPA; will be operated by LUMA
GW	Gigawatts
GWh	Gigawatt-hour
HFO	Heavy Fuel Oil (Bunker fuel)
Hg	Mercury
HMGP	Hazard Mitigation Grant Program
HoldCo	PREPA successor to be responsible for entity that will be responsible for certain non-operational functions
HR	Human Resources
HUB	HUB Advanced Networks, LLC (formerly PREPA Networks)
HUD	Department of Housing and Urban Development - Community Development Block Grant
HUD CDBG	[United States Department of] Housing and Urban Development Community Development Block Grant
HydroCo	Hydropower Assets to be contributed by PREPA to HydroCo pursuant to a capital contribution agreement
I&P	Incentives and Penalties Report
IEEE	Institute of Electrical and Electronics Engineers
Initial IRP	PREPA's initial proposed integrated resource plan for PREB's approval
IoT	Internet of Things

IPP	Independent Power Producer
IRA	Inflation Reduction Act of 2022
IRP	Integrated Resource Plan
IT	Information Technology
IT OT	Information Technology and Operational Technology
IVR	Interactive Voice Response
kV	Kilovolts
kWh	kilowatt-hour
LED	Light-Emitting Diode
LEOC	LUMA Emergency Operations Center
LGA	Legacy Generating Assets
LNG	Liquefied Natural Gas
LOI	Letter of Intent
LOLE	Loss of Load Expectation
LUMA	LUMA Energy, LLC & LUMA Energy ServCo, LLC
MAIFI	Momentary Average Interruption Frequency Index
MATS	Mercury & Air Toxics Standards
MIT	Mitigation
MMBTU	Million British Thermal Units
MW	Megawatts
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standard
NEM	Net Energy Metering
NFE	New Fortress Energy Inc
NME	Necessary Maintenance Expenses
Novum	Novum Energy Trading Inc.
NOx	Nitrogen Oxides
NTE	Not to Exceed
NYSE	New York Stock Exchange
O&M	Operations and Maintenance
OIG	Office of Inspector General (Department of Homeland Security)
OIPC	Oficina Independiente de Protección al Consumidor
OMA	Operations and Maintenance Agreement
OMS	Outage Management System
OPEB	Other Post-Employment Benefits
OSHA	Occupational Safety and Health Administration
OT	Operational Technology
Oversight Board	Financial Oversight and Management Board for Puerto Rico
P3	Public-Private Partnership

P3A	Puerto Rico Public-Private Partnerships Authority
PA	Public Assistance, FEMA program
PGHOA	Puerto Rico PREPA-GenCo-HydroCo Operating Agreement
Plan or Plan of Adjustment	PREPA Plan of Adjustment
PM	Particulate Matter, also called particle pollution
PMO	Project Management Office
POU	Publicly-owned utility
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
PPOA	Power Purchase and Operating Agreement
PR PSSTF	Puerto Rico Power System Stabilization Task Force
PRDOH	Puerto Rico Department of Housing
PRDOH CDBG-DR	Puerto Rico Department of Housing Community Development Block Grant - Disaster Recovery
PREB IC	Puerto Rico Energy Bureau Independent Coordinator
PREB or Energy Bureau	Puerto Rico Energy Bureau
PREMB	Puerto Rico Emergency Management Bureau
PREPA	Puerto Rico Electric Power Authority
PREPA ERS	Puerto Rico Electric Power Authority Employees' Retirement System
PRITS	Puerto Rico Innovation and Technologies Systems
PRM	Planning Reserve Margin
PROMESA	Puerto Rico Oversight, Management, and Economic Stability Act (2016)
PropertyCo	Comprises existing PREPA-owned assets that are not directly related to generation, T&D, or irrigation operations
Proposed IRP	PREPA's refiling of its proposed integrated resource plan after making revisions required by PREB
PS	Palo Seco Generating Unit
PSRB	Public Service Regulatory Board
Puma	Puma Energy
PV	Photovoltaics
PW	Project Worksheet
RCAP	Regulation for the Control of Atmospheric Pollution
RCAP Amendments	Amendments to the Regulation for the Control of Atmospheric Pollution
RFP	Request for Proposal
RFQ	Request for Quotation
RFR	Request for Reimbursement
Riego	PREPA's irrigation assets

RPS	Renewable Portfolio Standard
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SCADA	Supervisory Control and Data Acquisition
SIP	State Implementation Plan
SJ	San Juan Generating Unit
SJ CC	San Juan Combined Cycle Generating Unit
SO ₂	Sulfur Dioxide
SOQs	Statements of Qualifications
SOW	Scope of Work
SRP	LUMA System Remediation Plan
T&D	Transmission and Distribution
T&D OMA	Transmission and Distribution Operations and Maintenance Agreement
T&D System	Transmission and Distribution System
TRC	Total Resource Cost
TWh	Terawatt-hour
U.S. Corp of Engineers	United States Army Corps of Engineers
U.S. HUD	United States Department of Housing and Urban Development
UAAL	Unfunded Actuarial Accrued Liability
USD	United States Dollar
USGS	United States Geological Survey
UTIER	Puerto Rico Electrical Industry and Irrigation Workers Union [by its Spanish acronym]
VPP	Virtual Power Plants
VTP	Voluntary Transition Program
Water Administration	PREPA's hydroelectric generating assets
WTI	West Texas Intermediate
YTD	Year-To-Date

Table of Contents

Disclaimer	2
List of Acronyms and Key Terms	5
Table of Contents	11
List of Exhibits	15
List of Tables	17
1 Executive Summary	19
2 Historical Context and Current Challenges	23
2.1 <i>Key Facts about PREPA</i>	23
2.1.1 HoldCo	25
2.1.2 Generation Assets.....	26
2.1.3 Hydroelectric and Irrigation	27
2.1.4 T&D	29
2.2 <i>Overview of PREPA’s Risks & Challenges</i>	30
2.2.1 Geography	30
2.2.2 Natural Disasters and Climate	30
2.2.3 Socioeconomic Challenges and Risks	34
2.2.4 Inflation Reduction Act of 2022.....	36
2.2.5 Political Challenges	36
2.2.6 Generation Fleet and Grid Modernization.....	37
2.2.7 Unsustainable Debt and Pension Obligations	38
2.2.8 Changing Load Characteristics	38
2.3 <i>Operational Context</i>	38
2.3.1 Resource Adequacy	38
2.3.2 Generation Operational Context.....	40
2.3.3 T&D Operational Context	41
2.4 <i>Customer Demographics and Affordability</i>	42
2.5 <i>Governance Structure</i>	46
2.6 <i>Overview of Historical Financial Performance</i>	46
3 Transformation	49
3.1 <i>Introduction and Context of Puerto Rico’s Energy Sector Transformation</i>	49
3.2 <i>Regulatory & Title III Exit Milestones</i>	52
3.3 <i>Operational Measures</i>	52
3.3.1 <i>Overview and Key Accomplishments</i>	53

3.3.2	Renewable Procurement	53
3.3.3	Pension Reform.....	55
3.3.4	PREPA Reorganization and Legacy Generation P3	55
3.3.5	HoldCo & HydroCo Rightsizing (future size and structure).....	57
3.3.6	HydroCo Federal Funding Maximization	58
3.3.7	Study on Net Metering and Distributed Generation.....	58
3.4	<i>Transition to Private Generation Operator</i>	60
3.4.1	Objectives of the Transition to Private Operators	61
3.4.2	Future Structure of the Energy System and PREPA, As Well As Roles and Responsibilities	62
3.5	<i>Generation</i>	63
3.5.1	Transitioning the Legacy Generation Assets to Genera.....	63
3.5.2	Overview of the Generation OMA	64
3.5.3	Genera Objectives and Performance Management.....	70
3.6	<i>Implementation of Puerto Rico’s Energy Sector Transformation</i>	72
4	Legal & Regulatory Structure and Resource Planning	74
4.1	<i>Legal and Regulatory Structure</i>	74
4.1.1	Overview of Regulatory Structure and Key Legislation	74
4.1.2	Key Regulatory Issues	75
4.1.3	Overview of CILT Reform	79
4.1.4	Federal Environmental Law Requirements & Compliance	80
4.2	<i>Resource Planning and Resiliency</i>	80
4.2.1	PREB Modified Action Plan and Modified Preferred Resource Plan	81
5	Federal Funding and Capital Plan	87
5.1	<i>Federal Funding</i>	87
5.1.1	Federal Funding Overview	87
5.1.2	FEMA Funding for Permanent Work.....	88
5.1.3	FEMA Funding for Emergency Work	90
5.1.4	Federal Funding Local Cost Share Requirements	91
5.2	<i>Capital Plan</i>	91
5.2.1	GenCo Capital Plan	91
5.2.2	GridCo Capital Plan.....	95
5.2.3	HydroCo Capital Plan.....	100
5.2.4	HoldCo Capital Plan.....	100
5.2.5	Long-Term Capital Plan from FY2027 Onwards	100
6	Performance Metrics	102
6.1	<i>Introduction</i>	102
6.2	<i>Genera Performance Metrics</i>	102

6.2.1	GenCo Performance Metrics	102
6.2.2	Generation OMA Performance Metrics	104
6.3	<i>LUMA Performance Metrics</i>	107
6.3.1	T&D OMA Normal Operation Performance Metrics	108
6.3.2	T&D OMA Major Outage Event Performance Metrics	110
6.3.3	T&D OMA Incentive Fee Calculation Approach	112
7	Summary of Financial Projections	113
7.1	<i>Introduction to Baseline Rate and Revenue Requirement</i>	113
7.2	<i>Overview of Historic Revenue Requirements and Associated Baseline Rates</i>	114
7.3	<i>Revenue Projections and Load Forecasting</i>	117
7.3.1	Load Forecast	117
7.3.2	Basic Revenue Forecast.....	118
7.3.3	Baseline Rate Projections.....	119
7.3.4	Macroeconomic Projections.....	121
7.3.5	Modifiers to the Base Load Projection.....	122
7.4	<i>Sensitivities</i>	126
7.4.1	Energy Efficiency Program (EE)	127
7.5	<i>Expenses</i>	129
7.5.1	Overview of Expenses by Entity.....	132
7.5.2	GenCo Expense Projections	133
7.5.3	GridCo Expense Projections.....	134
7.5.4	HydroCo Expense Projections	135
7.5.5	HoldCo Expense Projections.....	135
7.5.6	Key Expense Assumptions	136
8	Debt Service	139
8.1	<i>Overview of PREPA Debt</i>	139
8.2	<i>Implications of Unrestructured Debt on Projected Rates</i>	140
8.3	<i>Debt Sustainability Analysis</i>	141
9	Pension Reform	147
9.1	<i>Historical Background and Organizational Structure</i>	147
9.2	<i>Pension Benefits Background</i>	148
9.2.1	Other Post-Employment Benefits (OPEB).....	149
9.3	<i>Liquidity Concerns</i>	149
9.4	<i>Structural Pension Reform</i>	151
9.4.1	Summary of Pension Reform	151
9.4.2	Establishment of PayGo Trust	151
10	Post-Certification Reporting	153

<i>10.1 Non-Operational Reports</i>	154
<i>10.2 T&D-Related Operational Measures</i>	156
<i>10.3 Generation-Related Operational Metrics and Reports</i>	156
<i>10.4 PREPA HoldCo and HydroCo Measures and Reports</i>	157
11 Conclusion	158

List of Exhibits

Exhibit 1: Statistics on the 10 largest publicly owned utilities in the United States, including PREPA, FY2021	23
Exhibit 2: PREPA reliability metrics compared to IEEE median, 2021 calendar year	24
Exhibit 3: Historical reliability metrics, PREPA vs. US median, 2017-2021.....	24
Exhibit 4: PREPA Reorganization and Transformation.....	25
Exhibit 5: HydroCo Assets	28
Exhibit 6: Unaudited historical revenues for Riego, FY2015 through FY2023 Projected	28
Exhibit 7: PREPA Transmission Loops	29
Exhibit 8: Minimum and Maximum Demand vs. Available Capacity (MW) During Hurricane Fiona.....	32
Exhibit 9: Fuel mix during Fiscal and Calendar Year 2022	32
Exhibit 10: Impact of Climate Effects on PREPA	33
Exhibit 11: Residential monthly consumption, July of FY2017 through February of FY2023.....	35
Exhibit 12: Annual Puerto Rico price changes	35
Exhibit 13: PREPA Generation System Efficiency and Performance Metrics.....	41
Exhibit 14: FY2022 PREPA Customer Count and Consumption by Municipality.....	43
Exhibit 15: Puerto Rico’s estimated energy electricity share of wallet compared to peer regions.....	44
Exhibit 16: Historical share of household income spent on electricity in Puerto Rico, CY 2018-2021 and CY 2022 (estimated).....	45
Exhibit 17: Energy Accredited and Exported from Customers in Net Metering (GWh)	60
Exhibit 18: Energy Sector Transformation Current and Future State	62
Exhibit 19: Current PREPA Structure	63
Exhibit 20: Completed Milestones for Power Sector Reform	73
Exhibit 21: Pending Milestones for Power Sector Reform	73
Exhibit 22: PREB Regulatory Structure	75
Exhibit 23: Overall Rate Composition, FY2024 (based on nominal rates).....	79
Exhibit 24: PREB Guidance for Procurement of Renewable Energy Generation and Battery Storage Capacity.....	85
Exhibit 25: LUMA Improvement Portfolios – Total Capital Expenditures.....	96
Exhibit 26: LUMA’s Proposed Recovery and Transformation Roadmap	98
Exhibit 27: FY2023 YTD (March) Gross Revenues, Forecast vs. Actuals (USD Million)	114
Exhibit 28: FY2023 YTD (March) Basic Rate Revenues, Forecast vs. Actuals, (USD Million)	115
Exhibit 29: FY2023 YTD Revenues Vs. Budget Variance by Customer Class.....	115
Exhibit 30: FY2023 Consumption, Gap to Forecast (GWh, %).....	116
Exhibit 31: Historical Billing Determinants (GWH, MW).....	117
Exhibit 32: Net Load Forecast (TWh), FY2022 Actuals and FY2024-2050 Forecast.....	117

Exhibit 33: Basic Revenue Forecast (USD Billion, in nominal dollars)	118
Exhibit 34: Revenue Requirement Rates in Real Terms (2022 USD) including F&PP, Opex, CILT, Subsidies & EE Riders, and Unrestructured Debt and Restructured PayGo Pension Costs (¢/kWh) vs. Net Load (GWh).....	120
Exhibit 35: Commonwealth of Puerto Rico Population Projections	122
Exhibit 36: Commonwealth of Puerto Rico GNP Projections	122
Exhibit 37: Cumulative Energy Efficiency Savings by Program (GWh).....	123
Exhibit 38: Current Energy Efficiency vs. Act 17 targets.....	124
Exhibit 39: 30-Year Distributed Generation Forecast by Customer Class (TWh)	125
Exhibit 40: Net load savings from implementation of energy efficiency initiatives (TWh)..	128
Exhibit 41: Alternative load model and base case comparison (TWh).....	129
Exhibit 42: Consolidated Forecast Expenses by Category, Excluding Debt Service Expenses (USD million).....	130
Exhibit 43: Consolidated Forecast Expenses Percentage by Category, Excluding Debt Service Expenses (%)	130
Exhibit 44: Consolidated Forecast Expenses by Entity, Excluding Debt Service Expenses (USD Million).....	133
Exhibit 45: Five-year Expense Forecast for GenCo (USD Million)	134
Exhibit 46: Five-year Expense Forecast for GridCo (USD Million)	134
Exhibit 47: Five-Year Expense Forecast for HydroCo (USD Million).....	135
Exhibit 48: Five-year Expense Forecast for HoldCo (USD Million)	136
Exhibit 49: Rate with Unrestructured Debt Added (in real 2022 terms, ¢/kWh)	141
Exhibit 50: Employer Contributions	149
Exhibit 51: Plan Asset Value and Funded Ratio	150

List of Tables

Table 1: PREPA FY2014 to FY2022 Statement of Net Position	47
Table 2: Transformation Objectives	49
Table 3: Key Initiatives by Transformation Category.....	51
Table 4: Regulatory & Title III Exit Milestones.....	52
Table 5: Operational Measures and Milestones	52
Table 6: Renewable procurement – revised potential timeline	55
Table 7: PREPA Reorganization RoadMap.....	56
Table 8: HoldCo & HydroCo Rightsizing.....	57
Table 9: HydroCo Federal Funding Maximization.....	58
Table 10: Study on Net Metering and Distributed Generation	59
Table 11: Generation OMA Initiatives and Milestones	60
Table 12: Genera Mobilization Period Deliverables	66
Table 13: Genera’s Improvement Programs	70
Table 14: Total Federal Funding Obligated by Funding Type	88
Table 15: FEMA Funding Obligated for Permanent Work by Program and Disaster	89
Table 16: FEMA Funding Approved for Permanent Work by Program and Disaster	89
Table 17: FEMA Funding Obligated for Permanent Work Related to Hurricane Maria by Program and Asset Category.....	90
Table 18: FEMA Funding Approved for Permanent Work Related to Hurricane Maria by Program and Asset Category	90
Table 19: FEMA Funding Received for Emergency Work by Disaster	90
Table 20: Revised & Updated Maintenance Schedule (As of May 2023).....	93
Table 21: Legacy Generation Asset Projects Approved by PREB	93
Table 22: Genera Prioritization Schedule.....	94
Table 23: Overview of GenCo Performance Metrics.....	103
Table 24: Generation Incentives and Penalties Metrics.....	105
Table 25: Details of Incentives and Penalties Metrics in the Generation OMA	105
Table 26: Genera Incentives and Penalties report.....	107
Table 27: Overview of T&D OMA Performance Metrics.....	108
Table 28: Overview of additional T&D OMA performance metrics requested by PREB	110
Table 29: Overview of T&D OMA Major Outage Event performance metrics	111
Table 30: Basic Revenues and Energy sales by Customer Class in FY2024.....	119
Table 31: Key Expense Assumptions	136
Table 32: Key Retirement Provisions	148
Table 33: Reporting Cadence.....	154
Table 34: Non-Operational Reports	155

Table 35: Reports on Reorganization Implementation, Holdco and Hydroco Operational Measures 157

1 Executive Summary

The 2023 Certified Fiscal Plan marks a monumental milestone and one of the final steps on the path towards the completion of the operational and financial reorganization of the Puerto Rico Electric Power Authority (PREPA) and the successful completion of the transformation of Puerto Rico's energy sector, with the upcoming target service commencement date of July 1st, 2023 for the private legacy generation operator, Genera. After such time, the transmission and distribution (T&D) (plus customer service) and legacy thermal generation operations will have been unbundled, leaving only a few elements of the transformation outstanding. The focus of this Fiscal Plan thus turns to completing the legal and financial aspects of the transformation and turning PREPA into an efficient entity that prioritizes energy system and service reliability and efficiency.

Puerto Rico's economic recovery depends on such a comprehensive transformation of its energy sector to deliver the safe, reliable, and affordable service that Puerto Rico's residents and businesses deserve. When fully implemented, these transformational initiatives will set Puerto Rico on a trajectory to achieve a safe, reliable, affordable, resilient, modern electric grid. The initiatives leverage regulated, private-sector expertise independent from political interference to improve the quality of life for its residents and to support long-term economic growth for the island.

During FY2023, PREPA and the Government made progress on several initiatives:

- Selected Genera as the successful bidder for the transition of the Legacy Generation Assets and executed the Puerto Rico Thermal Generation Facilities Operating and Maintenance Agreement (OMA) on January 24, 2023.
- Supported the transition of the Legacy Generation Assets Operations from PREPA, along with the Puerto Rico Public-Private Partnership Authority (P3A), to Genera.
- Assisted in enabling the participation of over 500 PREPA generation directorate employees in the Voluntary Transition Program and joining Genera.
- Obtained PREB approval of the GenCo, HydroCo and PropertyCo PREPA subsidiaries; along with the approval and execution of the PREPA-GenCo-HydroCo Operating Agreement (PGHOA).
- Approved a PREPA Governing Board Resolution authorizing the reorganization of the remaining PREPA legacy operation, reducing total headcount and budget footprint at HoldCo, PropertyCo and HydroCo.

As T&D System operator, LUMA made progress on the following areas:

- Repaired or replaced over 36,000 streetlights as part of our \$1 billion Community Streetlight Initiative
- Replaced over 4,200 broken and failing utility poles, including 1,150 distribution feeder pole changes after Hurricane Fiona
- Submitted 314 initial scopes of work to FEMA representing over \$7.1 billion in federally funded infrastructure work
- Constructed and energized four federally funded projects, including the substation project at Manatí Transmission Center
- Connected over 50,000 customers to rooftop solar, representing 300 MW

- Achieved average speed of answer of under five minutes (average for 19-month averages) since Commencement, compared to PREPA’s pre-Commencement average speed of answer of over seven minutes
- Provided over 140,000 hours of in-class and on-the-job training in FY2022
- Achieved 67% OSHA recordable injury rate improvement in FY2022

Despite these efforts and progress to date, much work remains to be done. These responsibilities are now shared with the T&D operator, LUMA, and Generation operator, Genera. It will take diligent implementation and coordination between LUMA, Genera, and PREPA to complete the comprehensive transformation of Puerto Rico’s energy system, which includes the privatization of T&D and generation operations, reaching public policy renewable energy targets, reducing outage frequency and duration, enabling rate affordability, improving service reliability and customer satisfaction, and ensuring system resiliency and preparedness against unforeseen events. It will also require the support and cooperation of the P3A and PREB and the growing stakeholder group, of multiple key initiatives, most importantly:

- **Improving T&D and generation operations:** Improving program management to ensure timely and on budget completion of key operational initiatives, including proactive maintenance programs.
- **Modernizing and reconstructing the transmission and distribution system:** Developing and timely executing a capital investment plan to modernize and strengthen the electrical grid.
- **Contracting new generation to meet Renewable Portfolio Standard (“RPS”) targets:** Implementing the PREB-approved IRP Modified Action Plan to modernize power generation resources and increase renewable energy generation through competitive procurement processes.
- **Effectively and efficiently deploying federal funding:** Optimizing the available federal funding and other associated obligated funding to enable the transformation of the generation portfolio and the T&D Systems.
- **Improving workforce and public safety:** Continuing health, safety and technical training for employees to develop a safe and competent workforce and to improve customer and public awareness of electrical hazards.
- **PREPA and P3A’s completion of the transition and onboarding of the new generation operator:** Ensuring an orderly transfer of the care, custody and control of the Legacy Generation Assets to Genera through the Generation Transition Period.
- **Restructuring legacy debt obligations:** Supporting ongoing efforts by FOMB and AAFAF to restructure PREPA’s existing, unsustainable debt load and regaining access to capital markets, without unduly affecting electricity rates and the burden on customers and the economy of Puerto Rico.
- **Pension reform:** Balancing the objectives of rate affordability with PREPA’s pension obligations to employees and retirees, PREPA must support FOMB and AAFAF in addressing the pensions in a plan of adjustment that ensures a sustainable reform.

Moreover, delays in the implementation of renewable energy projects and energy efficiency measures pose a serious risk to Puerto Rico’s ability to meet its renewable energy and energy efficiency aspirations. These delays also highlight the need for the Government, PREB, PREPA, LUMA, and Genera to take urgent actions to enable

and support the transition and transformation of the energy system. PREB and LUMA must also work towards updating both the existing Integrated Resource Plan to reflect the current pace of deployment, as well as updated macroeconomic conditions, and to ensure it serves as an appropriate roadmap for the actions and decisions that must be taken in the short- and medium-term. The failure to address the root causes of these delays, and to take the remedial actions needed to ensure a reliable energy service, may set Puerto Rico on a path to erasing the progress made over the last years, leaving the island's residents and businesses permanently at the mercy of an aging, unreliable, expensive, and inefficient energy system.

Puerto Rico's energy infrastructure lags national standards due to decades of operational and financial mismanagement. Delayed capital projects have kept the system vulnerable to disruption and increased rates. A historical lack of long-term planning has resulted in PREPA's system being technologically outdated, operationally inefficient, and heavily reliant on an unreliable, high-cost, volatile, and highly polluting oil-fired generation fleet. The dependence on outdated generation and low operational efficiency across the organization has resulted in high electricity rates and low service reliability. Despite the fact Puerto Rico's electricity service falls at the bottom of the fourth quartile of peer utilities for reliability, Puerto Rico's ratepayers spend a higher share of their income on electricity service than most U.S. ratepayers. The issues with PREPA's system are a result of long-term failures to invest in and maintain its grid. However, LUMA and Genera have brought professional and experienced services to the operation of PREPA's transformation, and distribution and generation systems and are expected to mitigate these problems. Major FEMA-funded investments in the grid have finally commenced during FY2023, but substantial work, resources, and time will need to be invested over the next several years to reach adequate service levels.

PREPA's prior operational shortcomings and inability to implement modest rate adjustments to cover its rising costs led to persistent operational deficits, the accumulation of significant legacy debt, and pension obligations. As of May 2017, PREPA held approximately \$9 billion in financial debt obligations, the equivalent of \$6,000 per customer. Furthermore, \$3.6 billion of PREPA's \$4.3 billion pension liability was unfunded, the equivalent of \$2,400 per customer.¹ In other words, for every \$1.00 owed to existing and future retirees, PREPA's pension plan had less than \$.20 available to pay pensioners. These liabilities led PREPA to seek a restructuring of its legacy obligations through a voluntary petition under Title III of the Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA) in 2017.

PREPA and the people of Puerto Rico have also faced compounding negative effects from external factors. In September 2017, Hurricanes Irma and Maria devastated the electric grid. In January 2020, key PREPA generation assets were damaged by a 6.4 magnitude earthquake. Shortly following that disaster, the COVID-19 pandemic began which further delayed much needed system maintenance and improvements. The Russian invasion into Ukraine in February 2022 and continuing escalation of the war has affected the global market for oil and makes fuel prices incredibly volatile. Last, in September 2022 Hurricane Fiona hit Puerto Rico and caused severe and costly additional damage to the electric grid and generation units which further increased PREPA customers' Loss of Load Expectation (LOLE) substantially.

Over the next 30 years, the overall load in Puerto Rico's electricity system is forecasted to decline because of declining population and diminishing inflation-

¹ Based on independent actuarial study conducted performed by Aon Hewitt, valuation results as of June 30, 2020

adjusted economic activity. The rate of decline is further accelerated as customers leverage energy efficiency (EE) and distributed generation (DG) to reduce their reliance on the grid. In this context of forecasted declining load, implementing efficiencies will be required to limit the need for rate increases to cover fixed costs of the system.

To successfully execute the 2023 Certified Fiscal Plan and ensure continued progress towards a transformed energy sector, PREPA – together with LUMA and Genera– must effectively manage several contingencies and risks. The effects of the COVID-19 pandemic, fuel-price volatility because of the war in Ukraine, and Hurricane Fiona are expected to taper during the coming fiscal year. LUMA is expected to execute large capital projects funded by FEMA and other federal agencies. Likewise, PREPA must ensure an efficient and orderly transition of the care, custody, and control of the Legacy Generation Assets to Genera. Other contingencies include successfully completing debt restructuring and working to ensure timely deployment and reimbursement of federal funding for emergency and permanent work. PREPA, in its now reduced form, will continue to collaborate with key government counterparties including the Oversight Board, the P3A, AAFAF, PREB, and Central Office of Recovery, Reconstruction, and Resiliency (COR3) to collectively ensure successful transformation.

If successfully implemented, the 2023 Certified Fiscal Plan for PREPA will accelerate the transformation of the Island’s energy sector into a safe, resilient, and modern electric grid that, provides reliable service to customers at predictable and affordable rates and enables long-term economic and job growth. Over the next years, this transformation will result in access to the safe, reliable, clean, and efficient energy system the people of Puerto Rico deserve.

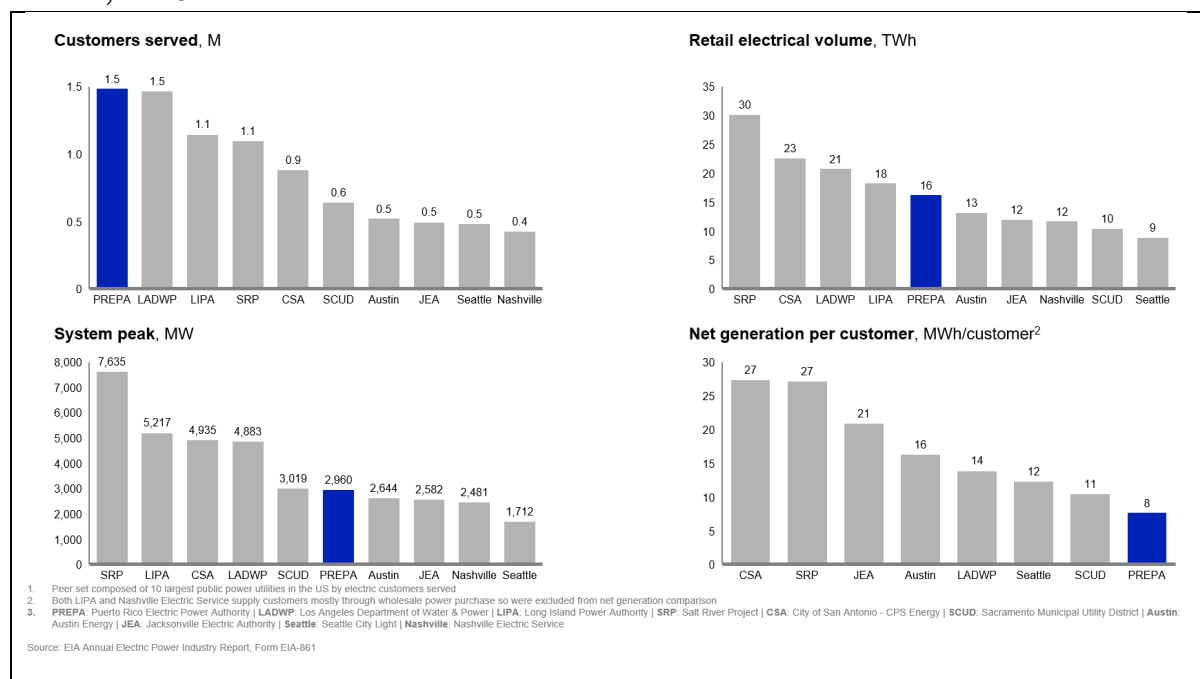
2 Historical Context and Current Challenges

2.1 Key Facts about PREPA

PREPA, known as the Puerto Rico Water Resources Authority until 1979, was created through Act No. 83 on May 2, 1941 (PREPA’s Enabling Act). Throughout its history, PREPA has served as the sole franchise utility electricity provider in Puerto Rico. Until 2014, and to ensure accountability on long-term planning and rate setting, PREPA was self-regulated and operated without an independent regulatory body. Today, PREPA works alongside LUMA (the power company responsible for transmission and distribution infrastructure) and Genera (the future operator of PREPA’s legacy thermoelectric generation assets) to serve approximately 1.5 million customers. For FY2022 the utility generated approximately \$4.1 billion in revenues from 16.3 terawatt-hours (TWh) of electricity sales.²

PREPA is the largest publicly owned power utility (POU) in the US by number of customers served. However, it has relatively low net generation on a per-customer basis compared to other POUs (Exhibit 1).³ PREPA currently produces an annual net generation of 8 MWh/customer, meaning PREPA delivers significantly less power per customer than comparable mainland utilities.

Exhibit 1: Statistics on the 10 largest publicly owned utilities in the United States, including PREPA, FY2021⁴



Puerto Ricans continue to experience lower quality service than what is available in other mainland US jurisdictions. In 2021 PREPA’s customers experienced 7.8 service interruptions, approximately seven times as many service interruptions as customers of the median US

² Monthly Report to PREPA’s Governing Board, June 2022 (interim unaudited financial results).
³ Based on publicly available data sourced from either EIA 412 or annual reports and the EIA 861 filings for FY2021. Utilities surveyed include Los Angeles Department of Water and Power; Long Island Power Authority; Salt River Project; City Public Service of San Antonio, Sacramento Municipal Utility District; Austin Energy; Jacksonville Electric Authority; Seattle City Light; Memphis Light, Gas and Water; Omaha Public Power District. Net Generation includes energy purchases as well as generated energy on a net basis.
⁴ EIA Annual Electric Power Industry Report, Form EIA-961

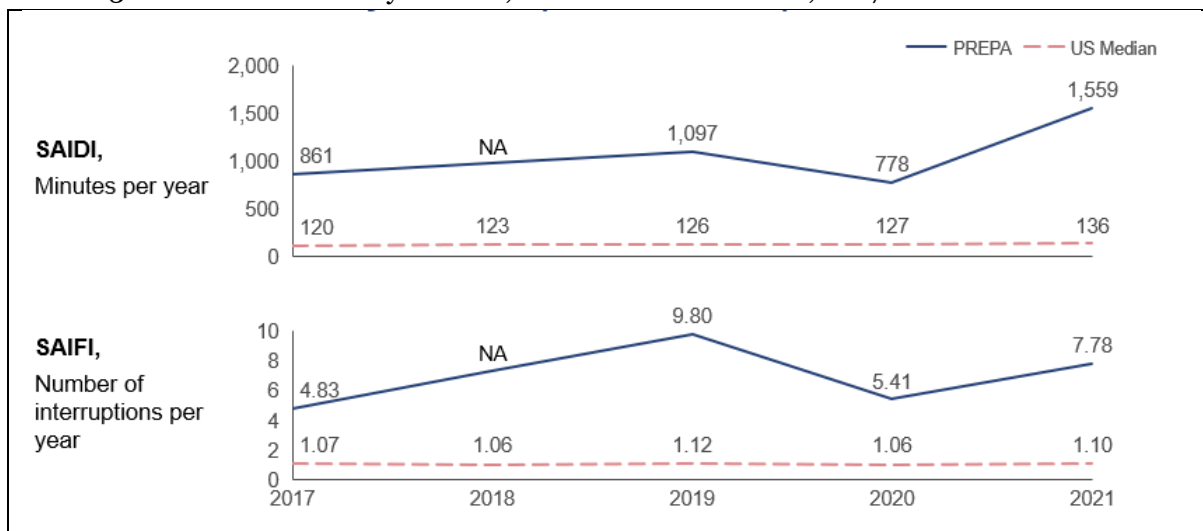
utility, based on IEEE benchmarks. Similarly, the average duration of power outages was approximately 11.5 times longer for PREPA customers than for the median mainland customer in 2021 (Exhibit 2). While SAIDI and SAIFI metrics were relatively stable for the median customer in the mainland US from 2017-2021, the frequency and duration of service interruptions remained high and even increased for PREPA customers over that period (Exhibit 3). Data for 2022 was not yet available for mainland utilities at the time of certification of this fiscal plan. However, PREPA data for FY2022 indicates the 12-month rolling average frequency of interruption events (as captured by SAIFI) fell from 8.0 to 7.6 , while the average interruption duration (SAIDI) increased from 1,340 to 1,649 minutes over the same period. This highlights the ongoing challenge of operating and maintaining the Puerto Rican energy grid to ensure high levels of service.⁵

Many of the challenges facing PREPA today have deep roots. For decades, PREPA has served as the sole electric power utility in Puerto Rico, and has operated a complex energy system in the context of several ongoing challenges, which will be discussed in subsequent sections.

Exhibit 2: PREPA reliability metrics compared to IEEE median, 2021 calendar year⁶

Reliability metric	PREPA CY 2021	IEEE US median, CY 2021	Gap, PREPA vs. US median
System Average Interruption Duration Index (SAIDI)¹ <i>Minutes per year</i>	1,559	136	11.5x
System Average Interruption Frequency Index (SAIFI)¹ <i>Number of interruptions per year</i>	7.8	1.1	7.1x

Exhibit 3: Historical reliability metrics, PREPA vs. US median, 2017-2021⁷



⁵ Puerto Rico Energy Bureau, 12-Month Metrics Summary, June 2021-May 2022: <https://energia.pr.gov/wp-content/uploads/sites/7/2022/08/20220818-MI20190007-Resolution-and-Order.pdf>

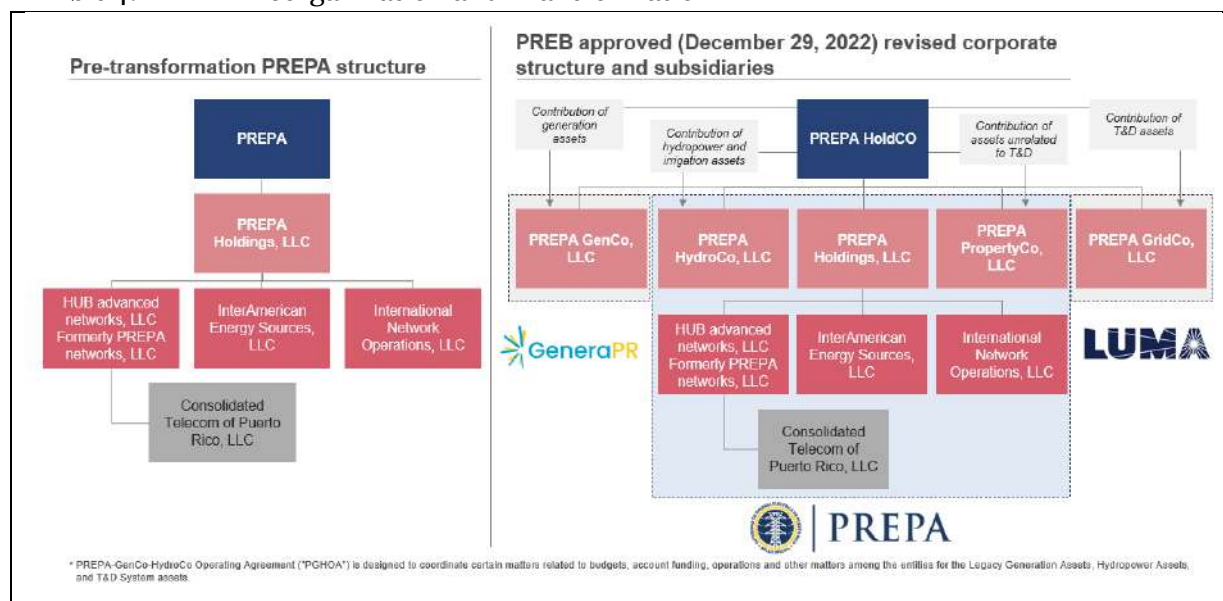
⁶ SAIDI and SAIFI exclude MED (major event delays)
Source for PREPA SAIDI/SAIFI: EIA Annual Electric Power Industry Report, Form EIA-861 detailed data files, 2021: <https://www.eia.gov/electricity/data/eia861/>; as reported by Puerto Rico Energy Bureau (PREB)
Source for IEEE US Median SAIDI/SAIFI: <https://cmte.ieee.org/pes-drwg/wp-content/uploads/sites/61/2022-Benchmarking-Survey.pdf>

⁷ PREPA SAIDI and SAIFI data for 2017 is FY2017, all other values are for calendar year. SAIDI and SAIFI data for 2018 is not available. **Source:** PREPA (available in 2018-2021 Certified Fiscal Plans); IEEE US Median.

2.1.1 HoldCo

On April 11, 2019, the Governor signed the *Puerto Rico Energy Public Policy Act* (Act 17-2019) into law. Act 17-2019 established, among other things, the regulatory framework for Puerto Rico's energy sector and PREPA's transformation. Moreover, Act 17-2019 specifically prohibits PREPA from continuing to operate as a vertical monopoly, mandating the unbundling of T&D and generational operations into separate and distinct entities, which will operate under PREPA HoldCo, as illustrated in Exhibit 4, going forward. Further descriptions of PREPA's assets falling under PREPA HoldCo are included in subsequent sections.

Exhibit 4: PREPA Reorganization and Transformation⁸



Even though PREPA has been unbundled into several subsidiaries as set forth in the Exhibit above, it maintains the structure necessary to support certain administrative functions. PREPA continues to comply with various legacy compliance and reporting activities, management and potential divestment of PropertyCo's miscellaneous properties, pension fund management and oversight, and operation of hydro/irrigation assets, among others. As PREPA's transformation advances toward completion, some activities may be discontinued due to changes in legal requirements, transferred to other government agencies, or permanently outsourced to other private companies. Notwithstanding these changes, PREPA will keep the position of the Executive Director, Board of Directors, Employee Retirement Services, Human Resources, Finance, and the Disaster Funding Management Office (DFMO) offices, among others, identified below.

PREPA will also be a party to the Puerto Rico PREPA-GenCo-HydroCo Operating Agreement (PGHOA). The PGHOA sets forth processes for budgeting, operating and maintenance charges, fuel and hydropower costs, agreed operating procedures including interconnection facilities, records, metering, and ancillary services, among other matters.⁹ Currently, PREPA is working with all stakeholders concerned to finalize and execute the capital contribution agreements and operating procedures for each subsidiary prior to June 30, 2023.

⁸ PREPA-GenCo-HydroCo Operating Agreement ("PGHOA") is designed to coordinate certain matters related to budgets, account funding, operations and other matters among the entities for the Legacy Generation Assets, Hydropower Assets, and T&D System assets

⁹ Puerto Rico Thermal Generation Facilities Operation and Maintenance Agreement, January 24, 2023: <https://www.p3.pr.gov/wp-content/uploads/2023/01/230124-LGA-OM-Agreement.pdf>

2.1.2 Generation Assets

Currently, electricity is supplied by PREPA-owned and operated generation plants and procured from independent power producers (IPPs) under power purchase and operating agreements (PPOAs). However, under the Generation Operating and Maintenance Agreement between Genera, PREPA and P3A, Genera will be the new Operator of the PREPA-Owned Generation Assets, with a target commencement date of July 1st, 2023. IPP contracts will be managed directly by PREPA, although dispatch is handled by LUMA.

PREPA-owned power plants have 4,961 MW of installed generation capacity. However, PREPA-owned generation experiences above industry average forced outage rates, primarily due to the average unit age of more than 40 years; between approximately 30% and 40% of this capacity is typically out of service, including units that are indefinitely out of service and in need of significant overhaul. As a result, on average, as of Q1 2023, only around 40% (1,913 MW) of PREPA-owned generation capacity is available for dispatch¹⁰. In addition to PREPA-owned generation assets, electricity supply from IPPs consists of 984 MW from two conventional power plants and 254 MW from various renewable energy providers. Given PREPA's frequent outages, it is often necessary to dispatch generation units with higher fuel cost. For example, the April 2019 maintenance-related transformer explosion and resulting loss of Aguirre Unit 2 for approximately 12 months (with average fuel cost of ~\$130/MWh) was compensated by increasing generation from low efficiency diesel peaking units (with average fuel cost of ~\$200/MWh).¹¹

Generation units in Puerto Rico are powered primarily by fossil fuels. According to PREPA, during April 2023, around ~60% of Puerto Rico's electricity was generated by petroleum-fired power plants, and more than ~97% of total electricity was generated from non-renewable resources.¹²

As part of the efforts to diversify and modernize the Island's generation fleet and reduce reliance on oil-fired generation resources, PREPA has renegotiated or completed the procurement of 844.8 MW of new renewable generation capacity.¹³ However, as of the close of the second quarter of 2023, none of these projects have reached financial close or commenced construction, resulting in significant delays as compared to PREB-established procurement and development timelines. Due to initial delays in the procurement process for these resources, PREB determined that the RFP for procuring additional tranches for renewable energy generation and storage resources will be managed by PREB and a third-party procurement contractor. This process is necessary to advance the integration of renewable energy into the grid in compliance with the PREB approved IRP and Modified Action Plan.

Under the T&D OMA, PREPA's generation resource planning is now performed by LUMA and includes resource adequacy studies and integrated resource planning. Every three years, LUMA, as an agent of PREPA, is required to prepare and submit to PREB an Integrated Resource Plan (IRP) for a 20-year planning period, the next of which is to be submitted in 2024. Act 57-2014 defines the IRP as a resource plan that shall consider all reasonable resources, including both energy supply (e.g. utility-scale generation) and energy demand (e.g. energy efficiency, demand response, and distributed generation), to satisfy the current and

¹⁰ LUMA Motion Submitting Seventh Update on Stabilization Plan February 15, 2023 (NEPR-MI-2022-0003)

¹¹ PREPA FY21 Q2 Budget to Actual Report submitted to the Oversight Board.

¹² PREPA Generation Report as of 4/30/2023.

¹³ PREB Resolution and Order February 2, 2022: Renewable Energy Generation and Energy Storage Resource Procurement Plan – First Tranche Projects for Phase III Contract Negotiation and Final Interconnection Plan Approvals

projected future needs of Puerto Rico’s energy system and its customers at the lowest reasonable cost.¹⁴ Furthermore, Act 57-2014 mandates that the IRP also include the environmental impact of the energy system.¹⁵ On August 24, 2020, PREB approved in part and rejected in part PREPA’s most recent proposed IRP and ordered the adoption and implementation of a Modified Action Plan and Modified Preferred Resource Plan.

LUMA, PREPA and the future operator of PREPA’s generation assets, Genera, must use the Modified Action Plan and Modified Preferred Resource Plan as a roadmap for repairs, upgrades, and replacements of existing generation resources as well as which new generation resources should be procured and developed.¹⁶ The approved IRP and Modified Action Plan envision a transformation of the energy sector of Puerto Rico by significantly increasing the share of renewable generation and storage, retiring all existing coal and heavy fuel oil generation, enhancing grid resilience through T&D System hardening, and enabling customer choice by supporting the incorporation of distributed generation (DG) and implementation of demand response (DR) and energy efficiency (EE) programs. As of August 21, 2020, PREB has approved the retirement of approximately 2.4GW of existing fossil fuel units.¹⁷ For more information, see Chapter 4.

In April, 2022, the Public Service Regulatory Board of the Puerto Rico Energy Bureau extended the deadline for the next IRP filing, resolving that LUMA shall file the next IRP by no later than March 1, 2024.¹⁸ Further information on the IRP and the Modified Action Plan can be found in Section 4.2, Resource Planning and Resiliency.

2.1.3 *Hydroelectric and Irrigation*

On September 14, 2022, a petition was submitted for the creation of PREPA subsidiaries and the PREPA-Genco-HydroCo Operating Agreement (“PGHOA”). The Resolution and Order was issued on December 29, 2022. On March 3, 2023, a Certificate of Formation and Organization was filed for HydroCo LLC. Today, HydroCo is responsible for the operation and maintenance of hydroelectric generating assets (Water Administration) and irrigation assets (Riego) (together, the “Hydropower Assets”).

PREPA’s current portfolio of Hydropower Assets consists of ten hydroelectric power plants around Puerto Rico and four irrigation facilities with two in the Costa Sur District (one in the east and one in the west), one in the Isabela District and one in the Lajas Valley District.

The ten hydroelectric units have a total installed capacity of approximately ~100 MW.¹⁹ However, due to lack of maintenance and repairs, today, the available capacity is ~18%, which represents less than 1% of the total net generation. Additionally, over the past 12 months, the units have, on average, generated less than five megawatts per hour and have never exceeded 24 megawatts. As of March 2023, four of these units were fully operational and seven were out of service or operating with very limited capacity.

¹⁴ Act 17-2019, Puerto Rico Energy Public Policy Act, approved April 11, 2019, Section 5.2(II).

¹⁵ Act 57-2014, Puerto Rico Energy Transformation and RELIEF Act, approved May 27, 2014, Section 6C(h)

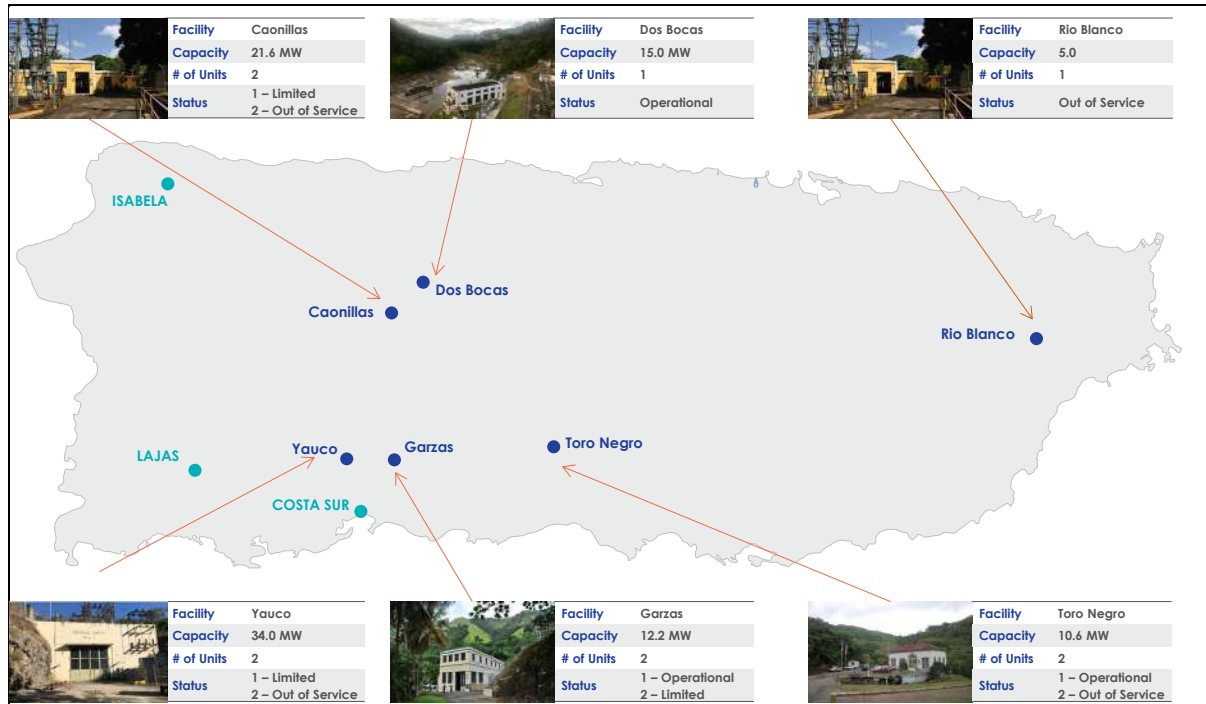
¹⁶ PREB Docket NEPR-MI-2020-0012 on IRP compliance and Modified Action Plan - <https://energia.pr.gov/expedientes/?docket=nepr-mi-2020-0012>

¹⁷ Final Resolution and Order on Puerto Rico Electric Power Authority’s Integrated Resource Plan: CEPR-AP-2018-0001: <https://energia.pr.gov/wp-content/uploads/sites/7/2020/08/AP20180001-IRP-Final-Resolution-and-Order.pdf>

¹⁸ Government of Puerto Rico, Public Service Regulatory Board, Puerto Rico Energy Bureau Case No. NEPR-MI-2020-0012: <https://energia.pr.gov/wp-content/uploads/sites/7/2022/04/20220422-MI20200012-Resolution-and-Order-Submittal.pdf>

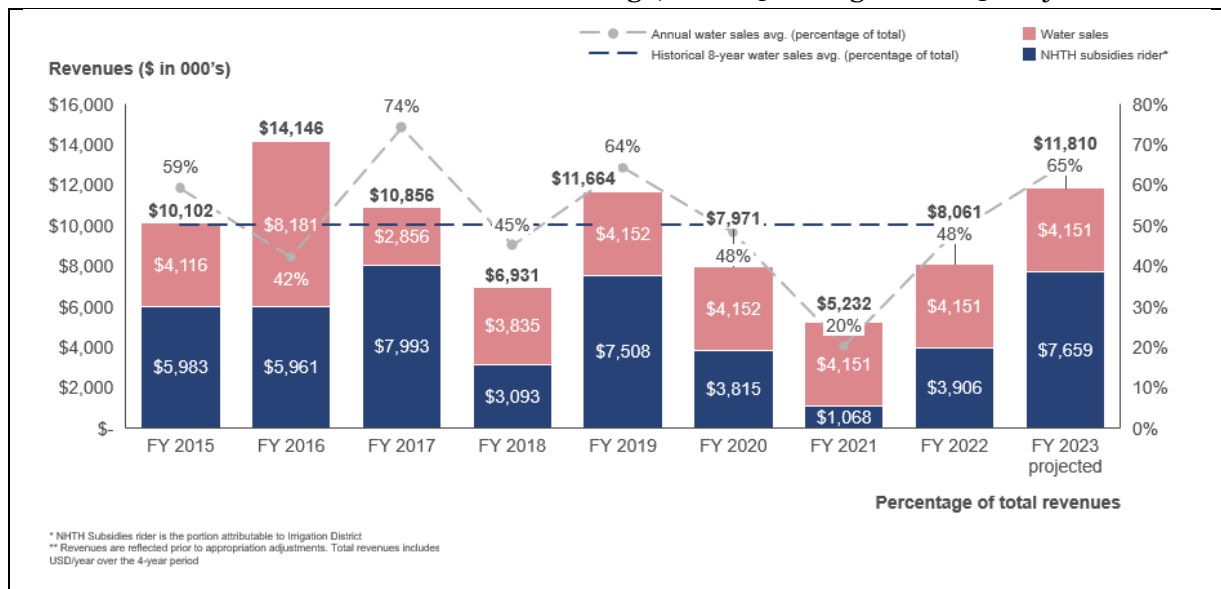
¹⁹ Daily Generation Availability Report 3/9/2023: <https://lumapr.com/wp-content/uploads/2023/03/20230309-Daily-Availability-Report.pdf>

Exhibit 5: HydroCo Assets



Riego has historically operated as its own entity with a separate accounting system. Riego’s revenues are comprised of two components: revenues from water sales and revenues from the Non-Help to Humans (“NHTH”) Subsidies Rate Rider. NHTH subsidies rider revenues have historically contributed approximately 50% to the overall Riego revenues, with water sales revenues and other revenues comprising of the other 50%. Exhibit 6 presents the historical revenue trends for Riego from FY2015 through FY2022 as well as the projected revenues from FY2023.

Exhibit 6: Unaudited historical revenues for Riego, FY2015 through FY2023 Projected²⁰



Even though PREPA will transfer the O&M of its thermal generation fleet to Genera on July 1, 2023, PREPA will still have minor operational functions after that date. For example, PREPA

²⁰ Based on unaudited Riego Income Statements from Fiscal Year 2019 through Fiscal Year 2022 provided by PREPA. Subject to change.

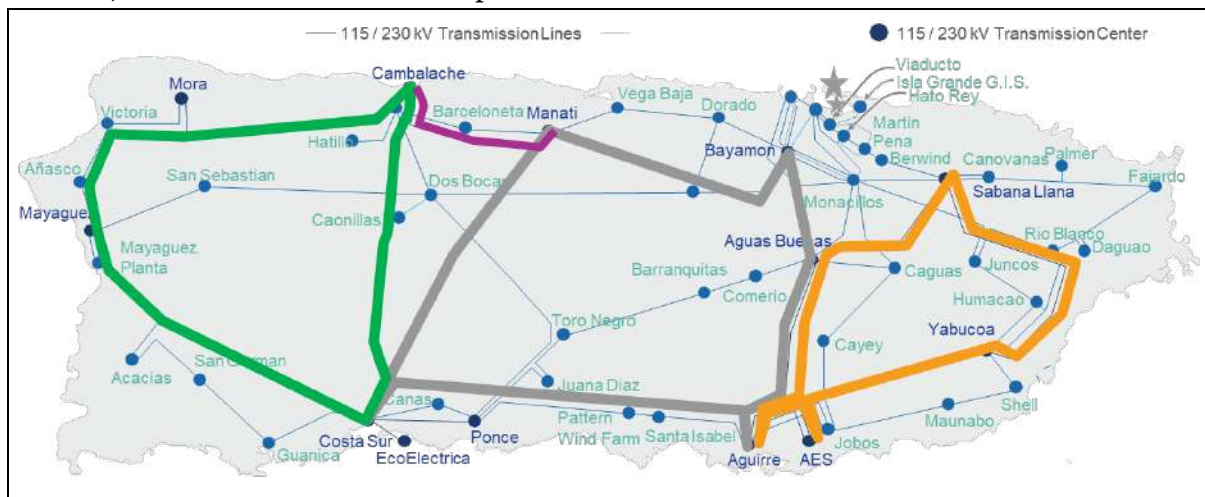
will still be responsible for the operation of the hydroelectric units at 15 sites, three irrigation systems, and 20 dams and reservoirs. Additionally, the operation and maintenance of the HydroCo assets may need technical and administrative support provided by HoldCo, especially for the development of federally funded projects. To maintain safe and prudent operations, PREPA has made a recommendation to the number of employees required to operate HydroCo assets safely and effectively as part of the reorganization. The recommended organization structure was based on a comprehensive analysis by AAFAP with PREPA input and was approved as part of Resolution 5064 of the PREPA Governing Board on June 9, 2023.²¹

2.1.4 T&D

Puerto Rico’s T&D System is comprised of three major transmission loops that move electric generation from power plants concentrated along the southern coast to load centers concentrated in the northeast. The system’s dependence on unreliable generation in the south, far away from the load center, creates grid vulnerabilities as it is difficult to maintain frequency and voltage levels in the north. In addition, a lack of system redundancy, unstandardized design of the T&D System (including several voltage levels), ad hoc repair and maintenance, and poorly maintained access routes and roads impairs the ability to respond to major events.

The system’s original transmission loop is the Central Loop, connecting Costa Sur, EcoEléctrica, and Aguirre power plants in the south with the San Juan power plant in the north via transmission centers at Aguas Buenas, Manatí, and Bayamón. The Western Loop, which began providing services in 2002, connects Costa Sur and EcoEléctrica’s power plants in the south with PREPA’s Mayaguez plant in the west, and the Cambalache plant in the north. The Eastern Loop, which entered service in 2006, connects Aguirre and AES’s power plants in the south through transmission centers at Yabucoa in the east and Aguas Buenas and Sabana Llana in the north.

Exhibit 7: PREPA Transmission Loops



Transmission System Overview

LUMA operates 50 transmission centers operating at 230 kV, 115 kV, and 38 kV. These centers link over 1,100 miles of transmission lines (230/115 kV) and over 1,500 miles of sub-

²¹ Government of Puerto Rico, Puerto Rico Electric Power Authority, Resolution 5064: Approval of the Reorganization of the Puerto Rico Electric Power Authority and Recommended Organization Structure for HoldCo LLC, HydroCo LLC, and PropertyCo LLC

transmission lines (38 kV). Of these lines, 96% are overhead and the remaining 4% are underground. LUMA also operates approximately 44,000 transmission structures, divided across the three 230 kV loops in the west, east, and central parts of the Island. The 115 kV lines serve all the major load centers, while the 38 kV sub-transmission system serves more remote interior regions, as well as most industrial and commercial customers.²²

Distribution System Overview

Puerto Rico's distribution system serves approximately 1.5 million customers utilizing 1,100 circuits. LUMA maintains just over 42,000 miles of distribution lines, including nearly 17,000 miles of primary voltage lines and approximately 25,000 miles of secondary lines and service drops. The distribution system connects approximately 60-115 kV substations, about 280-38 kV substations, and nearly 825 privately owned substations. There are approximately 665,000 distribution poles and approximately 168,000 service transformers. Most of the distribution system is comprised of overhead lines, with approximately 20% of underground lines located primarily in urban centers. Distribution poles are galvanized steel, concrete, and wood.²³

2.2 Overview of PREPA's Risks & Challenges

The 2023 Certified Fiscal Plan for the Commonwealth of Puerto Rico reaffirms the effort to set Puerto Rico on a new path to long-term fiscal sustainability. In line with this effort, the fiscal plan reiterates the continued drive to transform Puerto Rico's energy sector to ensure the safe, reliable, clean and affordable service Puerto Rico's residents and businesses need and deserve. This transformation process is described further in Chapter 3.

To successfully navigate this transformation, several risks and challenges must be considered. This section discusses a selection of these issues.

2.2.1 Geography

PREPA is the sole electric power utility in Puerto Rico, with LUMA as the T&D Operator and Genera will be the Generation Operator, managing the Legacy Generation Assets. Because Puerto Rico is an island, there are many complexities inherent in providing electricity. Most notably Puerto Rico cannot rely on access to a larger, regional, and interconnected power grid for regulation and power generation like most parts of the U.S. mainland. Other complexities and issues such as the availability and access to materials, personnel, and equipment must also be considered and evaluated as they will have an effect on the cost of delivering electricity. The complexities of operating an electrical system on the island of Puerto Rico have been compounded by decades of operational, maintenance, and financial mismanagement resulting in the system lagging far behind national standards.

2.2.2 Natural Disasters and Climate

Puerto Rico's energy system is at risk for the wide-ranging effects of climate change, including hurricanes, heat stress, and coastal flooding. Moreover, Puerto Rico is susceptible to earthquakes and hurricanes, which adversely impact PREPA's vulnerable grid, resulting in Island-wide blackouts and extensive damage to the transmission and distribution network.

²² Figures were provided by LUMA's Asset Management team.

²³ Figures were provided by LUMA's Asset Management team.

Climate projections show that Puerto Rico could experience significant climate events in the next 30 years, including: (1) a decrease in frequency, but greater intensity, of extreme precipitation events; and (2) a potential rise in sea level of one to two feet, which could lead to risks from coastal flooding and inundation, particularly in the populated areas on the northeastern part of the island (i.e., greater San Juan).^{24,25}

2.2.2.1 HURRICANES

In September of 2017, Hurricanes Irma and Maria, which hit Puerto Rico within the span of a few weeks, heavily damaged PREPA's already vulnerable grid, causing an island-wide blackout. The transmission and distribution network suffered significant damage, and it took several months for service to be restored to all the island's residents. Following these hurricanes, significant investments were made in hardening the island's T&D network. Please refer to PREPA June 2022 Fiscal Plan for more detail on the impact of Hurricanes Irma and Maria.

Despite these upgrades, the system still exhibits vulnerabilities. In September 2022, Hurricane Fiona hit Puerto Rico, causing significant impacts: parts of the island recorded 100 mph winds, up to 30 inches of rain, and widespread flooding. As in 2017, Fiona damaged the electrical grid, leaving Puerto Rico in a full blackout.

Hurricane Fiona resulted in more than \$4 billion in damage to critical T&D assets. According to LUMA, 54% of distribution feeders and 30% of the transmission lines in Puerto Rico were damaged because of the storm. It also resulted in approximately \$20 million in damages to PREPA's generation fleet, dams, hydroelectric systems, irrigation systems, and reservoirs.²⁶ Hurricane Fiona significantly reduced available dependable generating capacity, as shown in Exhibit 8 below. The storm also forced the utility to operate expensive peaking units to restart and maintain generation, resulting in an estimated cost of \$110 million due to more costly diesel fuel consumption. The effects of this shift can be seen in Exhibit 9, which shows a clear shift from natural gas generation to diesel in the fall of 2022.

On October 12, 2022, Governor Pedro R. Pierluisi requested Federal Assistance to stabilize the electrical grid. As a result, the Puerto Rico Power System Stabilization Task Force ("PR PSSTF") was formally established. In November 2022, the PR PSSTF recommended deploying a Maritime-Generator Power Barge (48 MW to 150 MW) and a Land-Based Generator (30 MW per unit) to complete priority emergency repairs to stabilize the system without significant interruption in service.

²⁴ U.S. National Aeronautics and Space Administration Earth Exchange (NEX) down-scaled climate model data, historical for 1976-2005 and future Representative Concentration Pathways (RCP) 4.5 scenario for 2021-2050.

²⁵ U.S. National Oceanic & Atmospheric Administration National Centers for Environmental Information & Cooperative Institute for Climate & Satellites-North Carolina. Intermediate sea-level rise scenario.

²⁶ LUMA Hurricane Fiona - <https://lumapr.com/fiona/?lang=en>

Exhibit 8: Minimum and Maximum Demand vs. Available Capacity (MW) During Hurricane Fiona

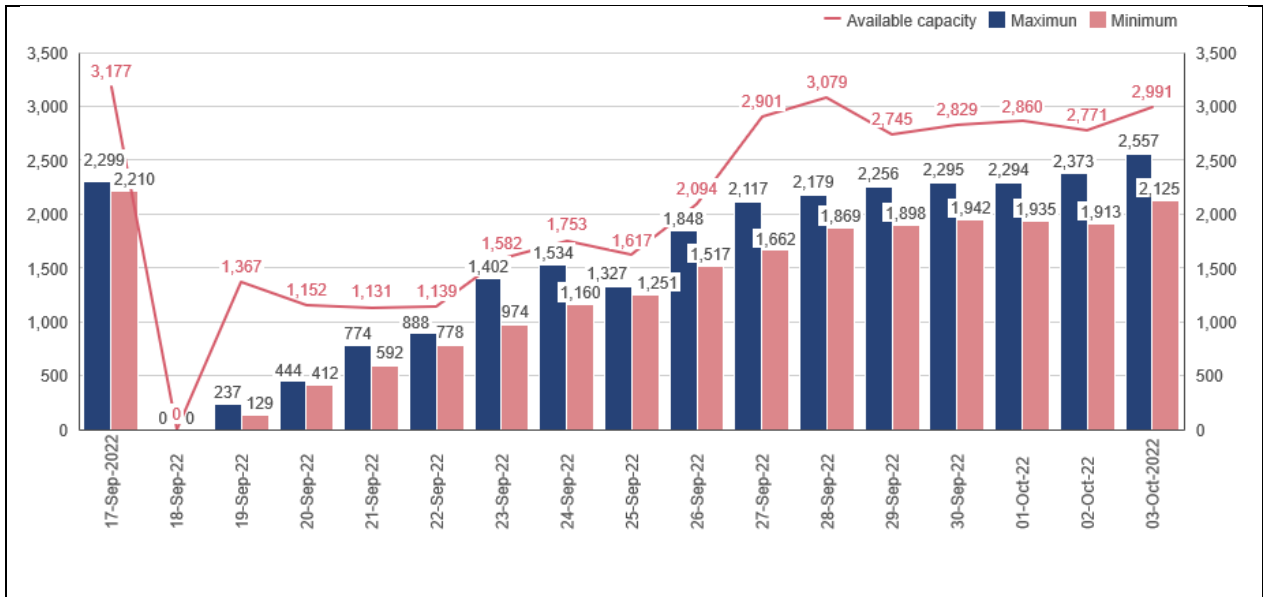
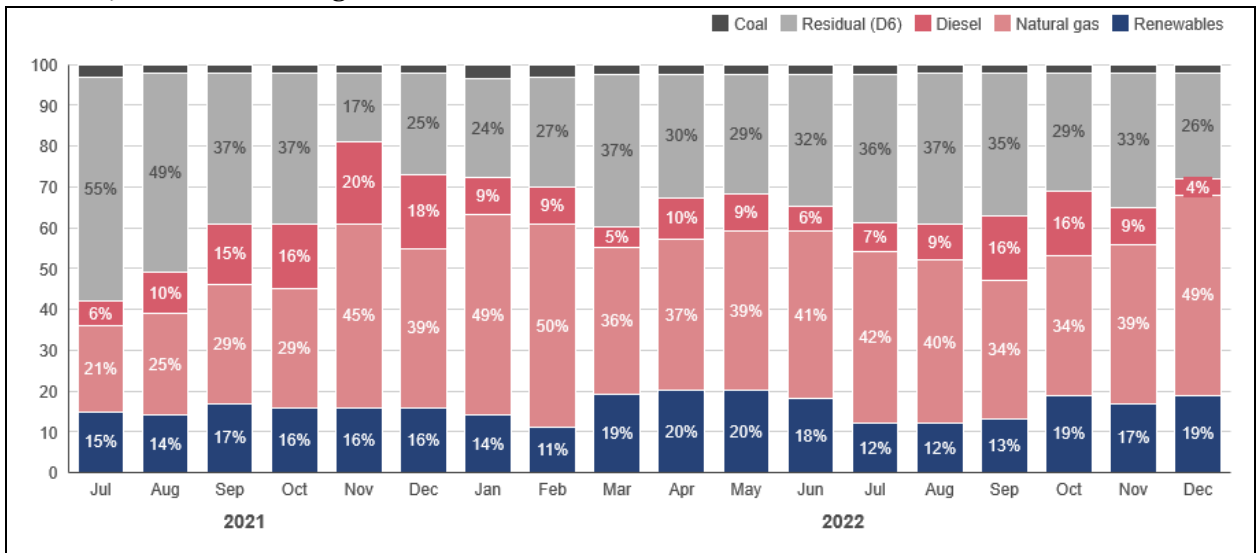


Exhibit 9: Fuel mix during Fiscal and Calendar Year 2022



2.2.2.2 EARTHQUAKES

Earthquakes have caused serious damage to utility infrastructure in Puerto Rico, posing a risk to generating assets, as well as damage to transmission lines because of falling trees and branches. The risks associated with seismic activity must be properly managed and considered in future grid improvement plans. On January 7, 2020, a 6.4 magnitude earthquake struck Puerto Rico’s southwest coast, causing damage to the Costa Sur Power Plant and less severe, but notable, damage to EcoEléctrica. In the immediate aftermath of the earthquakes, about two-thirds of the island’s population was left without power for several days. The loss of these two natural gas power plants increased the system’s reliance on more costly oil-fired power plants. In the near term, PREPA’s diesel peaking plants were dispatched to balance the load. As a result of the January 7, 2020, earthquake, the share of total monthly generation from natural gas declined by about 70%, from December 2019 to January 2020, while the share of generation from diesel fuel oil increased by almost threefold. Please refer to PREPA June 2022 Fiscal Plan for more detail on the impact of these earthquakes.

2.2.2.3 FUTURE NATURAL DISASTER RISK AND ONGOING MITIGATION

Although it is difficult to estimate and quantify the risk that climate change poses to Puerto Rico’s electricity system infrastructure and operation, the increased intensity of individual wind and rain events are projected to result in higher costs of repair and reduced demand due to outages on a per-event basis Exhibit 10. Additional work remains to improve operational practices — including routine preventative maintenance (T&D and generation) — and strengthen and upgrade existing infrastructure to prevent future adverse weather events from causing similar or even greater scale of damage.

Exhibit 10: Impact of Climate Effects on PREPA

Impact Level	Climate Effects	Description	Impact on PREPA
High	Damage from extreme wind	<ul style="list-style-type: none"> Frequency of extreme wind days have increased 28% since 1980 While average intensity has remained stable since 1980, maximum wind speeds have increased 	<ul style="list-style-type: none"> Loss of revenue due to outages Increased costs to repair storm damage Increased intensity of individual severe weather events suggest greater repair and lost demand costs on a per-event basis
	Damage from extreme precipitation	<ul style="list-style-type: none"> Projections suggest a 15% to 25% decrease in extreme precipitation days Projected increase in intensity of extreme precipitation days suggest a shift toward less frequent, more severe events (i.e. hurricanes) 	
	Damage from coastal flooding	<ul style="list-style-type: none"> Projected 1 to 2 ft sea level rise by 2050 expected to increase risk of coastal inundation and flooding Greatest risk posed to Northeast regions (i.e. San Juan) 	
	Wildfire risk	<ul style="list-style-type: none"> Natural forests cover significant share of PR land mass Rising temperatures can increase wildfire potential and subsequent risk of fire hazard and powerline damage 	
	Heat stress	<ul style="list-style-type: none"> Higher average temperatures could increase surges in demand for A/C (currently 27% of total energy demand for hot-humid climates)¹ Heat waves and droughts, however pose risks to infrastructure 	
	Decreased transmission efficiency	<ul style="list-style-type: none"> Energy loss in transmission and distribution is positively correlated with temperature 	
Medium			<ul style="list-style-type: none"> Increased demand for electricity Potential increase in revenue due to increased demand
Low			<ul style="list-style-type: none"> Increased generation required to meet equivalent demand due to increase energy loss Increased costs to increase generated load & generation capacity

LUMA and Genera are key to properly and sustainably addressing the challenges posed by climate change.²⁷ PREPA’s (and now Genera’s) capital plan for generation assets as well as LUMA’s set of improvement portfolios for the T&D System outline programs that will improve system resilience and strengthen the electric system against future extreme weather events.

As part of a series of federally funded FEMA projects to increase the resiliency of the Puerto Rican grid, LUMA has received funding for enhanced island-wide vegetation management.²⁸ This will include clearing of more than 1,000 miles of power lines and other vital pieces of electric infrastructure and repairing critical transmission lines and poles to improve grid resiliency. LUMA is currently in the condition assessment and preparing work scopes phase of the project and anticipates deploying over \$120 million of federal funds in FY2024, followed by \$850 million over the next three years on vegetation management. This federal funding is in addition to LUMA’s ongoing reactive and preventative vegetation management program.

Under Act 17-2019, PREB oversees the vegetation management program and LUMA reports on vegetation management activities in accordance with applicable laws and PREB requirements, including those indicated within PREB’s February 27, 2023 Resolution and Order. LUMA’s budget for vegetation management for FY2024 is \$179.8 million including federal funding, more than PREB’s requirement of \$60 million for vegetation management for FY2024.

²⁷ See additional detail on the transformation of Puerto Rico’s power sector in Chapter 3.

²⁸ <https://lumapr.com/news/critical-electric-infrastructure-progress-announced-for-puerto-rico/?lang=en>

2.2.3 Socioeconomic Challenges and Risks

In addition to the challenges posed by Puerto Rico's unique geography and susceptibility to natural disasters, PREPA has needed to respond to several macroeconomic challenges in recent years. Since 2007, Puerto Rico's economy has been in decline, experiencing a 20% fall in real gross national product (GNP) over this 15-year period.²⁹ At the same time, growing out-migration has led to population decline of over 15% since 2004, shrinking PREPA's revenue base.³⁰ Consequently, by 2022, energy sales had fallen by 21% from their peak in 2007. Throughout this period, with fewer customers and a lower energy demand, existing customers have had to pay higher rates to cover overall (including catch-up) system costs, including fuel and O&M, as those are spread over less total kWh sales. In the future, assuming continued decline in population and gross domestic product (GDP) projected in the certified fiscal plan for Puerto Rico, customer rates will require continued increases to generate the same level of revenues.

The following sections include a non-exhaustive discussion of socioeconomic challenges the island has faced in the recent past. While the precise conditions that led to these shocks and challenges are unlikely to be repeated in the future, the breadth and depth of these examples highlight the types of risk the Puerto Rican energy grid must consider in its capital planning and operation to ensure continued safe, reliable supply moving forward.

2.2.3.1 ECONOMIC SHOCKS

Aftershocks of the COVID-19 Pandemic

Following the onset of the COVID-19 pandemic, residential consumption patterns shifted. According to U.S. Census Bureau estimates, Puerto Rico's population declined ~2% between April 2020 and July 2022.³¹ Residential consumption, on the other hand, has increased. Using FY2019 as a baseline, residential consumption was 10% higher in FY2020, 18% higher in 2021, and 17% higher in FY2022. This breaks the downward consumption trend experienced in Puerto Rico since FY2008.

This short-term increase in residential consumption (in the face of population decline) is often referred to as the "COVID bump," and may result from residential customers' response to the COVID-19 pandemic (e.g., an increase in the share of time spent at home due to the rise of remote work, lockdowns and stay-at-home orders, etc.). The change in residential consumption levels over time are shown in Exhibit 11, below by comparing residential monthly consumption patterns in the pre-COVID period (pre-March 2020) to consumption patterns in the post-COVID period (especially March 2020 through the end of 2021).

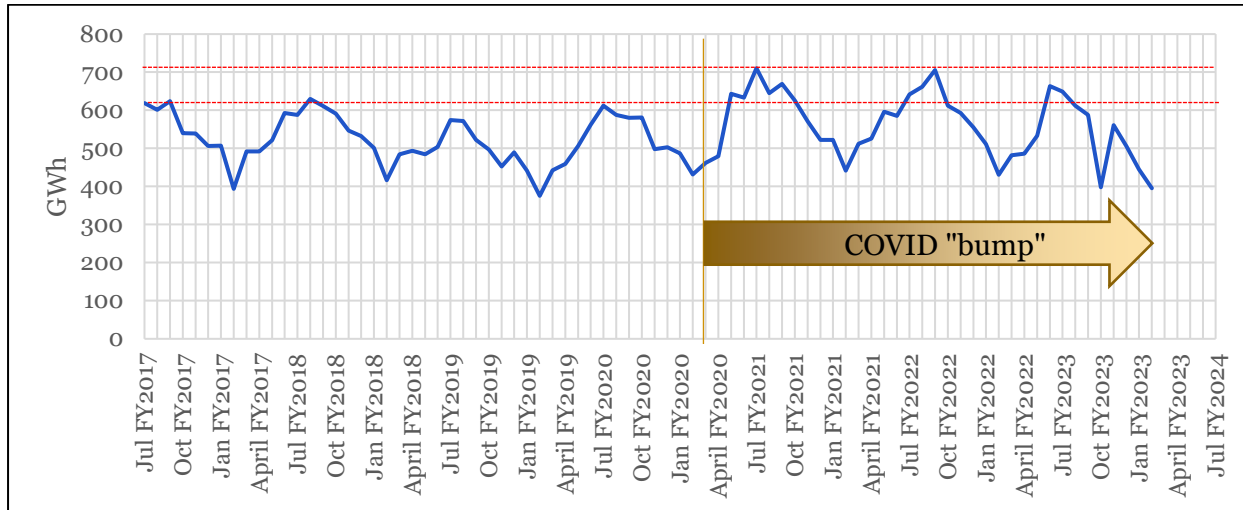
The monthly peaks following the onset of the COVID pandemic in March 2020 are, on average, approximately 5% higher than in the pre-COVID months. Total generation energy output, in contrast, is only approximately 1.6% higher since the start of COVID than in the pre-COVID period. More recently, in FY2023, there appears to have been a reversion to the pre-COVID mean, as evidenced by the fall in residential monthly consumption seen in Exhibit 11, where monthly peaks in consumption have not reached the highs seen in the summer of FY2021 and FY2022. See Chapter 7 for further discussion.

²⁹ Puerto Rico Department of Labor and Human Resources, 2022: [https://www.dol.gov/sites/dolgov/files/eta/Performance/pdfs/annual_economic_reports/2021/PR%20Economic%20Analysis%20Report%20FY%202020-2021%20\(00000002\)%20en%20pdf.pdf](https://www.dol.gov/sites/dolgov/files/eta/Performance/pdfs/annual_economic_reports/2021/PR%20Economic%20Analysis%20Report%20FY%202020-2021%20(00000002)%20en%20pdf.pdf)

³⁰ US Census Bureau population estimates for Puerto Rico show population of 3.29M in 2022, compared to 3.89M in 2004

³¹ US Census Bureau population estimates: <https://www.census.gov/quickfacts/PR>

Exhibit 11: Residential monthly consumption, July of FY2017 through February of FY2023



Going forward, planning for the Puerto Rico electric system will need to take into consideration unexpected external changes and shocks such as these that affect consumer behavior and the implications to customers both in terms of costs and reliability.

Inflation and Economic Downturn

Over the last year, both the U.S. mainland and Puerto Rico have experienced an economic slowdown and an increase in inflation rates, and prices continue to rise. While U.S. monthly inflation dropped to 4.9% and 4.0% in April and May 2023, the lowest rate since 2021, it remains far well above the 30-year average of ~2% year-over-year (YoY).³² This has affected every jurisdiction in the United States, including Puerto Rico.

Projections for Puerto Rico inflation, U.S. inflation, world food prices, and world oil prices used for the 2023 Fiscal Plan are summarized in Exhibit 12.³³

Exhibit 12: Annual Puerto Rico price changes³⁴

Puerto Rico Inflation	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Inflation	3.3%	2.0%	1.4%	1.3%	1.3%	1.4%	1.4%	1.5%	1.5%	1.5%
US inflation	4.8%	3.0%	2.2%	2.1%	2.1%	2.2%	2.3%	2.3%	2.3%	2.3%
Change in world oil prices	(8.0%)	(13.0%)	(4.6%)	5.0%	5.1%	4.7%	3.4%	4.2%	4.3%	3.7%
Change in world food prices	(6.2%)	(0.4%)	1.8%	1.7%	1.7%	1.9%	1.9%	1.9%	2.0%	2.0%

While the exact trajectory of the economy over the coming year and beyond are impossible to predict with certainty, the recent experience with inflation in the US and the risk of recession

³² Bureau of Labor Statistics, US Department of Labor, May 10, 2023: <https://www.bls.gov/news.release/pdf/cpi.pdf>

³³ "The Commonwealth of Puerto Rico's 2023 Fiscal Plan U.S. inflation forecast is sourced from the Congressional Budget Office (CBO). Estimates of oil and food prices in the short term (2022-2024) are based on the World Bank Commodity Markets Outlook. The long-term forecast (2025-2052) is based on the U.S. Energy Information Administration's (EIA) long-term forecast. The long-term world food forecast is projected as a function of long-term U.S. inflation."

³⁴ As reported on "Exhibit 12: Annual Puerto Rico Price Changes" in the 2023 Commonwealth Fiscal Plan pursuant to PROMESA Section 201; "2023 Transformation Plan for Puerto Rico: Restoring Growth and Prosperity, Volume 2: Economic trends and financial projections – Additional details" as certified on April 3, 2023 (pg. 6).

could put further strain on the Puerto Rican energy grid, especially if the economic downturn begins to put pressure on PREPA's commercial and industrial customers.

2.2.4 *Inflation Reduction Act of 2022*

The Inflation Reduction Act (IRA), signed in August 2022, is a significant piece of Federal legislation with several provisions that are expected to impact the energy sector. The IRA directs significant Federal spending towards clean energy R&D and production, while incentivizing electric vehicle adoption, clean transportation, energy efficiency, and increasing use of renewables. The largest investments of the IRA are in energy, manufacturing, the environment, transportation and EVs.

Several of the provisions of the IRA are targeted towards consumers, primarily through tax incentives around energy consumption and efficiency. These include a mix of new programs, and extensions and modifications of existing ones. For example, the IRA offers tax credits of up to \$2,000 for the purchase of heat pumps; \$30 per MWh for zero carbon electricity generation placed into service after 2024; \$15 per MWh for power produced at qualifying nuclear facilities; \$7,500 and \$4,000 per vehicle for new and used EVs, respectively. Furthermore, qualifying home improvements that increase energy efficiency will be eligible for a tax credit of up to 30% of the total cost, capped at \$1,200 per year.³⁵

The provisions of the IRA could present an opportunity for Puerto Rican households and businesses, and other entities to improve the reliability and resilience of the Puerto Rican power grid. However, a significant share of IRA spending takes the form of tax credits, leaving some uncertainty as to which of these provisions apply to Puerto Rico as an unincorporated territory of the US whose residents are generally exempt from federal income tax.

While there is a possibility the tax credits in the IRA could be employed by federally tax-exempt entities (e.g., governments, non-profits, individuals and entities with no tax liability) in a manner similar to a refundable tax credit or grant, these guidelines have not yet been tested.

2.2.5 *Political Challenges*

Decisions about the management of the Puerto Rican grid have historically been subject to political influence and instability, leading to high management turnover, discontinuity in capital investment plans, electric customer rates that were insufficient to cover operating and maintenance costs and the mounting costs of debt service. Politicized decision-making led PREPA to issue more debt to cover current debt service rather than to set rates at a level sufficiently high to do so. As a result, PREPA has operated under a fiscal deficit since the early 2000s. In turn, customers have been faced with increasingly poor reliability due to aging infrastructure, sub-optimal management and financial performance and rate volatility because of a historical overdependence on oil-fired generation with its fluctuating market prices, among other factors. The decision to transform Puerto Rico's energy system and unbundle PREPA was in large part an answer to this issue and to depoliticize decisions of the energy service.

³⁵ Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. (2021-22)

2.2.6 Generation Fleet and Grid Modernization

Failed efforts to diversify and maintain generation resources have resulted in an aged and inefficient generation fleet. PREPA owns installed capacity of nearly 5,000 MW and additional 1,000 MW contracted under PPOAs from AES and EcoEléctrica.³⁶ Aging assets lead to operational challenges, including lower operational flexibility because of slower ramp-up capacity, a higher likelihood of outages, increased costs per megawatt-hour generated, as well as non-compliance with environmental and health regulations. Further, PREPA-owned generation plants have high unavailability due to ongoing deratings, as well as forced and planned outages that result in 40-50% of PREPA-owned generation available for service on average over the past 12 months when considering the full 8,760 hours in the period. Despite substantial investment in Necessary Maintenance Expense (NME) over recent years, PREPA's generation fleet availability has diminished.³⁷

Although PREPA has reduced its reliance on oil-based power generation by converting certain key power units to natural gas-based power generation, PREPA customers are still subject to a generation mix highly dependent on antiquated oil-fired units and a rate structure that passes through fluctuating fuel costs, resulting in historically volatile rates. This in turn challenges customers' ability to pay and creates affordability pressure for all customer classes. Between fiscal years 2009 and 2014, PREPA's fuel-adjustment rider increased by around 45% when the oil price doubled from \$60 to \$120 per barrel.³⁸ The combined impact of lower sales and higher fuel prices contributed to high and volatile overall average customer rates ranging from approximately 20 to 30 ¢/kWh during the fiscal year 2009 to 2014 period.

In FY2022, approximately 34% of Puerto Rico's electric system generation was fueled by natural gas, 47% by oil-fire, 16% by coal-fire, and 3% by renewable sources. The recent surge in energy commodity prices starting in FY2022 was driven initially by tightening supply and demand and later exacerbated by broad global sanctions against Russia, which cut off a significant source of oil and gas supply. Within the past 12 months, these global market forces have driven PREPA electricity rates to a peak of over 35 ¢/kWh in October 2022, compared with a recent low of 16 ¢/kWh in October 2020, just two years prior. Most recently, PREB had an approved rate of ~26 ¢/kWh for April-May 2023 and has, as of May 24, 2023, reduced it further to ~21 ¢/kWh, which displays how reliance on fossil fuels can subject PREPA to significant volatility in costs and, by extension, rates. For comparison, the U.S. national average in 2022 for oil fired generation was less than 1% of total generation and average retail electricity rates were approximately 12 ¢/kWh. Without further investment in lower cost renewable power sources and battery storage, Puerto Rico residents and businesses will remain vulnerable to changes in oil and gas prices.³⁹

Furthermore, given insufficient revenues and an inability to implement rate adjustments to cover the substantial liabilities, PREPA's management historically reduced, or eliminated altogether, prudent and needed investments in long-term maintenance and capital improvement programs. In recent years, prior to LUMA's Service Commencement, capital investments in the T&D System were limited to the most urgent projects to avoid imminent

36 U.S. Congress, Exploring Energy Challenges and Opportunities. Excludes IPP installed capacity of 961 MW; all renewable energy plants are independently owned and contracted through PPAs.

37 LUMA June Generation Stabilization Plan Report – May 28, 2023- Docket: NEPR-MI-2022-0003.

38 PREPA, FY2009 Monthly Report (interim, unaudited financial results); PREPA, FY2014 Monthly Report (interim, unaudited financial results).

39 Siemens Industry, Puerto Rico Integrated Resource Plan 2018-2019, RPT-015-19, rev. 2 (Schenectady, June 7, 2019), 7-3, <http://energia.pr.gov/wp-content/uploads/2019/02/PREPA-Ex.-1.0-IRP-2019-PREPA-IRP-Report.pdf>; U.S. Energy Information Administration, Puerto Rico: Profile Overview, last modified November 21, 2019, <https://www.eia.gov/state/?sid=RQ>.

system failure or respond to equipment breakdowns, rather than proactively improving the grid. Historic underspending on vegetation management and other maintenance resulted in a T&D System highly susceptible to damage from hurricanes, earthquakes, and other unforeseen events.

2.2.7 Unsustainable Debt and Pension Obligations

As of May 2017, PREPA had accumulated approximately \$9 billion in debt and over \$4 billion in pension liabilities, of which \$3.6 billion was unfunded, the equivalent of \$2,400 per customer.⁴⁰ Rates were not historically adjusted to cover these growing liabilities. As of the time of certification, pension assets are now depleted. To fully fund pension payments, PREPA would be required to contribute over \$240 - 365 million per year on average, over a 20-year period.

For additional discussion on historical context, refer to section 2.6 (Historical Financial Performance). For discussion on rate implications of these historical obligations, refer to Chapter 7 of this year's Fiscal Plan. Information on rate implications of debt and pension obligations, refer to Chapter 8 (Debt Service) and Chapter 9 (Pension Reform) of this year's Fiscal Plan.

2.2.8 Changing Load Characteristics

As the composition of electric customers changes and as the adoption of distributed generation increases, there will be effects on the system load factor and, therefore, implications for rate designs and costs to customers.

The load factor is the ratio between the average demand and the peak demand, with 100% being when the average demand and the peak demand are equal, although this rarely if ever occurs. As the load factor decreases, the cost to serve each unit of energy increases, and inevitably, the rates customers must pay also increases.

There has been a steady decrease in load factor since the mid-2000s.⁴¹ This is most likely driven by an increase in the residential class's relative share of total consumption and has accelerated with the rapid adoption of distributed solar photovoltaics, which in Puerto Rico, decrease average energy consumption (with a particular decline during the sunlit hours of the day when distributed solar PV is producing electricity) without impacting annual system peaks, which occur after sunset.

Going forward, the load factor must be monitored to ensure proper planning for the system. Rate design must be adjusted to consider cost to meet peak demand and provide appropriate signals to customers. Initiatives to increase the load factor should also be considered (such as demand response and battery programs).

2.3 Operational Context

2.3.1 Resource Adequacy

Resource adequacy is when there is sufficient capacity and reserves for the grid operator to maintain a balanced supply and demand across the electric system. In general, Puerto Rico's

⁴⁰ Based on independent actuarial study conducted by Aon Hewitt, valuation results as of June 30, 2020 (and as published in Certified 2022 FP)

⁴¹ PREPA/LUMA monthly generation report

energy consumption and peak system demand have been in decline for 16 years. The capacity of energy supplies has also been declining. Declines in energy consumption and peak demand are expected to continue over the coming years and decades, primarily due to (1) declining population and weaker macroeconomic forecasts, (2) increased energy efficiency measures, and (3) greater adoption of distributed generation where customers generate their own power, use less power from the grid and inject power back into the grid.

The increasing age of the PREPA generating units will continue to put pressure on forced outage events, further constraining the generation fleet to meet customer demand.

LUMA filed its Resource Adequacy Study⁴² with PREB in August 2022, which assessed the sufficiency of electricity generation owned and operated by PREPA and other generators to meet existing electric customer load requirements in Puerto Rico. LUMA, which does not generate electricity, carried out this analysis in compliance with its responsibilities under the T&D OMA, to inform the PREB, policymakers, and stakeholders about the adequacy and inadequacy of generation resources in the Puerto Rico electric system and to inform strategic resource planning decisions. This was the first resource adequacy study on record for the island of Puerto Rico.

The key findings of this historic resource adequacy analysis include the following:

- PREPA has historically struggled to plan and manage outages in accordance with industry standards. Planned outage duration, on average, is ~20% longer than scheduled, and PREPA’s forced outage rates are 10-15%, which is significantly higher than the industry average.
- Using electric utility industry standards for measuring resource adequacy, Puerto Rico has inadequate supply resources to deliver reasonable system reliability. There is a risk of load shedding events beyond industry standards due to inadequate generation capacity by PREPA and other generators to meet expected demand.
- The loss of load expectation (“LOLE”) for Puerto Rico for FY2023 was calculated to be 8.81 days per year. On average, this means it is expected that there will be 8.81 days per year when customer demand will not be fully served by PREPA and other generators in FY2023. This measure is 88 times higher than the utility industry benchmark of 1 day in 10 years (0.10 days per year).
- The study calculated that 675 MW of new “perfect capacity” (available 100% of the time for each hour of the year) would be required to bring Puerto Rico to North American Planning Standards

Throughout FY2023, there were significant emergency generation efforts from the federal government, the Department of Energy, FEMA, and the Federal Corp of Engineers to assess, determine and ultimately install highly reliable capacity in northern Puerto Rico to help reduce the LOLE that Puerto Rico customers experience in FY2024. Additional emergency generation capacity of 350 MW is expected to be in place in phases, beginning in early June 2023 and continuing through late Summer.⁴³ The new capacity will be operated by a third party and is expected to have high availability, upwards of 90%.

⁴² Resource Adequacy Study prepared by LUMA, Aug 30, 2022: <https://energia.pr.gov/wp-content/uploads/sites/7/2022/09/Motion-to-Submit-Lumas-Resource-Adequacy-Study-NEPR-MI-2022-0002.pdf>

⁴³ Institute for Energy Research, March 23, 2023: <https://www.instituteforenergyresearch.org/fossil-fuels/gas-and-oil/biden-sends-natural-gas-generators-to-puerto-rico-for-resiliency/>

2.3.2 Generation Operational Context

As discussed in section 2.2.1, Puerto Rico's power grid is geographically isolated, making it impossible to import additional power to serve the customers of Puerto Rico. In addition, PREPA's baseload generation units each make up a relatively large percentage of the system's peak load, such that a single unit outage can cascade into an island-wide outage, as experienced in 2016, 2018 and 2022. To protect against this, generating units are required to spend significant operating hours at partial load to maintain reliability, reducing generation efficiency and increasing overall costs.

The majority of PREPA's current generation fleet runs on old and outdated steam generation technology with long ramp times. While these older steam plants are generally more economical than other PREPA-owned units due to lower-cost fuel sources, they are operationally limited by applicable federal mercury and air toxic standards (MATS) and the U.S. Environmental Protection Agency (EPA) Consent Decree. Many of PREPA's older steam plants that use lower cost fuel have been designated "limited use" by EPA to have an annual heat input capacity factor of less than 8 percent over a 24-month period. The MATS rule imposes stringent emission limitations for both particulate matter and acid gases, as well as requires work practice standards applicable during start-up and shutdown of power plants and regular burner and combustion control tune-ups. To-date, PREPA has paid stipulated penalties under the water and air portions of the Consent Decree for opacity deviations, which occur during start-up and shutdown processes. The EPA also has Clean Water Act civil penalty authority.

Puerto Rico's few renewable energy facilities represent the system's cleanest generation resources and are designated "must run". During FY2023 (July 2022 through February 2023) PPOA's for existing operational renewable energy projects had an average cost of approximately ~16 ¢/kWh versus an overall system average cost for generation (excluding IPPAs) of approximately ~17 ¢/kWh.⁴⁴ However, despite the recent fuel price volatility and sharp increases in fuel oil and LNG costs during FY2023, these facilities are still some of the most expensive generation sources for Puerto Rico, since, at the time of procurement, renewable generation capacity was priced much higher than the market price that would be available if similar energy sources were procured today. Considering this fact, several minor renewable projects had their PPOAs amended in late 2020, achieving reductions in their contract costs. However, for most of these projects, the savings achieved was not great enough for these resources to compete with other forms of power generation.

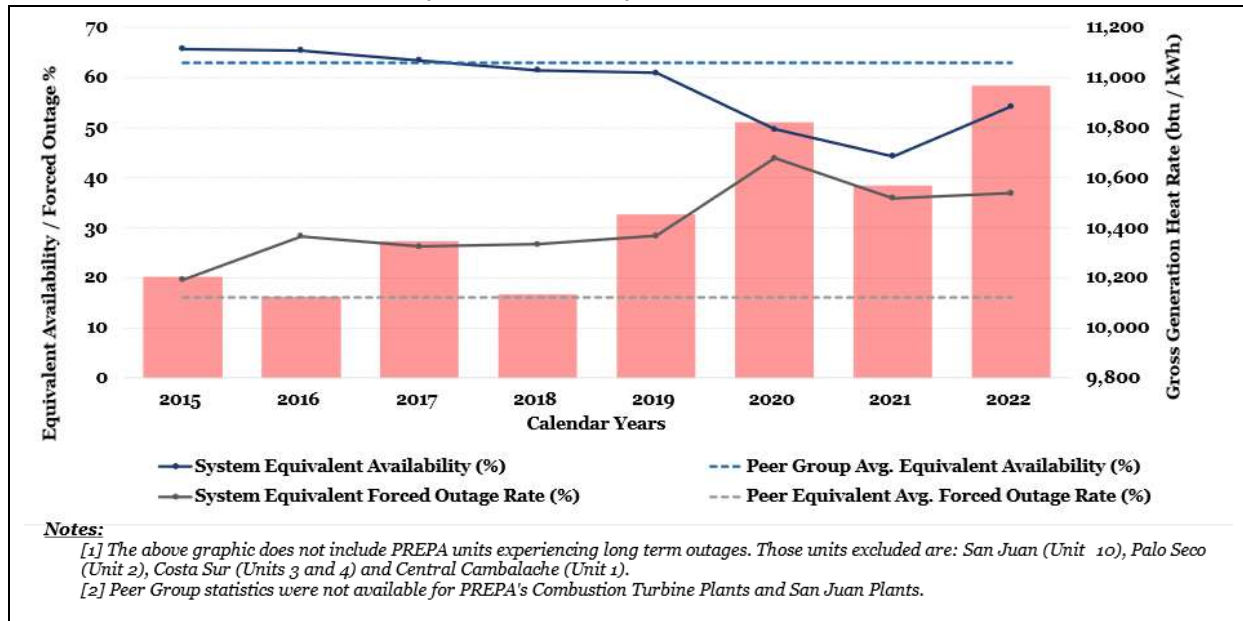
The condition and performance of PREPA's aging plants (Exhibit 13) has continued to deteriorate availability of the system's generating units dropped by approximately 18% from calendar year 2015 to 2022. In part aggravated by Hurricane Fiona, forced outages of generating units have also seen an increase of approximately 88% over the same period and underperformed peer units, exemplifying the unreliability of PREPA's legacy generating fleet⁴⁵. The net heat rate of generating units has also seen an increase of roughly 800 Btu/kWh from FY2016 to FY2023.⁴⁶ These trends point to growing inefficiencies and unreliability as these units continue to age.

⁴⁴ Figures included in PREB's docket: The Performance of the Puerto Rico Electric Power Authority. <https://energia.pr.gov/en/dockets/?docket=nepr-mi-2019-0007>

⁴⁵ As reported and calculated by PREPA. Equivalent Force Outage Rate (%) – Weighted, increased from 19.6% in 2015 to 36.9% in 2022.

⁴⁶ Figures derive from PREPA Monthly Report to the Governing Board 2016 and Performance Metrics Summary Report April 2023.

Exhibit 13: PREPA Generation System Efficiency and Performance Metrics⁴⁷



PREPA’s aging, inefficient, and unreliable generation fleet must be modernized and/or replaced. The roadmap for this modernization is defined in the IRP approved by PREB, which outlines the actions and investment in new generation that must be taken to reduce generation costs and achieve greater reliability and resiliency. Further detail is provided in Chapter 3.

2.3.3 T&D Operational Context

The geographic and operational challenges faced by the T&D system are discussed below.

The T&D system’s geographic challenges stem in part from the fact that the load center is in the north (San Juan Metro Area and Humacao Industrial District, approximately 70% of total load) while most of the more economical and efficient generation resources are in the south (approximately 70% of online generation capacity). The three 230 kV transmission loops that link generation from the south to meet demand in the north traverse mountainous and densely forested terrain, creating access limitations for repairs or reconstruction.

In addition to these geographic challenges, there are several significant systemic challenges and legacy practices that impact the operation and maintenance of today’s T&D system. From a distribution system perspective, managing a system with different voltage levels introduces complexity, and often results in extended outages to customers since load cannot be transferred to other feeders. There are also right-of-way access challenges, as many distribution lines and other assets are in close proximity to residences and other commercial areas. In terms of legacy operation of the T&D System, the lack of standards maintenance before LUMA’s commencement introduced a severe risk to the safety and reliability of the T&D System. The legacy repairs performed by PREPA were non-standardized, short-term patches that were executed based on the individual completing the repair, and not based on systematic procedures. Moreover, these customized patch repairs were typically not recorded centrally, and are only discovered upon system failure.

⁴⁷ Peer group statistics provided by Sargent & Lundy 2021 Independent Engineering Reports for PREPA’s plants and generating units. Peer group data for net heat rate was not available. The data is weighted in terms of each unit’s 2022 capacity to reflect the impact these statistics have on PREPA’s generational capabilities today. Peer group statistics were not available for PREPA’s Combustion Turbine plants and San Juan plants.

To address these challenges and improve operational performance and customer service, support rigorous capital project execution, and ensure ongoing fiscal balance and control, the P3A, in collaboration with PREPA and the Oversight Board, selected LUMA Energy (LUMA) to take on the responsibilities of operating and maintaining PREPA's T&D System. In addition, the improvement programs and portfolios for grid modernization outlined in the LUMA Initial Budgets and System Remediation Plan (SRP), along with the initiatives that have already begun, will be instrumental to strengthening Puerto Rico's electrical grid.

For a more detailed view on the T&D network's opportunities and challenges per LUMA's analysis, consult Section 7.1.1 of last year's certified fiscal plan and LUMA's 2022 Annual Report.⁴⁸

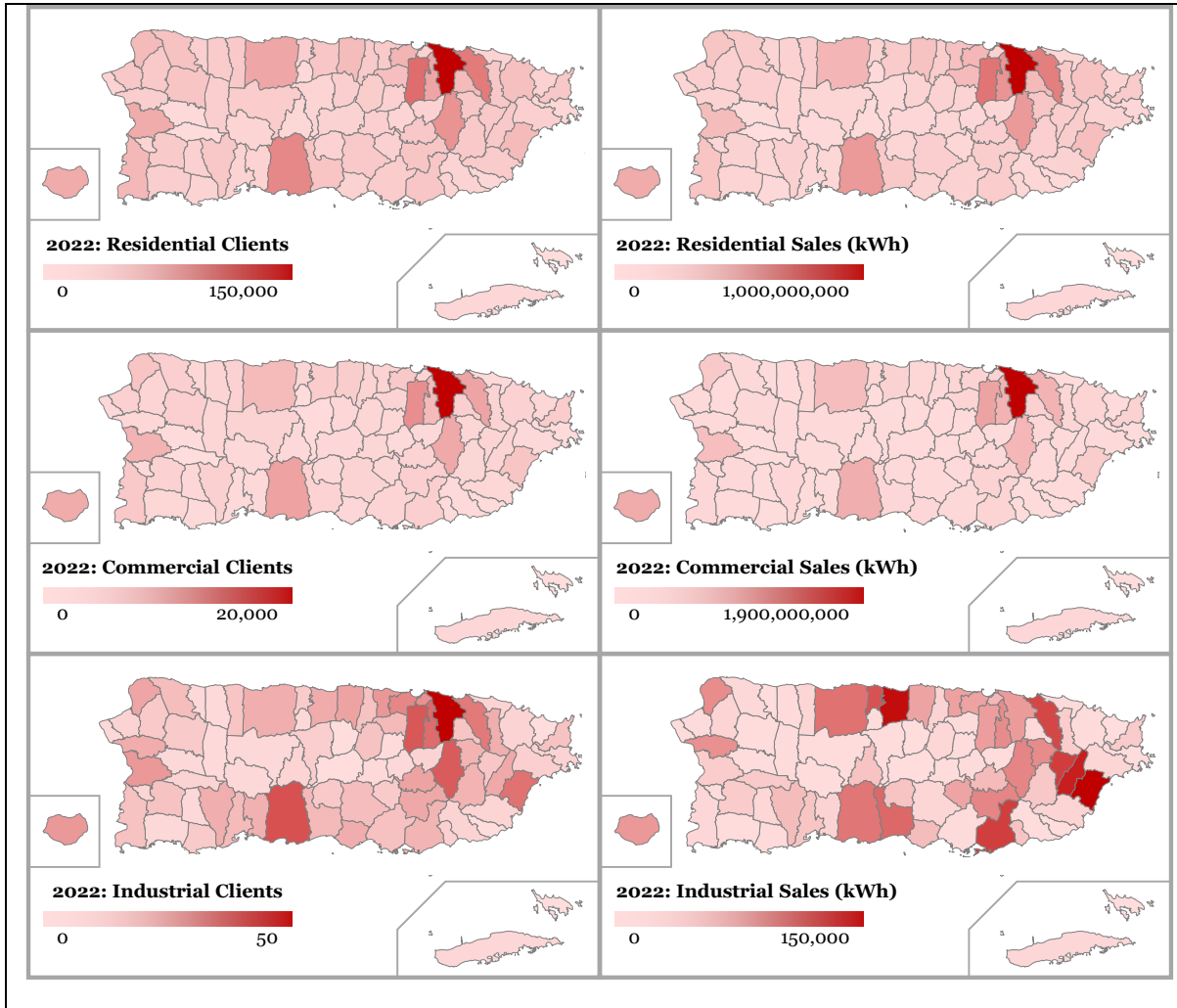
2.4 Customer Demographics and Affordability

PREPA currently serves approximately 1.5 million customers, of which 91% are residential, 8% are commercial, and less than 1% are industrial. Almost half of PREPA's load is driven by commercial customers, who represented 44% of FY2022's total consumption of approximately 16 TWh. This is followed by residential customers, accounting for 42% of electricity demand, and industrial customers, accounting for 12%.⁴⁹ The majority of PREPA's residential and commercial customers are concentrated in the San Juan metropolitan area. Industrial customers, on the other hand, are spread across the island, located primarily within the San Juan metropolitan area, the Humacao district (southeast of San Juan), the north-central coast (Arecibo, Manatí and Vega Baja) and the municipality of Ponce (southern coast) (Exhibit 14).

⁴⁸ <https://www.p3.pr.gov/wp-content/uploads/2022/11/LUMA-FY2022-Annual-Report.pdf>

⁴⁹ Additional load is attributed to public lighting and agriculture.

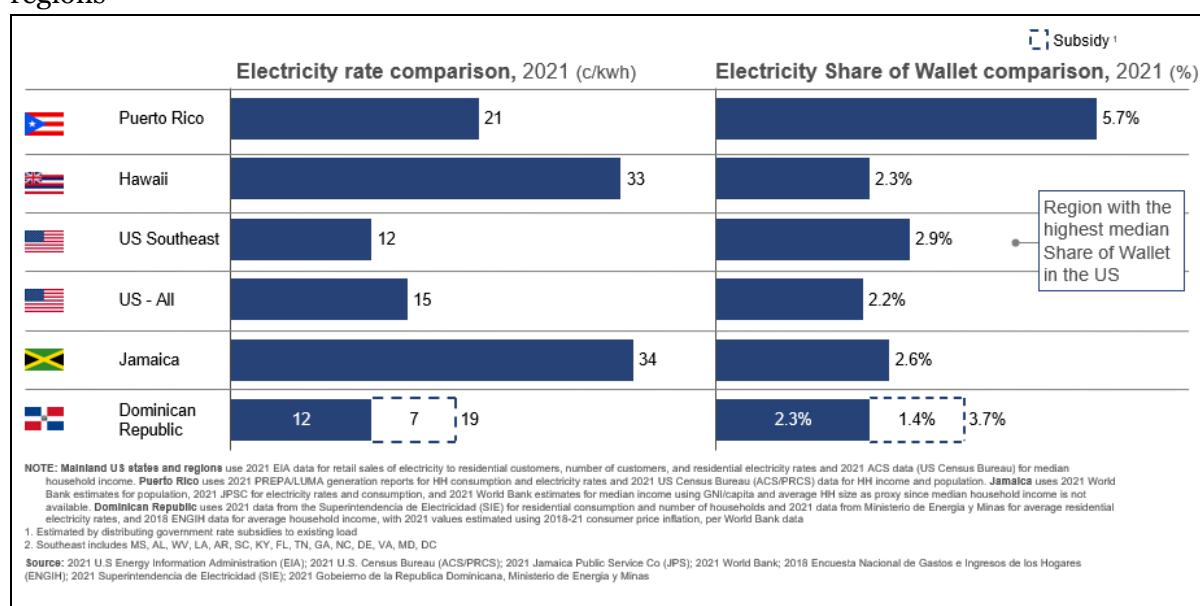
Exhibit 14: FY2022 PREPA Customer Count and Consumption by Municipality⁵⁰



On average, Puerto Rico’s consumers pay more for electricity relative to their income than consumers in any U.S. state. In 2021 (calendar year), for Puerto Rican households earning the median annual income of \$22,237 USD, the yearly electricity bill amounted to an implied 5.7% share of wallet, subsidies notwithstanding. Using a similar methodology, the equivalent energy spending share of wallet was 2.3% in Hawaii, the US state with the highest electricity rate in absolute terms in 2021. Consumers in the US Southeast, the mainland region with the highest spending on electricity as a share of household income, spent 2.9% share of wallet on electricity, while the median consumer in the US spent 2.2%. Preliminary data from Jamaica and the Dominican Republic, Puerto Rico’s Caribbean neighbors, suggest a median share of wallet of 2.6-3.7% of median household income, respectively, before subsidies, underscoring the uniquely high energy burden Puerto Ricans continue to face. (Exhibit 15).

⁵⁰ Based on PREPA weekly generation reports

Exhibit 15: Puerto Rico’s estimated energy electricity share of wallet compared to peer regions⁵¹

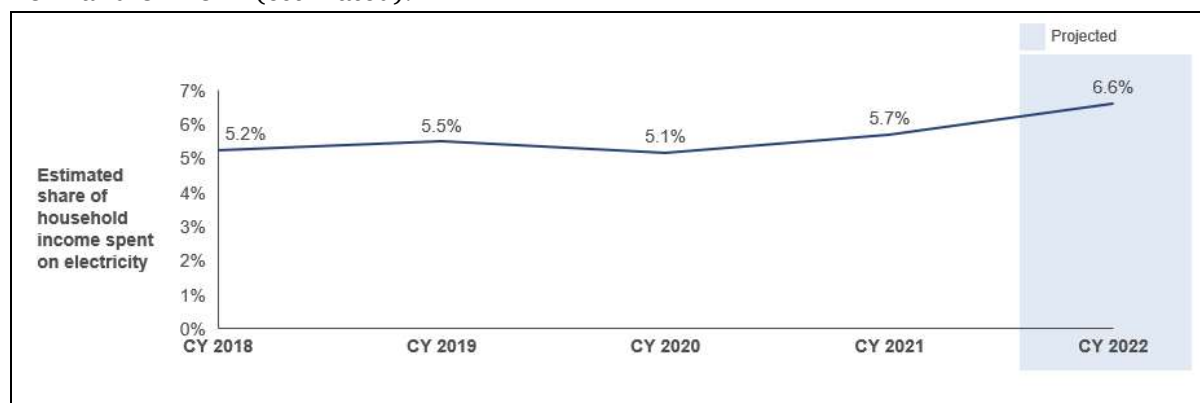


When considering trends in Puerto Rico over time, the median household spent an estimated 5.1-5.7% of household income on electricity between 2018 and 2021. There appears to be a slight upward trend in electricity spending as a share of household income over this period, with preliminary estimates of share of wallet for 2022 at approximately 6.6% of household income. This is likely at least partly attributable to the spike in oil prices that was observed in the world market in 2022, with 10-year highs between February and November 2022. As petroleum is a significant source of power generation for Puerto Rico, this increase in oil prices was reflected in a spike in rates for residential customers in Puerto Rico in 2022. While energy rates in Puerto Rico have fallen since their peak in 2022, Puerto Ricans continue to pay more for less reliable energy than consumers in any other part of the US as a share of household income.

The burden of high energy costs falls most heavily on low-income Puerto Ricans, who tend to pay a higher share of household income on energy than their higher-income peers (a higher energy burden).

⁵¹ Based on most recent data available, detailed below: **SOURCES: All US regions** – EIA (2022), US Community Survey (2021)/Puerto Rico Community Survey (2021) | **Dominican Republic:** ENGIH (Dominican Republic National Household Income and Expenditure Survey) 2018, Dominican Corporation of State Electrical Companies (CDEEE), Statista | **Jamaica:** Jamaica Public Service Company Limited (JPS), Statistical Institute of Jamaica | **METHODOLOGY:** Average rate for residential customers calculated from total revenue, sales, and number of residential customers per jurisdiction/region, per US EIA (2022), Dominican Corporation of State Electrical Companies (CDEEE), Jamaica Public Service Company Limited (JPS). Share of Wallet in Puerto Rico based on implied median annual residential consumption (4.9MWh in PR = 6.7TWh in residential sales/1,370,811 residential customers), divided by median HH income of \$22,200 USD (per 2021 US Census Bureau).

Exhibit 16: Historical share of household income spent on electricity in Puerto Rico, CY 2018-2021 and CY 2022 (estimated).⁵²



Various ongoing policy goals and performance improvement initiatives can positively impact affordability in Puerto Rico. Puerto Rico’s legislative mandate calling for drastically increased renewable generation should reduce rate volatility. For some customer, rates of the combined costs of solar energy plus necessary battery storage may be less than PREPA’s current and long-term average cost of generation. Despite recent setbacks and delays, if appropriately administered, the competitive procurement of utility scale renewable generation and storage resources provides a unique opportunity to address and mitigate rate stability and affordability concerns.

The impact of programmatic energy efficiency will likely have a positive impact on customer affordability by reducing electricity consumption for the average customer, thus lowering their electricity bill. From an overall system perspective, the impact on rates is less clear. On the one hand, aggregate system costs—and therefore rates—may decrease due to lower customer consumption and peak demand reducing the amount of investment required in generation and peaking resources. At the same time, rates may increase as system costs are spread over fewer kWh generated and sold per year. The IRP Modified Action Plan recognizes the benefit of energy efficiency as a “least cost resource” and contemplates further studies and implementation of programs to achieve greater energy efficiency through programmatic initiatives. If, however, efficiency measures are delayed or not achieved, there will be a more gradual decline in electricity demand that would also affect rates and overall affordability.

Another policy that may impact customer affordability is the net metering⁵³ framework currently in place pursuant to Act 17-2019, which pursues a distributed generation system to provide resiliency and further reduction on reliance on imported fuels.⁵⁴ Under Act 17-2019 customers that use distributed generation (i.e., rooftop solar) under certain circumstances are entitled to offset the energy they purchase from PREPA with the energy they export to the grid

⁵² 1. Puerto Rico’s implied electricity rate is based on monthly PREPA/LUMA generation reports for 2018-2021, which can be found at <https://indicadores.pr/dataset/generacion-consumo-costo-ingresos-y-clientes-del-sistema-electrico-de-puerto-rico/resource/8025f821-45c1-4c6a-b2f4-8d641cc03df1>. An implied average residential rate for the year is calculated by dividing the total revenue from electricity sales by year (in \$M USD, as reported by PREPA/LUMA) by the total residential electricity consumption by year (in GWh, also as reported by PREPA/LUMA)

2. Share of Wallet refers to the percent of household income spent on residential electricity revenue. This is calculated by multiplying the electricity rate by average electricity consumption per household, which is a function of residential electricity consumption in GWh (as reported by PREPA/LUMA in generation reports) divided by the number of households (as reported by the US Census Bureau)

As of the time of publication, US Census Bureau data for 2022 population, number of households, and median household income was not available. For population, UN Department of Economic and Social Affairs’ 2022 population estimate of 3.252 million was used for Puerto Rico. For number of households, applied 2018-21 average household size for Puerto Rico (2.739) to arrive at an estimated number

⁵³ National Renewable Energy Laboratory: [https://www.nrel.gov/state-local-tribal/basics-net-metering.html#:~:text=Net%20energy%20metering%20\(NEM\)%2C,exported%20to%20the%20utility%20grid.](https://www.nrel.gov/state-local-tribal/basics-net-metering.html#:~:text=Net%20energy%20metering%20(NEM)%2C,exported%20to%20the%20utility%20grid.)

⁵⁴ Puerto Rico Act 17-2019: <https://bvirtualogp.pr.gov/ogp/Bvirtual/leyesreferencia/PDF/2-ingles/17-2019.pdf>

on a one-to-one basis, at the prevailing retail rate. This policy will increase total residential renewable generation in the Puerto Rico system, but as more net metering systems are installed under full retail rate credit, net metering customers will be able to bypass charges that cover items like grid services. This policy is set to remain in place for at least 5 years from the enactment of Act 17-2019, after which PREB is mandated to conduct a study to determine net metering policy on a go forward basis. The Act. No. 17 of April 11, 2019, better known as the Puerto Rico Energy Public Policy Act, has not been amended since its approval.

2.5 Governance Structure

PREPA's Enabling Act established PREPA as a public corporation having a legal existence separate and independent from that of the Government of Puerto Rico. The PREPA Governing Board is charged with the power to appoint the Executive Director or Chief Executive Officer, as well as all other executive officers. The Governing Board is composed of seven members. For more detail, please refer to the June 2022 PREPA Fiscal Plan.

Governing Board members appointed by the Governor with the advice and consent of the Puerto Rico Senate serve staggered terms, while the members appointed at the Governor's sole discretion are considered at-will directors, except for the independent member, who serves a term of five years. The customer interest representative also serves a term of five years.⁵⁵

PREPA and its Governing Board are regulated by the Puerto Rico Electric Bureau (PREB). PREPA's Governing Board is also subject to the oversight of the Oversight Board since the enactment of PROMESA in 2016. Further details on regulatory structure, including the role of the PREB can be found in 4 – Legal and Regulatory Structure and Resource Planning.

2.6 Overview of Historical Financial Performance⁵⁶

PREPA's persistent financial deficits are a result of, among other things, decades-long fiscal and operational mismanagement, and a historical inability to adjust energy rates to a level that would ensure PREPA could cover its costs and the capital investments required to modernize its energy system. PREPA has been operating under a structural financial deficit since 2004, which has worsened over time. To cut costs, PREPA historically reduced or stopped investing in system upgrades, leading to an energy system that is vulnerable and prone to frequent and extended outages and voltage fluctuations. Additionally, PREPA has failed to fully fund its pension plan and, since 2014, has not paid its debt service other than through the issuance of additional bonds.

Over the past decade, revenues have decreased due to out-migration, economic decline, and increased adoption of distributed generation and energy efficiency measures. As the revenue base contracted, higher rates and associated volatility led to an increase in outstanding collections and bad debt, causing customers to further invest in energy efficiency and reduce their reliance on the grid, all with an adverse impact on PREPA's revenues. In response to these liquidity challenges, PREPA financed its fuel procurement through credit lines, which further contributed to PREPA's unsustainable debt.

PREPA's rates have also been insufficient to cover operating costs, pension costs, and debt obligations. PREPA's operating cash flow fell from a deficit of \$188 million in FY2000 to its

⁵⁵ Section 4 of the PREPA Enabling Act (22 L.P.R.A. § 194).

⁵⁶ All reference years are fiscal years (i.e., July 1 to June 30); Figures presented are unconsolidated, showing PREPA only and excluding the irrigation division; fuel, tourism (hotel), and public lighting subsidies are shown as revenue reductions rather than expenses.

worst point, with a deficit in excess of \$800 million during FY2008, leading PREPA to rely on financing to make up for revenue shortfalls (see Table 1 in PREPA June 2022 Fiscal Plan). By FY2014, PREPA's financial condition had deteriorated to the point where it had to enter into forbearance agreements with creditors, as there were insufficient funds to pay debt service. On July 2, 2017, the Oversight Board filed a petition on PREPA's behalf for bankruptcy relief under Title III of PROMESA before the U.S. District Court for the District of Puerto Rico.

Although operating expenses have declined in recent years, revenues have declined at a faster pace, resulting in a growing deficit.

Table 1: PREPA FY2014 to FY2022 Statement of Net Position

<i>(USD million)</i>	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022 *
Operating revenues	4,469	3,865	2,995	3,265	2,552	3,612	3,279	3,785	4,215
Operating expenses:									
Fuel expense	(2,345)	(1,887)	(1,215)	(1,218)	(1,052)	(1,408)	(1,236)	(1,283)	(2,088)
Purchased power	(808)	(790)	(687)	(729)	(586)	(682)	(733)	(617)	(840)
O&M expense	(752)	(1,129)	(1,241)	(1,394)	(2,564)	(1,271)	(1,443)	(1,488)	(275)
Depreciation	(342)	(382)	(517)	(519)	(343)	(367)	(350)	(334)	(372)
Total operating expenses	(4,246)	(4,189)	(3,661)	(3,860)	(4,544)	(3,728)	(3,762)	(3,722)	(3,575)
Operating income / (loss)	223	(323)	(666)	(595)	(1,992)	(116)	(484)	63	639
Grants from U.S. Federal Government, net of allowance							41		
Interest expense, net	(410)	(424)	(425)	(447)	(484)	(463)	(432)	(389)	439
Impairment loss on GDB deposits		(145)							
(Loss) / Gain before CILT and other	(187)	(892)	(1,091)	(1,043)	(2,476)	(579)	(875)	(326)	1,079
CILT and other subsidies	(278)	(273)	(172)	(178)	(192)	(169)	(70)	(63)	
Contributed capital	45	21	8	7	35	73	8	1	
Change in net position	(420)	(1,144)	(1,255)	(1,213)	(2,633)	(676)	(937)	(388)	1,079
Net position at beginning of year	(847)	(1,267)	(3,578)	(4,838)	(6,174)	(8,008)	(8,609)	(8,053)	(9,229)
Change in pension accounting cost and corrections		(1,644)		(124)	799	74	1,493		
Net Effect of the 2015 Restatement		477							
Net position at end of year	(1,267)	(3,578)	(4,833)	(6,175)	(8,008)	(8,609)	(8,053)	(8,441)	(8,150)

* FY2022 financials are unaudited and subject to material change

Since filing for bankruptcy relief under Title III of PROMESA in July 2017, PREPA has improved its cash flow and liquidity monitoring, reporting, controls, and communications. These improvements have been instrumental in preserving PREPA's financial stability through the significant disruptions caused by hurricanes Maria and Fiona, the earthquakes of January 2020, the COVID-19 pandemic and the current geopolitical situation impacting fuel supply and prices. As of April 30, 2023, PREPA's total cash position was approximately \$1.2 billion, of which \$589.2 million was in PREPA operating accounts and \$623.7 million was in other PREPA bank accounts. The \$589.2 million included \$121.0 million in various PREPA operating accounts (primarily concentration accounts and deposit accounts), \$453.1 million in the T&D Service Accounts⁵⁷ and \$15.1 million in the Generation Mobilization Account. The \$623.7 million primarily related to PREPA's various Emergency Accounts (e.g., FEMA reimbursement and FEMA working capital advance accounts), insurance accounts, U.S. Bank Trustee accounts, the Reserve Maintenance Fund and Other Restricted and Construction Accounts. While the measures implemented by PREPA have been effective in maintaining financial stability, there are several significant factors that will impact PREPA's future liquidity including among other things: the funding for the transformation of PREPA's legacy generation assets, operational working capital requirements, the restructuring of legacy debt obligations, underfunded pension obligations, capital and maintenance requirements

⁵⁷ As outlined in Section 6.1(a) and Section 7.5 of the T&D OMA, PREPA must fully fund LUMA's Service Accounts monthly, without the requirement for managing or overseeing these funds; the T&D OMA does not impose additional responsibilities related to the Service Accounts onto PREPA.

(including funding for federally-funded permanent work projects), and the costs to exit Title III.

3 Transformation

3.1 Introduction and Context of Puerto Rico’s Energy Sector Transformation

The Government, together with PREPA and the P3A, in fulfilment of Commonwealth public policy and as required in the 2022 PREPA Certified Fiscal Plan, is completing the transformation of Puerto Rico’s energy sector into a modern, efficient, reliable, and sustainable system that is operated in a fiscally responsible manner. The transformed energy sector will improve the everyday lives of Puerto Rico’s residents, create jobs, enable business to thrive , and help attract and maintain investment in Puerto Rico.

On January 22, 2018, in the aftermath of Hurricane Maria, the Government of Puerto Rico, in coordination with the Oversight Board, outlined a public policy vision for the transformation of the energy sector. The vision states the need for a customer-centric, safe, reliable, resilient, sustainable, and cost-efficient electric power service that meets environmental, regulatory, and statutory requirements. This development will be enabled by competent and experienced third-party operators for the generation and T&D System along with improved independent regulatory oversight and insulation from political interference. Previous PREPA and Commonwealth Certified Fiscal Plans have outlined a comprehensive transformation of Puerto Rico’s energy sector to address PREPA’s financial and operational challenges. Over the last three years, PREPA has taken numerous steps to address these challenges, including, as an example, supporting the selection of Genera as the Legacy Thermoelectric Generation Operator on January 24, 2023.

The Government of Puerto Rico’s objectives to transform the energy sector are as follows:

Table 22: Transformation Objectives

Transformation objectives⁵⁸	
Customer-centricity	<ul style="list-style-type: none"> ■ Focus on customer service and customer experience in planning and operations of the energy system
Affordability	<ul style="list-style-type: none"> ■ Ensure the delivery of electricity service in a cost-effective manner consistent with PREB oversight and orders ■ Improve operational efficiency
Reliability	<ul style="list-style-type: none"> ■ Establish an adequate and reasonable level of service reliability and quality to improve customer satisfaction and economic development ■ Optimize funding available for investments in system reliability
Resilience	<ul style="list-style-type: none"> ■ Expand and develop structurally hardened infrastructure to allow for adequate and rapid overall system recovery after the impacts of catastrophic natural disasters (hurricanes, earthquakes, etc.) and other adverse events ■ Continuously monitor and test emergency preparedness capabilities
Sustainability	<ul style="list-style-type: none"> ■ Diversify energy resources by prioritizing clean renewable energy deployment, and reduce the carbon intensity of the power sector ■ Incentivize customers to use energy wisely and efficiently

⁵⁸ See, “2022 Certified Fiscal Plan for the Puerto Rico Electric Power Authority,” as certified by the Financial Oversight and Management Board of Puerto Rico on June 28, 2022.

Transformation objectives⁵⁸	
Hydroelectric Generation	<ul style="list-style-type: none"> ■ Improve PREPA hydroelectric operations and explore a possible transfer of the responsibilities for the operation and maintenance of PREPA’s existing hydro assets to one or more qualified, professional, and experienced private operators, municipalities, or public corporations
PREPA Reorganization	<ul style="list-style-type: none"> ■ Restructure legacy debt and pension obligations and exit from Title III bankruptcy under PROMESA ■ Finalize the legal and financial reorganization of PREPA, rightsizing PREPA’s remaining non-operational legacy activities (HoldCo and HydroCo)

To achieve the vision and objectives outlined above, the Government took the following steps to establish a legal framework that mandates PREPA to separate its T&D and generation functions and transfer operation and maintenance responsibilities to third-party, professional operators, leveraging private sector management, experience, and expertise to effectively deliver reliable electricity to Puerto Rico’s residents:

- **June 20, 2018** – Enactment of the Puerto Rico Electric System Transformation Act (Act 120-2018) to provide the legal authority (under Puerto Rico law) and mechanisms for the sale, transfer or private operation and maintenance of PREPA’s T&D and generation assets, services, and functions through public-private partnerships.
- **April 11, 2019** – Enactment of the Puerto Rico Energy Policy Act (Act 17-2019), which establishes a regulatory framework to attract private investment and ensure independent, professional oversight of energy market participants. Moreover, Act 17-2019 specifically prohibits PREPA from continuing to operate as a vertical monopoly, mandating the unbundling of the T&D System and generation operations into separate and distinct entities.
- **June 22, 2020** – PREPA and P3A executed the T&D OMA with LUMA as the private operator for PREPA’s T&D System operations.⁵⁹
- **June 1, 2021** – LUMA began Interim Service Commencement under the Supplemental Agreement to the T&D OMA, providing for LUMA to assume T&D operations while PREPA remains in Title III.
- **December 29, 2022**– the Energy Bureau issued a Resolution and Order, whereby it authorized the creation of the subsidiaries as well as the PREPA – Genco - HydroCo Operating Agreement.
- **January 24, 2023** – P3A selected Genera for a 10-year operation and maintenance agreement to manage PREPA’s thermal generation assets.
- **July 1, 2023** – All conditions and requirements must be completed before this Generation OMA Service Commencement Date.

PREPA’s Certified Fiscal Plan and the energy public policy and legal framework established by the Government⁶⁰ provide a roadmap to complete the transformation of the Island’s energy system. If successfully implemented, a reformed energy system will lead to modern and reliable energy services across Puerto Rico. This includes a diversified fuel mix and more stable

⁵⁹ O&M references are to that certain Operation and Maintenance Agreement (T&D OMA) dated as of June 22, 2020, by and among PREPA, LUMA Energy, LLC, LUMA Energy Servco, LLC and the P3A. All language and statements under this chapter are meant to be illustrative only and shall be interpreted in accordance with, and subject to, the T&D OMA including the terms, as defined thereunder.

⁶⁰ Puerto Rico Energy System Transformation, Act No. 120-2018; Puerto Rico Energy Policy Act, Act No. 17-2019

fuel and purchased power costs, anchored on low-cost renewable energy generation resources; efficient allocation of resources by rightsizing HoldCo ; increased operational efficiencies; and a well-funded, financially responsible utility. These outcomes will benefit the customers and businesses of Puerto Rico through more reliable, clean, and safe electricity service. Below is a table summarizing Key Transformation Initiatives, which will be further discussed in subsequent sections.

Table 3: Key Initiatives by Transformation Category

Category	Key Initiative	
3.2 Regulatory and Title III exit	Plan of Adjustment (“POA”) Confirmation and PREB Proceedings	
	POA Implementation and Effective Date	
	Net Metering Program	
3.3 Operational measures	Renewable Procurement	
	Pension Reform	
	PREPA Reorganization and Legacy Generation P3	
	HoldCo & HydroCo Rightsizing	
	HydroCo Federal Funding Maximization Plan	
3.4 Transition to private operators	Mobilization Period	
	Mid-Term and Long-Term System Planning	
	PREPA Operational Restructure	
	Front-End Transition to Legacy Generation P3 Service Provider	
3.5 Generation	Fuel Saving Initiatives	
	Mobilization Period	
	Genera Recruitment	
	O&M Services	
	Decommissioning Services	
	Service Fees	
	Term and Demobilization	
	Genera Objectives and Performance Management	
	3.6 Hydroelectric and Irrigation	Organization structure and rightsizing
		Federal Funding Maximization

3.2 Regulatory & Title III Exit Milestones

Table 4: Regulatory & Title III Exit Milestones

Initiative	Milestone	Estimated Completion
POA Confirmation and PREB Proceedings	Secure approval from PREB for the necessary elements required to implement the Plan, including the incorporation of the Legacy Charge.	FY24
POA Implementation and Effective Date	The date in which the POA is effective	FY24
Net Metering Program	Finalize study to ensure cost-effectiveness, equitable distribution, competitive marketplace for distributed generation, and enhanced reliability and resilience in Puerto Rico's electric power system	FY24-Q4

Further discussion on Title III related matters can be found as part of Chapters 8 and 9.

3.3 Operational Measures

Table 5: Operational Measures and Milestones

Initiative	Milestone	Estimated Completion	Responsible party
Renewable Procurement	Tranche 1- Complete regulatory approvals prior to financial closing date Closing Date triggers the commencement of a 24-month countdown to reach the Commercial Operational Date milestone by FY26.	FY23-Q4	PREPA
Pension Reform	Freeze savings over time to produce significant savings which will play a significant role in restoring long-term adequate funding to the pension system.	FY24-Q2	PREPA/FOMB/AAFAF
PREPA Reorganization and Legacy Generation P3	Legacy Thermoelectric Generation Assets - Operator Service Commencement	FY23-Q4	PREPA/Genera
HoldCo & HydroCo Rightsizing (future size and structure)	Correctly allocate human resources and external resources to focus funds on high priority areas of the system	FY24-Q1	PREPA/FOMB/AAFAF
HydroCo Federal Funding Maximization Plan	Ensure the proper, prompt and most efficient way to leverage and optimize the use of federal funds for eligible hydroelectric projects to achieve RPS targets.	FY24-Q2	PREPA

3.3.1 *Overview and Key Accomplishments*

Operational measures defined in previous PREPA Certified Fiscal Plans remain essential for the overhaul of Puerto Rico’s energy sector. Together, these measures span all aspects of the energy service value chain – generation, T&D, and customer service – and address chronic issues in electric service reliability, safety, sustainability, and affordability. With the substantial scale-down of PREPA’s operations, their focus now lies predominantly on its Hydro and Irrigation operations as the remaining functions of the covered territorial instrumentality.

The operational measures must address the distinctive challenges inherent in these specific domains - hydroelectric generation and irrigation, in line with PROMESA Section 201(b) and directives provided by the Oversight Board. Over the course of the past fiscal year, PREPA made progress towards several key operational measures as part of its transformation. However, there are still substantial efforts required to bring to completion other measures across PREPA's remaining operations. Highlights of key accomplishments are presented below.

- **Environmental Regulatory Compliance:** On April 2, 2023, PREPA submitted a motion regarding a Budget Amendment Request for Implementation of FOMB Certified Fiscal Plan Transformation Initiatives in which approximately \$4.95 million were requested in the proposed NME budget amendment for necessary works to comply with the U.S. Environmental Protection Agency (“EPA”) Consent Decree during FY2023.
- **Legacy Generation P3 Transition:** On January 24, 2023, Genera, an independently managed subsidiary of New Fortress Energy Inc (“NFE”), was selected by the P3A for a 10-year operation and maintenance agreement to manage PREPA's thermal generation assets. As part of the 10-year contract, Genera will receive \$15M during a transition period which will last 100 days. After the transition period ends, Genera will get a fixed payment of \$20M for the first five years of the contract, an amount that is slated to decrease thereafter, which marks the beginning of the Mobilization Period.⁶¹ As of March 2023, PREPA, Genera and their respective teams have been fulfilling the tasks required to effectuate the transition of Generation functions and operations in a structured and phased approach.
- **PREPA Reorganization Implementation:** On December 29, 2022, the PREB conditionally approved PREPA's proposed creation of GenCo, HydroCo and PropertyCo, as well as the PGHOA, and stated that these are consistent with the implementation of the Puerto Rico Energy Public Policy. Efforts are currently ongoing to coordinate with stakeholders to finalize the capital contribution agreements and operating procedures for each subsidiary on or before June 30, 2023.

3.3.2 *Renewable Procurement*

In PREB’s final order on the IRP, PREPA was required to develop and execute a plan to procure renewable generation and battery storage in a series of six tranches. On February 22, 2021, PREPA issued an RFP for up to 1,000 MWs of renewable power production and up to 500 MWs of battery storage, incorporating recommendations from PREB and the Oversight Board. The RFP solicited proposals for the design, construction, installation, ownership, operation, and maintenance of renewable energy resources, energy storage resources, and

⁶¹ Thermal Generation Facilities Operation and Maintenance Agreement (Thermal Generation Facilities) dated as of January 24, 2023 by and among PREPA, Genera PR LLC and the P3A.

virtual power plants (“VPPs”) for sites across Puerto Rico and for a service period of up to 25 years.⁶² On February 2, 2022, PREB approved 18 of the solar PPOAs recommended by the Evaluation Committee. The FOMB approved 18 PPOAs on March 25, 2022.⁶³ LUMA conducted interconnection studies on the 20 projects from January to June 2022, and PREPA obtained final approval from PREB to execute the agreements in June 2022. PREPA executed 18 PPOAs for Solar PV resources in Q1 FY2023. However, more than a year later, it has yet to reach close on any of these agreements given several alleged complications, including developers’ claims that bid prices are unfeasible. Currently, PREB has approved five amended versions of these PPOA’s under seal before their consideration on docket number NEPR-MI-2020-0012.

On April 26, 2023 PREB issued an order requiring a sweeping investigation into the Tranche 1 renewable energy and battery storage procurement process due to persistent delays. The PREB order states that the delays in the Tranche 1 procurement process “could affect” renewable energy regulatory goals in the short-, medium- and long-term.⁶⁴

As it relates to Tranches 2 through 6, pursuant to an October 29, 2021 PREB order, PREPA is no longer administering this process and, instead, Acción Group LLC (“Acción Group”) was appointed as third-party administrator. On June 9, 2022, PREB issued a resolution and order establishing PREPA and LUMA’s respective roles in any future tranche.

Some of PREPA’s responsibilities in this process include, but are not limited to: (a) the selection of one PREPA Governing Board member from the members appointed by the Governor (at his sole discretion) to form part of the Selection Committee; (b) providing guidance and input to the Energy Bureau and PREB-IC concerning the lessons learned from Tranche 1 to ensure these lessons are incorporated in future tranches; (c) Providing legal advice and resources to ensure the RFP documents, including the PPOAs are included as part of the RFP and final contracts execution. LUMA’s responsibilities in this process include, but are not limited to: (a) selection one LUMA officer, with knowledge and/or experience in similar transactions, to form part of the Selection Committee; (b) providing any data and information required by the PREB-IC; (c) providing guidance and input to the Energy Bureau and PREB-IC concerning the lessons learned of Tranche 1 regarding interconnection studies, system impacts and other related technical matters to ensure they are incorporated in future tranches. Finally, PREB also reiterated that any final decisions made during the RFP process shall be determined by PREB, and that PREPA and LUMA’s roles shall in no manner delay the RFP process.⁶⁵

Tranche 2, which seeks 1,000 MW in renewable generation, has been delayed. As of March 2023, PREB-Independent Coordinator has not issued or circulated proposals for evaluation.

PREB announced the release of the third of six solicitations for new renewable energy and energy storage resources in February 2023. Tranche 3, which seeks to procure 500 MW of renewable resource generating capacity and 250 MW of energy storage capacity, will be

⁶² NEPR-MI-2020-0012 – February 22, 2021 Motion in Compliance with Order Submitting Responses to Stakeholder’s Questions Subject: Issuance of RFP and timeline for filing responses to questions received from stakeholders.

⁶³ FOMB - Media Release - PREPA Renewable Contracts published on March 25, 2022.

⁶⁴ Resolution regarding Motion in Compliance with the Order of April 12, 2023, presented by the Puerto Rico Electric Power Authority. NEPR-MI-2020-0012, April 26, 2023.

⁶⁵ Resolution and Order, Roles of PREPA and LUMA in the Procurement Process for Upcoming Tranches, In Re: The implementation of the Puerto Rico Electric Power Authority integrated resource plan and modified action plan, Case No. NEPR-MI-2020-0012, June 9, 2022

conducted by the PREB selected Independent Coordinator, Acción Group, and it is currently registering interested parties.

Table 6: Renewable procurement – revised potential timeline

Projects	#	Milestones	Estimated Completion Date
Renewable Generation & Battery Storage RFP	1	Submit revised projects with PREB approval to FOMB.	Delayed - Q1 FY2024
	2	Issue RFP for Tranche 2	Completed - November 2022
	3	Issue RFP for Tranche 3	Completed - February 2023
	4	Issue RFP for Tranche 4	Delayed- TBD
	5	Issue RFP for Tranche 5	Delayed- TBD
	6	Issue RFP for Tranche 6	Delayed- TBD

3.3.3 Pension Reform

Please refer to Chapter 9 (Pension Reform) for a detailed discussion regarding the challenges faced with PREPA's employee retirement system.

3.3.4 PREPA Reorganization and Legacy Generation P3

To achieve Puerto Rico's energy system transformation, a change in PREPA's historical roles, reassignment of PREPA's responsibilities, and separation of financial records to multiple entities is required. Consequently, to unbundle PREPA's vertically integrated monopoly, operations are being disaggregated into Generation and T&D utility functions – GenCo and GridCo, respectively. There are remaining critical tasks to fully establish HydroCo, PropertyCo, and HoldCo as separate and independent entities, finalizing the organizational structures and resources for each, and completing the Capital Contribution Agreements to transfer assets into every entity. GenCo is comprised of existing PREPA-owned generation resources that are to be operated and maintained by one or more private operators until their retirement, as mandated by Act 17-2019⁶⁶ and outlined in PREPA's approved Integrated Resource Plan.

On December 29, 2022, the Energy Bureau issued a Resolution and Order, whereby it authorized the creation of the abovementioned subsidiaries as well as the PREPA – Genco - HydroCo Operating Agreement (“PGHOA”). The PGHOA defines the relationship between PREPA, GenCo, HydroCo and LUMA regarding the development and approval of budgets, operating procedures with generators and the definition of responsibilities in front of and behind the demarcated interconnection points. The PGHOA also provides a process to have the legacy generation operator adopt the responsibilities established in the PGHOA. PREPA, in conjunction with the P3A and LUMA is working towards achieving all reorganization milestones and executing the PGHOA. The effective date for the execution of the PGHOA must be on or before June 30, 2023, before the legacy generation operator (“Genera-PR LLC”)

⁶⁶ The Puerto Rico Energy Public Policy Act, Act No. 17 of April 11, 2019

service commencement date on July 1, 2023. Table 7 Below is a summary of PREPA’s roadmap to reorganization.

Table 7: PREPA Reorganization RoadMap⁶⁷

#	Description	Responsible Party	Deadline
1	Submission of the PREPA, GenCo, HydroCo, Operating Agreement (“PGHOA”) and Contribution Agreements to the PREPA Board	PREPA	Completed on December 10, 2021
2	Approval of creation of GenCo, HydroCo and PropertyCo by PREPA Governing Board	PREPA	Completed on December 15, 2021
3	PREPA submission to PREB requesting approval of the reorganization (including the GGHOA and Capital Contribution Agreements)	PREPA	Completed on September 14, 2022
4	Approval by PREB of the PREPA Reorganization and PGHOA	PREPA/PREB	Completed on December 29, 2022
5	Confirmation of assets to be allocated to LUMA, GenCo, HydroCo, and PropertyCo	PREPA/LUMA	On or before June 30, 2023
6	Finalizing HR plan outlining employees that will be allocated to GridCo, GenCo, HydroCo, and PropertyCo	PREPA	Completion due by June 23, 2023
7	Employee Transfers to assigned entity	PREPA	On or before June 30, 2023
8	Registration of Subsidiaries Hydro Co, GenCo and Property Co with the Puerto Rico Department of State (“PR Department of State”)	P3A	Completed on March 3, 2023
9	Execution of Agreed Operating Agreements for HydroCo and GenCo facilities	PREPA	Completed on April 5, 2023
10	Execution of PGHOA	PREPA/LUMA	Effective date contemplated for June 2, 2023, or anytime on or before June 30, 2023
11	Confirm authorized signatory for PropertyCo, HydroCo and GenCo	P3A/PREPA	Completed on April 26, 2023
12	All tactical items for the entities to be operational: Subsidiary Registration & Creation (Establish EIN Number, Social Security Certification of Compliance) Merchant’s Registry	P3A	June 16, 2023
13	Execution of Facility Demarcation Agreements	PREPA/LUMA	June 15, 2023
14	Execute LGA Interconnection Agreement	PREPA/LUMA	Completion due by June 23, 2023
15	Execute Hydropower Interconnection Agreement	PREPA/LUMA	Completion due by June 23, 2023

⁶⁷ As submitted on May 26, 2023 PREPA NOV Response Letter – Table 7: PREPA Reorganization Roadmap

#	Description	Responsible Party	Deadline
16	Execute PropertyCo Capital Contribution Agreements	PREPA/LUMA	Completion due by June 23, 2023
17	Execute HydroCo Capital Contribution Agreements	PREPA/LUMA	Completion due by June 23, 2023
18	Execute GenCo Capital Contribution Agreements	PREPA/LUMA	Completion due by June 23, 2023
19	Establish HydroCo Operating Account	PREPA	Completion due by June 23, 2023
20	Establish GenCo Operating Account	PREPA	Completion due by June 23, 2023
21	Establish GenCo Fuel Account	PREPA	Completion due by June 23, 2023

3.3.5 HoldCo & HydroCo Rightsizing (future size and structure)

To complete PREPA’s reorganization and transformation, PREPA must efficiently allocate its human resources and base rate revenues to focus on improving the system. The public-private partnership operators will manage the T&D system and legacy thermal generation assets, and HydroCo will oversee PREPA's hydropower assets, while HoldCo must primarily handle legally required financial reporting, record-keeping, resolving past legal obligations, financing activities, compliance obligations, and pension administration.

LUMA, as the selected operator for the T&D System, began operating and maintaining the T&D System as of June 1, 2021, and Genera is expected to begin the operating and maintaining of the Legacy Thermolectric Generation Assets on July 1, 2023. As a result, PREPA’s (HoldCo) roles and responsibilities have been reduced drastically. To maximize benefits and minimize unnecessary costs from the reorganization of PREPA for the people of Puerto Rico, it is crucial to establish independent entities with distinct roles, eliminating duplicity and redundancy. HoldCo's functions must be primarily administrative, focusing on financial and pension management. For that reason, the Puerto Rico Fiscal Agency and Financial Authority (AAFAF), as the Government restructuring agency provided PREPA with a reorganized structure of the future state of HoldCo, that reflects PREPA’s future needs and headcount once Genera takes over on July 1, 2023. This reorganized structure was approved by PREPA’s Governing Board on June 9, 2023 via Resolution 5064.

Table 8: HoldCo & HydroCo Rightsizing

Projects	#	Milestones	Estimated Deadline	Responsible Party
HoldCo & HydroCo Organizational Structure Implementation	1	Submitting final AAFAF organizational structure plan analysis to the Oversight Board along with the approved by PREPA	July 2023	PREPA
	2	Submitting the finalized HoldCo and HydroCo reorganization, including: <ul style="list-style-type: none"> ■ approved staffing level to fulfill responsibilities ■ roster prior to the Generation OMA and organizational structure 	June 23, 2023	PREPA

	<ul style="list-style-type: none"> progress in implementing the AAFAF recommended and PREPA approved organizational structure 		
3	Status report of the reorganization and rightsizing of HoldCo and HydroCo, including roster at that moment and B2A's.	August 15, 2023	PREPA

3.3.6 HydroCo Federal Funding Maximization

Table 99: HydroCo Federal Funding Maximization

Projects	# Milestones	Estimated Deadline	Responsible Party
HydroCo Federal Funding Maximization Plan	1 Submitting a plan that include specific projects, federal funding sources, impact on the system and execution timeline	FY24-Q2	PREPA

3.3.7 Study on Net Metering and Distributed Generation

As provided in Act 114-2007, and as amended by Act 17-2017, existing customers who have installed distributed generation (i.e., rooftop solar) systems and who participate in the net metering program are entitled to receive a credit for the excess energy exported to the grid that is equal to the cost of the energy purchased from the grid. In other words, the energy exported to the grid is purchased by LUMA at the same price (the prevailing retail electricity rate) as the energy purchased by the customer from LUMA. Under Act 17-2019, this same compensation and credit structure will apply to new net metering customers, at least until April 11, 2024 (5-years from the enactment of Act 17-2019), and until PREB concludes a study on net metering and distributed energy and issues a determination establishing a new net metering compensation and crediting structure.

While renewable Distributed Generation (“DG”) provides benefits to rooftop solar customers it is a sub-optimal net metering program that may have unintended detrimental effects and risks, including an unequitable distribution of costs throughout the system. By requiring LUMA to purchase the excess energy produced by net metering customers at the prevailing energy rate, the effective cost to ratepayers of the renewable energy generated by net metering customers may be higher than the cost of purchasing that same quantity of electricity from other resources. As of June 2022, LUMA was required to pay \$0.28 for each kWh of energy exported to the grid by net metering customers, a cost that is then passed on, in whole or in part, to all other remaining customers.

Accordingly, as required by Act 17-2019, PREB must finalize the net metering and distributed generation study contemplated in Section 4 of Act 114-2007, as amended by Act 17-2019, by June 30, 2023. Thereafter, PREB must initiate a process for implementing recommendations and conclusions of the study and updating a net metering compensation and crediting structure, if it deems appropriate, which process must be concluded on or before April 11, 2024, with the potentially updated net metering structure coming into effect on that same date.

Table 10: Study on Net Metering and Distributed Generation⁶⁸

Projects	#	Milestones	Estimated Completion Date	Responsible Party
Study on Net Metering and DG	1	Initiated update to NRRI ⁶⁹ Draft work product for the Energy Bureau, “Recent State Actions Related to Net Energy Metering” (December 2020)	September 2022	PREB
	2	Completion of update to recent “State Actions” research	October 2022	PREB
	3	Complete draft NEM ⁷⁰ and DG analytical study	November 2022 – April 2023	PREB
	4	Commence administrative process	May 2023	PREB
	5	Finalize NEM and DG analytical study and release for stakeholder review	May – June 2023	PREB
	6	Develop draft rate design straw proposal based on NEM and DG analytical study	July – August 2023	PREB
	7	Hold technical workshops and hearings (if applicable / as necessary) on NEM and DG study and prospective rate designs	September – December 2023	PREB
	8	If determined by PREB, propose updated net metering and crediting structure	January – February 2024	PREB
	9	Solicit final comments on updated net metering and crediting structure	March 2024	PREB
	10	Establish final updated net metering and crediting structure	April 2024	PREB

On April 13, 2023, LUMA submitted an interconnection progress report for the period of January to March 2023. Subsequently, at the request of the PREB, LUMA participated in a Virtual Technical Conference on May 18, 2023 to discuss the above reference progress report.

As of March 2023, LUMA disclosed their Customer Care and Billing System (CC&B) had registered 78,097 clients with a capacity of 524MW. Exhibit 17 details the Energy Accredited and Exported from Customers enrolled in the Net Metering program from August 2017 through March 2023.

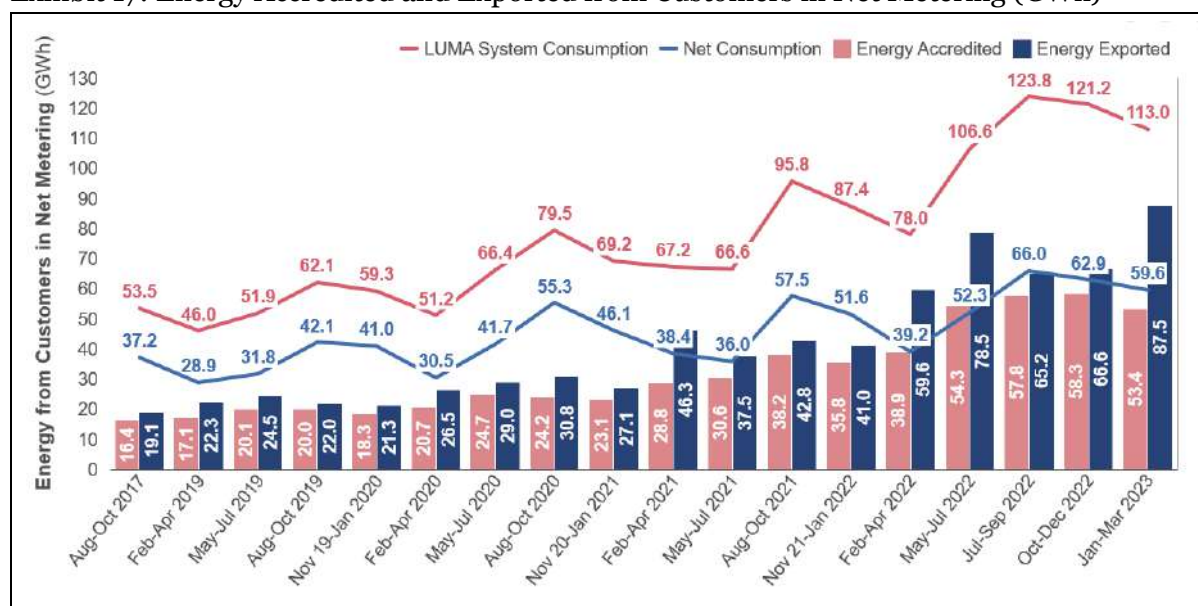
During the technical conference, it was highlighted that as the penetration of the distributed generation continues to rise, so does the saturation of the system. Consequently, it is foreseen that the need for grid improvements will become more prevalent.

⁶⁸ As submitted by PREB in FOMB response letter dated October 13, 2022.

⁶⁹ National Regulatory Research Institute

⁷⁰ Puerto Rico’s net energy metering

Exhibit 17: Energy Accredited and Exported from Customers in Net Metering (GWh)⁷¹



3.4 Transition to Private Generation Operator

As previously mentioned, on January 24, 2023 PREPA entered the Generation OMA with Genera. After execution, Genera began providing Mobilization Services to PREPA and, as of March 2023, PREPA, Genera and their respective teams have been executing the tasks required to effectuate the transition of GenCo functions and operations in a structured and phased approach. To complete the transition, PREPA, Genera and LUMA must achieve the following initiatives and milestones:

Table 1111: Generation OMA Initiatives and Milestones

Initiative	Milestone	Estimated Completion Date	Responsible Party
Mobilization Period	Execute tasks required to effectuate and finalize the transition of Generation functions and operations in a structured and phased approach.	Q4-FY23	Genera
Mid-Term and Long-Term System Planning	Ensure appropriate mid- and long-term system planning and timely and efficient execution of system-wide capital improvements.	FY24-FY25	LUMA/Genera
PREPA Operational Restructure	Take all necessary actions to (i) complete the competitive procurement process for substantially all of PREPA’s generation assets and (ii) complete ongoing efforts to transfer operation and maintenance of existing PREPA generation assets to professional and independent private operators	Q4-FY24	PREPA/LUMA/Genera
Front-End Transition to	Complete all other conditions and requirements before Service Commencement	Q4-FY23	P3/Genera

⁷¹ LUMA’s April 13, 2023 motion titled “Motion Submitting Interconnections Progress Report for January through March 2023 and Presentation for Next Compliance Hearing” Case No. NEPR-MI-2019-0016

Initiative	Milestone	Estimated Completion Date	Responsible Party
Legacy Generation P3 Service Provider	Date (current target commencement date is July 1, 2023).		
Fuel Savings Plan	Pursue all possible avenues available under its procurement opportunities and applicable legal framework to achieve better financing terms and reduce fuel premiums.	Q3- FY24	Genera

3.4.1 Objectives of the Transition to Private Operators

Private operation of PREPA’s T&D and generation assets forms a critical part of the transformation and the implementation of system modernization, generation upgrades, reliability, efficiency, federal funding, and capital delivery initiatives. The overall objective of the various private operators is to address and correct many of the operational and infrastructure deficiencies that have plagued PREPA’s T&D and generation services over the last decades, improve service quality, and deliver safe, reliable service at affordable rates, as determined by PREB within its rate-setting authority. As such, the private operators must deliver financial and operational performance improvements across the following six dimensions:⁷²

- **Improve operational performance through systematic upgrades and introduce and leverage experienced personnel.** LUMA and Genera must concentrate on eliminating PREPA's historical reliance on outsourced contracts, and can do so by bringing tasks in-house, empowering and training the local workforce, and attaining economies of scale.
- **Transform technology and systems to increase reliability and improve system resilience and efficiency.** LUMA and Genera must be capable, qualified, and focused on implementing modern technologies, digital capabilities, and infrastructure to enhance and improve operational and system performance.
- **Improve processes and procedures.** Drawing on their operational expertise, LUMA and Genera will further focus on streamlining and standardizing management processes and improving operational efficiencies.
- **Make decisions with limited political interference.** LUMA and Genera are subject to independent regulatory oversight by PREB, and contractual oversight from the P3A with respect to its performance under the T&D OMA and Generation OMA. This structure prevents political interference and allows experienced utility operators to make operational decisions with oversight from an independent regulator. It aims to depoliticize system management of the T&D System and generation facilities.
- **Implement effective and efficient capital project delivery.** LUMA and Genera are incentivized to establish the mechanisms and processes critical to effectively delivering capital infrastructure programs. Such programs are essential for the effective and timely transformation of the energy system and to ensuring federal funding required for grid modernization and generation asset improvements is well spent. This which in turn will

⁷² Commonwealth Certified Fiscal Plan, FY2022 Chapter 10 “Power Sector Reform”

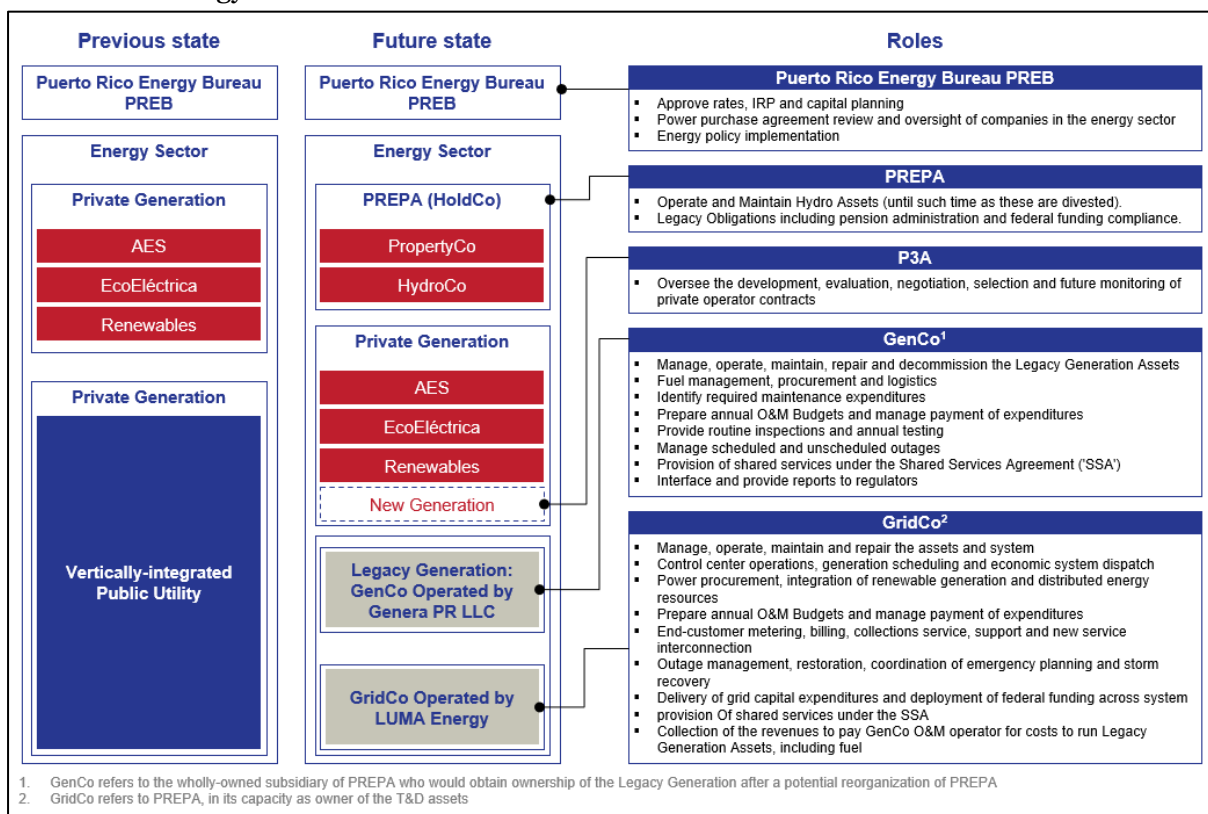
increase grid resilience, reliability, sustainability, and efficiency, and recover and mitigate high risk gaps.

- **Enable renewable energy generation and transmission.** LUMA, is assisting with renewables integration to enable the transition to a clean, reliable, and sustainable energy sector. This includes interconnection services for renewable energy projects, T&D System modernization, and net metering program management. These efforts are required to meet the goals set up by Act 17-2019.

3.4.2 Future Structure of the Energy System and PREPA, As Well As Roles and Responsibilities

Act 17-2019 calls for “transitioning from the current, vertically integrated monopoly comprising PREPA, to an energy system with multiple players as well as changes to the roles and responsibilities that have historically been concentrated within PREPA, and their reallocation across multiple entities.” Consistent with such energy key practices outlined in the T&D OMA, PREPA has transferred day-to-day roles and responsibilities over the operation of the T&D system and anticipates transferring the operation and maintenance of its generation systems, including deployment of federally and non-federally funded capital investments and short-, medium-, and long-term system planning. *Exhibit 18* provides an overview of the current and future state of the Puerto Rico Energy Sector.

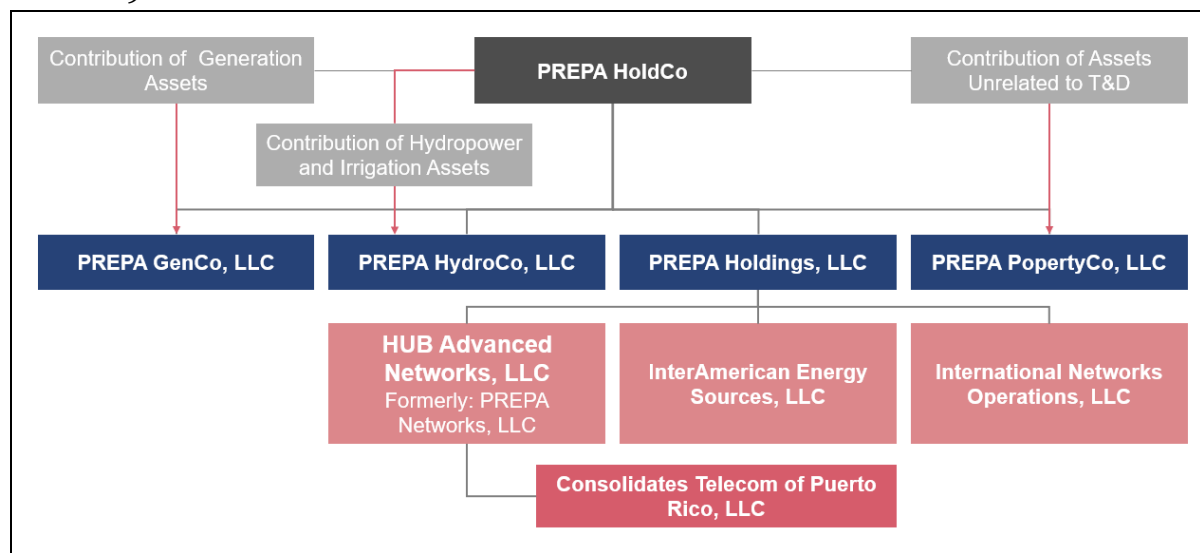
Exhibit 18: Energy Sector Transformation Current and Future State



PREPA has worked and coordinated with the P3A to develop a reorganization plan that is compliant with the energy policies of the Government of Puerto Rico and meets its obligations under the T&D OMA and Generation OMA. For further discussion regarding the T&D OMA and Generation OMA, please refer to Chapter 6. Performance Metrics.

Exhibit 19 reflects the December 29, 2022 PREB approved interim structure that included the creation of GenCo, HydroCo and PropertyCo before that of GridCo as a distinct and separate entity. Overtime, PREPA must establish a GridCo entity that encompasses only those T&D System functions and responsibilities transferred to LUMA. Any other remaining PREPA operations are to be encompassed within HoldCo, or within the other remaining subsidiaries.

Exhibit 19: Current PREPA Structure



3.5 Generation

3.5.1 Transitioning the Legacy Generation Assets to Genera

Delivering the safe, reliable, and affordable energy service the people and businesses of Puerto Rico deserve is necessary to complete the transformation of Puerto Rico’s energy system. A more efficient and cost-effective electric service is essential for Puerto Rico’s macroeconomic stability and to support PREPA’s restructuring and exit from Title III. Transitioning the operation of PREPA’s aging and outdated Legacy Generation Assets to a private operator is a key pillar of that transformation. To that end, through a competitive bidding process, the Government of Puerto Rico awarded a contract (the “Generation OMA”) for the management, operation, and maintenance of fuel supply, and decommissioning, where applicable, of the Legacy Generation Assets⁷³ to Genera PR—an entity formed by its experienced and highly qualified ultimate parent company, New Fortress Energy Inc.⁷⁴ The Generation OMA is another critical step in transforming Puerto Rico’s energy sector and modernizing its Legacy Generation Assets.

Genera is equipped to stabilize and optimize the operations of Puerto Rico’s Legacy Thermolectric Generation Assets until replacement baseload, renewable and distributed energy generation is installed, and the Legacy Generation Assets are decommissioned—ushering in both a clean and reliable energy future for the people of Puerto Rico. On January 24, 2023, Genera, PREPA and P3A executed the Generation OMA⁷⁵, and Genera began transitioning to become the private operator for PREPA’s Legacy Generation Assets. Following

73 Base-load generation plants and combustion turbine peaking units listed in Annex I (Legacy Generation Assets) of the Generation OMA.

74 Partnership Committee report Partnership Committee Report – Puerto Rico Public-Private Partnership for the Puerto Rico Electric Power Thermal Generation Facilities

75 Thermal Generation Facilities Operation and Maintenance Agreement (Thermal Generation Facilities) dated as of January 24, 2023 by and among PREPA, Genera PR LLC and the P3A.

the execution of the Generation OMA, Genera and PREPA embarked on the mobilization process required under the Generation OMA to ensure the transition of responsibilities. This process is expected to be completed on June 30, 2023, and thus, Genera will begin providing generation O&M services on July 1, 2023.

Furthermore, Act 120-2018,⁷⁶ as amended by Act 17-2019,⁷⁷ provides safeguards which include ongoing employment and certain vested rights for certain PREPA employees. These safeguards ensure the availability of government jobs for those employees opting to remain in public service and, alternatively, the option to exit public service and participate in the Voluntary Transition Program (“VTP”). The VTP is expected to facilitate the relocation of PREPA employees to Genera and indirectly help ensure the successful continuation of operation of generating facilities after the transition of their operation and maintenance to Genera.

On April 18, 2023, under Resolution and Order⁷⁸, PREB approved VTP Funding of up to \$29.4 million to fund a VTP program consistent with PREPA's obligations under Act 120-2018, as amended by Act 17-2019. As of May 22, 2023, there are 529 participants in the VTP program, with an estimated cost of \$16.2 million in total (including taxes).

A second VTP was approved by the Oversight Board on June 2, 2023 to be paid with the surplus of the first, this VTP expanded eligibility to all remaining PREPA employees that wish to exit public service and was slated to close on June 15, 2023. Results on participation are pending, but the objectives are directed towards minimizing the payroll impact at receiving agencies and in providing PREPA employees with an attractive exit window.

The following sections provide an overview of the Legacy Generation Assets transition to Genera.

3.5.2 *Overview of the Generation OMA*

Under the Generation OMA, Genera will ultimately assume responsibility for the Legacy Generation Assets, including operating these in the most efficient, reliable, and safe manner until decommissioning such assets—paving the path for the integration of renewable generation sources.

Genera will transform the Legacy Generation Assets through a two-phase process. First, Genera will complete certain tasks during an initial period, which will allow for the smooth and efficient transition of operation and maintenance from PREPA to Genera. Second, Genera will perform various tasks over the life of the contract, including, operating, maintaining, managing, and, if necessary, decommissioning the Legacy Generation Assets.

Consistent with the preceding, the Generation OMA will help:

- a. Transform PREPA’s generation into modern, sustainable, reliable, efficient, cost-effective, and resilient power generation facilities with technologically and operationally prudent practices to improve and increase power generation.
- b. Deliver cost-effective power generation to the transmission and distribution system.

⁷⁶ Puerto Rico Electric Power System Transformation Act (“Act 120-2018”)

⁷⁷ Puerto Rico Public Policy Act (“Act 17-2019”)

⁷⁸ "Determination on Request to Amend PREPA FY2023 Budget" (NEPR-MI-2921-0004),

- c. Increase resiliency, achieving performance in line with codes, specifications, and standards consistent with U.S. mainland power generation facilities.
- d. Increase generation reliability; and
- e. Implement industry best practices and operational excellence through managerial continuity and long-term planning.

The Generation OMA provides substantial financial and economic benefits for the electric ratepayers of Puerto Rico. It is structured with both fixed and incentive compensation. The fixed and incentive compensation cost is expected to be offset by operation, maintenance, and fuel savings that Genera intends to achieve during the contract's life. The incentive compensation mechanisms for the O&M budget, fuel and decommissioning savings are structured as 50%/50% sharing formulas between Genera and the electric ratepayers of Puerto Rico. In addition, the Generation OMA caps the maximum incentive compensation achievable by Genera in a contract year with the excess above the cap accruing 100% to the benefit of Puerto Rico electric ratepayers.

3.5.2.1 FUEL SAVING INITIATIVES

PREPA's customers are subject to the constant variance in fuel prices, reflected in their monthly bills through the fuel adjustment clause. Nevertheless, until renewables are integrated into the system, the LGA will continue operating, and thus, customers will remain subject to the fossil fuel price market changes. To address this, the Government of Puerto Rico selected Genera, which included several initiatives to reduce fuel costs in its proposal. Moreover, Genera proposed, and it was included in the Generation OMA, that the cost savings that result from these initiatives would be split between Genera as an incentive and ratepayers as a saving through the fuel adjustment mechanism.

Following the above, Genera will pursue all possible avenues available under its procurement opportunities (*i.e.*, procurement manual) and applicable legal framework to achieve better financing terms and reduce fuel premiums. Fuel contracts will be renegotiated, extended, or replaced with Genera acting as an agent of PREPA, which will provide increased access to markets.

Additional fuel savings opportunities include conducting maintenance to San Juan 5 & 6 and Costa Sur 5 & 6, the gas-fired units with lesser operation, maintenance and fuel costs of the LGA fleet.

Genera will also reduce the maintenance of intensive liquid fuel storage assets to reduce maintenance expenses to rebuild storage tanks and decrease fugitive emissions. A third party can replace the reduced storage to store and maintain fuel at a lesser cost. This would, in turn, reduce the delivery costs associated with liquid fuel transportation. This will be progressively implemented as storage assets must be repaired or replaced.

According to the Generation OMA, specific fuel savings initiatives, metrics and reporting cadence will be established and binding in the Fuel Optimization Plan, subject to P3A and PREB's approval.

3.5.2.2 MOBILIZATION PERIOD

Prior to assuming complete operational control of the Legacy Generation Assets and commencing the O&M Services, the Generation OMA contemplates a Mobilization Period to ensure an orderly transition of the responsibility for the management, operation,

maintenance, repairs, restoration, and replacement of the existing PREPA-owned fossil-fueled generation. The Mobilization Period will last approximately 22 weeks, and the aggregate amount of the Mobilization Service Fee will not exceed \$15 million.

During the Mobilization Period, Genera is responsible for extensive Mobilization Services, including (i) planning and implementing information technology systems and tools; (ii) reviewing applicable permits and compliance obligations; (iii) developing plans/procedures for various aspects of operation (including a Procurement Manual, Legacy Generation Emergency Response Plan, O&M Procedures, and Operator Training Programs); (iv) developing a communication plan; (v) evaluating and maintaining inventory; (vi) planning for and achieving key milestones; and (vii) developing a fuel savings strategy, among other things. Annex VII of the Generation OMA sets a detailed plan describing these services. These services are essential to Genera’s ability to assume control over the operation and maintenance of the Legacy Generation Assets and PREPA gaining the full benefits the Government Parties expect to achieve under the Generation OMA. These services and others provided by Genera during the Mobilization Period lay the foundation for Genera to perform the O&M Services in compliance with the Generation OMA and public policy.

During the Mobilization Period, Genera is tasked with complying with certain deliverables related to the Mobilization Services. The most significant and their status are:

Table 12: Genera Mobilization Period Deliverables

Initiative	Description	Estimated date	Current Status
Legacy Generation Emergency Response Plan	Submit to P3A and PREB plan of action that outlines the procedures and actions necessary for responding to any emergency	April 24, 2023	Completed
Interview Critical Employee Positions	Interview employees in critical positions (defined in Generation OMA, Annex X)	February 7, 2023	Completed
Employment Offers	Offer employment to full-time plant employees	April 4, 2023	Completed
Consumables, Spare Parts and Capital Spare Parts	Submit to P3A and PREB an analysis of the inventory of consumables, spare parts and capital spare parts for the LGA	March 27, 2023	Completed
Operations and Maintenance Procedures	Submit to P3A procedures related to the operation and maintenance and fuel supply of each LGA	April 24, 2023	Completed
Safety and Hazardous Materials Procedures Manual	Submit to P3A a manual that sets forth an illness and injury prevention program, a description of Genera’s participation in workplace safety and health management programs and a risk management plan	April 24, 2023	Completed
Operator Training Program	Submit to P3A a written program that ensures all personnel involved in providing the O&M Services have the required knowledge, training, and	May 24, 2023	Completed

Initiative	Description	Estimated date	Current Status
	experience for their respective assigned duties		
Procurement Manual	Submit to P3A and COR3 a manual with the procurement guidelines to be applied to the procurement of any new or replacement contracts, or modifications, amendments, renewals, and extensions of any contract	April 24, 2023	Completed
Communications Plan	Submit to P3A a communications plan describing systems to ensure that communication to Governmental Bodies, public officials, regulators, local municipalities and counties, employees, the media, the general public, and others is timely, effective, efficient, and consistent; and identifies the key personnel that will oversee and implement such plan	February 23, 2023	Completed
Invoice Review and Approval Procedures Manual	Coordinate with P3A and develop a manual that sets forth procedures related to the review and approval of all invoices	February 23, 2023	Completed
Fuel Optimization Plan	Submit to P3A a plan describing the fuel cost savings initiatives and outlining the expected methods and estimated fuel savings to be achieved	April 24, 2023	Completed
Federally Funded Generation Project Plan	Submit to P3A and COR3 a plan of action listing and describing projects that are a priority to Genera in the receipt of any funding for the LGA	April 24, 2023	Completed
Annual Performance Test	Submit to PREB, for its review and approval, the procedures for the Annual Performance Test, to be conducted each year to determine the tested capacity and heat rate for each LGA	May 2, 2023	Completed

3.5.2.1 GENERA RECRUITMENT

One of Genera’s priorities during the Mobilization Period was hiring as many PREPA GenCo employees as possible. The retention of the technical expertise garnered by these employees throughout their years of service is crucial. Pursuant to the Generation OMA, Genera is required to present job offers to GenCo plant employees. In accordance with this, Genera visited all the Legacy Generation Sites and PREPA’s headquarters to meet and greet all PREPA employees, including non-GenCo employees, that wanted to join Genera.

A total of 900 offers were extended as part of Genera’s hiring efforts, of which 575 offers have been accepted. All critical positions have been recruited and thus, Genera is prepared to operate the Legacy Generation Assets. Thus far, 237 declined offers and 88 are still awaiting confirmation. Genera continues its recruitment efforts to fill 25 positions, details of which are available on their website. Of these open positions, 18 are for executive and senior managerial

roles; eight will be based at the corporate office, while the remaining 10 will be spread across the Island.

Genera will continue hiring through the Mobilization Period and, if needed, during the O&M Services period.

3.5.2.2 O&M SERVICES

Pursuant to the Generation OMA, Genera will perform the O&M Services, which include:

- a. The operation and daily maintenance of the base-load generation plants and combustion turbine peaking units.
- b. The administration of facility contracts, including fuel contracts.
- c. The supply, storage, and maintenance of inventory.
- d. Maintenance, repair, and replacement of equipment.
- e. Management of blackouts by generation and restoration of power.
- f. Serve as liaison with PREPA and LUMA concerning the dispatch and matters of the T&D System.
- g. Serve as liaison with regulators, including PREB and environmental compliance agencies.
- h. Management of federal funds for the Legacy Generation Assets.
- i. Decommission Legacy Generation Assets that are no longer required for the generation system or pose a safety threat.

In addition to the day-to-day operations and maintenance functions, as part of the O&M Services, Genera will play an integral role in executing PREPA's modernization goals. Delivering major generation modernization capital projects on time and within budget is essential to protect Puerto Rico from future devastation from hurricanes and other natural disasters. No less critical, the O&M Services will also help improve everyday efficiency, safety, and reliability and benefit the ratepayers by putting the power generation system on a path to becoming more modern, sustainable, reliable, efficient, cost-effective, and resilient.

3.5.2.3 DECOMMISSIONING SERVICES

Because of the age and inefficient heat rates of the Legacy Generation Assets, the Environmental Protection Agency's mercury and air toxics standards ("EPA's MATS") requirements, and the IRP and Puerto Rico's public policy requirements, most of the Legacy Generation Assets must be retired and decommissioned. Nevertheless, certain Legacy Generation Assets may be needed for safe and reliable operations, as determined by the needs of the T&D System and the integration of new, modern, and renewable generation sources, which will be developed through PPOAs, private equity investment and federally funded projects, and following the parameters outlined in the IRP.

Through the Decommissioning Services, Genera will complete the dismantling and removing the structures comprising the Legacy Generation Assets and will complete all other activities indispensable for the retirement, dismantlement, decontamination, or storage of these assets. These activities must be completed in compliance with applicable law and the IRP. To enable this activity, Genera must prepare a Decommissioning Plan for (i) the permitting, demolition, decontamination, waste disposal and dismantling/or preparation for conversion of the Legacy Generation Assets and waste disposal for achievement of end-state conditions within a

prescribed time, (ii) the development of the Decommissioning Budget, (iii) reasonably acceptable arrangements to facilitate Genera's employees into new jobs or industries, and (iv) a timeline set forth when the services will be provided.

3.5.2.4 SERVICE FEES

Under the Generation OMA, an annual fixed fee of \$22.5 million plus inflation is payable to Genera each contract year. The inflation rate is capped under the contract at 3%. Genera will be reimbursed for the reasonable and documented costs incurred to perform its obligations, excluding disallowed costs and operator overhead.

After contract year five, the fixed fee is reduced to reflect any plants in their post-operational decommissioning phase, as determined by PREB. The minimum fixed fee post-year five until the Generation OMA ends is \$5 million. Therefore, as Legacy Generation Assets are retired and decommissioned per the IRP and PREB directives, the fixed fee will decline over the ten-year contract life.

The annual incentive compensation under the Generation OMA is based on six categories, along with a seventh penalty-based category. These categories include:

- O&M budget savings
- Fuel savings
- Decommissioning budget savings
- Availability performance of plants
- Safety performance
- Environmental performance.

The seventh category is penalty-based only and is paid if Genera exceeds its contractual periods for reporting obligations. The operations, fuel and decommissioning budget savings include a 50%/50% sharing formula between Genera and Puerto Rico electric ratepayers. Genera is obligated to achieve the annual Generation OMA budget approved by PREB. Under the Genera OMA, the maximum yearly incentive compensation (incentives minus penalties) that can be earned in a contract year is \$100 million. The incentive compensation, like the fixed fee, will decline as plants are decommissioned. Additional details regarding incentives and penalties are discussed in detail in Chapter 6.3.2 (Generation OMA Performance Metrics).

The power plant availability performance incentive ranges from \$5 to \$15 million for the combined baseload units and the combined peaking units and depends on performance above predetermined targets. The penalties are \$5 million each for baseload and peaking for below-target performance. The safety and environmental performance incentives and penalties are structured as heavily penalty oriented. The maximum incentives for safety performance are \$30,000 versus potential penalties of \$3 million. The maximum incentive for environmental performance is \$100,000 versus \$1 million in potential penalties. The maximum penalty for failure to adhere to applicable reporting obligations maximum penalty is \$1 million.

For decommissioning incentives and penalties, if Genera completes the decommissioning of a plant on time and under budget according to the plan that PREB approves, it can earn an incentive equal to 50% of the savings relative to the target budget cost determined by PREB. To the extent Genera completes decommissioning after the target date, they pay \$1 million per week of delay, subject to a combined maximum penalty of \$15 million for all plants.

3.5.2.5 TERM AND DEMOBILIZATION

The initial term of the Generation OMA is ten years. Nevertheless, it may be extended or reduced following the contract and pursuant to applicable laws. After the term expires or the Generation OMA is terminated, Genera must prepare a Demobilization Plan that P3A shall approve for the transition and handover of services and other rights and responsibilities. The plan must provide for: (i) acceptable arrangements to facilitate the transition of Genera’s employees, who meet certain qualifications at such Legacy Generation Asset and whose positions will be eliminated after the completion of the demobilization services, into new jobs or industries, and (ii) provide for the transfer and handover of the rights and responsibilities of the generation sites and any remaining Legacy Generation Assets back to PREPA or a successor operator.

3.5.3 Genera Objectives and Performance Management

Genera was hired to operate and maintain the Legacy Generation Assets. During the Mobilization Period, Genera performed a thorough assessment of all the GenCo components to identify the areas of most concern and the main necessities of the system that need to be improved in the near-term. This assessment ranges from the preparation of the employees to the efficiency of the Legacy Generation Assets.

Taking this assessment into consideration, Genera developed a set of improvement programs to stabilize and improve the Generation system. The initiatives developed by Genera are grouped into seven interdependent programs that together cover all functional areas of the utility:

Table 13: Genera’s Improvement Programs

Program	Target	Initiatives
Cost-efficiency	Reduction of the utilization of the operating budget	<ul style="list-style-type: none"> ■ Improve the heat rate of the Legacy Generation Assets, which in turn reduces fuel consumption and costs ■ Reduce overtime labor spent through efficient planning of operational shifts
Efficiency and Reliability	Implement and enhance the maintenance program to improve efficiency and reliability of the Legacy Generation Assets	<ul style="list-style-type: none"> ■ Utilize predictive technology for proactive equipment maintenance and prevent failures. ■ Train staff in new technological processes for equipment repair and maintenance. ■ Have digital data with original equipment manufacturers’ drawings and manuals from each equipment manufacturer, such as pumps, compressors, boilers, etc. ■ Optimization of the CMMS to capture lessons learned and communicate issues across all plants and reduce work order backlogs with better outage planning ■ Increase diagnostic testing ■ Verify the calibration of all flow meters for water, steam, fuel, air, etc. ■ Establish a more efficient air-fuel operating curve and try to operate the unit at its most efficient point according to the needs of the system ■ Optimize operational and maintenance methods to avoid forced outages

Program	Target	Initiatives
Fuel Optimization	Reduce fuel costs	<ul style="list-style-type: none"> ■ Renegotiate existing fuel contracts ■ Optimize Legacy Generation Assets efficiency to reduce fuel consumption ■ Improve the reliability of the base load units to avoid dispatch of peakers that burn more costly fuel ■ Prioritize maintenance to the most efficient Legacy Generation Assets to dispatch the less costly first ■ Prioritize utilization of cleaner fuels to reduce maintenance requirements ■ Stabilize maintenance schedule to reduce costs of out-of-schedule fuel purchase
Emergency Preparedness	Continuous monitoring and testing of emergency preparedness capabilities	<ul style="list-style-type: none"> ■ Implementation of the centralized Emergency Response Plan (ERP) which addresses emergency preparedness, response, disaster recovery, restoration and business continuity as well as collaborating with other stakeholders ■ Update plant-level ERPs for each of the Legacy Generation Assets ■ Procurement and dispatch of supplies ■ Verification of spare parts and vendor support for response to emergency events ■ Provide training to management and operational staff
Environmental Compliance	Operate ensuring environmental and sustainability standards	<ul style="list-style-type: none"> ■ Implement an environmental and legal compliance calendar system for action management and reporting for the Legacy Generation Assets ■ Implement program to monitor applicable laws and regulations to fulfill new/modified standards and requirements ■ Develop and implement Environmental Management Strategy and Framework aimed at process improvement and optimization ■ Enhance reporting capabilities through improved data management and processing ■ Evaluate and implement (where practical) system/instrumentation improvement programs aimed at enhancing compliance as well as system performance
Employee Development	Certifying and training employees to broaden their skillset and make them more competitive in the labor market	<ul style="list-style-type: none"> ■ Conduct personnel assessments to identify training needs ■ Improve the existing training center and identify new educational resources ■ Implement e-learning system

Program	Target	Initiatives
Safety	Promote a safe workplace	<ul style="list-style-type: none"> ■ Execute updated hazard and risk assessment aimed at identifying and prioritizing mitigation opportunities and eliminating any immediate dangers to life or health ■ Execute procedures, controls, training programs, improvements to safe work principles and drive a renewed corporate culture wherein compliance resulting in zero harm is achieved ■ Update and implement contractor HSEQ compliance program ■ Implementation of safety management system and framework to enhance and further grow compliance, reduce risk, and reduce occupational injuries ■ Implement training program aligned with management system

3.6 Implementation of Puerto Rico’s Energy Sector Transformation

Exhibit 20 provides a detailed description on the accomplished milestones relating to power sector reform, segregated by the primary area of focus. This encompasses the implementation of critical regulatory reform, the seamless transition to private sector operations, as well as the release of requests for proposals (RFPs) for renewable energy generation and battery storage. Each accomplished action item signifies substantial progress towards a more sustainable, efficient, and resilient power sector. However, the path forward entails pivotal tasks that are yet to be completed.

On the other hand, *Exhibit 21* outlines a comprehensive list of pending milestones essential for the successful reform of the power sector. These include notable events such as the implementation of the approved Integrated Resource Plan (IRP), and the ratification of Title II Plan of Adjustment. The Exhibit underscores the exigency of these reforms to assure the sector's transformation aligns with the PREPA and the Commonwealth’s Certified Fiscal Plans. Moreover, these milestones serve as a necessary steppingstone towards achieving the growth and revenue targets as set out in the Certified Fiscal Plan, thereby ensuring a sustainable, resilient, and reliable future for the power sector.

Exhibit 20: Completed Milestones for Power Sector Reform

Area of focus	Action item	Responsible party	Deadline
Implement regulatory reform	▪ Provide interim feedback on PREPA's Integrated Resource Plan (IRP)	▪ PREB	▪ Completed
	▪ Remove CW government approval needed for PREB staff appointments	▪ CW government	▪ Completed
	▪ Revise charter legislation to provide dedicated funding for power sector regulation that provides regulator with annual budget of \$20 million in line with benchmark	▪ CW government	▪ Completed ¹
	▪ Appoint the remaining PREB commissioner to serve staggered six-year terms	▪ PREB	▪ Completed
	▪ Increase number of PREB staff in line with appropriate benchmarks	▪ PREB	▪ Completed
	▪ Approve IRP	▪ PREB	▪ Completed
	▪ Conclude and publish a study regarding an optimal CIL T structure and submit recommendation to the Governor and tile Legislature.*	▪ PREB	▪ Completed
	▪ Create an oversight and monitoring division for LUMA operation and management agreement and other P3A deals, with experienced career civil servants and minimal trust employees	▪ P3 Authority	▪ Completed
	▪ Provide FOMB with staffing plan and organizational chart outlining the monitoring and compliance division created within P3A and required funding sources.	▪ P3 Authority/ AAFAF/ Legislature	▪ Completed
Transition to private operators	▪ Select a winning proponent to manage and operate PREPA's existing generation assets	▪ P3 Authority	▪ Completed
	▪ Perform market sounding to collect feedback on interests and concerns from interested parties for generation asset privatization	▪ P3 Authority/ Oversight Board	▪ Completed
	▪ Select a winning proponent to manage and operate PREPA's T&D system	▪ P3 Authority	▪ Completed
	▪ Prepare for and launch RFQ for tile selection of a proponent for PREPA's generation assets	▪ P3 Authority	▪ Completed
Renewable Generation & Battery Storage RFP	▪ Prepare for and launch RFP for the selection of a proponent for PREPA's generation assets	▪ P3 Authority	▪ Completed
	▪ Launch Tranche 2 RFP	▪ PREB	▪ Completed

Exhibit 21: Pending Milestones for Power Sector Reform

Area of focus	Action item	Responsible party	Deadline
Implement regulatory reform	▪ Amend PREB enabling act (Act 57-2014) to stipulate that PREB's budget will be funded through rates	▪ Governor/ Legislature	▪ Delayed - December 31, 2021
Transition to private operators	▪ Implement approved IRP and grid modernization plan to ensure a modernized, resilient, and reliable grid	▪ PREB/PREPA/LU MA/GENERA	▪ In process
Restructure legacy debt obligations	▪ Confirm Title III plan of adjustment	▪ FOMB	▪ To be determined
	▪ Implement PREPA plan of adjustment	▪ PREPA	▪ To be determined
Renewable Generation & Battery Storage RFP	▪ Complete and announce Tranche 2 RFP selected proponents	▪ PREB	▪ First half of FY24

4 Legal & Regulatory Structure and Resource Planning

4.1 Legal and Regulatory Structure

4.1.1 *Overview of Regulatory Structure and Key Legislation*

Historical Context

For much of its history, PREPA was structured as an unregulated monopoly, without a strong, independent third-party regulator. The successful transformation of Puerto Rico's energy sector into a safe, reliable, affordable, and modern system depends on the presence and active involvement of a politically independent, professionally supported regulator.

The utility industry has long recognized that an independent regulator is critical to overseeing the performance of utility energy service providers and protecting the interests of consumers. The regulator plays a vital role in ensuring that: (i) energy rates are just and reasonable; (ii) targets for quality of service, efficiency improvement, and renewable resources are met; and (iii) capital spending programs are implemented on time and on budget.

The Puerto Rico Energy Bureau (PREB) was established by Act 57-2014 as an independent and professional regulatory body to promote and enable the transparent implementation of Puerto Rico's energy policy. Act 57-2014 also established standards and procedures for PREB to assess and approve electricity rates, requiring that rates be "just and reasonable, as well as consistent with sound fiscal and operational practices which result in a reliable service at the lowest reasonable cost."⁷⁹

As Puerto Rico's energy sector continues its transformation, PREB will be responsible for promoting prudent investments, assuring increased quality of service to customers, and ensuring industry trends and technological advancements are appropriately incorporated into Puerto Rico's energy system.⁸⁰ To fully achieve its purpose, PREB must remain financially and operationally independent from the Commonwealth Government and its determinations must be free from any direct or indirect political influence or interference.

Several legislative acts have strengthened the regulatory framework and empowered PREB with greater authority and an independent administrative budget, setting forth ambitious goals for private sector operations and revitalization of the energy sector.

Act 17-2019

Act 17-2019 established a comprehensive energy policy that sets forth aspirations for the transformation of Puerto Rico's electric sector and regulatory guidelines to help realize this transformation. Key tenets and requirements of the Act include:

- **Unbundling (Functional Reorganization):** The Act requires the unbundling of the electric system through the transfer of operation and maintenance responsibilities of PREPA's transmission and distribution (T&D) and generation assets to private operators, thereby ending PREPA's vertically integrated monopoly.
- **System modernization and renewable energy:** Along with promoting grid resiliency through the development of microgrids for critical loads and facilities, the Act strongly promotes renewable energy and distributed generation. It updates Puerto Rico's

⁷⁹ Act 57-2014, as amended.

⁸⁰ Ibid.

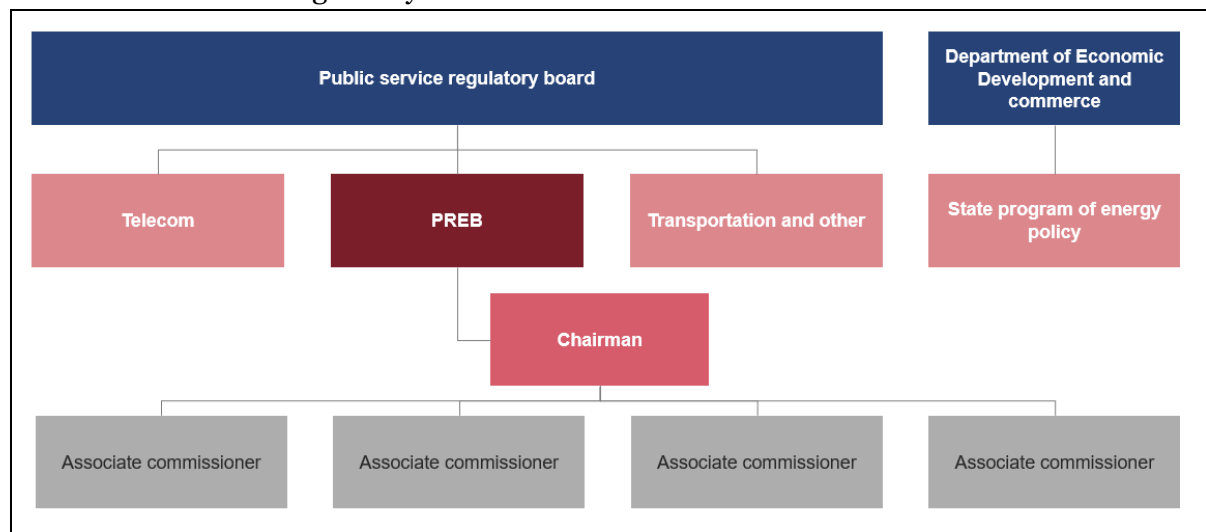
Renewable Portfolio Standard (RPS), targeting a share of 40% share of electric power generation from renewable sources by 2025, 60% by 2040, and 100% by 2050), allows faster permitting and interconnection for residential renewable projects, and mandates the elimination of coal-fired generation by January 1, 2028.

- Expanded PREB authority under Puerto Rico law:** The act confirms PREB’s role as an independent, apolitical regulator and expands its authority to (i) establish mechanisms for imposing incentives/penalties, (ii) exercise a high degree of scrutiny over the maintenance of the electric network, (iii) require reporting on the state of the electricity systems, and (iv) use alternative mechanisms to regulate tariffs based on service costs. The act also delineates PREB’s annual budget of \$20 million and makes it clear that this budget is not subject to executive or legislative approval. In addition, PREB is currently mandated to transition from its current employee structure to one with no less than 75% civil servant employees and no more than 25% trust employees.⁸¹

PREB’s Organizational Structure

Although administratively located within the Public Service Regulatory Board (PSRB), PREB is a functionally independent entity (*Exhibit 22*). PREB is comprised of five commissioners and makes decisions with majority approval. Commissioners are appointed by the Governor with the advice and consent of the Puerto Rico Senate and serve staggered terms.⁸² Commissioners must meet certain requirements relating to professional education and experience to hold their position and can only be removed for just cause.

Exhibit 2222: PREB Regulatory Structure



4.1.2 Key Regulatory Issues

PREB’s statutory mandate as an independent regulator is to promote an efficient, reliable, resilient, and customer-responsive energy system. As such, PREB’s primary responsibilities include (1) rate setting, (2) Integrated Resource Plan (IRP) approval and compliance, (3) protecting the interests of customers and consumers, and (4) ensuring workforce safety.

81 See Act 17-2019, Section 5.13 amending Section 6.7(k) of Act 57-2014.

82 PREB has its full slate of five commissioners, including the Chairman, in place. Under Act 57-2014, as amended, the terms are: The Chairman shall hold office for six (6) years, two (2) commissioners for four (4) years; and two (2) commissioners for two (2) years. The successors of all commissioners shall be appointed for six (6) year terms.

Pursuant to its enabling act, as amended, PREB is responsible for the oversight and implementation of Puerto Rico's energy public policy, including the various transformations currently under way with PREPA's T&D System and the legacy generation assets. Some of PREB's more important responsibilities include:

- **Oversight & Execution:** Exercising direct oversight responsibilities of all energy market participants (including the T&D operator, the generation operator, and current and new independent power producers, etc.) to ensure full compliance with energy public policy goals as mandated by law. This includes overseeing the quality and reliability of the electric power services provided by PREPA, LUMA, Genera, and any other electric power company certified in Puerto Rico. This also includes formulating and implementing strategies to achieve the objectives of Act 57-2014 as amended by Act 17-2019, including, but not limited to, (1) reducing and stabilizing energy costs permanently, (2) controlling volatility in the price of electricity in Puerto Rico, and (3) ensuring that electricity prices are affordable, just and reasonable, consistent with the public interest, and compliant with the parameters established by PREB through regulations.
- **Debt Repayment and Pension Rate Adjustments:** Reviewing and incorporating reasonable direct and indirect operational charges – such as the payment of pensions and debt repayment - while itemizing separately the cost of bonds and other obligations.⁸³
- **Rates and Resource Planning:** Reviewing rates and approving those found to be just and reasonable, ensuring expenditures in the energy system are prudent and consistent with energy public policy, and ensuring appropriate long-term resource planning through the periodic review of IRPs and other capital investment plans.
- **Transparency:** Requiring any electric power service company certified in Puerto Rico to keep, maintain, and regularly submit to PREB those records, data, documents, and plans that are necessary to attain the public policy objectives of Act 57-2014, as amended by Act 17-2019.
- **Renewable energy portfolio standards:** Supporting investments in generation and related resources directed at reaching Puerto Rico's RPS of 40% by 2025, 60% by 2040, and 100% by 2050. Following PREPA's delay in conducting the renewable energy resource procurement processes, PREB will also execute the second tranche and future renewable generation procurements through an independent coordinator.⁸⁴
- **Net energy metering:** Establishing and periodically updating Puerto Rico's net metering program so that it both promotes cost-effective investment in renewable energy systems and ensures appropriate recovery of costs among customer classes.
- **Contributions in lieu of taxes (CILT):** Ensuring full compliance by PREPA and the municipalities with the establishment of CILT-eligible consumption levels and the billing, collection, and payment of amounts relating to electricity consumption by municipalities in excess of the CILT-eligible consumption levels and of the CILT-ineligible consumption.
- **Energy Efficiency (EE):** Adopting a regulatory framework that promotes the adoption of energy efficiency measures available to all customer classes, including municipalities, in a manner that enables Puerto Rico an opportunity to reach the goal of thirty percent (30%) cumulative reduction in energy usage from energy efficiency by 2040, as compared to PREPA's FY2019 net utility sales. PREB adopted a regulation for Demand Response (DR) on December 10, 2020, and EE on January 21, 2022. The adopted DR and EE regulations

⁸³ See Act 57-2014, Section 6.25(b) and subsections.

⁸⁴ PREB Resolution & Order issued on January 25, 2022. See NEPR-MI-2020-0012.

utilize similar program approaches for development, administration, implementation, and funding. Following a PREB resolution earlier this year, LUMA plans to commence its commercial emergency and economic DR programs in fiscal year 2023, while the launch of a residential battery DR program is scheduled for fiscal year 2024, factoring in the necessary period for administrative setup and technology implementation. A holistic program, inclusive of EE and DR branding is anticipated to be fully functional by fiscal year 2025.⁸⁵

- **Wheeling and cost unbundling:** Establishing and enforcing the rules and regulations for the unbundling of PREPA costs and the proposal of new industry structures to introduce competition among generators to provide services, primarily to large commercial and industrial customers.

Currently, PREB is the power sector's regulator and obtains its powers from the Legislature. The Oversight Board has ultimate responsibility under PROMESA related to Certified Fiscal Plan and budget issues for the Commonwealth, PREPA, and other covered territorial instrumentalities. PROMESA provides that the Governor and Legislature may not enact or implement any statute, regulation, policy, or rule that impairs or defeats the purposes of PROMESA as determined by the Oversight Board. Because PREB is a territorial entity, it is subject to the same constraints as state agencies and public corporations. Therefore, in the event PREB's actions impair or defeat PROMESA's purposes, as determined by the Oversight Board, the Oversight Board may enforce PROMESA's constraints by directing PREB and seeking judicial intervention when necessary. To ensure PREB becomes a best-in-class regulator, the Oversight Board has proposed a few structural changes in the 2023 Commonwealth Certified Fiscal Plan.⁸⁶

4.1.2.1 GUIDING PRINCIPLES FOR RATEMAKING

To achieve an optimal rate structure, PREB is required by law to consider the following non-exhaustive set of guiding principles for Ratemaking:⁸⁷

- **Just & Reasonable:** PREB must ensure rates are affordable, just, reasonable, and non-discriminatory for all electric service consumers in Puerto Rico to provide reliable service at the lowest reasonable cost.
- **Fiscal responsibility:** Rates must be sufficient to cover payment of, among other things, fuel and purchase power costs, and the costs of electric utility operations, including operating costs (which may include direct and indirect labor related expenses such as pensions), capital requirements, debt repayment and other obligations.
- **Affordability:** The Ratemaking process should account for customer socioeconomic factors and conditions (e.g., consideration of subsidies and other cost-allocation measures).
- **Cost causation/cost of service allocation:** Customer electricity rates should be based on the cost of providing service to a specific type or class of customer, except where otherwise mandated by law (e.g., subsidies for low income, hotels, senior citizens).

⁸⁵ PREB Resolution & Order issued on February 16, 2023. NEPR-MI-2022-0001.

⁸⁶ 2023 Commonwealth Certified Fiscal Plan, 5.3.1 Power Sector / Energy Reform

⁸⁷ PREB's authority to review rates and approve modifications or temporary adjustments are established under Section 2.8 of Act 57-2014, which amends Section 6(B) of Act 83-1941 which is expected to be fully executed prior to the close of FY23 as approved by the Oversight Board"

- **Transparency:** Rate components and calculation methodology must be clearly communicated (fixed monthly and volumetric customer consumption), providing customers with detailed information on the costs covered by rate components.
- **Policy alignment:** Customer behavior is incentivized to be consistent with energy public policy (e.g., promote improvements in energy efficiency, reward customers for reliability benefits associated with customer-owned resources, encourage achieving renewable portfolio standards).

4.1.2.2 PREPA'S CURRENT RATE STRUCTURE

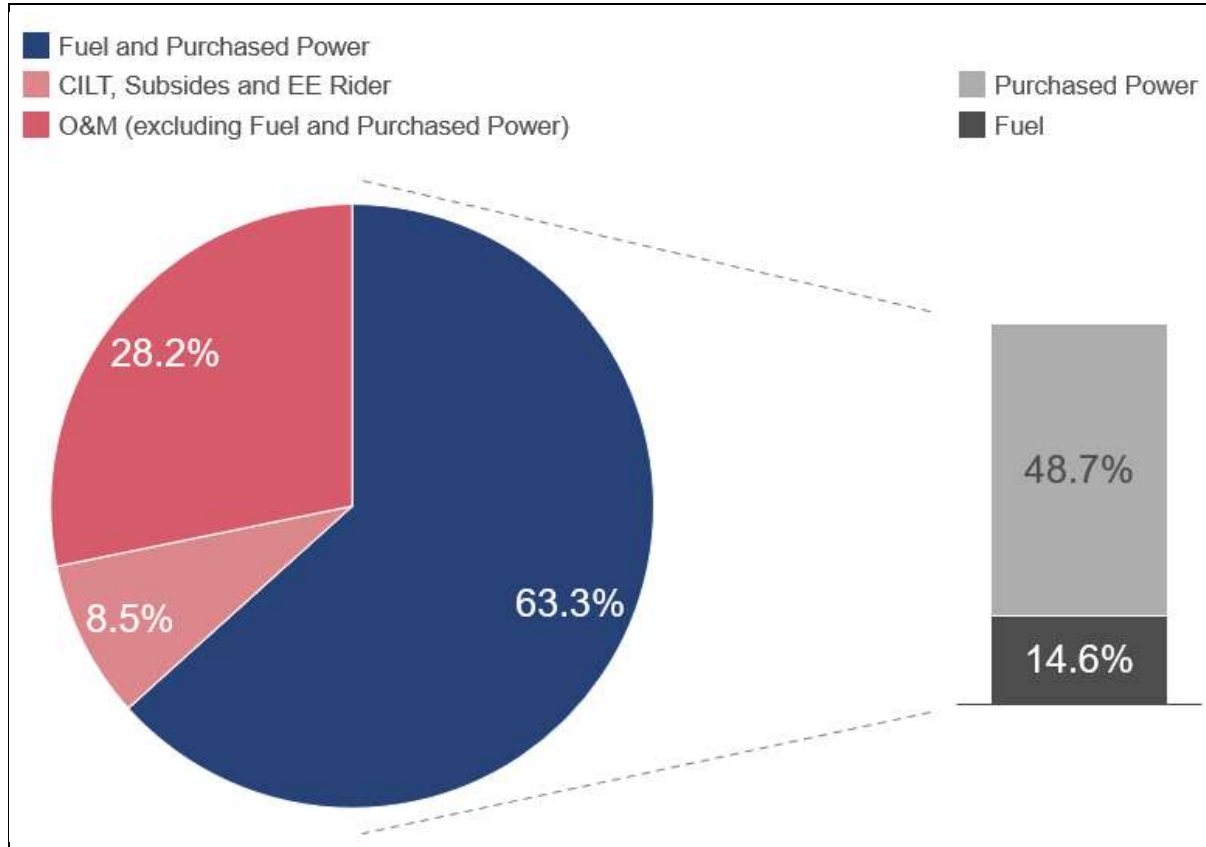
The current rate structure was established and approved within PREB's Resolution and Order in case CEPR-AP-2015-0001 dated January 10, 2017.⁸⁸ This rate structure is anticipated to stay in effect until July 1, 2024, as mandated by the PREB Resolution and Order in case NEPR-MI-2021-0004 dated May 31, 2021. The same PREB Resolution and Order deems that a formal rate review shall be filed by LUMA no later than August 1, 2023. The Initial Budgets, and the now proposed Annual Budgets filed by LUMA with P3A and PREB on May 16, 2023, were within the limits of the base rate approved by PREB for GridCo and GenCo and implement methodologies consistent with the 2017 Rate Order as determined by P3A as Administrator to the OMAs. Thus, the operators are not seeking a base rate increase in connection to the Annual Budget Filings. The 2023 Certified Fiscal Plan's FY2024 through FY2026 expense forecast reflects LUMA's Annual Budgets as filed before PREB on May 16, 2023 and are in accordance with P3A's determination (until such time as PREB determines otherwise). PREPA, through its proposed HoldCo and HydroCo budget filings, had exceeded its allocation of base revenues thereunder. Consequently, PREB must review their submission and issue a determination on whether to reduce the budget requests, adjust the rate allocation, or contemplate a modification of the base rate. The PREB's decision is scheduled to be delivered prior to June 30, 2023.

Overview of PREB-Approved Rates

The 2017 rate order establishing PREPA's new rate structure marked a meaningful step toward greater transparency by separating CILT and subsidy riders from the fuel and purchased power rate components. In FY2024, the projected rate components are 8.5% for CILT, the EE rider and other subsidies, 28.2% for operating and maintenance costs, and 63.3% for fuel and purchased power (*Exhibit 23*).

⁸⁸ Amended in part and affirmed in part on March 8, 2017.

Exhibit 2323: Overall Rate Composition, FY2024 (based on nominal rates)⁸⁹



Significant work remains to be done to achieve a rate structure that covers relevant operational, maintenance, and capital expenditures for the benefit of customers and consumers while also encouraging sustainable economic development. The regulatory reform that has been set in motion will allow Puerto Rico’s electric system to better serve its customers reliably and cost effectively.

4.1.3 Overview of CILT Reform

The Government of Puerto Rico has made significant changes in the treatment of the CILT by enacting Act 57-2014 and Act 4-2016. Under the revised rate structure, PREPA recovers the cost of CILT via the subsidies and CILT rider on customer bills. The CILT rider provides greater transparency and accountability for customers and establishes incentives for improved municipal energy efficiency. Any additional reductions or amendments would require further legislation.

Actions taken to implement CILT reform include the following:

- **Transparent billing:** CILT costs are shown as a separate line item in customer bills.
- **New treatment for ineligible service accounts:** Municipal for-profit and other ineligible entities from receipt of the CILT electric service credit.
- **Municipal consumption cap:** A legally established total consumption (kWh) cap was implemented during FY2017 on the municipal CILT per municipality and reduced by 15% over following three fiscal years (5% each year).

⁸⁹ Does not include possible future costs of legacy debt and pension obligations

- **Energy efficiency incentives:** A mechanism that promotes energy efficiency and additional savings above the mandated total consumption cap was imposed on municipalities by Act 57-2014; if the conditions set forth in Act 57-2014 and Act 83-1941 are met, municipalities would receive a payment from PREPA for the value of the difference between the mandatory total consumption cap and actual consumption, which would only be payable if all municipalities, in the aggregate, comply with their respective caps.

In FY2022, the CILT rider amounted to approximately 1.3% of the average customer rate.

4.1.4 *Federal Environmental Law Requirements & Compliance*

As an electric utility operator, PREPA must comply with environmental laws and regulations, including the Clean Air Act (CAA), which is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish the national ambient air quality standard (NAAQS) to protect public health and public welfare and to regulate emissions of air pollutants, including the emissions of hazardous air pollutants.

Under Section 107(a) of the CAA, each state, territory, or local air district has the primary responsibility for submitting a state implementation plan (SIP) for specifying the manner in which NAAQS will be achieved and maintained within each of its air quality control regions.⁹⁰ The CAA also requires that the EPA review and approve SIPs that meet the requirements of the Act. As the new operator of the legacy generation units, most environmental compliance related responsibilities will now fall to Genera.

4.2 **Resource Planning and Resiliency**

Act 57-2014 and Act 17-2019 require LUMA to prepare and submit to PREB an IRP for a 20-year planning period, which must be revised every three years. Act 17-2019 defines the IRP as a resource plan that must consider all reasonable resources, including both energy supply (e.g., utility-scale generation) and energy demand (e.g., energy efficiency, demand response and distributed generation), to reliably satisfy the current and projected future needs of Puerto Rico's energy system and its customers at the lowest reasonable cost.⁹¹ Act 57-2014 also mandates that the IRP include evaluations of the Transmission and Distribution System (e.g., capacity and reliability) and the environmental impact of the energy system.⁹²

PREB approved the current IRP on August 2020, requiring PREPA, LUMA and Genera to follow a Modified Action Plan and Modified Preferred Resource Plan until an updated IRP is approved, with the following grid and generation modifications to form the three core elements of the Approved IRP:

1. **Increasing share of renewable generation and storage:** including the additions of new renewable energy generation, energy storage, retiring or converting all existing coal and heavy fuel oil generation, and system modifications (e.g., synchronous condensers) to enable integration of inverter-based generation.

⁹⁰ As detailed in U.S.C. § 7407(a)

⁹¹ Act 17-2019, Puerto Rico Energy Public Policy Act, approved April 11, 2019, Section 5.2(II).

⁹² Act 57-2014, Puerto Rico Energy Transformation and RELIEF Act, approved May 27, 2014, Section 6C(h).

2. **Enhancing grid resilience:** including capital investment in the Transmission and Distribution System to support greater resilience and reliability and further optimization proceedings to determine optimal T&D System investments to improve resiliency.
3. **Enabling customer choice:** including changes to the system to support the incorporation of DG (e.g., rooftop solar photovoltaic) and recommended EE and DR programs, allowing the customer to play a meaningful role in Puerto Rico’s electricity grid.

As of June 1, 2021, LUMA is responsible for the T&D System’s operations and is responsible for implementing several aspects of the approved IRP. PREB has issued an order taking over direct responsibility for managing the procurement of new renewable energy resources, commencing with the Tranche 2 and Tranche 3 RFP process through an independent coordinator, Acción Group, LLC (Acción Group or Acción).⁹³

LUMA has started preparing the new IRP for submission to PREB and is targeting filing the IRP in early calendar year 2024.

4.2.1 *PREB Modified Action Plan and Modified Preferred Resource Plan*

PREB’s Final Resolution and Order (Final Order) approved in part and rejected in part the Proposed IRP and ordered the adoption and implementation of a Modified Action Plan and Modified Preferred Resource Plan in lieu of PREPA’s proposed Action Plan and Preferred Resource Plan (Approved IRP).⁹⁴ The following three notable modifications to the grid were approved by PREB, which form the core elements of the Modified Action Plan and Modified Preferred Resource Plan for PREPA:

1. Increasing share of renewable generation and storage while retiring or converting existing coal and heavy fuel oil generation;
2. Enhancing grid resilience through hardening capital projects, including potential mini-grids and microgrids; and
3. Enabling customer choice through DG, EE, and DR programs.

Act 17-2019 outlines Puerto Rico’s aspiration to generate 100% of its electricity from renewable sources by FY2050. Unfortunately, the timelines for the procurement and deployment of renewable resources originally established in the IRP are unlikely to be achieved given the procurement processes mandated by PREB. Required work has fallen significantly behind schedule. On February 2, 2022, PREB approved 18 power purchase and operating agreements (“PPOAs”) for Solar PV in connection with the Tranche 1 RFP, signed between June and August 2022. Of the 18 executed PPOAs, nine were signed June 30, 2022 and the date to achieve closing before triggering the automatic termination was February 25, 2023. On January 2023, PREB approved amending the automatic termination date to April 26, 2023. Currently, due to ongoing negotiations and amendments with various PPOA developers – claiming several alleged reasons, PREB granted a final extension of the closing date to June 30, 2023⁹⁵. Additionally, Tranches 2 – 6 are still outstanding. Cost for the deployment of renewables have increased significantly recently, and current market-based renewable energy prices are already higher than those projected in the IRP⁹⁶. As a result, the

⁹³ See PREB October 29, 2021 Resolution and Order (Case No. NEPR-MI-2020-0012).

⁹⁴ Final Resolution and Order, In Re: Review of the Puerto Rico Electric Power Authority Integrated Resource Plan, Case No. CEPR-AP-2018-0001, August 24, 2020.

⁹⁵ Resolution and Order: Extension of time for Tranche 1 Executed Projects signed June 30, 2022 to achieve closing date – April 24, 2023 (NEPR-MI-2020-0012)

⁹⁶ NREL Annual Technology Baseline 2022

base case projections in the 2023 Certified Fiscal Plan for the share of renewables in FY2025, FY2040, and FY2050 only reach 25%, 87%, and 100%, respectively, compared to targets of 40%, 60%, and 100%.

Act 17-2019 also requires the phase-out of coal-fired power plants by December 31, 2027. As a result, the current coal-burning units at Guayama are scheduled to retire in FY2028, which will significantly reduce base-load generation capacity in Puerto Rico. While the existing coal-fired generation capacity is expected to be replaced with an equivalent proportion of renewable resources, given the delays outlined before, it is unclear if such renewable resources will be available when needed. Should there be no available new renewable resources, and absent a thorough plan to identify the necessary, environmentally compliant and cost-effective resources to ensure a continued provision of reliable generation, there is a significant risk that older, less efficient, more expensive and more polluting oil-fired generation units would need to be deployed.

Uncertainties over the ability to achieve certain targets and the projections for key load drivers create significant risks that Puerto Rico's energy system may find itself without the necessary generation resources to meet a potentially higher and more variable demand than projected such as load increases that require outdated units to run longer, which increases risks of failure and outage. Some of the uncertainties that, unless appropriately addressed, represent risks to the medium- and long-term reliability of the system include:

- **Energy Efficiency:** Act 17-2019 outlines the target to reach a 30% reduction of net load below the 2019 baseline by 2040 through energy efficiency measures. Since Interim Period Service Commencement, LUMA has provided input on an updated Energy Efficiency and Demand Response regulation and developed a Transition Period Plan with proposed programs, estimated savings, and associated costs.
- **Distributed Generation:** The 2023 Certified Fiscal Plan has a general growth factor projection for customer adoption of distributed generation solutions but lacks a bottom-up, granular modeling that incorporates assumptions on the future costs and benefits to ratepayers that incentivize adoption. As such, the actual pace at which DG technologies are adopted in Puerto Rico may vary from those currently assumed by PREB and LUMA. The most significant impact causing the increase in forecast DG adoption as compared to the 2022 PREPA Certified Fiscal Plan is the observed adoption rates since the last forecast's development, rather than a change in methodology. LUMA's projection is derived as a function of both observed year-over-year growth in installed capacity between December 2021 and February 2023 and the EIA's forecast of national small-scale solar PV capacity. The Fiscal Plan assumes that the recent acceleration in PV adoption will gradually revert to the EIA projected growth rate by the end of FY2025.
- **Electric Vehicles:** The EV uptake projections included in the 2023 PREPA Certified Fiscal Plan are based on work performed by the DOE related to the PR 100 study and include a forecast developed by the DOE and National Labs for Puerto Rico.

LUMA has not completed studies regarding risks to the system and to rates associated with load impacts from EE, EV adoption and DG/Cogen adoption and accordingly has not developed mitigation measures. Several studies such as the Baseline Study, the Potential Study and the Net Energy Metering Study are the responsibility of PREB and are either ongoing or not yet started. Ongoing studies have plans to have results after Spring 2024.

At present, LUMA derives its forecasts of DG from the Energy Information Agency's (EIA) national forecast, EE from the legislative mandate in Act 17-2019 related to Energy Efficiency

Savings requirement, and EV adoption by taking as given the values projected by DOE PR100 for light duty vehicles.

Increasing Share of Renewable Generation and Storage

In the Final Order, PREB ordered PREPA to develop a plan to procure 3,750 MW of renewable energy and 1,500 MW of battery storage by 2025. In addition, PREB approved the installation of up to 81 MW of local peaking capacity procured through a technology-agnostic, competitive bid RFP process that is open to all single or aggregate sources of demand and supply-side options. PREB also approved the conversion of eight retired steam plants to synchronous condensers to enable voltage stability following the installation of inverter-based renewable generation and battery storage. The Final Order clarified that the conversion plan will be subject to additional studies and coordinated with retirement schedules, with funding for said works yet to be determined.

Regarding fossil fuel-powered power PPOAs PREB approved both the extension of the EcoEléctrica contract through 2032 and the cessation of the agreement for coal-fired AES units by the end of 2027, pursuant to Act 17-2019. Finally, PREB approved the retirement of approximately 2.4 GW of existing fossil fuel units subject to the EPA's MATS rule.⁹⁷

4.2.1.1 RENEWABLE GENERATION AND STORAGE

Under the Modified Action Plan, PREPA was required to develop a detailed procurement plan for the acquisition of renewable resources and battery energy storage to achieve compliance with the RPS subject to the Energy Bureau's guidance and approval. Then, consistent with the PREB-approved procurement plan, PREPA was required to issue a series of RFPs for the provision of (a) renewable energy in support of Act 82's RPS mandate, and (b) battery energy storage in support of (1) capacity needed to meet PREPA's peak load requirements and (2) requirements for integration of renewable energy generation. These competitive procurements must be open to all forms of renewable energy including, but not limited to, wind, hydro, solar photovoltaic (PV), VPPs, and energy storage. Successful proponents of renewable generation and energy storage projects will enter long-term PPOAs, energy storage services agreements, or grid services agreements (in the case of VPPs) with PREPA.

On February 22, 2021, as part of its efforts to implement the Modified Action Plan, PREPA issued an RFP for 1,000 MWs of renewable power production and 500 MWs of battery storage resources, incorporating recommendations from PREB and the Oversight Board.⁹⁸ The RFP solicited proposals for the design, construction, installation, ownership, operation, and maintenance of renewable energy resources, energy storage resources, and VPPs for sites across Puerto Rico and for a service period of up to 25 years. The RFP was the first of six planned RFP tranches to be released over the next two years seeking a cumulative 3,750 MWs of renewable energy resources and 1,500 MWs of energy storage resources.⁹⁹ The cadence of each RFP tranche and the respective minimum required renewable energy and battery storage capacity to be procured per tranche, as ordered by PREB in the Modified Action Plan, is included in Exhibit 24. PREB is responsible for reviewing and approving any recommended projects and associated PPOAs resulting from the RFP process if deemed to be consistent with the IRP and Puerto Rico energy public policy.

⁹⁷ Units to be retired are Aguirre 1 & 2, Costa Sur 3, 4, 5, & 6, Palo Seco 1, 2, 3, & 4, San Juan 7, 8, 9, & 10, and AES's coal generation facility.

⁹⁸ PREPA RFP No. 112648, February 22, 2021.

⁹⁹ More information on the status of the RFP process can be found in Chapter 3.2.1.

Citing the delays that occurred during the Tranche 1 RFP process, PREB determined that it would appoint an independent coordinator, Acción Group, to conduct the Tranche 2 and 3 RFPs. Acción Group's roles will include, without limitations: (a) prepare RFP documents; (b) manage all communications; (c) manage communications protocols; (d) manage code of conduct; (e) make recommendations regarding the RFP process; (f) develop evaluation methodology, models, criteria, and assumptions; (g) conduct evaluations of proposals; (h) lead contract negotiations; (i) report to PREB during process; and (j) assure that the goals of Tranches 2 and 3 RFPs and related Updated Procurement Plan provisions are achieved.

The Tranche 1 process has taken longer than PREPA and PREB anticipated at the outset of the renewable generation and energy storage procurement process. Delays in the completion of final interconnection studies continues to be a limiting factor of tranche completion.

On December 16, 2021, PREPA filed a document titled Motion Submitting 733MW of PV Renewable Energy Draft Power Purchase and Operating Agreements Offered in Tranche 1 of PREPA's Renewable Generation and Energy Storage Resources RFP for Energy Bureau Evaluation and Approval ("December 16 Motion"). In that December 16 Motion, PREPA identified fifteen solar PV projects totaling 732.7MW and submitted draft bespoke PPOAs contracts for those projects, for evaluation and approval by the Energy Bureau. In the December 16th Motion, PREPA also identified three battery energy storage resource projects (4-hour duration) totaling 220MW, for which PREPA indicated planned submission of bespoke energy storage services agreements (ESSAs) was intended by or before December 23, 2021. PREPA included in the December 16 Motion submission as Attachment A, a memorandum from PREPA's Tranche 1 Evaluation Committee describing the detailed evaluation approach taken to arrive at its selection of project offerings for approval.

On December 23, 2021, PREPA filed a document titled Supplemental Motion Submitting PV Renewable Energy Draft Power Purchase and Operating Agreements (PPOAs) as well as Energy Storage Service Agreements (ESSAs) as part of PREPA's Tranche 1 Renewable Generation and Energy Storage Resources RFP For Energy Bureau Evaluation and Approval ("December 23 Motion"). PREPA submitted three bespoke ESSA contracts totaling 220MW reflecting the projects stated in the December 16 Motion and submitted three solar PV bespoke contracts totaling 112.1MW, additional to the 732.72MW of solar PV projects submitted for authorization in the December 16 Motion. The combined solar PV resource procurements for which authorization was sought by PREPA was 844.82MW. Both PREB and later the Oversight Board provided their approvals of the 18 PPOAs in February of 2022.

PREPA then executed 18 PPOAs in or before August 2022, fulfilling the bulk of its resource procurement obligations in Tranche 1. Since then, Tranche 1 activities have focused on completing interconnection related tasks and keeping projects alive in a challenging development environment as proponents have also since claimed significantly increased costs driven by inflation, material cost increases due to supply chain issues and competing demand. In March 2023, energy facility permitting processes were adversely impacted by a decision of the Puerto Rico Supreme Court. PREPA is currently working with PREB and LUMA regarding interconnection agreements and related activities and has negotiated pricing and other amendments required to address the changing energy project development environment. PREB recently approved 5 of these amended Tranche 1 PPOA's submitted under seal.

The Tranche 2 bidding process was completed on December 5, 2022. However, as of March 2023, the PREB Independent Coordinator had not issued or circulated proposals for evaluation. Additionally, on February 1, 2023, PREB announced the release of the third of six solicitations for new renewable energy and energy storage resources for Tranche 3. The goal

of the Tranche 3 RFP is to procure 500 MW of renewable resource generating capacity and 250 MW of energy storage capacity. Tranche 3 will be conducted by the PREB’s assigned Independent Coordinator, Acción Group, and the process is currently open for registration of interested parties.

Exhibit 2424: PREB Guidance for Procurement of Renewable Energy Generation and Battery Storage Capacity

PREB guidance for procurement of renewable generation and batter storage capacity						
Tranche	RFP target release	Actual or new release date	Solar PV or equivalent other energy, MW		4-hr battery storage equivalent, MW	
			Minimum	Cumulative	Minimum	Cumulative
1	Dec 2020	Feb 2021	1000	1000	500	500
2	Jun 2021	Dec 2022	500	1500	250	750
3	Dec 2021	Feb 2023	500	2000	250	1000
4	Jun 2022	TBD	500	2500	250	1250
5	Dec 2022	TBD	500	3000	125	1375
6	Jun 2023	TBD	750	3750	125	1500

4.2.1.2 GRID RESILIENCY MEASURES

As the T&D System operator, LUMA is responsible for planning and implementing grid resiliency measures. As part of the Front-End Transition, LUMA developed capital plans, to be funded with federal- and non-federal capital, to repair, reconstruct, and modernize the existing T&D system and improve resiliency against extreme events. In its proposed Annual Budgets, filed on April 1, 2022, LUMA budgeted approximately \$2.6 billion from FY2023 through FY2025 for T&D infrastructure repair, modernization, and hardening projects. Further information on capital plans can be found in 5 (Federal Funding and Capital) and 3.5.0 (LUMA Improvement Portfolios) for PREPA and LUMA, respectively. Further information on sources and uses of federal funding can be found in Chapter 5 (Federal Funding and Capital).

4.2.1.3 ENABLING CUSTOMER CHOICE

PREB’s Modified Action Plan calls for further customer choice through various programs, including DG, EE, and DR. Since Commencement on June 1, 2021, LUMA has made significant advancements with respect to DG, EE, and DR. Further, LUMA has supported PREB’s new initiative on Electric Vehicles which was launched in October 2021.

LUMA is responsible for the integration of DG and the activation of net energy metering on customers’ bills. When customers install behind-the-meter generation systems, they can apply for a net energy metering credit on their bill. This allows customers to sell electricity back to the grid in exchange for a credit on their bill. Pursuant to Act 17-2019 the credit is equal to the full retail rate of electricity. At Commencement, there was a significant backlog of applications. Since June 1, 2021, LUMA has eliminated the backlog inherited from PREPA and continues to activate net energy metering customers, most recently reaching 10,000 activations in one quarter.

Act 57-2014 requires PREB to establish regulations governing EE and DR programs. PREB adopted a regulation for DR on December 10, 2020, and EE on January 21, 2022.^{100,101[66]} The adopted DR and EE regulations utilize similar program approaches for development, administration, implementation, and funding. Both documents require LUMA, or a program administrator (to be selected by LUMA following a competitive bid process) to implement DR and EE programs. Implementation of the adopted and proposed regulations is centered on a three-year period driven by three-year plans which will be developed by LUMA and Genera, on behalf of PREPA, and approved by PREB. Each three-year plan will identify the proposed DR or EE programs, budgets, and goals. LUMA is required to prepare and submit separate three-year plans for DR and EE. Following the first and second years of implementation of each three-year plan, LUMA will be required to submit an annual update to PREB for approval that describes in detail any proposed changes to the program offerings, performance metrics, targets, and/or budget.

All DR and EE programs must be assessed for cost-effectiveness through a custom cost-benefit test called the “Puerto Rico Test.” The process to develop the “Puerto Rico Test” has commenced, however no cost-effectiveness determination has been made by PREB. Until the Puerto Rico Test is defined and approved, a standard interim cost/benefit test—currently the standard Utility Cost Test—will be used to determine cost-effectiveness of proposed programs. For both EE and DR, Evaluation, Measurement, & Verification (EM&V) activities are required to be performed. Per the DR regulation, PREB will be responsible for evaluating DR programs while LUMA will be responsible for measuring and verifying the DR resources provided by all DR program providers through a set of formal procedures approved by PREB. In the proposed EE regulation, PREB will be responsible for EM&V activities.

The adopted DR and EE regulations permit the PREB-approved program budgets to be recovered in customer rates. In addition, the DR regulation permits LUMA to develop and implement (with PREB’s approval) time-varying rates and/or demand charges informed by the costs of distribution or transmission infrastructure and energy supply and capacity, so long as the rate structure does not discourage beneficial electrification.

In June 2022 LUMA filed the Transition Period Plan with PREB and presented the plan during a technical conference on June 29, 2022.^{102,103} The plan outlined the barriers to adoption and the program solutions, the value of energy efficiency, the Transition Period objectives, LUMA’s proposed Transition Period Programs and the long-term energy efficiency market transformation roadmap. In PREB’s February 2023 Determination of LUMA’s Proposed Transition Period Plan, PREB approved the plan and ordered LUMA to file an application for an Energy Efficiency Rider to be implemented on July 1, 2023 to fund Energy Efficiency related spending and programs in FY2024¹⁰⁴.

¹⁰⁰ Adoption of Regulation for Demand Response, In Re: Regulation for Energy Efficiency and Demand Response, Case No. NEPR-MI-2019-0015, December 10, 2020.

¹⁰¹ Adoption of Regulation for Energy Efficiency, In Re: Regulation for Energy Efficiency, Case No. NEPR-MI-2021-0005, January 21, 2022.

¹⁰² “Submittal of Proposed EE/DR Transition Period Plan” filed with PREB on June 21, 2022 Docket ID: NEPR-MI-2021-0006.

¹⁰³ “Submittal of LUMA’s Presentation for Workshop Scheduled for June 29, 2022” filed with PREB on June 29, 2022 Docket ID: NEPR-MI-2021-0006.

¹⁰⁴ “Motion to Submit EE Rider” on April 11, 2023, Case No. NEPR-MI-2022-0001 and “Motion Submitting Reconciliations for May 2023, Submission of FCA, PPCA, and FOS Calculated Factors, and Request for Confidential Treatment Subject: EE Rider Factor Calculation_FY2024_Values”, Case No. NEPR-MI-2020-0001

5 Federal Funding and Capital Plan

As detailed below, over the coming years, significant federal funding resources are available for the rebuilding and transformation of Puerto Rico’s energy system. The inflow of obligated federal capital—as well as the state funding commitment for cost-sharing amounts—create a significant opportunity to modernize Puerto Rico’s energy infrastructure and position it as a crucial enabler of general economic recovery.

PREPA, Genera and LUMA have developed plans and roadmaps for maintenance and capital investments that reflect their perspectives on critical needs to recover and reconstruct the energy system. Genera will be responsible for the generation facility projects once the transition of legacy generation operations is completed in July 2023, until which PREPA remains responsible. LUMA, as T&D operator, is responsible for the deployment of funds to improve and reconstruct the island’s T&D System.

PREPA’s near-term generation capital plan includes the scheduled maintenance program, Legacy Generation Asset projects, and the black-start and emergency generation unit procurement. LUMA’s near-term T&D capital plan focuses on remediating and improving the deficient T&D Assets and Systems. Near-term capital plan of HydroCo prioritizes improving aging hydroelectric units, while that of HoldCo focuses on facilities maintenance.

5.1 Federal Funding

5.1.1 Federal Funding Overview

As of June 2, 2023, PREPA has been awarded over \$15 billion of federal funding in total. Approximately \$12 billion of FEMA funding is obligated for permanent work and has received approval for projects amounting to approximately \$2.3 billion. The remaining obligated federal fundings include approximately \$2.4 billion FEMA funding for emergency work, approximately \$600 million FEMA funding for management costs, and approximately \$2.3 million CDBG funding (See Table 14).

Recently, over \$68.5 million FEMA funding was awarded for emergency protective measures related to Hurricane Fiona.¹⁰⁵ Additional costs related to damages caused by Hurricane Fiona, including \$20 million in generation assets estimated by PREPA and more than \$4 billion in T&D assets estimated by LUMA, may potentially be eligible for federal funding.¹⁰⁶

Key areas of federal funding risk include project eligibility and compliance, and non-Federal cost share funding. Failure to mitigate these risks may prevent PREPA from accessing the federal funding needed to implement necessary repairs and improvements for reliability, resiliency, and environmental compliance. Additionally, failure to identify funding sources for non-Federal cost share may result in rate increases for customers.

¹⁰⁵ FEMA press release. (January 5, 2023). *FEMA Awards Over \$68.5 Million to the Puerto Rico Electric Power Authority*

¹⁰⁶ LUMA official website. Retrieved from: <https://lumapr.com/fiona/?lang=en>

Table 14: Total Federal Funding Obligated by Funding Type¹⁰⁷

Funding Type	Obligated amount (\$M)
FEMA Emergency Work	\$2,429
FEMA Permanent Work	\$12,266
FEMA Management Cost	\$636
CDBG	\$2
Total	\$15,333

Funds from several federal programs are available to PREPA:

1. **FEMA’s Public Assistance (“PA”) Program:** The program provides funds for communities to recover from federally declared disasters or emergencies through programs such as Sections 428 (“FEMA PA 428”) and 406 (“FEMA PA 406”). Funding is provided for both emergency assistance and for permanently restoring infrastructure¹⁰⁸ Under certain circumstances, funding can be extended beyond restoring infrastructure to cover transformational improvement and hazard mitigation, such as measures that directly reduce the potential of future, similar disaster damages.¹⁰⁹
2. **FEMA’s Hazard Mitigation Grant Program (“FEMA 404 HMGP”):** The program funding should be used to provide protection to undamaged parts of a facility or to prevent or reduce damages caused by future disasters.¹¹⁰
3. **Federal Housing and Urban Development (HUD) Community Development Block Grant (CDBG) – Disaster Recovery and Mitigation (MIT) Programs:** Funds from the CDBG programs must address a disaster-related impact in a Presidentially-declared disaster area and meet several additional criteria. PREPA intends to use the funds from these programs to cover the cost share requirements of the PA and 404 HMGP programs. For this reason, HUD CDBG funds are not shown separately in . PREPA has received \$2.3 million CDBG funding as of June 2, 2023, of which \$1.8 million is related to Hurricane Irma peaking units.¹¹¹

5.1.2 FEMA Funding for Permanent Work

PREPA has been awarded over \$12 billion of federal funding obligated for permanent work as of June 2, 2023 (See Table 15). The awarded funding is related to damages caused by Hurricane Maria and the 2020 Earthquake. Projects approved so far amount to approximately \$2.3 billion (See Table 16). The use of funding is limited to the restoration of disaster-damaged facilities and equipment, cost-effective hazard mitigation measures for undamaged facilities,

¹⁰⁷ As of June 2nd, 2023. Includes federal funds, cost share, insurance payouts, and state-matched amounts. Amounts retrieved from FEMA Reasonable Cost Analysis Summary for PW6099 dated June 2020, subject to change based on final proposed and approved projects, award notice letters, FEMA eServices Application Suite, Project Worksheet Report (D.1), and COR3 Disaster Recovery Solution (DRS) System, Payment Request Report. Note: All costs, funding sources, and subtotals are estimates subject to change based on project worksheets developed, among other factors.

¹⁰⁸ FEMA Public Assistance Alternative Procedures (Section 428) - Guide for Permanent Work from February 10, 2020. Document #: FEMA-4339-DR-PR

¹⁰⁹ FEMA press release, last updated March 18, 2021, retrieved from: <https://www.fema.gov/press-release/20210318/fema-hazard-mitigation-grants-404-and-406>

¹¹⁰ FEMA press release, last updated March 18, 2021, retrieved from: <https://www.fema.gov/press-release/20210318/fema-hazard-mitigation-grants-404-and-406>

¹¹¹ COR3 Disaster Recovery Solution (DRS) System, Payment Request Report

planning for future disaster response and recovery operations, and so on, not including planning and design beyond hazard mitigation purposes, covering budget shortfalls, paying down debt, and so on.¹¹²

Table 15: FEMA Funding Obligated for Permanent Work by Program and Disaster¹¹³

Disaster	FEMA 428 (\$M)	FEMA 404 (\$M)	FEMA 406 (\$M)	Total (\$M)
Hurricane Maria	\$10,705	\$1,512	\$39	\$12,256
2020 Earthquake	\$9.7	\$0	\$0	\$10
Total	\$10,714	\$1,512	\$39	\$12,266

Table 166: FEMA Funding Approved for Permanent Work by Program and Disaster¹¹⁴

Disaster	FEMA 428 (\$M)	FEMA 404 (\$M)	FEMA 406 (\$M)	Total (\$M)
Hurricane Maria	\$729	\$1,512	\$39	\$2,280
2020 Earthquake	\$9.7	\$0	\$0	\$10
Total	\$739	\$1,512	\$39	\$2,290

FEMA Permanent Work Funding Related to Hurricane Maria

FEMA PA 208 program has made available \$10.7 billion for permanent work related to damages incurred from Hurricane Maria, including \$194 million of insurance cost and approximately \$1.05 billion of non-Federal share. The FEMA-approved obligated amount allocated initially more than 80% to T&D assets, which are estimates subject to change based on projects submitted and approved (See Table 17). Projects approved so far amount to approximately \$2.3 billion (See Table 18).

¹¹² FEMA Public Assistance Alternative Procedures (Section 428) - Guide for Permanent Work from February 10, 2020. Document #: FEMA-4339-DR-PR

¹¹³ As of June 2nd, 2023. Includes federal funds, cost share, insurance payouts, and state-matched amounts. FEMA 428 amounts retrieved from FEMA Reasonable Cost Analysis Summary for PW6099 dated June 2020, subject to change based on final proposed and approved projects. FEMA 404 amounts are based on approved projects, retrieved from award notice letters. FEMA 406 amounts are based on approved projects, retrieved from FEMA eServices Application Suite, Project Worksheet Report (D.1). Note: All costs, funding sources, and subtotals are estimates subject to change based on project worksheets developed, among other factors.

¹¹⁴ As of June 2nd, 2023. Funding amounts are based on approved projects. FEMA 428 and 406 amounts are retrieved from FEMA eServices Application Suite, Project Worksheet Report (D.1). FEMA 404 amounts are retrieved from award notice letters. Note: All costs, funding sources, and subtotals are estimates subject to change based on project worksheets developed, among other factors.

Table 17: FEMA Funding Obligated for Permanent Work Related to Hurricane Maria by Program and Asset Category¹¹⁵

Asset Category	FEMA 428 (\$M)	FEMA 404 (\$M)	FEMA 406 (\$M)	Total (\$M)
Generation & Hydro	\$970	\$1,512	\$0	\$2,482
T&D	\$8,924	\$0	\$39	\$8,963
Others	\$811	\$0	\$0	\$811
Total	\$10,705	\$1,512	\$39	\$12,256

Table 18: FEMA Funding Approved for Permanent Work Related to Hurricane Maria by Program and Asset Category¹¹⁶

Asset Category	FEMA 428 (\$M)	FEMA 404 (\$M)	FEMA 406 (\$M)	Total (\$M)
Generation	\$270	\$1,512	\$0	\$1,782
T&D	\$410	\$0	\$39	\$450
Others	\$49	\$0	\$0	\$49
Total	\$729	\$1,512	\$39	\$2,280

5.1.3 FEMA Funding for Emergency Work

PREPA has been awarded approximately \$2.4 billion and received approximately \$2 billion for emergency assistance through the FEMA PA Programs (See Table 19). Approximately \$1.7 billion of funds have been received for costs related to Hurricanes Irma and Maria, such as contractor expenses, mutual aid assistance, and costs from increased peaking unit usage. Approximately \$340 million of funds have been received for costs related to 2020 Earthquake, due to increased peaking unit usage.

Table 19: FEMA Funding Received for Emergency Work by Disaster¹¹⁷

Disaster	Emergency work (\$M)
Hurricane Irma	\$15
Hurricane Maria	\$1,616
2020 Earthquake	\$346
COVID-19	\$1.9

115 As of June 2nd, 2023. Includes federal funds, cost share, insurance payouts, and state-matched amounts. FEMA 428 amounts retrieved from FEMA Reasonable Cost Analysis Summary for PW6099 dated June 2020, subject to change based on final proposed and approved projects. FEMA 404 amounts are based on approved projects, retrieved from award notice letters. FEMA 406 amounts are based on approved projects, retrieved from FEMA eServices Application Suite, Project Worksheet Report (D.1). The "Others" category includes IT and telecommunications, and buildings. Note: All costs, funding sources, and subtotals are estimates subject to change based on project worksheets developed, among other factors.

116 As of June 2nd, 2023. Funding amounts are based on approved projects. FEMA 428 and 406 amounts are retrieved from FEMA eServices Application Suite, Project Worksheet Report (D.1). FEMA 404 amounts are retrieved from award notice letters. The "Others" category includes IT and telecommunications, and buildings. Note: All costs, funding sources, and subtotals are estimates subject to change based on project worksheets developed, among other factors.

117 As of June 2nd, 2023. Amounts retrieved from COR3 Disaster Recovery Solution (DRS) System, Payment Request Report

Disaster	Emergency work (\$M)
Hurricane Fiona	\$63
Total	\$2,041

5.1.4 Federal Funding Local Cost Share Requirements

All PREPA, or its agent, is required to bear a portion of the costs of FEMA federal funding programs, known as “Cost Share” or “non-Federal share”.¹¹⁸ Cost share requirements vary by program, type of work, disaster, and may be changed after initial declaration.

For the FEMA PA 428 funding concerning permanent work related to Hurricane Maria, the cost share requirements are estimated to be at 10%, amounting to approximately \$1.05 billion (or 10% of the \$10.7 billion after deducting expected insurance proceeds of \$193 million).¹¹⁹ PREPA plans to meet most of its non-Federal cost share obligations through the Community Development Block Grant Disaster Recovery (“CDBG-DR”) program, as it becomes available. To date, \$500 million has been made available under Energy Grid Rehabilitation and Reconstruction (ER1) Cost Share Program to meet the non-Federal cost shares.¹²⁰ For the non-Federal cost share remaining, PREPA must find funding elsewhere and/or adjust rates to cover the obligation. Failure to identify the funds necessary for cost share may prevent PREPA from having access to the portion of the Global Settlement contributed by federal funding FEMA.

5.2 Capital Plan

The following section provides an overview of PREPA’s near-term capital plans, separated by the four entities (GenCo, GridCo, HydroCo, HoldCo). The capital plans mentioned below are estimations subject to final approval from PREB. The associated costs that are not federally funded and thus borne by PREPA are reflected in the Necessary Maintenance Expense line item.

5.2.1 GenCo Capital Plan

5.2.1.1 GENCO CAPITAL PLAN OVERVIEW

Genera is responsible for performing day-to-day maintenance functions as well as executing on generation modernization capital projects. The general capital plan includes three components:

1. Generation maintenance program
2. Legacy generation asset projects: \$147 million Federally funded investments in Legacy Generation Assets are planned to ensure a more modern, sustainable, reliable, efficient, cost-effective, and resilient power generation system.
3. Black-start and emergency generation unit procurement: purchase of 11 turbines to provide black-start and peaking services, amounting to an estimated cost of approximately \$770 million.¹²¹

¹¹⁸ FEMA. Cost Sharing. Retrieved from: <https://www.fema.gov/hmgrp-appeal-categories/cost-sharing>

¹¹⁹ FEMA Reasonable Cost Analysis Summary for PW6099, June 2020

¹²⁰ Puerto Rico Disaster Recovery Action Plan

¹²¹ Costs to be revised during the ongoing Phase I of the project

5.2.1.2 GENERATION MAINTENANCE PROGRAM

During FY2024, Genera will undertake measures to execute critical maintenance work for generation plants and implement performance improvement projects. This maintenance program aims to ensure that the Legacy Thermoelectric Generation Assets can achieve a minimum level of reliability, stability, compliance, and ability to maintain sufficient reserves to avoid severe outage incidents.

One of the main sources of unexpected fuel and maintenance costs is the constant changes in the maintenance schedules. These changes respond to the need to cover demand when forced outages occur. Unforeseen changes may result in incremental costs, for example, if a power unit scheduled for downtime unexpectedly needs to remain operational due to another unit's unforeseen failure, extra fuel must be procured outside the regular supply contract to meet the demand. This typically results in a higher fuel cost than initially planned. Another type of situation could be scheduled environmental outages that need to be rescheduled to later dates due to lack of energy to supply the demand, which in turn could mean the utility having to pay fines for lack of environmental compliance.

Nevertheless, this year's maintenance program implementation will be steady and without constant changes. The FY2024 maintenance schedule has been developed in consideration of the additional total available capacity of 350 MW that the U.S. Corps of Engineer have installed in the Palo Seco and San Juan power plants. This additional capacity will aid in the implementation of a stable maintenance plan, steering away from unpredicted changes caused by lack of capacity to meet the demand caused by forced outages.

Table 20 below shows a schedule of outages for FY2024. Most of these outages respond to mandatory environmental outages in compliance with the consent decree and major inspections due to expiration of fire hours.

Table 20: Revised & Updated Maintenance Schedule (As of May 2023)

GenCo's Outage Schedule		
Unity	Capacity (MW)	Outage Schedule Timeline
SJCC 5	220	October 2023
SJCC 6	220	February 2024-June 2024
SJ 7	100	February-July 2023; November 2023-February 2024
SJ 8	100	January 2023-June 2024
SJ 9	100	April-July 2023; May-July 2024
SJ 10	100	January 2023-December 2024
PS 3	216	November 2023-January 2024
PS 4	216	September-November 2023
CS 5	410	October-December 2023
CS 6	410	June-July 2023; October-November 2024
AG 1	450	January-June 2023; November-December 2024
AG 2	450	May 2023; November-December 2023

Please refer to Section 3.4 Transition to Private Operators for additional discussion regarding the ongoing PREPA reorganization and Section 2.1 (Key Facts about PREPA) for discussion regarding PREPA's reorganized assets and entities.

5.2.1.3 LEGACY GENERATION ASSET PROJECTS

As of March 2023, approximately \$147 million of Federally funded projects in Legacy Generation Assets have been approved by PREB (See Table 21). Genera will continue the ongoing projects and prioritize those that are in procurement processes or near the award phase. Genera is also in the process of reallocating funds that PREPA planned to utilize for maintenance and repairs that are not aligned with Genera's plan.

Table 21: Legacy Generation Asset Projects Approved by PREB

Project	PREB-Approved Amount
In-Progress Projects	\$ 11,517,972
FAASt San Juan 001 – Units 5 & 6	\$31,085,359
FAASt San Juan Plant 002 – Units 7 & 8	\$19,050,000
FAASt San Juan Power Plant 004 - Auxiliary Infrastructure	\$1,897,000
FAASt Costa Sur Permanent Repairs 5 & 6	\$32,084,490
FAASt Aguirre Power Plant 002 Units 1 & 2 Projects	\$3,772,629
FAASt Aguirre Power Plant Infrastructure Projects 001	\$2,281,265
FAASt Fire Pump for Aguirre Power Complex (AG-004)	\$280,040
FAASt Aguirre Power Plant 003 Combined Cycle	\$4,102,096
FAASt Costa Sur Permanent Repairs	\$1,250,000

Project	PREB-Approved Amount
FAASt Palo Seco Steam Plant Unit 3-4	\$26,266,818
FAASt Palo Seco Steam Plant Permanent Repairs	\$3,495,548
FAASt Cambalache Power Plant Permanent Repairs	\$6,043,000
FAASt Cambalache Power Plant – Flood Protection Barrier	\$4,000,000
PREB-Approved Total	\$147,126,217

5.2.1.4 BLACK-START AND EMERGENCY GENERATION UNIT PROCUREMENT

PREPA is currently in the process of acquiring eleven small generators with the intention to submit for reimbursement under the FEMA 404 HMGP fund. These turbines will be deployed in different sites across the island and will replace the dated and inefficient Frame 5000 currently dispatched for peaking, black-start, and additional ancillary services to the grid.

Across two ongoing RFPs, four units of generators with 81MW total generation capacity are planned to be deployed to the Costa Sur and Yabucoa area, while the remaining seven units of generators with 147MW generation capacity are planned to be deployed to the Jobos, Daguao, and Palo Seco sites in December 2025, and January 2026 respectively.

At PREB’s request, these generation units will be mobile, capable of redeployment to different sites. This flexibility can enable integration of renewables, provide services where renewables and batteries cannot, and support development of mini-grids, in accordance with the Energy Bureau’s system optimization plan.

5.2.1.5 GENERATION MAINTENANCE AND CAPITAL PLAN PRIORITIZATION

Genera’s primary responsibility under the Generation OMA is to operate and maintain the Legacy Generation Assets. As such, Genera must ensure that its maintenance plan targets maintaining the LGA in service, in the most cost-efficient manner possible, until they can be safely retired and then, decommissioned. Prioritization of capital projects considers factors such as asset retirement schedule (in accordance with the IRP, EPA), eligibility to federal funding, and the need for additional generation capacity to enable planned outages to conduct additional repairs to base load units (See Table 22).

Genera’s maintenance and capital program prioritization is summarized in Table 22

Table 22: Genera Prioritization Schedule

Priority	Criteria	Projects
Priority 1	New generation installation <u>Target:</u> stabilization of the grid	<ul style="list-style-type: none"> ■ Black-start unit installation in Aguirre and Costa Sur ■ Emergency generation unit installation in Daguao, Jobos and Palo Seco
	Most Economic Generating Units <u>Target:</u> cost efficiency and reliable base-load generation	<ul style="list-style-type: none"> ■ San Juan 5&6 ■ Costa Sur 5&6

Priority 2	Base Load Units <u>Target:</u> reliable base-load generation	<ul style="list-style-type: none"> ■ Aguirre 1&2 ■ Palo Seco 3&4
Priority 3	Peaker Units <u>Target:</u> cover peak demand and ancillary services when warranted by the T&D System	<ul style="list-style-type: none"> ■ Maintenance projects for Cambalache and Mayaguez¹²²

5.2.2 GridCo Capital Plan

5.2.2.1 GRIDCO CAPITAL PLAN OVERVIEW

Based on LUMA’s FY2024 Budget filing with PREB¹²³, LUMA plans to spend over \$5 billion of capital within its Improvement Programs over the next three years. The Improvement Programs are meant to remediate and start improving the deficient T&D Assets and Systems. Activities are aggregated into seven Improvement Portfolios, as shown in Exhibit 25.

As a required part of the Front-End Transition, LUMA developed a set of improvement programs to restore and modernize Puerto Rico’s T&D System, including the management system and processes. Programs were organized into seven interdependent portfolios of similar topics that together cover all functional areas of the utility. These improvement programs and portfolios are described in the LUMA Initial Budgets¹²⁴ and the SRP¹²⁵. LUMA’s Initial Budget was reviewed by P3A and approved by the PREB on May 31, 2021, prior to service commencement and program implementation.¹²⁶ Additionally, LUMA’s SRP was reviewed by P3A and approved by PREB on June 23, 2021, prior to service commencement and program implementation.¹²⁷

A description of the development of the initial improvement programs, including LUMA’s initial assessment of the physical T&D assets and the management and operational systems and process can be found in the February 24, 2021 SRP filing with the PREB.¹²⁸ LUMA found that not only was the T&D System damaged from Hurricane Irma and Maria, but the processes, systems and data to support the operations and maintenance of the T&D System was severely lacking. Remediating the gaps to Contract Standards will require significantly more investment than the FEMA-obligated funding related to Hurricane Maria.

Since Interim Period Service Commencement, LUMA has updated the programs and portfolios to reflect activities completed to date and information acquired since assuming operations. The most up to date improvement portfolios and programs can be found within

¹²² There are no additional maintenance projects for peaking units because the existing will be retired, decommissioned and replaced with the new units being procured (see Priority 1).

¹²³ May 15, 2023 filing of “LUMA – Annual Budget Fiscal Year 2024 to 2026” under Docket ID NEPR-MI-2021-0004.

¹²⁴ LUMA’s Initial Budgets filing on February 24, 2021 Docket ID: NEPR-2021-0004.

¹²⁵ LUMA’s System Remediation Plan Filing on February 24, 2021 Docket ID: NEPR-MI-2020-0019

¹²⁶ Determination on LUMA’s Initial Budgets filing on May 31, 2021 Docket ID: NEPR-MI-2021-0004,

¹²⁷ Resolution and Order Approving the Proposed System Remediation Plan filing on June 23, 2021 Docket ID: NERP-MI-2020-0019

¹²⁸ LUMA’s System Remediation Plan Filing on February 24, 2021 Docket ID: NEPR-MI-2020-0019

LUMA’s May 16, 2023 submission of their “Annual Budgets Fiscal Years 2024 to 2026” with PREB.¹²⁹

The improvement portfolios use a range of funds depending on the scope of each program and funding usage limitations (e.g., limitations on the use of certain types of federal funds). Operating expenditures, federally funded capital, and non-federally funded capital are all utilized within the improvement portfolios.

LUMA’s Quarterly and Annual Reports filed with PREB under docket NEPR-MI-2021-0004 include details on LUMA’s operational improvements and achievements, and financial performance.

Exhibit 2255: LUMA Improvement Portfolios – Total Capital Expenditures

Improvement Portfolio	Total			- Federally Funded Contributions			+ Net Non Federally Funded		
	2024	2025	2026	2024	2025	2026	2024	2025	2026
Customer Experience	133,646	259,370	320,938	121,861	247,864	301,027	11,997	21,506	19,912
Distribution	242,794	440,246	616,490	215,655	413,307	589,551	26,939	26,939	26,939
Transmission	131,610	248,039	362,390	130,406	247,458	361,780	601	601	601
Substations	130,783	272,569	337,946	114,643	252,522	324,356	16,140	20,077	13,491
Control Center & Buildings	42,416	54,068	55,262	38,722	49,220	49,964	3,694	5,448	5,298
Enabling	180,691	484,484	521,026	157,184	409,412	447,731	23,507	75,072	73,295
Support Services	14,666	9,666	9,198	8,177	1,150	1,450	6,489	8,516	7,748
Subtotal	876,207	1,779,073	2,223,154	786,850	1,620,914	2,075,870	89,357	158,158	147,284
Other									
2% Reserve for Excess Expenditures	17,524	36,130	45,819	15,737	32,918	42,783	1,787	3,212	3,035
Inflation ¹		27,403	67,785		24,967	63,294		2,436	4,491
Total Capital Expenditures¹	893,732	1,842,605	2,336,758	802,587	1,678,799	2,181,947	91,144	163,806	154,810
<i>Total Amount of CapEx to be Funded by Federal Cost Share²</i>	<i>50,000</i>	<i>111,000</i>	<i>124,000</i>	<i>50,000</i>	<i>111,000</i>	<i>124,000</i>	<i>-</i>	<i>-</i>	<i>-</i>

Note:

¹ Figures include inflation, as per macroeconomics provided by FOMB on February 8, 2023, of 1.5% and 1.5% in FY2025, and FY2026, respectively.

² Line item has been included as per February 27, 2023 Order from the Energy Bureau. This amount reflects the total funding to be provided by the Government of Puerto Rico and does not reflect additional costs on top of LUMA's Federally Funded Capital Expenditures.

5.2.2.2 SUMMARY OF IMPROVEMENT PORTFOLIOS

Initiatives are grouped into programs and programs are organized into seven interdependent portfolios that together cover all functional areas of the utility:

1. The **customer service portfolio** includes a set of programs to continue improving customer service technology, improve billing systems, implement advanced metering infrastructure, continue to execute a “Voice of the Customer” program, and upgrade and replace distribution streetlights, as needed.
2. The **distribution portfolio** includes improvements to the distribution system, including overhead and underground distribution line rebuilds, pole and conductor repairs, system inspections, spot repairs and replacements as needed, and implementation of technology that enables planning.
3. The **transmission portfolio** includes improvements to the transmission system, including line rebuilds and hardening, priority pole replacements, system inspections, spot repairs and replacements as needed, and improved transmission monitoring systems, as well as telecommunications investments to improve first responder and emergency response communication and centralized monitoring and control.
4. The **substations portfolio** includes investments to rebuild, harden, and modernize transmission and distribution substations, including physical security upgrades, and

¹²⁹ LUMA’s Submission of Consolidated Annual Budgets for Fiscal Year 2024 and Proposed Annual T&D Projections through Fiscal Year 2026 on May 16, 2023, Exhibit A, “Annual Budgets Fiscal Years 2024 to 2026” dated May 15, 2023, Docket ID: NEPR-MI-2021-0004

studies to eliminate major cascading outages and ensure system compliance with applicable laws, codes, and regulations.

5. The **control center & buildings portfolio** includes investments in rebuilding damaged facilities, upgrading security systems, and implementing energy and advanced distribution management systems that enable renewable energy, demand response, and battery storage integration and dispatch.
6. The **enabling portfolio** includes several safety and operational excellence programs and initiatives such as the provision of new tools and Personal Protective Equipment (PPE); skills and safety training for all employees; a data system to manage T&D asset data, and vegetation and fleet management.
7. The **support service portfolio** includes cross-functional programs that support all departments, and includes programs within Human Resources, Information Technology and Operational Technology (“IT OT”), and finance. This portfolio also includes the Phase I Electrical Vehicles (“EV”) Program Implementation.

More details on the improvement portfolios, including a summary of annual spending estimates for each portfolio for FY2024 through FY2026, are provided in LUMA’s May 16, 2023¹³⁰ submission with PREB.

As part of LUMA’s obligations under the T&D OMA, LUMA has assumed reporting of certain statistics related to the T&D System and system planning. LUMA reports these statistics along with PREPA’s generation-related statistics as provided by Genera to PREB quarterly as part of PREB’s review of PREPA statistics within docket NEPR-MI-2019-0007. Since commencement, LUMA’s implementation of improvement programs described within the seven portfolios above has resulted in improvements to system statistics.

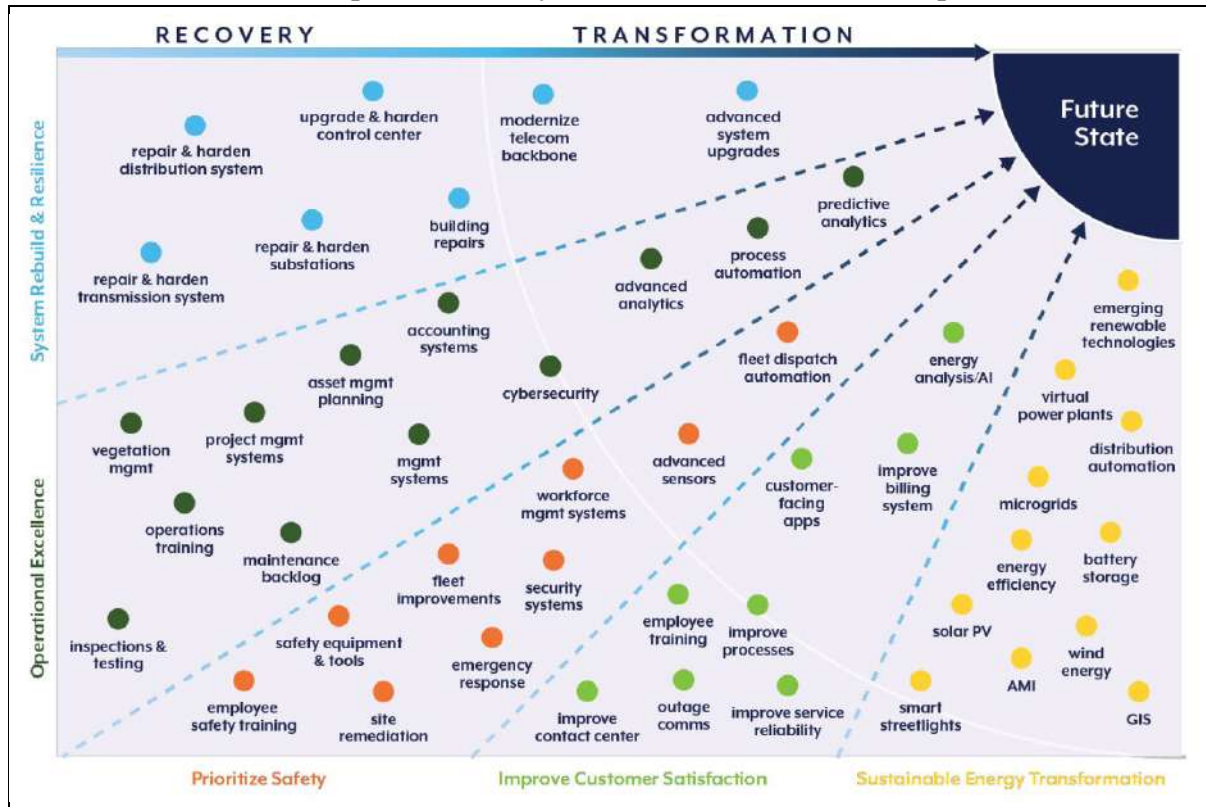
5.2.2.3 GOALS AND ROADMAP OF IMPROVEMENT PROGRAMS

To prioritize and sequence the improvement work, LUMA developed a Recovery and Transformation framework and roadmap to guide planning and decision making across, including the SRP and improvement portfolios. The framework references public policy objectives, stakeholder needs, and regulatory and contractual requirements. The framework has five key goals in delivering LUMA’s stated mission of customer-centric, reliable, resilient, safe, sustainable electricity at reasonable prices:

1. **Prioritize Safety** – Reform utility activities to support a strong safety culture focused on employee safety and the safety of the people of Puerto Rico
2. **Improve Customer Satisfaction** – Transform operations to deliver a positive customer experience and deliver reliable electricity at reasonable prices
3. **System Rebuild and Resiliency** – Effectively deploy federal funding to restore the grid and improve the resilience of vulnerable infrastructure
4. **Operational Excellence** – Enable employees to pursue operational excellence through new systems, processes, and training
5. **Sustainable Energy Transformation** – Modernize the grid and utility to enable sustainable energy transformation

¹³⁰ LUMA’s Submission of Consolidated Annual Budgets for Fiscal Year 2024 and Proposed Annual T&D Projections through Fiscal Year 2026 on May 16, 2023, Exhibit A, “Annual Budgets Fiscal Years 2024 to 2026” dated May 15, 2023, Docket ID: NEPR-MI-2021-0004

Exhibit 2266: LUMA’s Proposed Recovery and Transformation Roadmap¹³¹



LUMA has planned its capital spending considering PREPA’s current financial situation and lack of access to capital markets. Planned capital spending has been prioritized based on the Recovery and Transformation Framework. The spending has been sequenced to perform ‘necessary maintenance’ only and to fit within budgetary constraints. LUMA has not performed an analysis of the level of capital required to prudently maintain the T&D System and support growth and other transformational initiatives.

Additional details on key activities within LUMA’s Improvement Portfolios and Programs can be found in LUMA’s filing of the FY2024 Budget.

5.2.2.4 PROGRESS ON FEDERAL FUNDING REQUIREMENTS

Since the start of Fiscal Year 2023, LUMA has submitted a total of 341 SOWs to FEMA for T&D projects representing an estimated \$7.1 billion in reconstruction activities. These activities are related to various initiatives, such as streetlights, minor repairs on Substation, Distribution pole replacements, and telecom infrastructure, among others. Initial Federal approvals have been received for LUMA to start its work on first-of-its-kind projects including a one-time island-wide vegetation clearing and the implementation of Advanced Metering Infrastructure and meter data management technologies.

Further, given the impact of Hurricane Fiona on Puerto Rico, LUMA is working with COR3 to ensure emergency response activities and subsequent permanent work will be able to be applied for federally funded reimbursement.

¹³¹ Filing of System Remediation Plan under Section 4.1(d) of the Operation and Maintenance Agreement for Energy Bureau’s Evaluation and Approval. In Re: Review of the Puerto Rico Electric Power Authority’s System Remediation Plan. Case No. NEPR-MI-2020-0019. February 24, 2021.

To date within Fiscal Year 2023, LUMA has deployed over \$220 million in federal funding across various projects including:

- Replaced or repaired over 4,200 broken and damaged utility poles, including over 1,150 repairs or replacements due to damage from Hurricane Fiona
- Replaced or repaired over 36,000 streetlight luminaires as part of the \$1 billion Community Streetlight Initiative and daily operations in the municipalities of Aguada, Cataño, Aibonito, Dorado, Hatillo, Guánica, Lajas, Luquillo, Maunabo and Villalba
- Constructed and energized four federally funded projects
- Started or planned 11 substation update projects in 2023, with \$101 million in already-approved federal funds for LUMA's Substation Modernization Initiatives
- Completed the first FEMA-funded substation project at Manatí Transmission center and completed three other distribution infrastructure replacement projects

LUMA is also pursuing federal funding opportunities outside of disaster funding. LUMA has made progress requesting for federal funding via the Infrastructure Investments and Jobs Act (IIJA). LUMA has submitted proposals to harden specific portions of the underground transmission loop and has engaged grid recovery partners on additional federal funding opportunities, such as DOE electrical system improvement Grants, HUD and PRDOH CDBG-DR Programs for Hazard mitigation, Grid Resilience and Cost Share, and FEMA 406HM proposals in all major asset categories and projects.

5.2.2.5 OTHER CAPITAL NEEDS

LUMA developed its budgets in line with T&D OMA requirements and with an understanding of PREPA's financial constraints while in Title III, namely that all capital costs would be expensed in the year they are incurred and must be collected from rates that year. LUMA also recognized that PREPA may not be able to access public debt markets for additional funding for some time post exit from Title III. For that reason, LUMA assumed for its forecast period (FY2024 – FY2026) that T&D non-Federally Funded Capital would continue to be expensed in the year incurred and sized its capital plans accordingly, prioritizing those activities that will remediate the system in accordance with LUMA's System Remediation Plan and Recovery and Transformation Framework. LUMA has not performed an analysis of the capital requirements of an ongoing prudent maintenance program.

In PREB's February 27, 2023 Resolution and Order it required LUMA to include the following items in its Non-Federally Funded Capital Budget: The Cost Share portion of the Federal Funded Capital and the Interconnection and Network Upgrade Costs associated with the interconnection of the utility scale solar projects and Battery Energy Storage Systems for Tranche 1, if they cannot be funded by Federal Funds. Due to financial constraints these costs have not been included in LUMA's budgets for FY2024 – FY2026 as discussed in LUMA's budget filing in PREB Docket NEPR-MI-2021-0004.

When LUMA is directed to obtain federal funding for new priorities set by the Government of Puerto Rico and the Energy Bureau (AMI & Network Upgrades), federal capital is diverted from the obligated PA funds associated with Hurricane Maria. This means that there may be infrastructure that requires permanent work once the federally funded capital has been fully consumed, and funding for these projects must come from rates.

Lastly, growth capital required to support the electrification of the island and the energy transition on the island has not been estimated or included in LUMA's projections as PREPA

is currently capital constrained and decisions regarding these projects are currently in front of PREB. These dockets include topics such as Electrical Vehicles and the use of Hydrogen, among others which may require additional infrastructure and capital costs. Furthermore, the IRP which has been ordered to be submitted in March 2024 will outline investments in generation facilities and the T&D System that are required to meet demand and transition the island to 100% renewables by 2050.

5.2.2.6 DISTRIBUTION OF FEDERAL FUNDING RESPONSIBILITIES FOR THE T&D SYSTEM

Puerto Rico's energy sector continues advancing its transformation pursuant to Puerto Rico's energy public policy. During FY2024, LUMA continues to have control over the operation and maintenance functions of the T&D System through providing O&M Services that are detailed and defined under the T&D OMA and performing and supervising Capital Improvements of the T&D System.

The T&D OMA provides specific roles and responsibilities for LUMA, PREPA, and the P3A related to the use, management, recordkeeping, and oversight of federal funds used for T&D System capital improvements (which include grid reconstruction). The parties to the T&D OMA will cooperate as described in the T&D OMA to ensure legal compliance, effective and efficient use of federal funding, maximized eligibility of projects for federal funding, and secure adequate recordkeeping and access for compliance audit purposes.

5.2.3 *HydroCo Capital Plan*

HydroCo has approximately \$ 2.5 million of Necessary Maintenance Expenses projected for FY2024. Capital projects are planned to protect PREPA's water assets from further deterioration and increase the capacity, efficiency and reliability of its hydroelectric generation, such as hydroelectric unit improvement and dam security system.

5.2.4 *HoldCo Capital Plan*

HoldCo has approximately \$ 1.5 million of Necessary Maintenance Expenses projected for FY2024, mainly to maintain its property portfolio while finalizing potential divestment plans.

5.2.5 *Long-Term Capital Plan from FY2027 Onwards*

PREPA has historically underinvested and operated at low-quality levels, with SAIDI and SAIFI reliability metrics drastically lower than other US peers (See Section 2.1 Key Facts about PREPA). As FEMA federal funding is limited primarily to disaster recovery and hazard mitigation, after the funding is fully leveraged, PREPA will need to maintain adequate capital investment comparable to industry standards at the least, to deliver a modern, efficient, reliable, and sustainable electric power system. Long-term capital spending levels are estimated in consideration of availability of federal funding, standards of comparable utilities, long-term industry trends, and inflation. Non-Federally funded Necessary Maintenance Expense (NME) between FY2027 and FY2033 are estimated by applying inflation adjustments to the FY2026 spending level. As federal funding is expected to be fully leveraged by FY2034, non-Federally funded NME for FY2034 and beyond are estimated by benchmarking against other comparable utilities the required capital expenditure, adjusted for PREPA-specific network characteristics.

LUMA has identified multiple categories of long-term non-federally funded capital after FY2034, which are not currently analyzed or estimated¹³²:

- 1. Improvement programs for critical and non-critical System Remediation Programs**
- 2. Maintenance capital program:** Capital expenditures related to ongoing maintenance and preventative maintenance of assets is needed to prudently operate the power system. Investment is required to maintain federally-funded assets as they reach the end of life cycle.
- 3. Non-Federally funded capital in support of Federally funded capital:** Capital is needed to fund costs not eligible for federal funding, such as line equipment cost for a line replacement.
- 4. New initiatives & development:** Given regulatory mandates (See Section 4.2 Resource Planning and Resiliency) and underlying industry trends, LUMA anticipates that future non-federally funded capital will be required to address:
 - a. Aging infrastructure:** With large portion of energy system and infrastructure at or reaching the end of useful life, investment is needed for replacements and upgrades.
 - b. Energy efficiency:** Investment in more efficient generation assets and T&D system is needed to achieve energy efficiency goals.
 - c. Grid hardening:** Increasing climate risks from more destructive and frequent weather events (e.g., hurricanes, flooding) calls for more investment in grid hardening to improve reliability and resilience.
 - d. Renewable energy expansion:** Investments in areas such as control systems and energy storage infrastructure are required to manage the intermittent nature of renewable energy and to deploy new T&D lines for improved hosting capacity.
 - e. Increasing distributed generation adoption:** Investments in areas such as distribution automation, microgrids, and mini-grids will be needed to enable bi-directional power flows.
 - f. Increasing electric vehicle adoption:** Investments in T&D system is needed to meet this growing demand with differing load patterns.

¹³² LUMA has, to date, focused its capital Improvement Programs on its System Remediation Program and Recovery and Transformation Framework rather than routine maintenance given the current state of the T&D System. Until these Improvement Programs are advanced further, LUMA has not performed an analysis of the operational and capital requirements of prudent ongoing maintenance programs over a longer-term horizon.

6 Performance Metrics

6.1 Introduction

As part of the transition to a reorganized electric system where roles and responsibilities are distributed across public and private entities, the Government of Puerto Rico entered Operation and Maintenance Agreements (“OMAs”) with LUMA and Genera, in which performance-based compensation was established to align each operator’s performance with the public policy goals of Puerto Rico. For the Operators to earn their performance-based compensation, they must meet certain performance targets set through an evaluation with the Energy Bureau. Correspondingly, the Operators’ are guaranteed budgets adequate in both scope and amount providing a reasonable opportunity for the Operators to earn the incentive compensation.

6.2 Genera Performance Metrics

After the Service Commencement Date of July 1st, 2023, Genera, as the legacy thermoelectric generation operator, will be evaluated against two sets of performance metrics. The first set is performance metrics set by the Puerto Rico Energy Bureau In Re: The Performance of the Puerto Rico Electric Power Authority.¹³³ These metrics include parameters to report against established baselines (historical performance) and benchmarks (minimum desired performance). The second set of performance metrics are incentives and penalties metrics established in the Generation OMA, subject to PREB’s revisions in future proceedings.

6.2.1 GenCo Performance Metrics

On May 14, 2019, PREB issued a Resolution and Order, which initiated a proceeding to establish the quarterly reporting of performance metrics for operating the electric system. From commencement until LUMA took over providing Transmission & Distribution services, PREB provided quarterly metric reports by PREPA regarding the performance of the electric system. Once LUMA began providing T&D Services, LUMA assumed the responsibility of submitting all metrics related to the T&D System to PREB. PREPA will continue to report metrics related to the assets and responsibilities of HoldCo, PropertyCo, GenCo and HydroCo’s until the transfer of operations to Genera occurs on July 1st, 2023 – at which time the responsibility of legacy thermoelectric generation reporting is also transferred.

On December 23, 2020, PREB commenced a process to establish a performance baseline and compliance benchmarks. Following applicable law and Regulation 9137,¹³⁴ PREB shall apply metrics and targets to PREPA until a for-profit successor company is operating the system, at which point, PREB may apply financial incentives for the successor. Performance metric baseline consists of data collected in previous projects. These performance metric baselines can be utilized to establish a goal and to determine if trends indicate the likelihood of meeting the target. Concurrently, a performance metric benchmark defines the precise level of service or output that a utility is expected to achieve during a particular period for a specific metric. Benchmarks can serve as a tool to guide a utility's performance. On May 21, 2021, PREB set the overall system metrics with baselines and benchmarks, utilizing the data reported by PREPA in FY20.

¹³³ PREB Docket No. NEPR-MI-2019-0007

¹³⁴ Regulation 9137: - Regulation for Performance Incentive Mechanisms (energia.pr.gov found at <https://energia.pr.gov/wp-content/uploads/sites/7/2020/02/9137-Regulation-for-Performance-Incentive-Mechanisms.pdf>)

Once Genera begins providing the operation & maintenance Services (after the Service Commencement Date – July 1st 2023), it will be responsible for reporting GenCo’s quarterly performance metrics to the PREB, (which those same metrics associated with the performance of the Legacy Generation Assets were subject to). HydroCo will continue to report all the metrics related to Hydropower Assets. *Table 23* shows the metrics that Genera will report in accordance with the procedures outlined in PREB Docket No. NEPR-MI-2019-0007 and their corresponding description.

Table 23: Overview of GenCo Performance Metrics

	Metric	Description
Safety	OSHA Recordable Rate	Total number of OSHA recordable incidents because of work-related injury
	OSHA DART Rate	Total number of OSHA recordable cases with lost-time days (away, restricted or transferred)
	OSHA Severity Rate	Total number of work-related injuries with severity days (both restricted and lost time days)
	OSHA Fatality Rate	All work-related fatalities
Finance	Operational expenses vs. budget	Comparison of operational expenses versus those budgeted to measure the ability to stay within budget
	Capital expenses vs. budget	Comparison of capital expenses versus those budgeted to measure the ability to stay within budget
	Capital budget: non-federally funded	Comparison of non-federally funded projects expenses versus those budgeted to measure the ability to stay within budget
Generation	Plant Availability	Shows plant availability of the entire system and per plant
	Forced Outages	Shows forced outages of the entire system and per plant
	Cost of Generation	Shows the cost to generate by plant type
	Monthly Thermal Generation	Shows the amount of generation of the system
	Average Heat Rate	Shows the average heat rate of the system and per power plant
Fleet	Fleet out of service	Shows the percentage of vehicles that are not in service

	Metric	Description
	Total vehicles in service	Shows the number of vehicles that are in service
Fuel	MMBtu consumed	Fuel (diesel #2, #6 and natural gas) consumed shown in MMBtu
	Average fuel price	Cost of fuel (diesel #2, #6 and natural gas) price shown in \$ / MMBtu
	Average fuel price vs. forecast price	Variance of fuel (diesel #2, #6 and natural gas) price versus forecasted
Human Resources	Budgeted headcounts by employee type	Number of employees budgeted
	Actual headcounts by employee type	Total employees
	Absenteeism	Percentage of absenteeism compared to total employees
Planning and Environmental	Timeliness of permitting	Shows the timelines of obtaining permits
	Emissions of SO ₂ , NO _x , CO ₂ , PM, Hg and other regulated pollutants (system)	Emissions of SO ₂ , NO _x , CO ₂ , PM, Hg and other regulated pollutants of the system are shown in lb. / MMBtu
	Emissions rates of SO ₂ , NO _x , CO ₂ , PM, Hg and other regulated pollutants (system)	Emissions rates of SO ₂ , NO _x , CO ₂ , PM, Hg and other regulated pollutants of the system are shown in tons / MWh
	Carbon intensity of fossil generation	Emissions of carbon in tons / MWh

PREB may expand these reporting requirements and add additional reporting metrics for the Legacy Generation Assets and GenCo.

6.2.2 Generation OMA Performance Metrics

In each fiscal year, Genera shall be eligible to receive financial incentive compensation or be subject to penalties based on a set of metrics outlined in Annex II of the Generation OMA. These metrics measure Genera's O&M Services and Decommissioning Services performance.

The evaluation for incentives and penalties will be based on the following metrics:

Table 24: Generation Incentives and Penalties Metrics

Incentives	Penalties
<ul style="list-style-type: none"> ■ Operation cost efficiency ■ Equivalent availability factor ■ Safety compliance ■ Environmental compliance ■ Reporting obligations ■ Fuel savings ■ Decommissioning cost efficiency 	<ul style="list-style-type: none"> ■ Equivalent availability factor ■ Safety compliance ■ Environmental compliance ■ Reporting obligations ■ Decommissioning cost efficiency

Table 25 shows the incentives and penalties metrics included in the Generation OMA, their corresponding description, and the criteria for eligibility for payment or penalty for each metric.

Table 25: Details of Incentives and Penalties Metrics in the Generation OMA

Incentive	Description	Measuring Parameter	Criteria and Incentive/Penalty
Operation Cost Efficiency (O)	Incentive based on a percentage of the total cost savings achieved in delivering the O&M Services compared to the approved operating budget.	Actual expenditures as a percentage (%) of the approved Operating Budget, where actual savings equal the Operating Budget minus the actual expenditures.	>95% but <99%: 50% of actual savings
			>90% but ≤95%: 50% of actual savings
			>85% but ≤90%: 50% of actual savings
			≤85%: 50% of actual savings
Equivalent Availability Factor (EAF) (O)	Incentive based on overall annual EAF for a contract year exceeding the EAF established in accordance with the Annual Performance Test procedure. ¹³⁵ Penalty is applicable if the EAF falls below the targets referenced above.	EAF = [(AH – EPDH – EUDH) / PH] x 100% Where: AH = Available Hours EPDH = Equivalent Planned Derated Hours EUDH = Equivalent Unplanned Derated Hours PH = Period Hours or number of hours that the Legacy Generation Asset was in active state	EAF for Baseload Units: >5% above Target: Payment of \$15 million >2.5% but ≤5% above Target: Payment - \$10 million >0% but ≤2.5% above Target: Payment- \$5 million ≤ Performance Target: Penalty - \$5 million
			EAF for Peaking Units: >10% above Target: Payment - \$15 million >5% but ≤10% above Performance Target: Payment of \$10 million >0% but ≤5% above Target: Payment - \$5 million

¹³⁵ Annual EAF targets and Minimum Performance Thresholds for Baseload and Peaking Units are set via the Annual Performance Test, conducted within 90 days of Service Start and in the first 30 days each Contract Year. The test provides a Capacity and Heat Rate baseline, influencing Genera's proposed EAF targets, subject to PREB approval.

Incentive	Description	Measuring Parameter	Criteria and Incentive/Penalty
			≤ Performance Target: Penalty - \$5 million
Safety Compliance ⁽²⁾	Incentives and penalties based on performance concerning the safety compliance targets described, including subcontractors' performance.	OSHA Lost Time Incidents	≤ 3 : Payment of \$10,000
			3-5 : Payment of \$5,000
			5 >: Penalty of \$100,000
		OSHA Recordable Injury or Illness	0 : Payment of \$10,000
			1-3 : Payment of \$5,000
			>3 : Penalty of \$100,000
OSHA Fatality or Severe Injury	0 : Payment of \$10,000		
	≥ 1 : Penalty of \$100,000		
Environmental Compliance ⁽²⁾	Incentive payment based on performance concerning the environmental targets.	Violation of Consent Decrees and/or Notice of Violations	0 : Payment of \$10,000 > 1 : Penalty of \$25,000 (for each violation or NOV)
Reporting Obligations ⁽³⁾	Penalty based on the timeliness of responding to a reasonable request for information from P3A.	Days of Failure of Response	\$100,000 penalty for every 15 consecutive days of non-response to P3A.
Fuel Optimization	Fuel Optimization Payment of 50% of any Actual Fuel Savings achieved during the relevant fiscal year.	Actual expenditures as a percentage (%) of the approved Operating Budget, where actual savings equal the Operating Budget minus the actual expenditures.	Genera receives 50% of any Actual Fuel Savings achieved. Fuel Optimization Payment, calculated per the Fuel Optimization Plan and current budget assumptions, equals the difference between budgeted and actual costs of relevant items.
Decommissioning Costs Efficiency ⁽¹⁾	Incentive Payment if (i) actual expenditures are below the estimates included in the applicable Decommissioning Budget and (ii) successful completion of the applicable Decommissioning Services on or before the relevant Decommissioning Completion Date.	Actual expenditures as a percentage (%) of the approved Decommissioning Budget minus actual expenditures.	95%-99% : Receives 50% of the actual savings
			90% -≤95% : Receives 50% of the actual savings
			>85% but ≤90% : Receives 50% of the actual savings
			≤85% : Receives 50% of the actual savings

Incentive	Description	Measuring Parameter	Criteria and Incentive/Penalty
			<p>Decommissioning Services Penalty:</p> <p>\$1 million weekly penalty for delayed Decommissioning Services beyond the set completion date, up to a \$15 million aggregate maximum across all Legacy Generation Assets and Sites.</p>
<p>(1) The maximum incentive payment shall be subject to the Annual Incentive Cap for each fiscal year.</p> <p>(2) For each Fiscal Year, the maximum aggregate incentive payment payable to Genera shall be subject to the Annual Incentive Cap, and the maximum aggregate O&M Penalty that Genera may incur shall be \$100,000.</p> <p>(3) For each Fiscal Year, the maximum aggregate Reporting Obligation Charge that Genera may incur shall be \$1 million.</p>			

The following table shows the timelines for Genera to present reports of these metrics to P3A, as well as for the determination and payment or deduction of any incentive or penalty.

Table 26: Genera Incentives and Penalties report



There are no incentives or penalties during the mobilization and demobilization period. Furthermore, upon any force majeure event, Genera and P3A shall negotiate adjustments to the metrics shown in *Table 26*.

The performance incentive mechanisms shown in Table 25 are subject to the applicable legal provisions and the proceeding or proceedings that PREB may establish regarding Genera’s compliance with the relevant metrics.

PREB retains the authority to impose penalties. The penalties that the Public-Private Partnership Authority of Puerto Rico imposes on Genera will not substitute penalties for those PREB can impose in accordance with the applicable laws and regulations. Despite the powers granted to PREB by law and regulation, PREB will not duplicate penalties already imposed by P3A, if any, for a given circumstance. Should PREB impose a duplicative penalty for an act or omission already penalized by P3A under the Generation OMA, PREB would deduct the amount previously imposed by P3A from the own penalty PREB imposes.

6.3 LUMA Performance Metrics

Once PREPA exits Title III and the PREB sets performance targets, LUMA will be evaluated against a set of performance incentive metrics in three categories: 1) customer service; 2) technical, safety, and regulatory compliance; and 3) financial. These metrics align LUMA’s performance priorities with improved customer experience and public policy goals. In many cases, the metrics track progress to reversing the significant negative performance trends observed under PREPA’s management of the T&D System. As part of LUMA’s work during the Front-End Transition period, in February 2021 LUMA proposed to the PREB Performance

Metrics based on those outlined in the T&D OMA¹³⁶, including revisions, baselines, and performance targets. As of the certification of this Certified Fiscal Plan, the proposed Revised Annex IX to the T&D OMA has not been approved by PREB and therefore may change in whole or in part. Any future modifications proposed by LUMA during the term of the T&D OMA, including the proposed baselines and targets, are subject to final approval by PREB.

LUMA’s compensation is tied to achieving certain target thresholds for the performance metrics. In other words, LUMA’s performance metrics are standards by which LUMA’s performance may be measured, and incentive compensation is determined based on targets that are achieved. Incentives will be paid in the form of a variable and capped incentive fee. (See Section 6.3.3 T&D OMA Incentive Fee Calculation Approach for more details).

The following overview summarizes LUMA’s performance metrics as presented to PREB in September 2021 in the revised Annex IX of the T&D OMA.

6.3.1 T&D OMA Normal Operation Performance Metrics

LUMA’s performance for normal operations will be measured by and evaluated against performance metrics across three major categories:

1. **Customer service metrics** to ensure LUMA is achieving a high-level of customer satisfaction across all customer classes
2. **Technical, safety, and regulatory metrics** to verify LUMA is operating a safe, reliable electric grid while remaining compliant with applicable safety, environmental, and other regulations
3. **Financial performance metrics** to ensure LUMA is operating sustainably within the Operating and Capital Budgets (both federally funded and non-federally funded)

LUMA’s metrics by category and a description of each metric are included in *Table 27*. This overview reflects the revised Annex IX of the T&D OMA as filed with PREB on October 28, 2022. The submission was largely the same as the one submitted in September 2022, with LUMA adding four additional metrics as ordered by PREB on net energy metering validation, energy efficiency, demand response and vegetation management. As discussed above, PREB has not yet approved these proposed performance metrics.

Table 27: Overview of T&D OMA Performance Metrics¹³⁷

	Metric	Description
Customer service metrics	J.D. Power Customer Satisfaction Survey (Residential Customers)	Third party measure of customer satisfaction
	J.D. Power Customer Satisfaction Survey (Business Customers)	Third party measure of customer satisfaction
	Average speed of answer (minutes)	The average wait time from the moment the customer enters the Automated Call Distribution (“ACD”) queue to the time an agent answers the call
	Customer complaint rate	Total annual complaints registered with PREB divided by the total number of customers and then multiplied by 100,000

¹³⁶ Annex IX. Performance Metrics. Puerto Rico Transmission & Distribution System Operation & Maintenance Agreement. June 22, 2020.

¹³⁷ Subject to final PREB approval

	Metric	Description
	Abandonment rate	The percentage of callers who hang up (abandon) while the call is still in the ACD queue
Technical, safety, and regulatory metrics ¹³⁸	Occupational Safety & Health Administration (OSHA) Recordable Incident Rate	Total number of OSHA recordable incidents due to a work-related injury
	OSHA Fatalities	All work-related fatalities
	OSHA Severity Rate	Total number of work-related injuries with severity days (both restricted and lost time days)
	OSHA Days Away Restricted or Transferred (DART) Rate	Total number of OSHA recordable cases with lost-time days (away, restricted or transferred)
	System Average Interruption Frequency Index (SAIFI)	Indicates how often the average customer experiences a sustained interruption over a predefined period
	System Average Interruption Duration Index (SAIDI)	Indicates the total duration of interruption for the average customer during a predefined period
	Distribution Line Inspections & Targeted Corrections	The number of distribution line inspections completed, with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
	Transmission Line Inspections & Targeted Corrections	The number of transmission line inspections completed, with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
	T&D Substation Inspections & Targeted Corrections	The number of distribution and transmission substation inspections completed with data recorded in a database for analysis. Category 0 and Category 1 findings shall be incorporated in a plan to be addressed within 60 days of identification.
Financial performance	Operating budget	Measures ability to stay within budget
	Capital budget: federally funded	Measures ability to stay within budget
	Capital budget: non-federally funded	Measures ability to stay within budget
	Overtime	Measures ability to manage overtime costs under normal operations (excluding emergency events)

¹³⁸ The descriptions for SAIFI and SAIDI are from the Institute of Electrical and Electronics Engineers (“IEEE”) Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366™-2022.

	Metric	Description
	Days Sales Outstanding (DSO) - General Customers	Measures ability to collect bills from general customers
	Days Sales Outstanding (DSO) - Government Customers	Measures ability to collect bills from government customers

Since September 2021, PREB has requested additional metrics for evaluation, in the areas of Net Energy Metering, Energy Efficiency and Demand Response, and Vegetation Management. These additional metrics are summarized in the table below.

Table 28: Overview of additional T&D OMA performance metrics requested by PREB¹³⁹

	Metric	Description
Technical, safety, and regulatory metrics ¹⁴⁰	Vegetation Maintenance Miles Completed by 230kV, 115kV, 38 kV, and Distribution (primary line only)	Indicates the number of overhead line miles fully maintained in the given year by Transmission (230kV, 115kV, 38kV, and Distribution (less than 38kV).
	NEM Project Activation Duration	Measures the average duration (days) for activating NEM projects
	Energy Savings as % of Sales	Measures total energy savings achieved (MWh) as percentage of total energy sales (MWh) during the period.
	Peak Demand Savings as % of Peak Demand	Measures peak demand savings achieved (MW) as percentage of total peak demand (MW) during the period.

6.3.2 T&D OMA Major Outage Event Performance Metrics

The T&D OMA also includes a set of Major Outage Event Performance Metrics to measure LUMA’s performance during a Major Outage Event. For the purposes of the T&D OMA and Major Outage Event Performance Metrics, a Major Outage Event is defined as:¹⁴¹

“an event as a result of which (i) at least two hundred and five thousand (205,000) T&D Customers are interrupted for more than 15 minutes or (ii) at any point in time during the event, there are one thousand five hundred or more ($\geq 1,500$) active outage events for the T&D System, which are tracked in the Outage Management System (OMS). The major outage event is deemed ongoing so long as the interruptions/outages continue to remain above the stated cumulative amounts, in each case for a period of twenty-four hours or longer (≥ 24) and are caused by an act of God. If such an act of God is a storm, the storm must be designated as a named storm by the U.S. National Weather Service, or a State of Emergency declared by the Government of Puerto Rico. The major outage event shall be deemed to have ended when the cumulative number of T&D customers remaining interrupted falls below ten thousand (10,000) for a continuous period of eight (8) hours.

¹³⁹ Subject to final PREB approval

¹⁴⁰ Institute of Electrical and Electronics Engineers (“IEEE”) Guide for Electric Power Distribution Reliability Indices IEEE Std. 1366TM-2022.

¹⁴¹ As stated in Section 2.8 of Request for Authorization to Submit Revised Pre-Filed Testimony of Melanie Jeppesen, Second Amended Revised Annex IX to the OMA, and Redline of Second Amended Revised Annex IX to the OMA In Re: Performance Targets for Luma Energy ServCo, LLC, Case No. NEPR-MI-2020-0025, September 24, 2021.

The T&D OMA Annex IX metrics for a Major Outage Event and a description of each metric are included in Table 29

Table 29: Overview of T&D OMA Major Outage Event performance metrics¹⁴²

Metric	Description
1. Preparation Phase	Completion of steps to provide timely and accurate emergency event preparation following an alert from U.S. National Weather Service or the company's private weather service, in accordance with the Emergency Response Plan, for an event expected to impact the company's service territory.
2. Downed Wires	Response to downed wires reported by municipal public Officials
3. Damage Assessment	Completion of preliminary damage assessment
4. Crewing	50% of the forecast crewing [from mutual assistance] committed to the utility.
5. Estimated Time of Restoration (ETR) for 90% of Service Outages	Estimated Time of Restoration for 90% of service outages (made available by utility on web, IVR, to Customer Service Representatives (CSRs), etc.)
6. ETR Accuracy for 90% of Service Restoration	Regional ETR accuracy Municipal ETR accuracy
7. Municipality Coordination	Coordination with municipalities regarding road clearing, down wires, critical customers, etc.
8. Municipal Emergency Operation Centers (EOC)	Coordination with municipal Puerto Rico Commonwealth and Federal EOCs.
9. Utility Coordination	Coordination with other utilities (communications, water, etc.)
10. Safety	Measure of any employee or contractor injured doing hazard work during storm/outage and restoration
11. Mutual Assistance	Crew requests made through all sources of mutual assistance or other pre negotiated contracts with utility service providers
12. Call Answer Rates	Customer calls answered by properly staffed call centers (Use of IVR and other technology is an acceptable solution).
13. Web Availability	The company's website, specifically the section pertaining to outage impact and restoration, must be available around the clock during a major storm event and information must be updated hourly until final restoration. In the event no new information is available, the web site must display the last time and date that information was updated. The web site and/or section pertaining to outage impact and restoration may be taken offline for a short period during off peak hours to perform system maintenance.
14. PREB and Administrator (P3A) Reporting	Provide storm event information to PREB and Administrator (P3A) in accordance with Electric Outage Reporting System guideline requirements to be established in the ERP for LUMA.
15. Customer Communications	Availability of press releases, text messaging, email, and social media.
16. Outgoing message on telephone line	Recorded message providing callers with outage information is updated within two hours of communication of press releases.

¹⁴² Subject to final PREB approval.

6.3.3 *T&D OMA Incentive Fee Calculation Approach*

LUMA's performance in the contract year as measured against the normal operation performance metrics shall determine LUMA's eligibility for the T&D OMA Incentive Fee. Each category of metrics is allocated a percentage of the incentive compensation pool and each metric within the category is assigned a certain number of base points. Customer service metrics and financial performance metrics are allocated 25% of the incentive compensation pool each while technical, safety, and regulatory metrics are allocated 50%. LUMA may earn from 25% to 150% of the base point value for that metric depending on the extent to which LUMA exceeds the minimum performance level. The more LUMA exceeds the minimum performance level, the larger the multiplier on the base point value will be. This process is repeated for all metrics and categories to determine LUMA's overall point score and the corresponding Incentive Fee.¹⁴³

Finally, if any Major Outage Event (including a Major Outage Event that is a force majeure event) prevents LUMA from achieving one or more of the normal operation performance metrics, LUMA is still entitled to earn the Incentive Fee for the period of the Major Outage Event, as long as LUMA achieves the Major Outage Performance Metrics during such period of time.

¹⁴³ Further information on this process and an example Incentive Fee calculation can be found in the OMA at <https://www.p3.pr.gov/wp-content/uploads/2020/06/executed-consolidated-om-agreement-td.pdf>.

7 Summary of Financial Projections

The following chapter provides an overview of PREPA's projected financials for the near-term (next five years) and the long term (next 30 years). These projections reflect the potential impact of external factors (e.g., fuel price increases and the macroeconomic outlook for Puerto Rico), and the potential impact of internal developments (e.g., the integration of renewable generation capacity). The projections reflect the expected impacts of PREPA's ongoing transformation, including the initiatives and operational measures being planned or implemented across the four separate entities that will make up PREPA in the future: HoldCo, GenCo, GridCo, and HydroCo, each with their own specific role, responsibilities, and operating costs.

All projections in this chapter are based on and consistent with the macroeconomic assumptions (including population and GNP growth) underlying the latest Commonwealth Certified Fiscal Plan, certified in April 2023. This chapter also largely assumes compliance with Act 17-2019's targets for energy efficiency and renewable generation, as well as the most recent 2021 Integrated Resource Plan (IRP) mandates. There is also a brief discussion of alternative forecasts that may result in a deviation from these assumptions in section 7.4 – Sensitivities.

7.1 Introduction to Baseline Rate and Revenue Requirement

PREPA's financial projections are made in the context of a revenue requirement model. The revenue requirement refers to the revenue PREPA must earn in a given period (in this case, a fiscal year) to provide reliable service to its customers. PREPA's expected revenue, which it receives through its main economic activity (selling the electricity it generates to its customers), must fully cover all projected costs it must reasonably incur to ensure the provision of adequate service to Puerto Ricans. To achieve this, the baseline rates approved by PREB must ensure that the revenue requirements are met for the upcoming fiscal year, given the expected load across customer classes, and the costs associated with operating and maintaining generating assets and transmission and distribution infrastructure. While it is impossible to predict the load with certainty, a combination of macroeconomic trends and other factors affecting the electricity market (e.g., changing consumption habits and statutory requirements around energy efficiency and renewable energy adoption, among others) must be considered to give the best possible idea of how the supply of and demand for electricity will affect load requirements, which are thereby used to set rates.

Section 7.2 provides an overview of historic revenue requirements and associated baseline rates, as well as a view of the forecasted versus actual performance for PREPA during past periods. Section 7.3 provides a view of the load forecast in Puerto Rico and projected revenue for PREPA in the base case, from FY2024 through FY2052, with a discussion on select macroeconomic drivers behind the load forecast and additional factors (including energy efficiency programs, distributed generation, and electric vehicles) that could affect the load.

Note that the Fiscal Plan for FY2024 doesn't account for the restructuring of legacy debt. As a covered entity subject to the requirements of PROMESA currently navigating the Title III process, discussions around restructuring of debt obligations are ongoing and the outcome of the process remains uncertain. Additionally, it does not forecast changes to rate design that may be required to support the evolving energy transition.

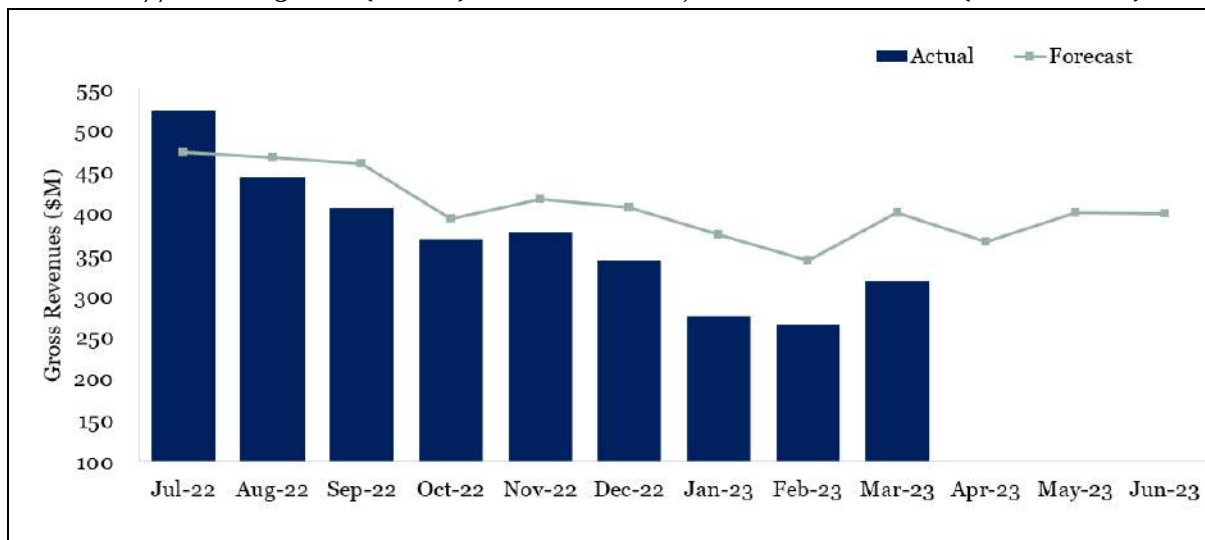
FY2021 is the last fiscal year in which consolidated expenses for PREPA are presented for reporting. Starting FY2022, the Certified Fiscal Plans and Budgets present the three component units – GenCo, GridCo, HoldCo, and, in FY2024, HydroCo will be incorporated.

7.2 Overview of Historic Revenue Requirements and Associated Baseline Rates

According to the latest operational results updated through March 2023 (including the 9 months elapsed in FY2023 with available data), PREPA’s actual gross revenues (i.e., revenues from electricity sales without other income or other adjustments) were \$3.3 billion. This compares to budgeted gross revenues of \$3.8 billion. The cumulative difference between budget and actual revenue for FY2023 to-date is -\$475M during this 9-month period.

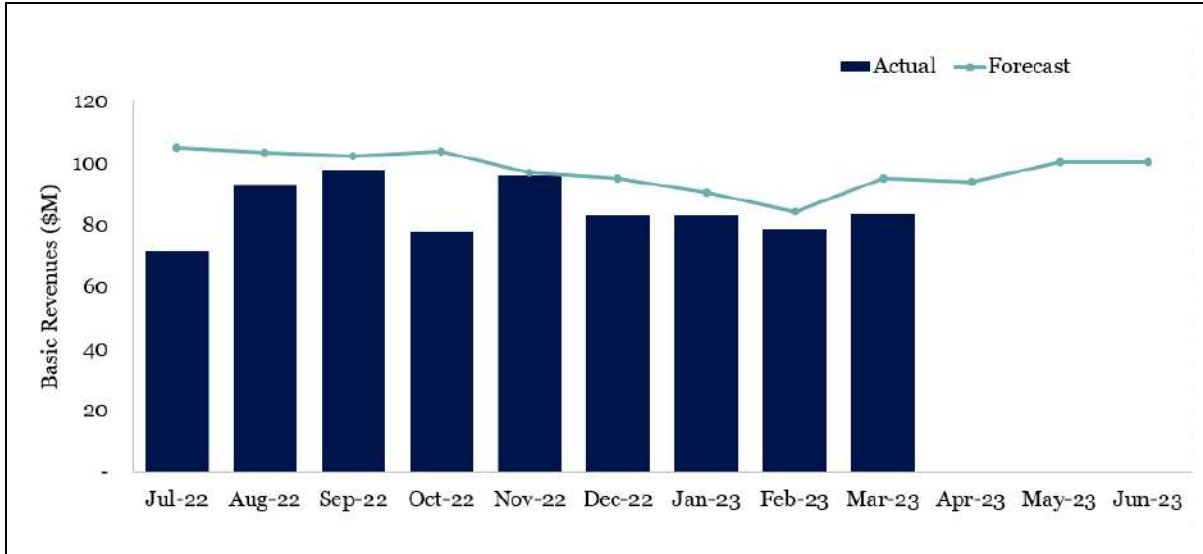
Exhibit 27, below, shows a monthly comparison of forecast vs. actual gross revenues for FY 2023. This reveals that actual revenues have consistently been lower than what was forecast for each month. The largest gaps can be observed during the first three months of CY2023 (January through March), with a deviation of 20-26% below forecast. To date, July, 2022 was the only month of FY2023 with actual revenues above the forecast.

Exhibit 2277: FY2023 YTD (March) Gross Revenues, Forecast vs. Actuals (USD Million)



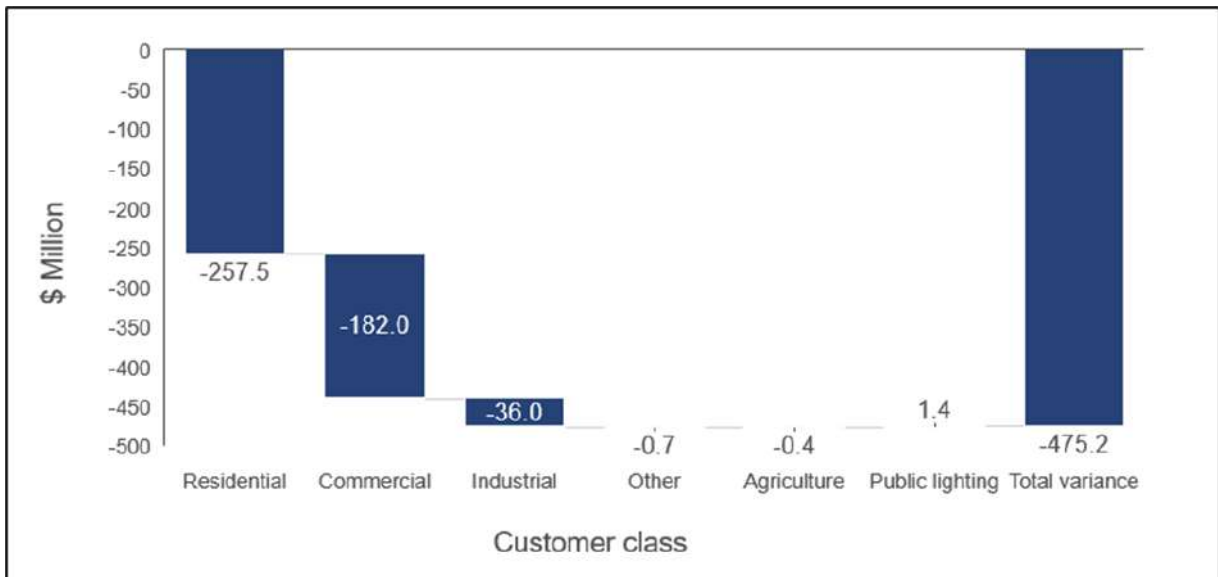
When only basic rate revenue is considered, the overall trend is similar, with actual basic rate revenue 13% lower than forecast for FY2023 through March. Revenue was significantly lower during the months of July and October, with basic rate revenue coming in 23% and 25% lower than forecast, respectively, as can be seen in Exhibit 28.

Exhibit 2288: FY2023 YTD (March) Basic Rate Revenues, Forecast vs. Actuals, (USD Million)



The following Exhibit 29 shows a breakdown of the total variance for FY2023 between budgeted and actual gross revenues split across customer classes. Residential represents the biggest gap versus the budget with \$257 million lower sales than anticipated, representing ~54% of the total variance. The gap among commercial customers is smaller but still significant at \$182 million below budget, representing ~38% of the total gap to budget. Industrial represents ~8%, with public lighting, agriculture, and other customer classes making up the remainder (together, less than 1%).

Exhibit 2929: FY2023 YTD Revenues Vs. Budget Variance by Customer Class

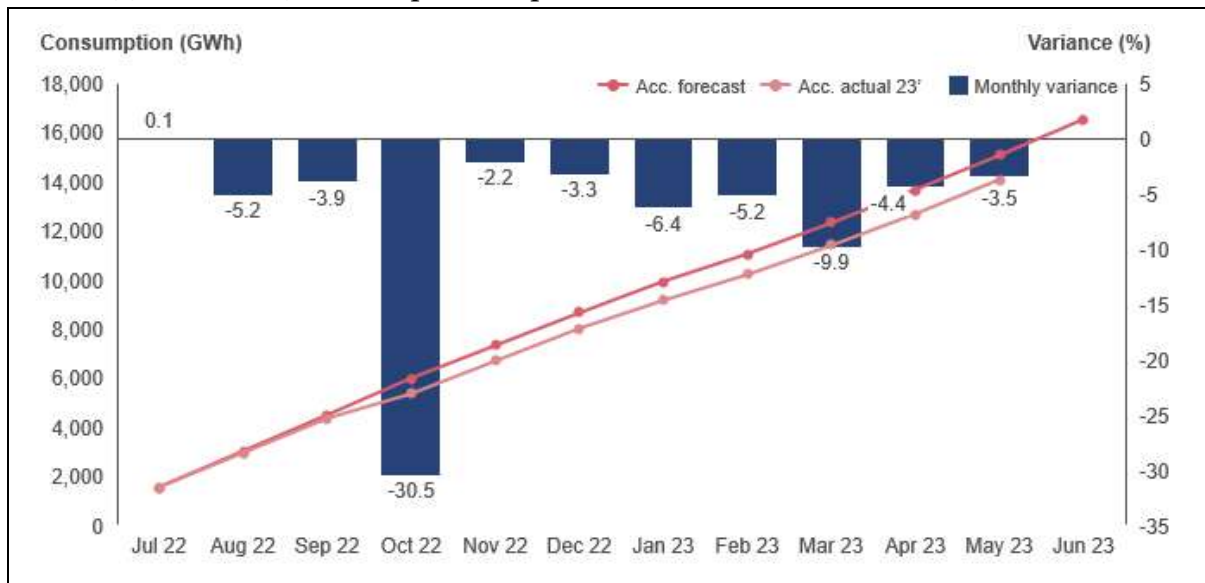


In FY2023, most of the gap between the actuals versus basic revenues in FY2023 so far can be explained by lower-than-expected energy sales. Exhibit 30 shows how consumption has lagged forecast in every month except July 2022, with a view on accumulated forecast consumption, accumulated actual consumption (both in GWh), and the monthly variance to forecast (in percent). The gap was largest in October, which saw consumption 30.5% lower than forecast, largely due to the effects of Hurricane Fiona, driving lower than expected total consumption for the year, which is currently 6.8% below forecast. However, if the decline in consumption

due to the shock of Hurricane Fiona is excluded, FY2023 actual consumption lags forecast by just 4.3%.

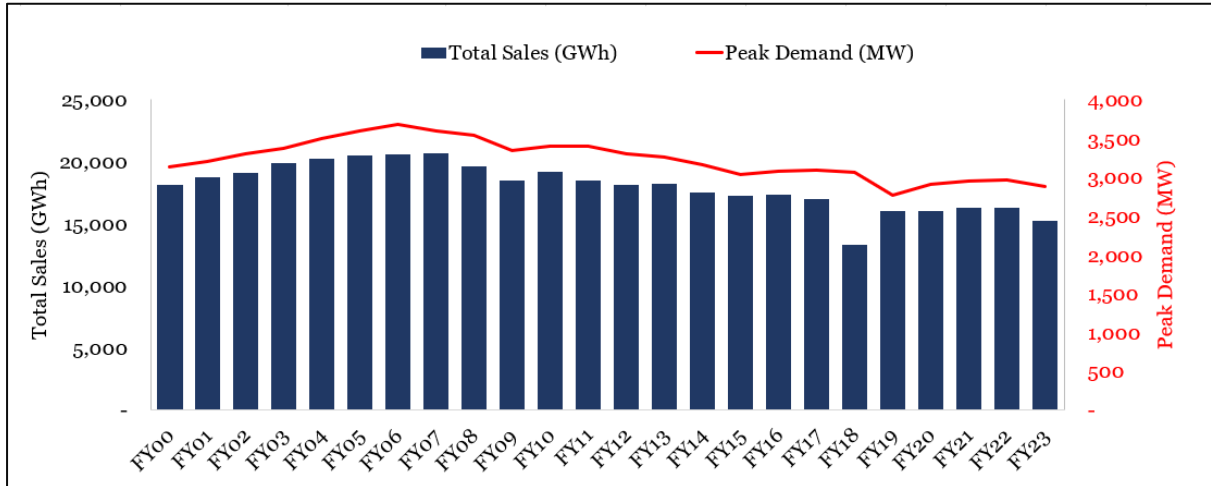
The underperformance of the consumption and revenues compared to forecasts can be explained by a variety of factors, including (but not necessarily limited to) the effects of Hurricane Fiona, a reversion to the pre-COVID mean following an increase in consumption during the COVID-19 pandemic (as discussed in Chapter 2), and an expansion of the number of Net Energy Metering customers (mostly through rooftop solar installations) incentivized by increasing rates, falling payback periods, persistent unreliability in the electrical system, and high inflation. The discrepancy between forecast and actual energy consumption and sales should be further evaluated and root causes considered in future rounds of planning to ensure accurate budgeting and rate setting.

Exhibit 3300: FY2023 Consumption, Gap to Forecast (GWh, %)



Less-than-expected gross revenues for FY2023 are occurring in the context of an ongoing trend of falling energy sales in Puerto Rico. Exhibit 31 shows the historic sales and peak demand since FY2000. Sales exhibit a steady growth from FY2000 to FY2007 where they peaked at approximately 21 TWh. During the next decade, underwent a gradual decline, falling to 17 TWh in FY2017. In FY2018, the effects of Hurricanes Irma and Maria left many parts of Puerto Rico with no electricity for extended periods of time. This can be observed as a demand shock equivalent to almost a fall of almost 4 TWh of energy sales in FY2018. After recovering from the hurricanes, total sales have held relatively steady at approximately 16 TWh per year from FY2019-FY2022. For FY2023, however, sales are trending slightly lower. Over this period, peak demand has generally followed the same trend, with a peak in FY2006 at 3.7 MW and gradually declining thereafter to approximately 2.9 MW in FY2023.

Exhibit 3311: Historical Billing Determinants (GWh, MW)



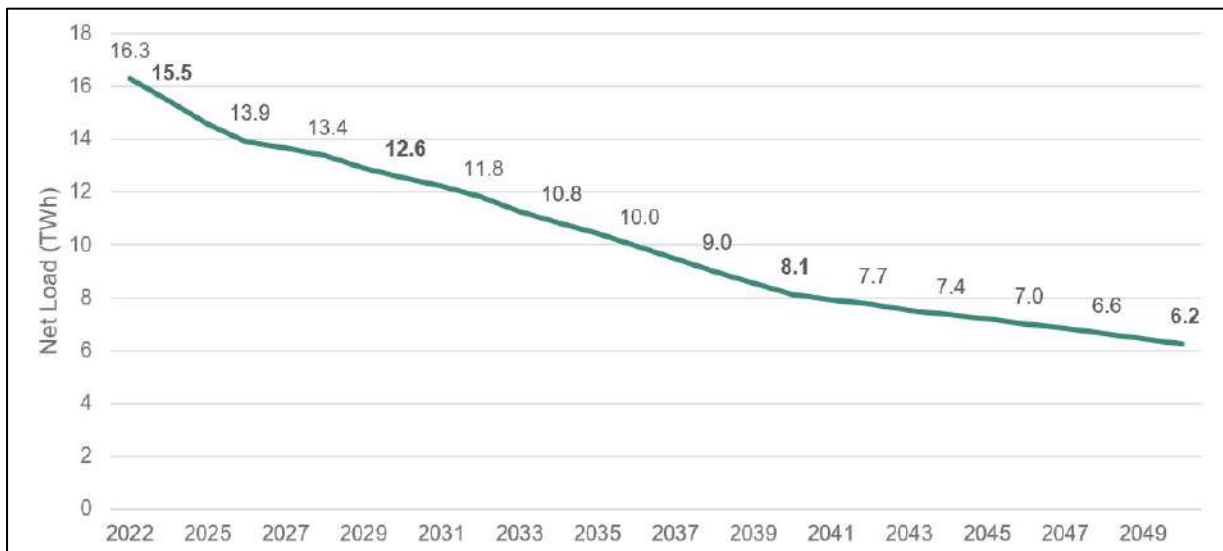
7.3 Revenue Projections and Load Forecasting

This section will focus on providing an overview of the load forecast for FY2023. It will also provide context on several macroeconomic drivers that affect the load. Finally, this section will discuss the additional modifiers to the load that should be considered in the projections, including energy efficiency, distributed generation, and the adoption of electric vehicles.

7.3.1 Load Forecast

For the 2023 PREPA Fiscal Plan, LUMA submitted their forecast for the net load for the period FY2024 to FY2050. Exhibit 32 shows the load curve expressed in TWh. From a FY2022 baseline of ~16TWh, a steady and significant decline in net load is projected over the forecast period: from a high of 15.5 TWh in FY2024, net load is projected to decline to 12.6 TWh in FY2030 and 8.1TWh in FY2040, reaching a low of 6.2TWh in FY2050. This is equivalent to an average 3% annual decrease in net load over the forecast period. This results in a FY2050 net load projection that is roughly 40% of the load expected for FY2024.

Exhibit 3322: Net Load Forecast (TWh), FY2022 Actuals and FY2024-2050 Forecast

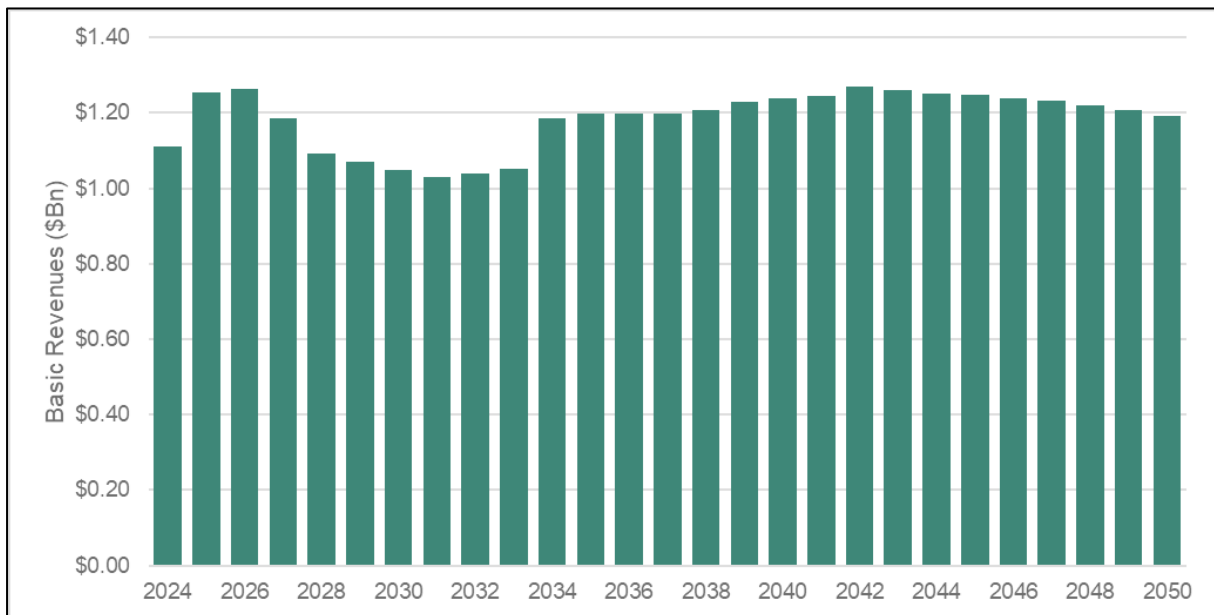


Two of several factors contributing to the projected decline in load will be analyzed in the following sections: macroeconomic factors and load modifiers. Note that other factors may also contribute to changes in load and this discussion is not intended to be exhaustive.

1. **Macroeconomic factors:** The ongoing decline in Puerto Rico’s population, and the concurrent decline in economic activity on the island, as measured through the GNP, leads to a reduced energy demand and therefore a decreasing load over time (*See Section 7.2.3 Macroeconomic Projections for further discussion on this topic*).
2. **Load modifiers:** Behavioral components on the demand side that directly affect the projected load, including:
 - Energy Efficiency (**EE**) initiatives that make residential and commercial appliances and public lighting more efficient in their use of energy, thereby reducing load demand;
 - Distributed Generation (**DG**) via the installation of rooftop solar and other renewable power generation, which results in customers generating their own power, thereby reducing load demand;
 - Electric Vehicle (**EV**) adoption. The widespread adoption of EVs by Puerto Rican families acts in the opposite direction to EE and DG, increasing load that connects to the grid and requires energy to charge; (*See Section 7.2.4 Modifiers Projections*)

7.3.2 Basic Revenue Forecast

Exhibit 3333: Basic Revenue Forecast (USD Billion, in nominal dollars)



In FY2024, rates were set to reach a revenue requirement of \$1.1 Billion. This compares to a \$1.0 Billion budgeted in FY2023 and \$1.2 Billion in basic revenues collected in FY2022. Basic revenues are expected to rise slightly in FY 2024-2026 in nominal terms, to a high of \$1.34 Billion in 2027, driven by higher overall operational costs. After this point, the trend is generally towards a slight increase in basic revenues in nominal terms, peaking at \$1.27 billion in FY2042 (Exhibit 33). In nominal terms, this amounts to an average annual increase of less than 1% over the FY24-50 period, which is less than the projected rate of inflation over this period. In other words, the projected change in basic revenues over this period in real terms is negative. The fall in basic revenues in real terms is driven primarily by a projected fall in the

macroeconomic drivers of base revenues (including population and GNP) and compounded by projected future gains in energy efficiency and continued adoption of rooftop solar, which will lead to a lower load, partially offset by an expected increase in adoption of electric vehicles. The macroeconomic drivers of basic revenues will be discussed in more detail below.

It should be noted that increases in operating expenses, including necessary maintenance expenses and labor and non-labor expenses, are partially counteracting the fall in basic revenues driven by macroeconomic forces such as population decline and GNP.

In FY 2024, the projected \$1.1 Billion is originated as follows: 51% coming from commercial customers, 34% coming from residential customers, and 9% coming from industrial customers. A further 5% is expected to come from public lighting, with agriculture and other uses making up the remainder. This breakdown can be seen in Table 30, below.

Table 30: Basic Revenues and Energy sales by Customer Class in FY2024

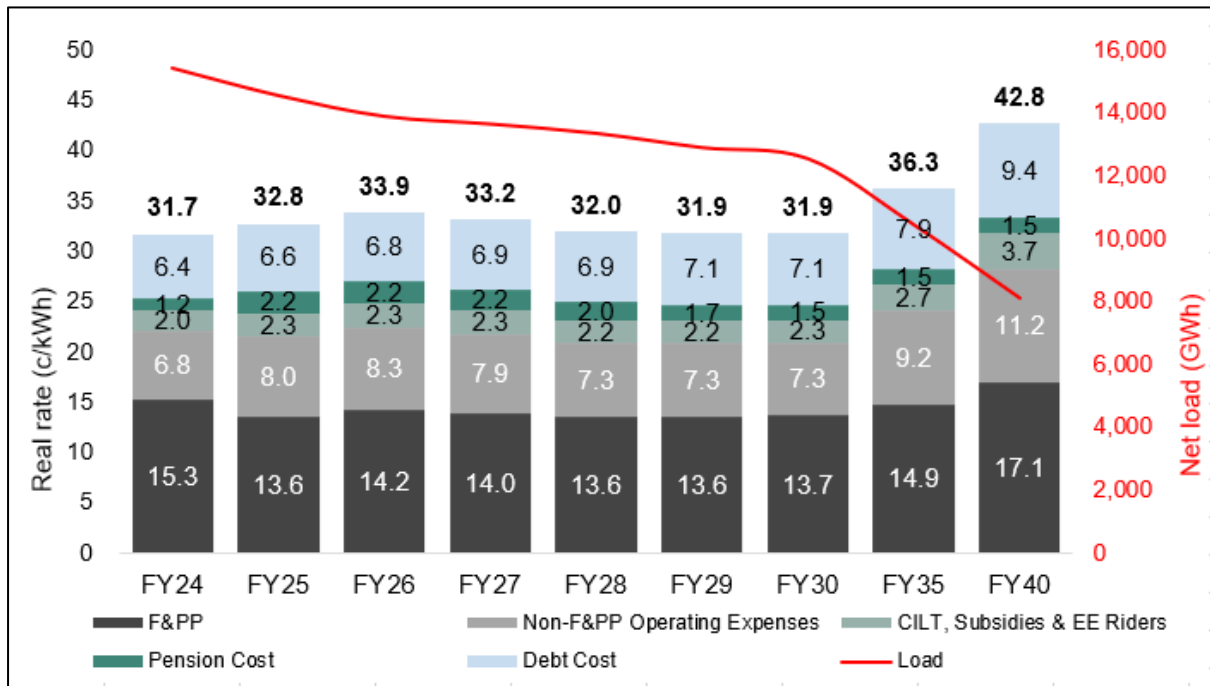
Customer Class	Basic Revenue (\$ Million)	GWh	Customers
Residential	373.9	6,166.8	1,378,429
Commercial	569.5	7,124.2	125,004
Industrial	103.4	1,864.0	586
Public Lighting	61.0	253.1	2,165
Agricultural	1.9	21.5	1,102
Other	2.2	36.2	2
Total	1,111.8	15,465	1,507,288

7.3.3 Baseline Rate Projections

Baseline rate projections are shown in Exhibit 34 below, where rates are expressed in real terms to adjust for future inflation. These projections show that absent any transformation of PREPA, and without the benefits of any financial restructuring or operational improvement initiatives, customer rates will increase steadily over the 2024-2040 period. From the FY2024 rate of 31.7 ¢/kWh, rates can be expected to rise to 33.9 ¢/kWh in FY2030, 36.3 ¢/kWh in 2035, and 42.8 ¢/kWh in FY2040. The increase in rates over this period is largely driven by a sustained fall in demand, as seen on the downward net load curve shown in red on the same Exhibit. The effect of a declining net load causes fixed costs to be spread across a smaller number of customers (expressed in kilowatt-hours), which is reflected in a higher real rate. However, a significant driver of the increase in rates starting in FY2024 is the legacy debt and pension cost, which contribute ~25-28% to the real rate each year over the FY25-40 period.

The high and increasing baseline rates shown below, especially in light of already expensive electrical rates in Puerto Rico as a share of household income (as discussed in Section 2.4), underscores the need for a comprehensive transformation of PREPA, as outlined in Chapter 3 (Transformation) which could mitigate some of the pressure on ratepayers while also lowering the risk of grid defection due to the lower cost of electricity generated through rooftop solar compared to purchasing through the PREPA grid.

Exhibit 3344: Revenue Requirement Rates in Real Terms (2022 USD) including F&PP, Opex, CILT, Subsidies & EE Riders, and Unrestructured Debt and Restructured PayGo Pension Costs (¢/kWh) vs. Net Load (GWh)



Additional factors beyond the transformation and other initiatives mentioned above could also have an impact on future rates. These can be categorized into expense-related and demand-related factors.

Expense-related factors: Most of PREPA’s utility operating costs are projected based on historical PREPA, LUMA, and Genera base cost expenses, indexed to the expected rate of inflation. Some costs, however, are dependent on third-party processes, political outcomes, and market factors, and cannot be projected with a high degree of certainty. These include, among others:

- **A 10% cost share requirement to access federally funded capital expenditures.** PREPA currently assumes that it can cover the cost share between FY2024 and FY2026 with funds from HUD-CDBG ER1 program . The remaining federal funding cost share is assumed to spread evenly between FY2027 to FY 2033. In the absence of other funding sources, the cost share in this period is assumed to be borne by PREPA, leading to potential rate increase (See Section 5.1.4 Federal Funding Local Cost Share Requirements for more details).
- **Volatile fuel prices.** PREPA’s generating assets are still highly reliant on fossil fuels such as diesel, heavy fuel oil, and coal that trade on global commodity markets. This exposes PREPA to a high degree of price volatility due to regular commodity cycles and sudden spikes due to geopolitical and other shocks that directly, unpredictably, and significantly influence electricity rates customers pay.

Demand-related factors: Changes in both aggregate and peak demand also impact costs. If aggregate demand increases, PREPA’s fixed costs (e.g., necessary maintenance expenditures, labor expenses, administrative costs, debt, and pensions) are spread across a higher number of kilowatt-hours, reducing the rate per kWh. Conversely, if aggregate demand decreases, rates per kWh go up. Regarding peak demand, and load factor (the difference between the average demand and the peak demand), when peak demand increases and load

factor decreases, rates per kWh go up, and when peak demand decreases and load factor increases, rates per kWh go down. These demand factors are directly influenced by the Macroeconomic and Modifiers projections discussed in the following sections.

7.3.4 *Macroeconomic Projections*

The Certified Fiscal Plan incorporates macroeconomic projections consistent with those used in the 2023 Commonwealth Certified Fiscal Plan.^[4] They show a steady population decline over the next 5 years, driven by a combination of outmigration and demographic factors. They also project a modest decline in economic activity over the next two years, followed by some equally modest growth in the three years that follow that, with the trend in the medium term close to 0% annual growth.

Macroeconomic indicators and demographics

- **Population:** The Certified Fiscal Plan incorporates macroeconomic projections consistent with those used in the 2023 Commonwealth Certified Fiscal Plan. They show a population decline of between 0.1% and 0.5% year over year through FY2027, driven by a combination of outmigration and demographic factors, with a projected 2052 population of 2.497 million, down from 3.25 million currently, representing a decline of approximately 24%. The projection for population of Puerto Rico from including actual population through 2022 and projections from 2023 to 2050 can be seen in Exhibit 35.
- **GNP:** after a rebound in 2019 fueled by post-hurricane recovery, GNP growth fell in FY 2020, fueled by the economic impacts of COVID-19, more than offsetting those gains. Generous relief spending benefitted Puerto Rican consumers and the economy as a whole in FY2021 and FY2022, fueling a rise in GNP of 1-2% in FY 2021 and 2022. The 2023 Commonwealth Fiscal Plan projects a 0.7% decline in FY2023 real GNP, followed by a period of near-zero growth in FY2024-FY2026. A brief growth rebound in FY2027-2028 is followed by a return to Puerto Rico's negative historical trend, with an average decline of 0.5% per year in FY2029-FY2052. See Exhibit 36 for more details.

Exhibit 3535: Commonwealth of Puerto Rico Population Projections

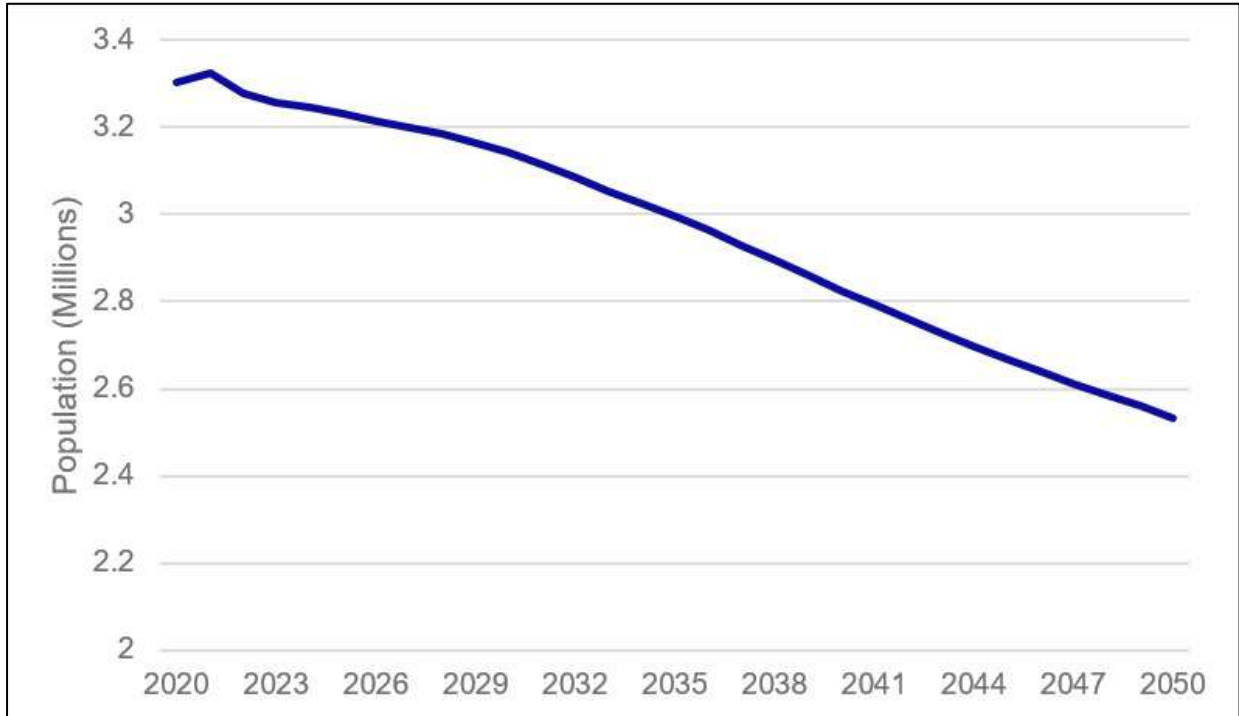
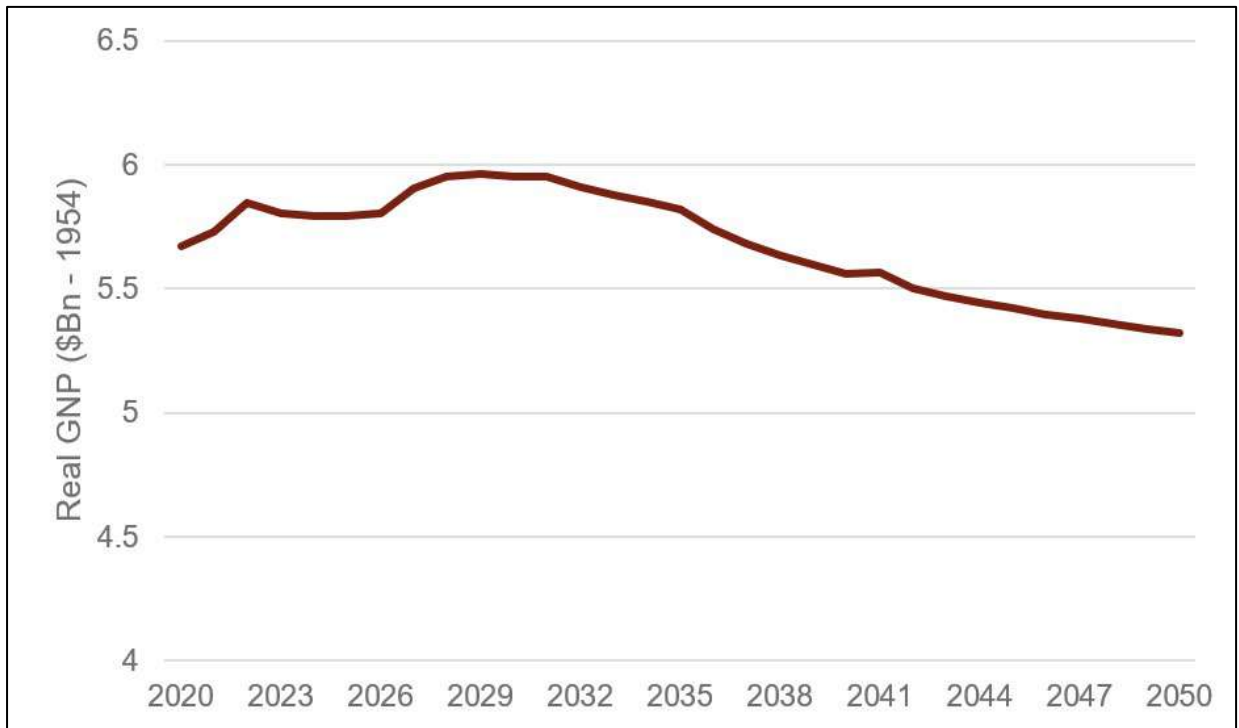


Exhibit 3636: Commonwealth of Puerto Rico GNP Projections



7.3.5 Modifiers to the Base Load Projection

Large-scale secular trends across three primary areas are used to adjust the base load forecast. Expectations from various stakeholders and industry experts, including PREB and IRP intervenors, were accounted for in considering these demand-side impacts. Together with the projected ongoing fall in population in Puerto Rico, energy efficiency, and to a lesser extent distributed generation can be expected to further contribute to declining load projections

through the Certified Fiscal Plan forecast period. This will be partially offset by other trends, such as the increasing adoption of electric vehicles.

While the Inflation Reduction Act, discussed in Chapter 2, could result in impacts to some of the drivers behind modifiers to the base load projection, further guidance from the US Treasury is required to clarify to what extent the IRA can impact energy efficiency, distributed generation, and electric vehicle adoption in Puerto Rico. In the absence of clearer eligibility guidance, the IRA’s provisions have not been considered as part of EE, DG, or EV adoption in this Fiscal Plan (see Section 2.2.4 for more details on IRA).

7.3.5.1 ENERGY EFFICIENCY PROGRAM

The Certified Fiscal Plan load forecast assumes that PREPA achieves the target set forth by legislative mandate in Act 17-2019 of a 30% reduction in load attributable to energy efficiency by 2040, compared to PREPA’s FY 2019 net utility sales.

On June 21, 2022, LUMA submitted the inaugural Energy Efficiency and Demand Response Plan to PREB, which they named the “Transition Period Program Plan for Energy Efficiency and Demand Response”. The plan outlined a series of actions and approaches to facilitate the smooth ramp-up of Energy Efficiency and Demand Response programs to build market readiness prior to beginning a full-scale comprehensive portfolio of Energy Efficiency and Demand Response programs. The impact of the market ready programs on customers and the overall distributed energy resource market will determine the full-scale portfolio programs and plans. For more information on the Transition Period Plan and Energy Efficiency Regulation, please refer to PREB Dockets NEPR-MI-2021-0006 and NEPR-MI-2021-0005.

The cumulative energy savings through implementing Energy Efficiency programs is expected to be approximately 4,744 GWh in FY 2040, pursuant to the requirements of Act-17. The path to this level of saving can be seen in Exhibit 37. However, there has been limited year-over-year progress towards energy efficiency goals in recent years, with actual cumulative EE savings currently standing at ~16 GWh in FY2023, which is projected to rise to 40 GWh in FY2024. While this would represent an ambitious 2.5x increase in EE year-over-year, efficiency would still need to increase dramatically the year after by a factor of 8.35x to meet cumulative energy efficiency savings target of 334 GWh in FY2025. The path to meeting FY2040 energy efficiency targets established in Act-17 is extremely ambitious and will require a rapid ramp-up in EE initiatives to accelerate beyond current levels, as can be seen in Exhibit 38.

Exhibit 3737: Cumulative Energy Efficiency Savings by Program (GWh)

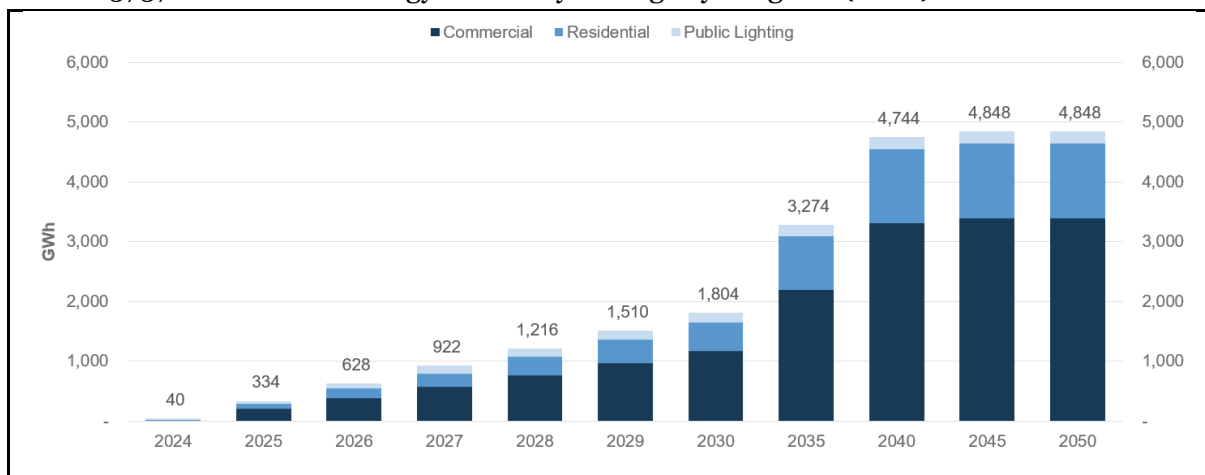
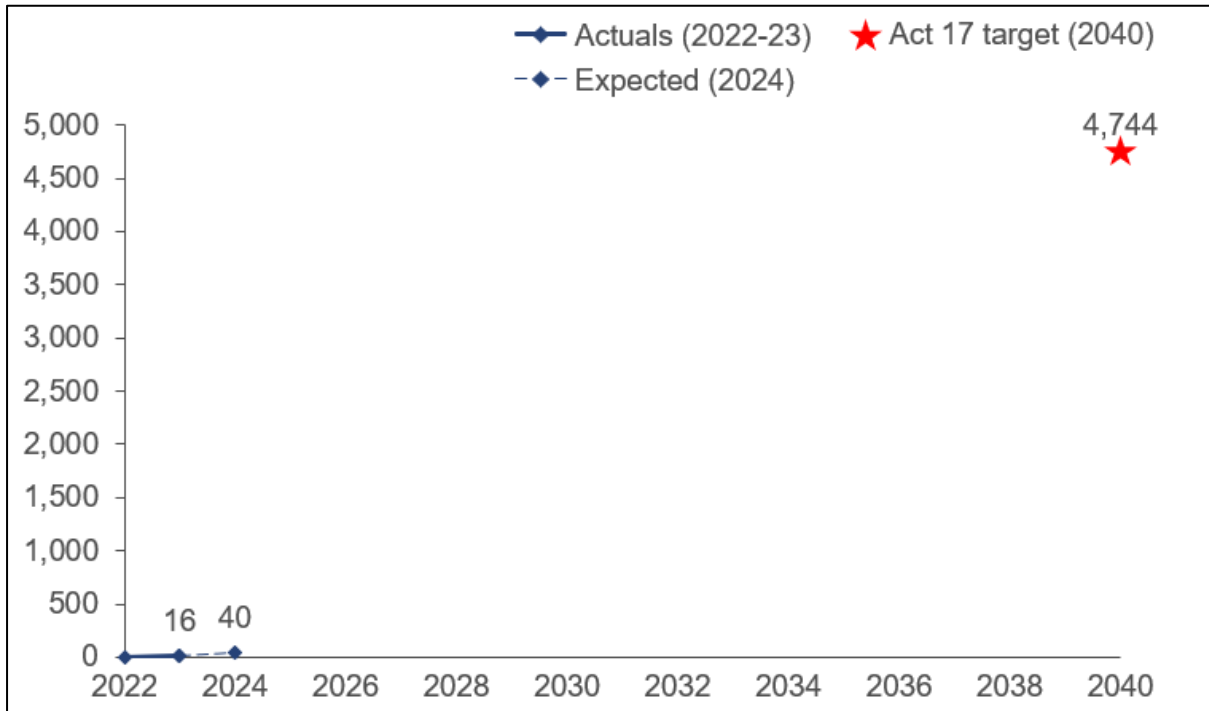


Exhibit 3838: Current Energy Efficiency vs. Act 17 targets



Actual energy savings from energy efficiency will depend on the uptake of measures among customers. Given the lack of robust baselining, studies of energy efficiency potential, and the relatively nascent energy efficiency market in Puerto Rico, there is a high degree of uncertainty as to reasonable energy efficiency expectations in Puerto Rico, with a range of possible outcomes. Act 17-compliant projections in the Certified Fiscal Plan (as seen in Exhibit 38) are based on optimistic assumptions regarding customer participation rates and savings potential. It shows the gains in EE that would be required to reach Act-17’s 2040 targets. However, the actual impact of programmatic energy efficiency measures might be less than expected, resulting in a lower-than-expected decline in demand for electricity.

To achieve those goals, the primary funding source identified for the implementation of EE and DR programs is the EE Rate Rider, unless other revenue is obtained (grants, federal funds, etc.) which can reduce funds collected from ratepayers or increase the quantity of cost-effective EE pursuant to the regulation. LUMA recently filed an EE Rider Petition in compliance with PREB Orders in Docket NEPR-MI-2022-0001 and also filed for it as part of the annual subsidies’ rider reconciliation process on June 20, 2023 in Docket NEPR-MI-2020-0001. This filing included an illustrative discussion of average customer bill impacts, but as of the date of publication there are no future year potential rate impact analyses publicly filed before PREB.

LUMA provided an EE Program Cost Forecast that ran from FY24 through FY41, starting with an initial FY24 funding of ~\$19.7M with a 39.5 GWh efficiency target but increasing sharply to and holding at ~\$147M through FY40 with a 294 GWh annual incremental energy efficiency goal and then ramping down to a final year in FY41 with ~\$50M in funding to meet the remaining required GWh energy efficiency target and reach Act 17’s Energy Efficiency requirements. The Program Cost Forecast totaled approximately ~\$2.4B in nominal terms. Given the lack of regulatory certainty on the approval of future year ratepayer funded costs, but in recognition of the need to fund EE programs to achieve Act 17’s targets, the Fiscal Plan reflects ~\$49M of LUMA’s annual projected program costs through FY41 to be funded through the EE rider, and assumes the additional program costs will be funded through external, non-

Commonwealth sources that the Government and Oversight Board has and/or will work to identify.

7.3.5.2 DISTRIBUTED GENERATION (DG)

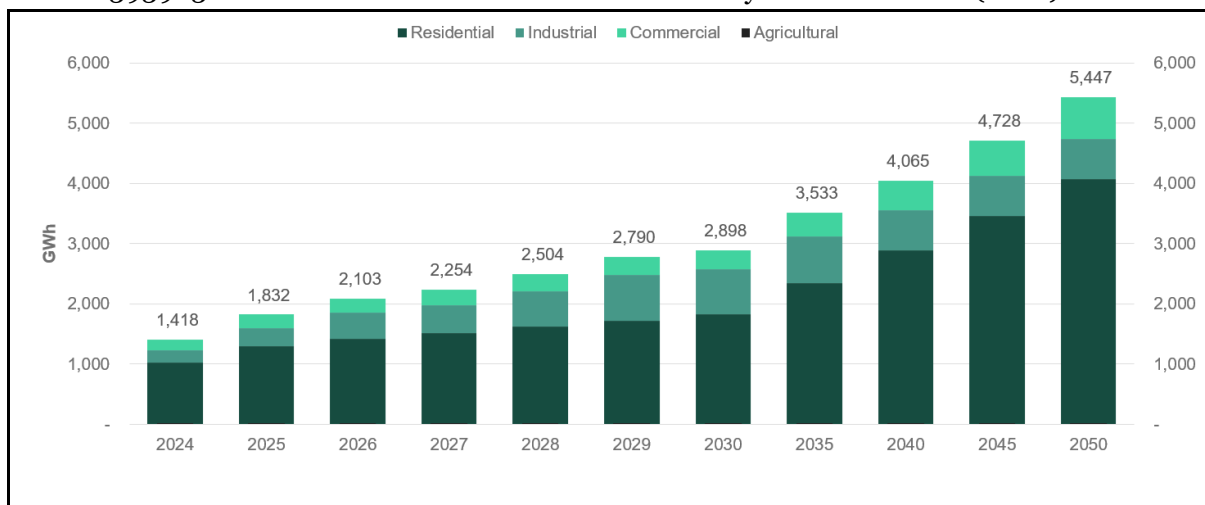
Deployment of distributed generation (i.e., rooftop solar and combined heat and power generation) is projected to grow across all customer classes in the coming years. While commercial and residential customers are more likely to adopt co-located solar generation, industrial customers are more likely to build combined heat and power generation (CHP). The assumptions for CHP are based on current pipeline of projects as updated by PREPA Planning and T&D personnel. Because CHP is expected to be customer owned and associated with industrial processes there is no cycling of these units to accommodate renewable generation in the financial projections.

Some risks associated with the adoption of photovoltaic (PV) DG have been identified, both of which could lead to a rise in rates, all else equal.

Grid defection: Currently, payback periods for rooftop and other co-located solar are falling. All else equal, this means that more customers will find it economically feasible to install solar units to generate electricity at home. Some customers may find it advantageous to switch completely to distributed generation (with the addition of battery storage) or to significantly curtail consumption from the grid during times when solar generation is viable, causing overall load to decline, resulting in higher rates.

Decreasing load factor: Load factor is the ratio between the average demand and peak demand. As the load factor decreases (i.e., as the gap between average and peak demand grows), the cost to serve each unit of energy increases. Increasing penetration of solar PV reduces energy sales overall, so average demand will fall. However, it tends to not impact peak demand in Puerto Rico, which since Fiscal Year 2003 typically occurs past sunset, in the evening when solar generation is not viable. This means that PV can substantially reduce revenue collected per customer without materially impacting the fixed capacity system costs imposed per customer, resulting in the potential for increases in the prices faced by customers over the longer term.

Exhibit 3939: 30-Year Distributed Generation Forecast by Customer Class (TWh)



7.3.5.3 ELECTRIC VEHICLES

Driven by technological development and regulatory support, the penetration of electric vehicles is expected to increase in the upcoming decades. For instance, some estimates project that by 2030 EVs could reach nearly 60% of total vehicles sales across the markets of China, the EU, and US. While these numbers depend on a variety of factors, including battery cost developments, regulation, and customer preferences, a significant uptake in EV sales will have increase electricity demand, both on average and peak load.

The Certified Fiscal Plan load forecast uses the DOE PR 100 forecasts for light duty vehicles as its basis. At the time of certification, final forecasts have not been produced and therefore are subject to change.

LUMA outlined some risks in the EV docket, such as risks related to increased peak demand, distribution system thermal overloading, and generation resource adequacy constraints. The primary mitigation measure currently identified for EV risks is the implementation of time-of-use rates for electric vehicle charging which would motivate customers to shift charging load to off-peak periods.

7.4 Sensitivities

The Certified Fiscal Plan Base Case (the “Base Case”) developed by PREPA and LUMA includes a load scenario that is based on assumptions for key gross load drivers (GNP and population projections consistent with Commonwealth Certified Fiscal Plan) and for key net load drivers related to energy efficiency (EE), distributed generation (DG) adoption and electric vehicle (EV) uptake. To develop the net load on the Base Case, a series of assumptions on the key load drivers were used during the forecast and calculations:

- Energy Efficiency Program (EE): Forecast based entirely on Act 17 compliance, achieving an efficiency target of 30% by FY 2040, which translates into a reduction of 4,744 GWh by the target year. To get there, the assumption was a straight line from the current levels in FY2024 all the way to FY2040, after when the assumption is that there would be no more efficiency gains, so the load saving would remain flat.
- Distributed Generation (DG): The forecast was done using data collected by the Energy Information Administration (EIA) on residential rooftop systems in the US. The analysis then was made with a regression on the historical data between July 2014 and June 2021. It is important to note between the months of January 2022 to January 2023, there was an acceleration in the Distributed Generation deployment and Net Metering registration by customers all over Puerto Rico. This important deviation from historic trends had to be incorporated in the model, so it would incorporate the latest trends.
- Electric Vehicles (EV): The forecast was made using the latest PR100 EV forecast from December 2022.

The methodology followed for the Base Case calculation and the resulting load implications were considered as accurately reflecting the reality and future estimates for the DG and EV components. But the assumptions in the Base Case for EE do not fully capture the actual constraints and realities in Puerto Rico or the state of current programs and plans in place to support these assumptions.

An alternative load forecast was developed, using a bottoms-up approach. This forecast uses the current situation in Puerto Rico as the starting point and does not constrain assumptions based on Act 17 targets. Furthermore, the alternative forecast incorporates the latest data

available on energy efficiency gains by sector and type of appliance, current and future costs, and is supported by driver specific models, providing a perspective on a potentially different load forecast (the “Alternative Forecast”). This forecast is subject to change based on changes in legal/regulatory framework, continued changes in price and cost trajectories, and other factors.

The assumptions, results and final impact on the net load will be discussed in the next section.

Comparative View

Key Differences and Assumptions

Fundamentally, the Base Case projections are based on top-down assumptions, while the Alternative Forecast approach is based on a bottoms-up perspective.

Approach to EE Program compared: The Base Case projects EE load to reach the FY 2040 30% EE Program target established by Act 17 while the Alternative Forecast assumes organic growth of EE through incremental year-over-year technology efficiencies without considering legislation or program investments. More specifically, the Base Case starts with a top-down target and assumes that the 30% energy efficiency goal for FY 2040 – as established in Act 17 – is achieved on time. To achieve this goal, the Base Case assumes a constant yearly EE load increase of ~2% to get there.

Given current rates of technological improvement and cost savings, the load decrease projected in the Base Case through EE is unlikely to be achieved only through organic commercial and residential lighting, equipment, and appliance replacements, and will likely require additional interventions such as those proposed in the Transition Period Plan, which is planned to take effect on July 1, 2023, discussed in Sections 4.2.1.4 and in 7.4.1

Specific Assumptions in the Alternative Forecast – Energy Efficiency Program

The EE forecast in Alternative Forecast is based on replacement life cycles, savings from energy efficiency gains, and customer uptake. For example, each equipment type is assumed to have a projected useful life/natural replacement cycle (e.g., residential lighting CFL is expected to be replaced every 4.7 years and LED lighting every 14.8 years). Additionally, the Alternative Forecast considers yearly efficiency gains specific to each equipment type from technology innovation (e.g., residential ACs are expected to have 0.3-0.4% annual efficiency gain), which is forecasted to be lower in Puerto Rico than in the US mainland. Finally, the Alternative Forecast also accounts for the yearly customer uptake based on the level of behavior change required and purchasing decisions (e.g., 40% uptake for residential LEDs and 60% uptake for commercial LEDs due to increased costs of technology). Figure 2 showcases the net difference that these assumptions generate in the projection of net load.

7.4.1 Energy Efficiency Program (EE)

Key differences and assumptions: Fundamentally, the Base Case projections are based on top-down assumptions, while the Alternative Forecast approach is based on a bottoms-up perspective. The Base Case projects EE load to reach the FY 2040 30% EE target established by Act 17 while the Alternative Forecast assumes organic growth of EE through incremental year-over-year technology efficiencies without considering legislation or program investments.

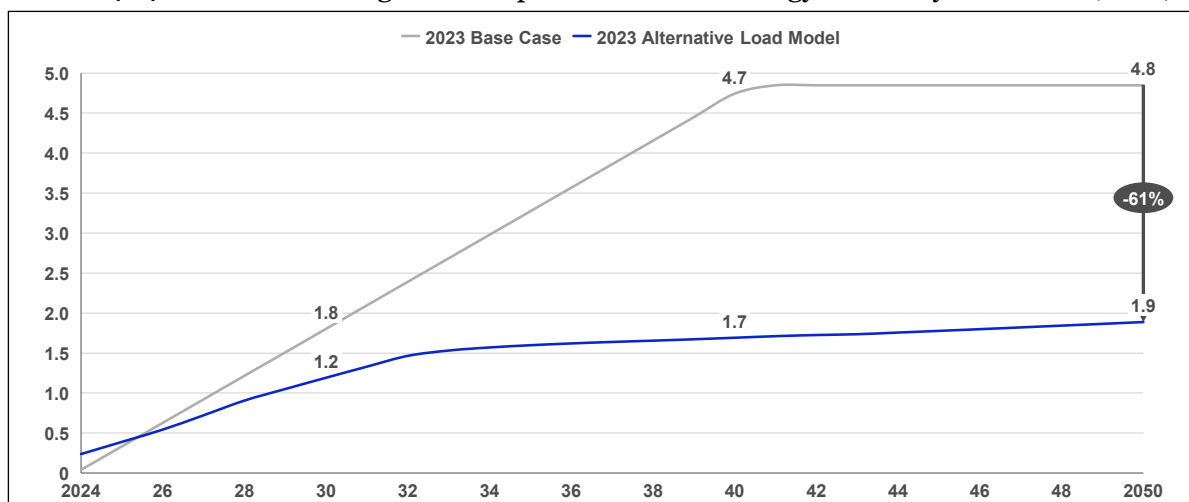
To calculate the Energy Efficiency gains, the assumptions used were mostly based on EIA’s energy efficiency reports, namely their “Updated Buildings Sector Appliance and Equipment Costs and Efficiencies”¹⁴⁴ as well as EIA’s Annual Energy Outlook¹⁴⁵. Combined they provide a perspective on the expected gains by type of appliance divided by the main sectors of focus, commercial and residential. Additional inputs considered were customer uptake, among others, to project year-over-year projections for savings.

It is important to highlight that as of the time of certification of this Fiscal Plan, there are currently no active programs or funding incentives in place to support an energy efficiency program. However, as noted in section 4.2.1.4, the Transition Period Plan, scheduled to begin on July 1st, 2023, includes an Energy Efficiency Rider to fund Energy Efficiency related spending and programs beginning in FY2024. Given current rates of technological improvement and cost savings, the load decrease projected in the Base Case through EE is unlikely to be achieved only through organic commercial, industrial, and residential lighting, equipment, and appliance replacements, which is why incentives such as these will likely be important to encourage adoption of energy efficiency technologies among Puerto Rican consumers.

Calculation and results

The EE forecast in Alternative Forecast is based on replacement life cycles, savings from energy efficiency gains, and customer uptake. For example, each equipment type is assumed to have a projected useful life/natural replacement cycle (e.g., residential lighting CFL is expected to be replaced every 4.7 years and LED lighting every 14.8 years). Additionally, the Alternative Forecast considers yearly efficiency gains specific to each equipment type from technology innovation (e.g., residential ACs are expected to have ~0.4% annual efficiency gain), which is forecasted to be lower in Puerto Rico than in the US mainland. Finally, the Alternative Forecast also accounts for the yearly customer uptake based on the level of behavior change required and purchasing decisions (e.g., 40% uptake for residential LEDs and 60% uptake for commercial LEDs due to increased costs of technology). Exhibit 40 showcases the net difference that these assumptions generate in the projection of net load.

Exhibit 4040: Net load savings from implementation of energy efficiency initiatives (TWh)



¹⁴⁴ Updated Buildings Sector Appliance and Equipment Costs and Efficiencies, Appendix B and Appendix C. Published March 2023. <https://www.eia.gov/analysis/studies/buildings/equipcosts/>

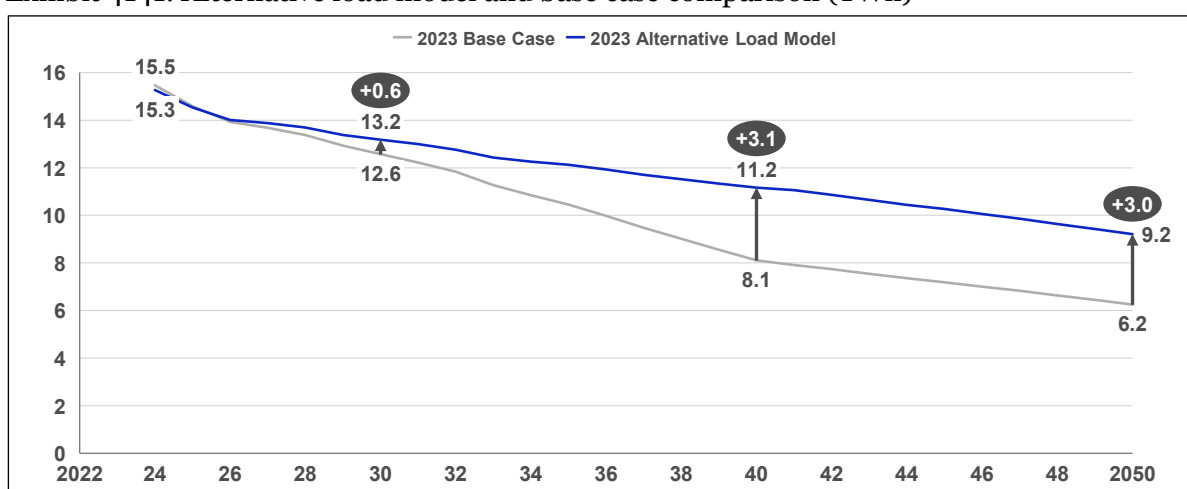
¹⁴⁵ Annual Energy Outlook. Published 2023: <https://www.eia.gov/outlooks/aeo/>

The resulting EE savings between the Base Case and the ALM are very similar during the first years of the forecast. By FY2030, there is a gap of ~600 GWh expected in fewer savings on the ALM model. That gap continues to grow until reaching its maximum point in FY2041 of 3.0TWh, or -64%, when the Base Case assumes Act-17 compliance. After that year, the Base Case estimates no gain, so the gap closes by ~100 GWh to reach a final diversion from the Base Case of around -61% in the FY2050.

Impact on net load

The Alternative Forecast projects a net load that is 3.0 TWh higher than the Base Case by FY2050. The difference is exclusively driven by a more conservative approach in Energy Efficiency (EE). The resulting uplift would be less impactful during the first years but as the ALM forecast a slower adoption of EE measures, when compared to the Base Case, the impact on load is greater. Results are shown on Exhibit 41.

Exhibit 4141: Alternative load model and base case comparison (TWh)



7.5 Expenses

This section gives an overview of the nine major expense categories that make up PREPA’s revenue requirement and outlines how these categories are projected to develop over time. The focus of this chapter is on the near term, i.e., the next 5 years until FY2028, as within this period the first major financial impact of PREPA’s ongoing transformation is expected to materialize.

The consolidated expenses for PREPA are forecasted at \$ 4,333 million for FY2024. The expenses are projected to continuously decline in the long term, with the largest year-on-year decrease at approximately 5% between FY2027 and FY2028 (see Exhibit 42 and Exhibit 43).

The main declining expense categories include non-renewable fuel and conventional PPAs expenses, driven by a strategic shift from fossil fuel generation to renewable power (see Section 4.2 Resource Planning and Resiliency for more details), as well as non-labor operating expenses, driven by the projected decline in bankruptcy and restructuring costs with the expected exit from Title III bankruptcy (see Section 3.2 Regulatory & Title III Exit Milestones for more details). Conversely, expenses for renewable PPOAs are projected to increase, in accordance to Act 17 (see Section 3.3.2 Renewable Procurement for more details).

Exhibit 4242: Consolidated Forecast Expenses by Category, Excluding Debt Service Expenses (USD Million)¹⁴⁶

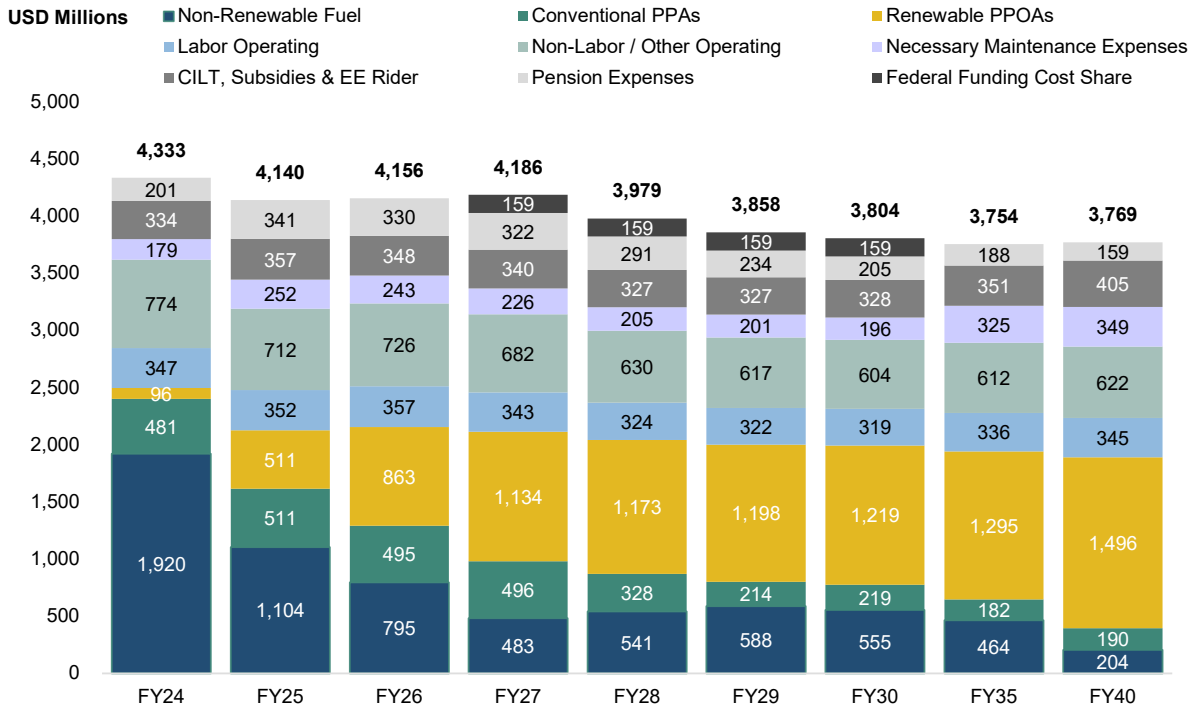
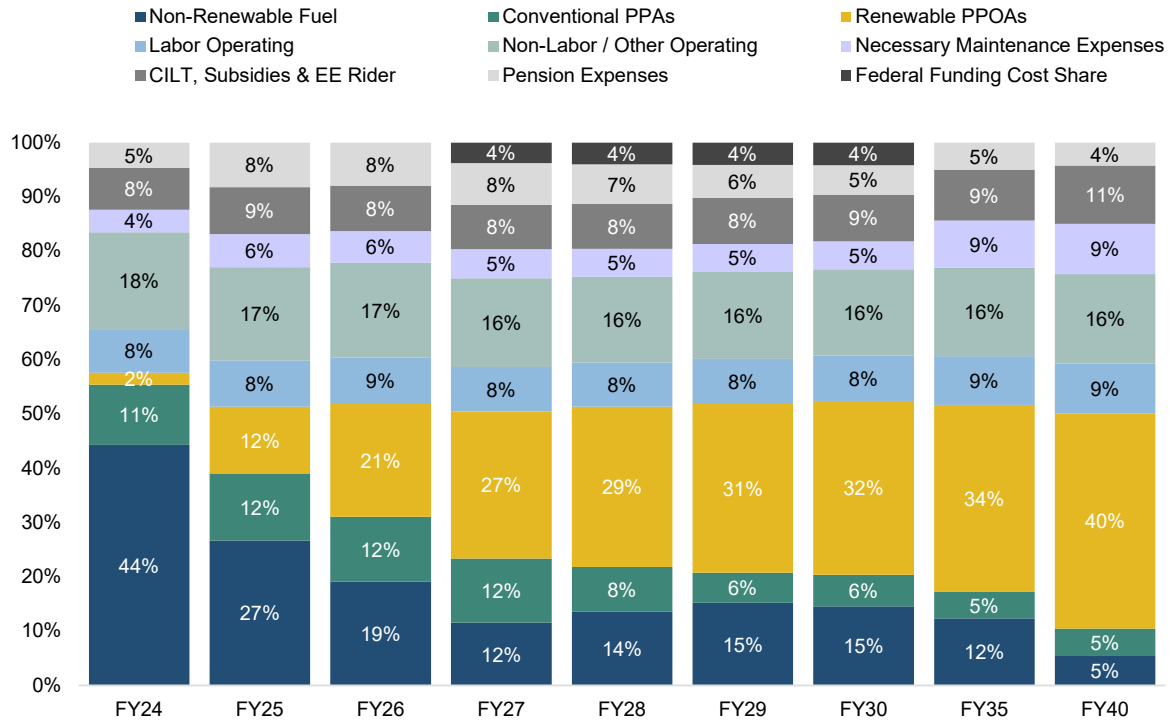


Exhibit 4343: Consolidated Forecast Expenses Percentage by Category, Excluding Debt Service Expenses (%)



¹⁴⁶ Based on nominal terms. Includes bad debt expenses in Non-labor / Other operating expenses

PREPA's overall expenses are made up of nine expense categories, not including debt service expenses (see Chapter 8 Debt Service for more details):

- **Non-renewable fuel:** Cost of fossil fuels, e.g., coal, diesel, heavy fuel oil
- **Conventional power purchase agreements (PPAs):** Expenses for non-renewable power purchased from third-party providers (e.g., EcoEléctrica and AES)
- **Renewable power purchase and operating agreements (PPOAs):** Expenses for renewable power purchased from third-party providers
- **Labor operating cost:** Expenses for the labor associated with operating generation assets and the T&D System
- **Non-labor / other operating cost:** Operating expenses other than labor, e.g., supplies, rent, transportation, bad debt expense, etc., associated with operating, maintaining, and administering generation assets and the T&D System
- **Necessary maintenance expenses:** Expenses for maintaining and improving energy systems and assets that are not funded externally This includes repairs and associated materials, among others (see Chapter 5 Federal Funding & Capital Plan for more details), and does not include Federal funding cost share, which is shown as a separate line item
- **Federal Funding Cost Share:** Non-federally funded portion of the costs of capital projects under FEMA federal funding program that is borne by PREPA, in the absence of external funding sources (see Section 5.1.4 Federal Funding Local Cost Share Requirements for more details)
- **CILT, subsidies and EE Rider:** Expenses for “contributions in lieu of taxes”; subsidies that benefit certain customer groups (such as low-income ratepayers); and the Energy Efficiency Rider for the rate payer funding reflected in the plan, (see section 7.3.5.1) which provides for the recovery of certain costs for approved EE program.
- **Pension expenses:** Expenses to fund PAYGO pension benefits and OPEB (after FY24) for retirees

Overall, due to the impact of the ongoing transformation and the declining load, PREPA expenses are expected to decrease over the next 5 years:

- **Non-renewable fuel:** As the largest expense category constituting over 40% in FY2024, non-renewable fuel expenses are expected to decline in the long run to around 5% in FY2040, as PREPA's generation mix shifts from owned and operated fossil-fuel-powered generation to third-party-provided renewable power. The expense is expected to decline quickly until FY2027, but increase slightly again between FY2028 and FY2029, as cheap but polluting coal generation is projected to be phased out in FY2028.
- **Conventional PPAs:** Expenses are projected to decline in absolute terms, as generation shifts from conventional to renewable sources.
- **Renewable PPOAs:** Expenses are expected to increase quickly from less than 3% in FY2024 to close to 40% in FY2040, due to the shifting generation mix.
- **Labor operating cost:** Expenses are projected to decline in absolute terms, as generation assets are transitioned to private O&M operators that are expected to realize efficiencies (see Section 3.5 Generation for more details).
- **Non-labor operating cost:** Expenses are expected to decline due to future efficiencies from private operators.

- **Necessary maintenance expenses:** Expenses are projected to decrease slightly in absolute terms, as legacy generation assets are scheduled to retire (see Section 7.5.2 GenCo Expense Projections for more details).
- **Federal Funding Cost Share:** Between FY2024 and FY2026, costs are expected to be covered by the \$500 million funding from CDBG-DR ER1 program, without incurring expenses to PREPA. Between FY2027 to FY2033, in the absence of other funding sources, the Federal funding cost share is projected to be borne by PREPA, spreading evenly across the period. This may result in rate increases for the customers (see Section 5.1.4 Federal Funding Local Cost Share Requirements for more details).
- **CILT, subsidies and EE rider:** Expenses are expected to stay relatively stable.
- **Pension expenses:** Expenses are projected to decrease over time, subject to change based on Title III restructuring results (see Chapter 9 Pension Reform for more details).

Expense projections were developed using a set of assumptions and inputs, including macroeconomic projections, load-related assumptions, and inputs for specific expense categories, e.g., existing contracts for non-labor expenses, as well as capital plans, and PREPA’s IRP, among others (see Section 7.5.6 Key Expense Assumptions for more details). Furthermore, the projected expenses shown below are “post-measure” in the sense that they already account for the expected effects of certain improvement initiatives, outlined in Chapter 3 Transformation and Section 5.2 Capital Plan Fed. Without these effects, expenses - and as a result rates – would be higher, as outlined in Section 7.3 Revenue Projections and Load Forecasting.

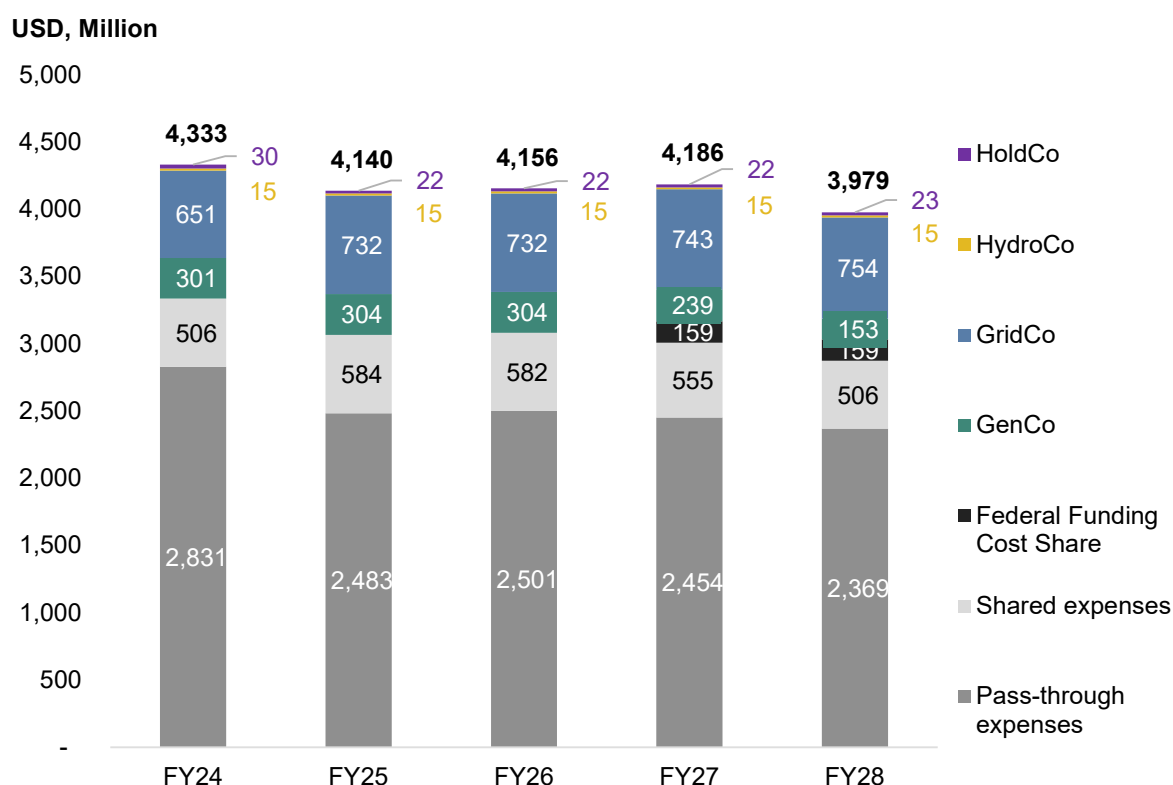
7.5.1 *Overview of Expenses by Entity*

As a result of the transition to GenCo, GridCo, HoldCo, and HydroCo, expenses will be split across the four entities (See Exhibit 44). Federal funding cost share, shared expenses and pass-through expenses are shown separately.¹⁴⁷

Overall expenses are expected to decline to meet declining load and operational efficiencies. GenCo expenses are projected to ramp down over time, as PREPA’s generation units retire, and more power is procured through PPOAs. GridCo expenses are projected to increase slowly over time, driven by the increasing capital investments. HydroCo expenses are projected to stay relatively stable in real terms. HoldCo expenses are projected to decrease quickly in the short term, as Genera assumes responsibility over Legacy Generation Assets and PREPA expects to exit Title III bankruptcy. It should be noted that the forecasted expense allocation (excluding Federal funding cost share, pass-through and shared expenses) amongst the aforementioned four entities for FY24 is not final and may change through the FY24 PREPA Certified Budget Certification, if prior to such budget’s certification the PREB has issued a determination to that effect. The eventual Oversight Board FY24 PREPA Certified Budget will be the binding document for that fiscal year.

¹⁴⁷ Pass-through expenses include fuel, PPOA and PPA expenses and CILT, subsidies and EE rider costs; Shared expenses include bad debt expenses, bankruptcy and restructuring costs, operator fees, and pension costs.

Exhibit 4444: Consolidated Forecast Expenses by Entity, Excluding Debt Service Expenses (USD Million)



7.5.2 GenCo Expense Projections

GenCo-specific expenses, excluding Federal funding cost share, pass-through and shared expenses, are projected to decline by approximately 50% over the next 5 years, from \$301 million in FY2024 to \$153 million in FY2028 (See Exhibit 45).

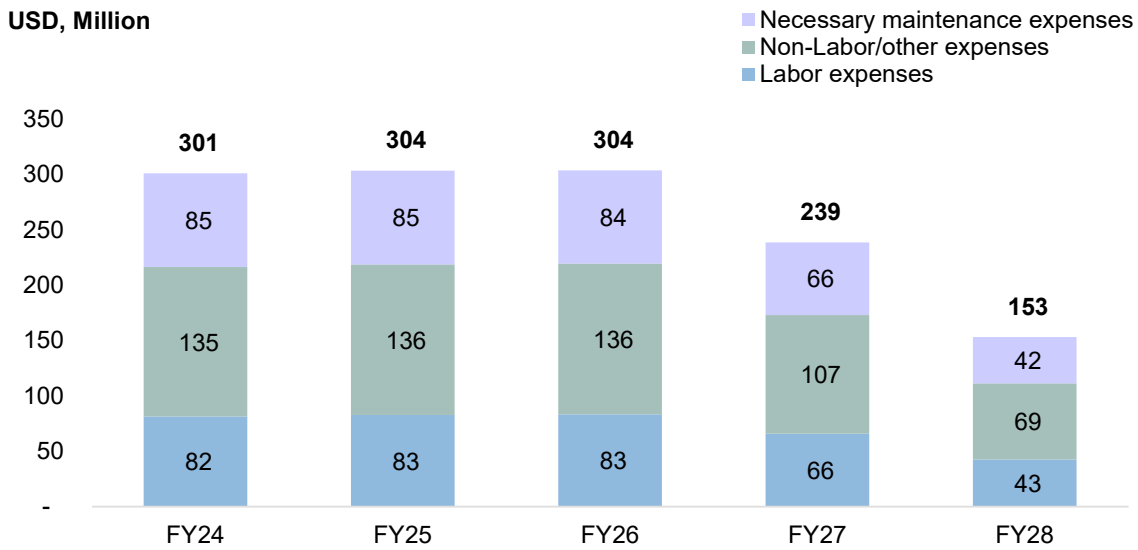
As many PREPA-owned legacy generation units are scheduled to retire, associated labor, non-labor, and necessary maintenance expenses are expected to decrease proportionately. Certain non-labor and other expenses less correlated with legacy generation capacity, such as shared service agreement between LUMA and GenCo, insurance expenses, and IT costs, are expected to decrease less rapidly over the same period.

The labor expenses are projected with the consideration of (i) facilitating the transition to Genera, the private operator, (ii) implementing the transition to renewable energy, and (iii) the hiring, training, and retaining of the necessary employees to allow for the continuous and safe operation and maintenance of legacy generation assets.

The non-labor expense category includes the purchase of non-capitalizable services, equipment and tools, and materials needed to conduct technical activities in compliance with operational, environmental, and insurance-related requirements. This is essential to ensure a safe and reliable operation and maintenance of the legacy generation units, and to meet the energy dispatch and load reserve requirements required during hours of regular and peak demand, as well as the hurricane season.¹⁴⁸

¹⁴⁸ Note that the cost of insurance premiums for the various insurance policies mentioned here is included in the cost of Shared Services with LUMA, not in Generation Non-Labor Expenses.

Exhibit 4455: Five-year Expense Forecast for GenCo (USD Million)

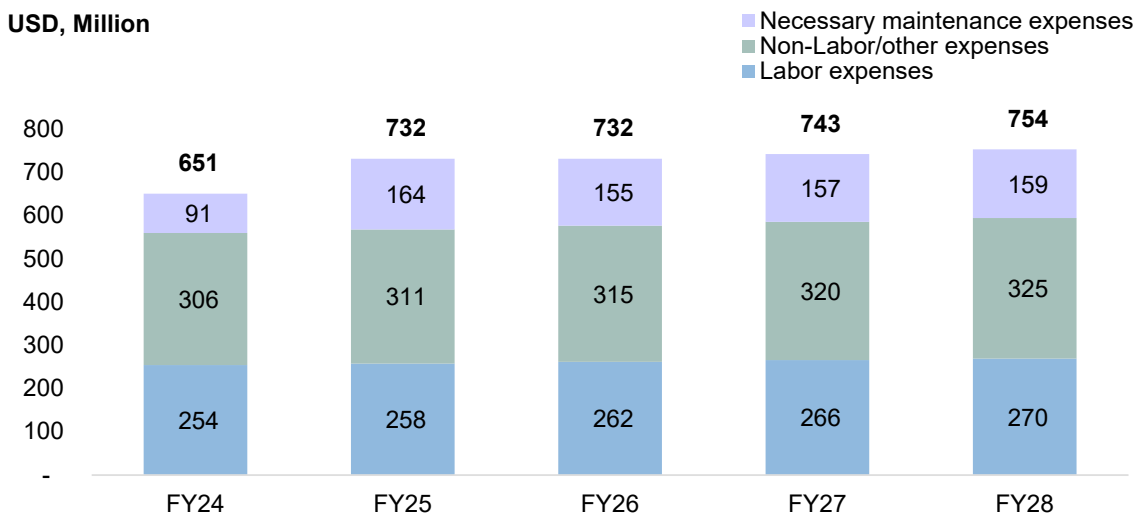


7.5.3 GridCo Expense Projections

GridCo-specific expenses, excluding Federal funding cost share, pass-through and shared expenses, are projected to increase by approximately 15% over the next 5 years, from \$651 million in FY2024 to \$754 million in FY2028 (See Exhibit 46).

Labor expenses and non-labor operating expenses are projected to stay relatively stable in real terms. Necessary maintenance expenses are expected to return to historical averages, as operational improvements reduce and focus shifts to more capital investments. GridCo expense projections for FY2024 to FY2026 are detailed in LUMA’s FY2024 Budget, filed with PREB.¹⁴⁹

Exhibit 4646: Five-year Expense Forecast for GridCo (USD Million)

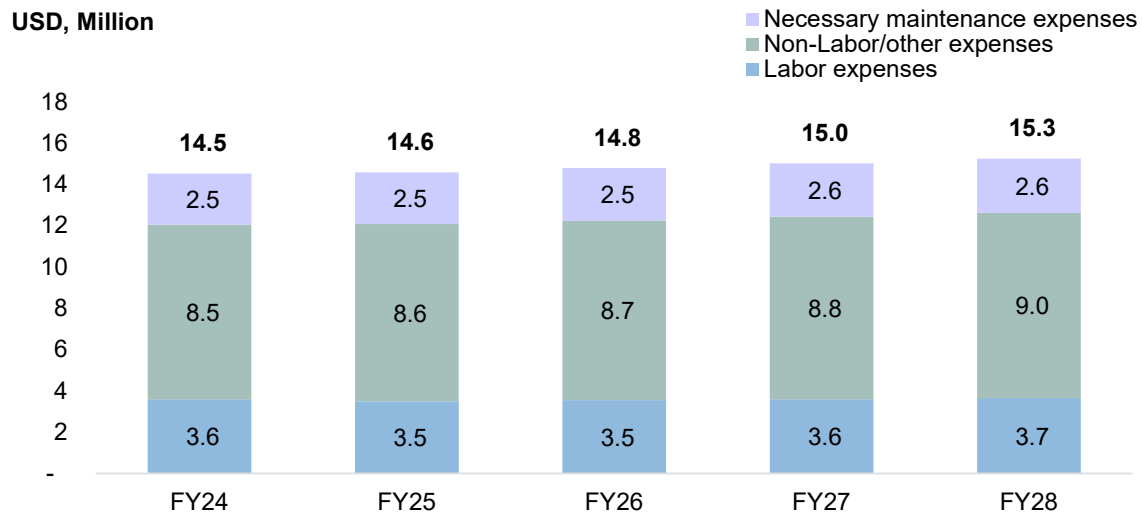


¹⁴⁹ May 16, 2023 filing “Annual Budget Fiscal Year 2024 to 2026” under Docket ID NEPR-MI-2021-0004.

7.5.4 HydroCo Expense Projections

HydroCo-specific expenses, excluding Federal funding cost share, pass-through and shared expenses, are projected to remain relatively stable around \$15 million per annum over the next 5 years (See Exhibit 47). Non-labor / other operating expenses, such as equipment, inspection, and repairs, account for most of the expenses.

Exhibit 4747: Five-Year Expense Forecast for HydroCo (USD Million)

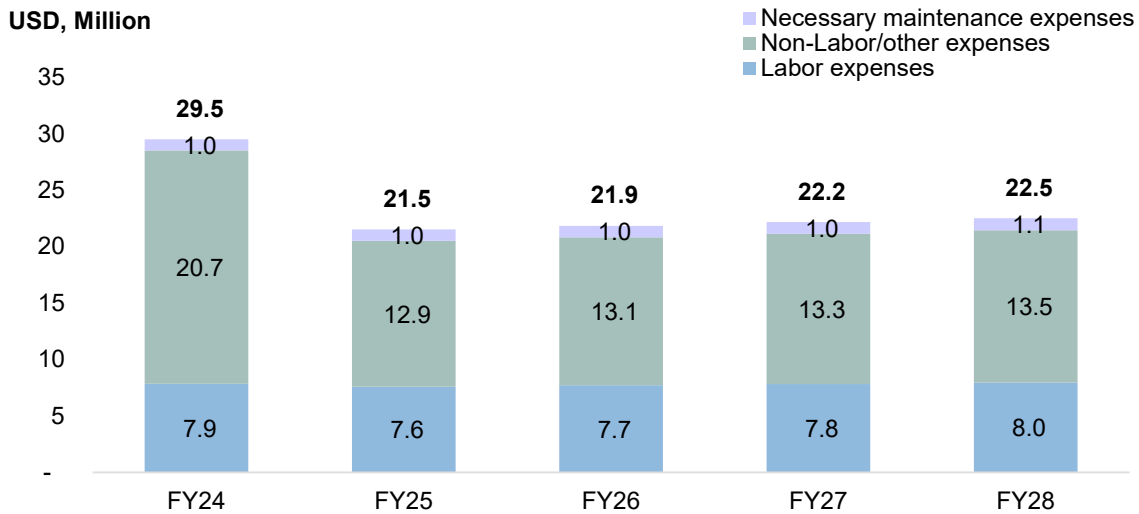


7.5.5 HoldCo Expense Projections

HoldCo-specific expenses, excluding Federal funding cost share, pass-through and shared expenses, are projected to decline by 240% over the next 5 years, from \$29.5 million in FY2024 to \$22.5 million in FY2028 (See Exhibit 48).

As Genera assumes responsibility for the Legacy Generation Assets, HoldCo expenses are expected to decrease between FY2024 and FY2025, driven by decrease in retiree benefits and non-labor expenses (See Section 3.4 Transition to Private Generation Operator for more details). Additionally, the shared bankruptcy and restructuring costs are expected to decrease in this period, as PREPA is expected to exit Title III bankruptcy.

Exhibit 4848: Five-year Expense Forecast for HoldCo (USD Million)



7.5.6 Key Expense Assumptions

Key assumptions for -expense projections are provided in the table below, consistent with underlying assumptions for the revenue and load projections in the previous chapter.

Table 31: Key Expense Assumptions

Entity	Expense item	General Assumptions
PREPA	Federal Funding Cost Share	<ul style="list-style-type: none"> Cost share requirement is estimated at 10% of obligated amount less insurance and other costs.¹⁵⁰ Between FY2024 and FY2026, Cost Share is assumed to be covered by the \$500 million CDBG-DR ER1 funding.¹⁵¹ The remaining cost share is assumed to spread evenly between FY2027 to FY 2033. In the absence of other funding sources, the cost share in this period is assumed to be borne by PREPA (See Section 5.1.4 Federal Funding Local Cost Share Requirements for more details).
GenCo	Fuel and Purchased Power Costs	<ul style="list-style-type: none"> Fuel and Purchased Power cost projections are based on an hourly generation dispatch model forecast that uses capacity expansion consistent with the PREB approved IRP and Modified Action Plan and recent market pricing and projections for refined fuel products. For FY 2024, a PROMOD simulation was used to estimate Fuel and Purchased Power expenses. Projections for FY 2025 onward are based on an Aurora capacity expansion model simulation which assumes an optimal economic dispatch, without the capacity to consider transmission constraints, which yields Fuel and Purchased Power projections that are significantly optimized compared to PROMOD’s projections. Therefore, absent changes on inputs, Aurora provides

¹⁵⁰ FEMA Public Assistance Alternative Procedures (Section 428) - Guide for Permanent Work from February 10, 2020. Document #: FEMA-4339-DR-PR

¹⁵¹ PREB; Page 18; In Re: Review of LUMA's Initial Budgets; Case No.: NEPR-MI-2021-0004; Subject: Determination on LUMA's FY23 Annual Budgets and LUMA's FY24 Annual Budgets pre-filing requirements

		expense projections that are significantly lower than PROMOD.
GenCo	Labor Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the filed budget. ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor.
GenCo	Non-Labor / Other Operating Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the filed budget. ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor.
GenCo	Necessary Maintenance Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the filed budget (See Section 5.2.2 GridCo Capital Plan for more details). ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor. ■ Federal funding is assumed to be available to cover projects related to disaster recovery and hazard mitigation for up to FY2033. Related cost share is described in more detail above.
GridCo	Labor Expenses	<ul style="list-style-type: none"> ■ FY 2024, FY 2025, and FY 2026 are in line with the LUMA filed budget for GridCo. ■ FY 2027 and beyond are projected using budget by adjusting the FY2026 spending levels with an inflation factor. ■ Benefits expenses are based on historical spending levels and performance.
GridCo	Non-Labor / Other Operating Expenses	<ul style="list-style-type: none"> ■ FY 2024, FY 2025, and FY 2026 are in line with the LUMA filed budget for GridCo. ■ FY 2027 and beyond are projected using historical by adjusting the FY2026 spending levels with an inflation factor Cost of service includes T&D operator management fee for the forecast period.
GridCo	Necessary Maintenance Expenses	<ul style="list-style-type: none"> ■ Federal funding is assumed to be available to cover projects related to disaster recovery and hazard mitigation for up to FY2033. Related cost share is described in more detail above. ■ FY2024, FY2025, and FY2026 are in line with the LUMA filed budget for GridCo (See Section 5.2.2. GridCo Capital Plan for more details). ■ FY 2027 to FY2033 are projected by adjusting the FY2026 spending levels with an inflation factor. ■ FY2034 and beyond is projected by benchmarking comparable utilities adjusted for inflation (See Section 5.2.5 Long-Term Capital Plan from FY2027 Onwards for more details).
HydroCo	Labor Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the adjusted budget and the reorganization plan. ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor. ■ Benefits expenses are based on historical spending levels and performance.

HydroCo	Non-Labor / Other Operating Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the adjusted filed budget. ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor.
HydroCo	Necessary Maintenance Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the adjusted filed budget (See Section 5.2.3 HydroCo Capital Plan for more details). ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor.
HoldCo	Labor Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the adjusted budget and the reorganization plan. ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor. ■ Benefits expenses are based on historical spending levels and performance.
HoldCo	Non-Labor / Other Operating Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the adjusted budget. ■ FY 2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor.
HoldCo	Necessary Maintenance Expenses	<ul style="list-style-type: none"> ■ FY 2024 is in line with the adjusted budget (See Section 5.2.4 HoldCo Capital Plan for more details). ■ FY2025 and beyond are projected by adjusting the FY2024 spending levels with an inflation factor.

8 Debt Service

8.1 Overview of PREPA Debt

As of May 2017, PREPA was burdened with approximately \$9 billion in bond and other debt obligations, along with an unsustainable repayment schedule. PREPA also had a materially underfunded pension plan. To pay full debt service on the bond obligations within applicable contractual terms, PREPA would have been required to increase rates by approximately 6 to 8 ¢/kWh between FY024 and FY2027 (as of the Petition Date). PREPA’s unsustainable capital structure reflects decades of borrowing to fund operating deficits. In February 2014, three major credit-rating agencies downgraded Puerto Rico’s public debt to below investment grade. In late June 2015, the debt was downgraded a second time when it became clear the island’s debts were unpayable.¹⁵² Finally, in the spring of 2016, as the investment community viewed default on nearly all of Puerto Rico’s debt as a “virtual certainty,” PREPA lost access to credit markets – thus eliminating debt as a means of funding necessary capital spending and operating deficits.^{153,154}

In July 2017, in the interest of ensuring PREPA’s future financial sustainability, and at the request of the Government of Puerto Rico, the Oversight Board filed a voluntary petition on behalf of PREPA for protection under Title III of the Puerto Rico Oversight, Management, and Economic Stability Act (PROMESA) with the U.S. District Court. In May 2019, a group of PREPA creditors, the Oversight Board, the Government, and PREPA negotiated and signed a consensual debt restructuring support agreement which was subject to termination by the Government and by the Oversight Board under certain conditions. As a result of the uncertain and unpredictable effects of COVID-19 on PREPA and its customers, the Oversight Board and the Puerto Rico Fiscal Agency and Financial Advisory Authority (AAFAF) requested, and the Court granted, a pause in the Title III process for approval of this agreement to assess and understand the implications of COVID-19.

On March 8, 2022, due to concerns regarding high rates, inflation, surging gas prices and sustainability of the electric system (among other reasons), AAFAF terminated the PREPA restructuring support agreement in accordance with its terms, an action supported by the Oversight Board. This action terminated the agreement as to all parties such that the restructuring support agreement is no longer in effect.

On March 1, 2023, the FOMB filed a Modified Second Amended Plan of Adjustment (the “March 2023 POA”) to restructure PREPA’s debt and other obligations, including approximately \$4 billion of unfunded pension liabilities. The March 2023 POA provided for the issuance of new debt in the amount of \$5.68 billion based on projections set forth in PREPA’s Fiscal Plan certified on June 28, 2022. The March 2023 POA reflects restructuring support agreements reached with certain of PREPA’s largest claimants, including its prepetition fuel line lenders and National Public Finance Guarantee Corporation. Mediation continues with certain other holders and insurers of PREPA’s bonds, its remaining unions, its pension system, and the official committee of unsecured claimholders.

¹⁵² D. Andrew Austin, Puerto Rico’s Current Fiscal Challenges, (U.S. Library of Congress, Congressional Research Service, R44095, 2016), 4, <https://fas.org/sgp/crs/row/R44095.pdf>.

¹⁵³ “An obligation rated ‘CC’ is currently highly vulnerable to nonpayment. The ‘CC’ rating is used when a default has not yet occurred, but S&P Global Ratings expect a default to be a virtual certainty, regardless of the anticipated time to default.”, “S&P Global Ratings Definitions,” S&P Global Ratings, last modified September 18, 2019, https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352.

¹⁵⁴ D. Andrew Austin, Puerto Rico’s Current Fiscal Challenges, [4](#).

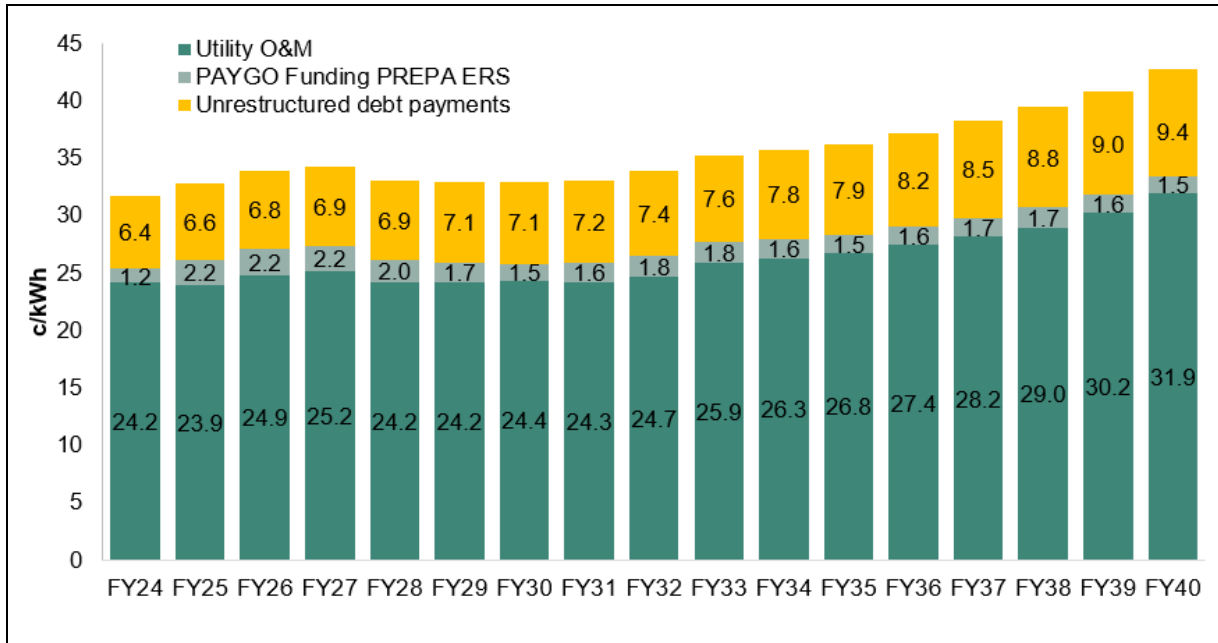
The Oversight Board subsequently determined, based on the projections set forth hereinabove, the amount of new bonds to be issued under the March 2023 POA is not sustainable. The Oversight Board therefore intends to file a further amended Title III plan of adjustment providing for the issuance of new bonds consistent with the debt sustainability analysis set forth below. The success of any debt restructuring for PREPA is dependent on achieving sustainable rates, affordable debt service, and sufficient revenue to support safe and reliable operations. Sustainable rates and affordable debt service will both underpin PREPA's ability to operate in a financially viable manner (ensuring that PREPA achieves fiscal responsibility and access to capital markets) and avoid undue burden on ratepayers which leads to business and consumer ratepayers leaving the grid and sometimes leaving Puerto Rico entirely.

8.2 Implications of Unrestructured Debt on Projected Rates

Without restructuring its debt and other liabilities, PREPA would need to repay approximately \$2.62 billion of scheduled legacy debt obligations over four years from FY2024 to FY2027 in addition to the roughly \$4.83 billion of unpaid past and currently due amounts through the end of FY2023. Bringing PREPA's unrestructured debt obligations to funded status in the near term would require rate increases of approximately 6 to 7 ¢/kWh in real dollars in the FY24-27 period. In the longer term, without any restructuring, PREPA's estimated annual debt service obligation is approximately \$1 billion per year based on amortization of all long-term financial liabilities at a 5.25% interest rate over 20 years. Absent restructuring of the debt, PREPA and its customers cannot afford to meet these obligations, which would result in material risks to the utility, such as accelerating grid defection (e.g. via the installation of rooftop to solar power generation), deterring business investment, accelerating out-migration from Puerto Rico, and increasing the already high energy burden on the island, which would fall most heavily on the lowest-income Puerto Ricans.

Payments for unrestructured debt service directly translate into higher customer bills. For instance, for a general residential customer (unsubsidized) with a monthly electricity consumption of 425kWh in FY2025, adding payments for unrestructured debt to the electricity rate would increase the customer's average monthly bill in FY2025 by ~26% from \$113 to \$144. This illustrative calculation assumes energy efficiency improvements in compliance with Act 17-2019 (as included in PREPA's IRP), unrestructured pensions, and no demand-increasing effects from, for example, electric vehicles or other technologies.

Exhibit 49: Rate with Unrestructured Debt Added (in real 2022 terms, ¢/kWh)



8.3 Debt Sustainability Analysis

This debt sustainability analysis (DSA) begins with a framework for assessing PREPA’s long-term capacity to pay debt service. PREPA’s debt levels need to align with the objective of achieving fiscal responsibility and access to capital markets to fund ongoing and future infrastructure capital investment and ensuring a sustainable electric system with affordable energy prices for the Commonwealth and its residents. The following debt sustainability analysis describes PREPA’s capacity to increase rates above the projected rates stated above in an amount sufficient to pay debt in addition to its operating costs, including reformed pension obligations as required by this Fiscal Plan.

The DSA assesses PREPA’s long-term capacity to pay debt service. Payment of any debt service will be funded through an increase in rates to generate net revenues, after payment of operating expenses and necessary reinvestment. The imposition of this rate increase will have a material impact on PREPA’s customers and revenues. The analysis must therefore consider that raising rates to pay legacy debt is subject to persons’ and businesses’ ability to pay, alternatives available to them if rates increase beyond their ability or willingness to pay, the negative impact higher rates have on a generally poor population, and the Commonwealth’s ability to attract new investments to grow its economy and provide jobs for a population having a high unemployment rate. Exhibit 15 shows the “share of wallet” of electricity costs for the average Puerto Rico household is far above the average for U.S. and comparable island markets even without the recent surge in fuel prices. PREPA’s debt levels also need to align with the objective of recovering capital market access at reasonable rates to fund essential ongoing and future infrastructure capital investment and/or refunding savings. Ensuring a sustainable electric system with affordable energy prices for the Commonwealth and its residents and avoiding the consequences to PREPA of accelerating load defection to solar and other alternative energy resources, (including electricity theft). This debt sustainability analysis incorporates PREPA’s capacity to pay current and projected debt through a rate increase that accounts for these concerns and PREPA’s statutory mission and duties. Thus, the analysis, necessarily, incorporates the Oversight Board’s objective and subjective judgments concerning fairness to Puerto Rico residents, fairness to creditors, carrying out PREPA’s

statutory mission, and risks of demand loss from multiple causes. This Fiscal Plan's references to fairness to creditors refers to fairness from a ratemaking and business perspective and does not purport to opine on fairness for confirmation or other legal purposes.

Specifically, the DSA needs to account for the following considerations: (1) overall customer affordability (customer ability and willingness to pay for PREPA's services before they seek out alternatives and/or out-migrate to other jurisdictions); (2) PREPA's sustainability (the extent to which PREPA can be expected to continue as a going concern by, among other things, being able to raise rates to generate revenues to make necessary capital investments, fund operating expenses and required contributions to pensions without reaching the point of losing customers and revenues due to incremental rate hikes); and (3) the likely cost of alternatives to PREPA's services (for example, customers installing photovoltaic (PV) solar panels on their homes or businesses) and the potential impact of those alternatives on PREPA's customer base and revenues.

a. Guiding Principles

The DSA incorporates many economic and societal considerations, including:

- Residential Affordability. The large number of low-income households in Puerto Rico means that many PREPA residential customers have limited or no ability to afford higher rates without sacrificing other necessities.
- Elasticity. As discussed in detail below, higher rates, and the resulting higher bills for customers, ultimately induce customers to reduce their consumption of electricity from PREPA (including notably by using electricity generated by PV solar panels installed at their premises), to "cut the cord" from the grid entirely through taking full responsibility for their electricity generation or even to out-migrate from Puerto Rico. Whenever customers decrease their consumption, the remaining customers must shoulder a higher share of the electric system's fixed costs. Increases of rates beyond some level accelerate these trends in ways that become difficult for PREPA to manage. Higher-income customers tend to have more opportunities to respond to rate hikes with actions such as installing solar roofs. Thus, when higher income ratepayers find alternatives, their exits from or diminished use of the electric grid burden particularly lower-income customers. Therefore, rates must be kept below levels that will excessively accelerate an otherwise generally healthy trend towards increased use of clean energy generation such as PV solar panels.
- Cost of Service. Rate increases for debt service on top of the projected rates for other purposes (including operating costs and investment in the systems) as described above should not result in the poorest ratepayers shouldering a disproportionate increased burden. The Residential, Commercial, and Industrial sectors must share the increased burden in a workable manner.
- Debt Repayment. Given the antiquated and fragile nature of PREPA's infrastructure all incremental revenues generated from rate increases to pay restructured debt could be used to transform PREPA into a modern, efficient, clean utility. The Oversight Board, however, will use the revenues generated by such rate increase to repay creditors.

b. Structure

PREPA's customers comprise a large variety of different types of consumers, from low-income households to big-box retailers. The Oversight Board has concluded a rate increase for debt

service must be allocated among the various existing customer types consistent with the goals of sustainability. To optimize revenues for debt service in line with the principles outlined above, the composition of such a rate increase should utilize the existing structure of PREPA's current rate classifications: Residential, Commercial, and Industrial (as well as subclassifications therein, for example based on customer size in terms of electricity demand).

Moreover, the structure of the rate increase should be based on the general design of PREPA's existing rates, including both fixed monthly charges (i.e., a monthly connection charge regardless of how much electricity is consumed) and volumetric charges, which are based on the amount of electricity the customer consumes per month (i.e., a per-kWh charge applied to the kWhs consumed in the billing period).

c. Elasticity, in General

An important consideration for the Oversight Board in facilitating debt sustainability for PREPA is the impact that increasing PREPA's rates would have on PREPA's sales. As a general matter, the higher PREPA's rates are, the more PREPA's rates incentivize customers to choose alternatives. Sales of electricity decline, as consumers limit their energy consumption or use alternative sources of energy to reduce their bills. The design of electricity rates (i.e., the combinations and levels of fixed and volumetric charges), in general, has an impact on sales to customers (including customers' decision to remain on the grid), especially when substitutes (such as photovoltaic panels and customer-premise battery storage and diesel generators) are available at economical prices.

The response of customers to rate changes, in terms of their reduction in the kWhs they consume (or even whether they remain PREPA customers at all) is referred to as the "price elasticity of demand." This can be estimated for a given group of customers by analyzing historical data and economic literature, as well as assessing recent and expected future trends and anticipated consumer behaviors.

d. Initial Estimation of Incremental Rates

Any increase in PREPA's rates, including for debt service or any other purpose, cannot exceed the conceptual upper bound of affordability: the total rate that PREPA customers can pay without (1) threatening the sustainability of PREPA as a functioning utility; (2) threatening the sustainability of the Puerto Rico economy; and/or (3) subjecting customers to undue hardship (i.e., making rates unaffordable to those customers). The Oversight Board, through its advisors, has calculated the difference between the revenues from PREPA's rates in this Fiscal Plan (excluding the rate component designated for debt service) and the revenues from the notional maximum PREPA's rates could become without undermining these goals as the "Revenue Envelope."

The Revenue Envelope was estimated by examining incremental fixed and volumetric components, starting with increased fixed monthly charges. Fixed charges (as opposed to volumetric charges) are preferable as the primary instrument for raising additional revenues, as they are not impacted by the adoption of solar panels by consumers unless the customers terminate their attachments to the grid. As a general matter, solar rooftop adoption in Puerto Rico is already relatively attractive for a variety of reasons, including the large number of sunny days per year, the prevalence of buildings with flat roofs, and the generous incentives offered to adopters of solar technology under Puerto Rico law. Consumers purchasing solar panels would see an immediate reduction in their bill from all volumetric charges. This is because solar panels generate electricity while it is sunny, reducing the volume of electricity

drawn from PREPA's system, and thus the amount of any volumetric charge billed to that consumer, including any volumetric charge to repay legacy debt.

On their own, however, solar panels cannot replace PREPA's grid, because they cannot provide power on demand (for example, solar panels may not generate sufficient power during the day to meet all power needs during evening and night hours). Moreover, availability of net metering benefits through which PREPA pays solar-equipped customers for excess power they sell back to the grid further discourages full disconnection from the grid. As such, most customers are expected to remain connected to the PREPA grid when they install solar panels. If they do, the installation of solar roof panels would neither reduce nor eliminate fixed monthly charges (as opposed to usage charges). To avoid paying such fixed monthly charges, a customer would need to remove themselves from the grid entirely. This in turn would require that a customer install sufficient additional equipment, such as batteries, to ensure access to reliable electricity at night (and be willing to take the risk in the event their own generation and storage capabilities do not suffice). While the cost of the required additional equipment is also decreasing and many solar rooftop installations in Puerto Rico already involve some battery capacity, the cost of installing enough backup capacity to disconnect from the electric grid entirely (and thereby avoid both fixed connection charges and volumetric charges) will likely remain prohibitively expensive for most customers for many years to come, particularly in light of the loss of net metering benefits. The expected loss of sales from a rate increase therefore can be mitigated by imposing higher fixed, rather than volumetric, charges. The loss of sales due to higher volumetric (Legacy) charges not only reduces the amount of revenue collected by a volumetric charge, but it also lowers the total amount of revenue collected under PREPA's existing rates. Given that rates are set to cover all PREPA's costs including its fixed operating costs under an assumed sales volume, lower sales due to solar roof panel adoption led to the need to increase base rates for all customers. Higher base volumetric rates would affect all customers but would impose heavier burdens on customers that do not have solar roofs. Since higher-income customers are more likely to be early adopters of solar roof panels, solar adoption would also be expected to benefit primarily higher-income households and hence lead to (a) a more rapid loss in PREPA sales to higher-income households and (b) a shifting of the burden of PREPA's rates to those least able to afford it.

The use of fixed monthly connection charges, rather than volumetric charges, is also increasingly being considered on the mainland U.S. as a response to increasing solar rooftop installations. Accordingly, the Oversight Board has concluded that a fixed charge should be the primary instrument for generating incremental revenues for debt service, combined with a volumetric charge to supplement debt service revenue with the goal of keeping the fixed charge at a sustainable level.

To establish a fixed monthly charge that could reasonably support the maximum amount of debt as concluded in this DSA, the Oversight Board assumed a fixed maximum monthly residential charge using a benchmark surveying fixed charges imposed by electric utilities across the U.S. as an outer limit, among other considerations. Additional hypothetical maximum volumetric charges were thereafter estimated by reference to the elasticity and affordability considerations mentioned above. The Oversight Board assumed that households with Modified Adjusted Gross Income (MAGI) below a certain threshold like the MAGI eligibility levels needed to qualify for Medicaid healthcare benefits in Puerto Rico, and currently subsidized rate classes (e.g., public housing customers), cannot afford significant rate increases beyond what is assumed in the Fiscal Plan. The maximum volumetric charge under the Revenue Envelope calculation was therefore set so that the resulting electric bill would be affordable, in the first year of implementation (FY 2025), for non-exempt households

with assumed income of \$24,400, monthly volumetric consumption of 425 kWh, and using the rates in this Fiscal Plan (excluding debt service) as the baseline, where affordability is defined as a maximum total electricity bill not above 6% of total income. Affordability was set at 6% of total income, or 6% “wallet share,” because this 6% energy burden threshold is currently used in several mainland U.S. States as a baseline for providing support to consumers. Indeed, it is likely this 6% wallet share constitutes the very upper limit of affordability since comparable incomes and electric rates in the poorest states in mainland U.S. are significantly higher than in Puerto Rico.

To estimate the Revenue Envelope, the combination of additional fixed and volumetric charges estimated to result in the maximum additional revenue that could be generated from (non-exempt) Residential customers was then scaled to Commercial and Industrial customers, with differences in elasticities appropriate for those customer classes being considered. The rate increases calculated for the Residential, Commercial and Industrial customer classes based on these considerations be allocated to (i) maintain affordability while accounting for current and projected rates, which are significantly above historical and previously projected rates and (ii) ensure that lower income/lower usage customers do not pay a higher amount of the new debt on a blended per-kWh basis than do higher income/higher usage customers. The maximum incremental revenue expected to be generated by these increases was then calculated by multiplying the anticipated incremental rates by the load projection contained in this Fiscal Plan on an annual basis. This DSA assumes a 35-year term, a 6% interest rate and level debt service (i.e., 1.0 times coverage).

e. Reductions from Elasticity Effect and Non-Fiscal Plan Costs

This maximum incremental revenue (i.e., the Revenue Envelope), however, is subject to a further reduction that must be made to arrive at revenues available for the payment of debt, as price elasticity of demand must be considered. The increased rates will result in a loss of some electricity sales over the subject 35 years. Moreover, while sales will decrease, not all PREPA’s costs will decrease consistent with the lower sales. While some of PREPA’s costs are variable (meaning they scale with the volume of sales), many of PREPA’s costs are fixed (i.e., they remain constant even if the sales decrease). The effect of price elasticity resulting from the rate increases described herein is expected to reduce the kWh sales otherwise projected in the Fiscal Plan, causing a shortfall in the revenues available to cover fixed costs.

For PREPA to remain sustainable (and to ensure access to capital markets), it must collect revenues sufficient to cover all its costs, including its fixed costs. However, the Revenue Envelope calculated above was based on the sales projections contained in this Fiscal Plan for the next 35 years. As indicated above, the sales projections in this Fiscal Plan are calculated based on a lower rate that does not include any amount for debt service. Applying price elasticity of demand means that, with the rate increases for new debt included, PREPA’s sales will trend lower than the sales projections included in this Fiscal Plan. Therefore, the revenue PREPA earns from the remainder of its rates will be lower than those projected in this Fiscal Plan, and those lower revenues will not be sufficient to cover all PREPA’s fixed costs. Therefore, a portion of the Revenue Envelope—a portion of the hypothetical additional revenues associated with the increased rates—must be allocated to general PREPA operating costs to cover lost revenue. This means any initial estimate of the gross amount (i.e., the Revenue Envelope) available for debt must be reduced to allow PREPA to pay for the expected shortfall in fixed cost recovery.

Additionally, the Oversight Board’s debt sustainability determination assumes the risk that one or more funding sources other than collections from customers will be available.

f. Conclusion

After an estimated reduction due to the fixed cost recovery loss due to the effect of price elasticity, and with other funding as noted above in the foregoing paragraph, net revenues for debt service are estimated to be sufficient to support the issuance of bonds (and their repayment over a 35-year term) with a par value of approximately \$2.384 billion at an annual interest rate 6.00%. The Oversight Board further estimates that, based on the assumptions set forth herein, PREPA can provide to creditors (other than the pension system) approximately \$2.5 billion (including such bonds).

9 Pension Reform

9.1 Historical Background and Organizational Structure

The PREPA Employees' Retirement System ("PREPA ERS") was initially created through Resolution 200 of PREPA's Governing Board in accordance with the terms of a Collective Bargaining Agreement executed in 1942 between the Puerto Rico Electrical Industry and Irrigation Workers Union ("UTIER," by its Spanish acronym) and the Water Resources Authority, now known as PREPA. PREPA's Governing Board adopted the resolution establishing the PREPA ERS as of July 1, 1945. Through the years, the PREPA ERS expanded its scope to cover other PREPA employees. Since its inception, the PREPA ERS has been governed by its bylaws, as amended, which are contractual in nature, known as the "Electric Power Authority Employee Retirement System Regulations" (the "PREPA ERS Regulations").

The PREPA ERS is a public pension system. Its assets are dedicated for the benefit of the active members, retired members, and their beneficiaries. PREPA is the plan sponsor, contributes to the PREPA ERS, and pays for most of the administrative costs of the PREPA ERS, which total approximately \$5 million per year. The PREPA ERS Regulations establish a Board of Trustees (the "Board of Trustees") to administer the PREPA ERS. That Board is comprised of eight members, of which one member is the Executive Director of PREPA, three members are active members of the PREPA ERS and are elected by the active members of the PREPA ERS, three members are appointed by the PREPA Governing Board, and one member is elected by the retired members of the PREPA ERS.

Article 7 of the PREPA ERS Regulations provides that the powers of the Board of Trustees are subject to the limitations that the Governing Board of PREPA may prescribe. Further, Article 11 of the PREPA ERS Regulations provides that the PREPA ERS Regulations may be amended by the Board of Trustees, provided that said board notifies the PREPA Governing Board thirty (30) days in advance of its intention to amend the PREPA ERS Regulations. PREPA's Governing Board may, within said thirty-day (30) period, veto the proposed amendment. Additionally, Article 9(2) of the PREPA ERS Regulations provides PREPA's Governing Board with the ability "upon recommendation of the Board of Trustees" to modify contributions to or terminate the PREPA ERS "for reasons that affect its development and normal operations as a solvent entity, discontinue, suspend or reduce its contributions." Article 9(3) of the PREPA ERS Regulations allows PREPA to terminate operation of the PREPA ERS "based on causes or circumstances that are outside of its control" upon the recommendation of the Board of Trustees; however, to date, no such recommendation or has been made.

To fund the system, the PREPA ERS Regulations provide for PREPA to make an employer contribution to the PREPA ERS in the amount of the actuarially determined contribution (ADC), which is an actuarially determined amount reflecting the cost of benefits earned during the year ("normal cost") plus the amortization of any determined unfunded status of the plan over a fixed number of years. The ADC is the amount needed, if contributions are made consistently based on each year's actuarial calculation, to fully fund all the benefits payable by a plan, so long as the ADC is based on a set of assumptions that accurately represents expected future costs of the plan. The PREPA ERS Regulations impose on the Board of Trustees the obligation to approve its actuarial reports and financial statements annually. Up until June 30, 2016, actuarial valuation that the actuary for the PREPA ERS provided PREPA was, in hindsight, based on overly optimistic assumptions regarding payroll, life expectancy, and return on system assets. As a result, the ADC that has been historically approved by the Board of Trustees was insufficient to maintain the health and funded status of the PREPA ERS. In

2018, an actuarial revision was performed by the PREPA ERS actuary with the help of the PREPA Governing Board. Many key economic and demographic assumptions were updated, which significantly increased the projected ADC that would be required beginning with the June 30, 2017, valuation reports (i.e., FY2019 ADC).

9.2 Pension Benefits Background

PREPA ERS undertook a significant pension reform in 1993. Most notably, PREPA ERS increased the minimum retirement age and the imposition of a cap on pension benefits through the establishment of a maximum annual compensation limit of \$50,000 as the base for the calculation of the pension benefit (pre-1993 employees would receive a merit-based pension of 75% of the highest three years of compensation without any cap). As a result, the maximum amount of annual pension benefit that a post-January 1, 1993, hire could earn is \$37,500 (75% of \$50,000). Such reform notwithstanding, the Cost-of-Living Adjustment (COLA) remain in effect and applies to all retirees, providing for an increase to benefits every three years. Additionally, effective June 30, 2002, and June 30, 2003, an annual \$400 Christmas bonus and a \$100 Summer bonus, respectively, were added to retiree benefits. As of June 30, 2004, a lump sum Funeral Benefit of \$1,000 was also established.

Key retirement provisions are itemized in the table below, both for employees hired before and after January 1, 1993.

Table 32: Key Retirement Provisions

Defined Benefit	Hired Before January 1, 1993	Hired On or After January 1, 1993
Eligibility for Full Retirement Benefit	<ul style="list-style-type: none"> ■ 30 years of service 	<ul style="list-style-type: none"> ■ Age 55 and 30 years of service
Maximum Compensation	<ul style="list-style-type: none"> ■ Average of the three highest annual base salaries 	<ul style="list-style-type: none"> ■ Average of the three highest annual base salaries, but capped at \$50,000
Annual Benefits	<ul style="list-style-type: none"> ■ Merit annuity is 2.5% of compensation times years of service up to 30 years ■ Accrued benefit annuity is 1.5% compensation for each year of service, plus 0.5% of compensation for each year of service after 20 years ■ Maximum benefit at retirement is \$37,500 for those hired on or after January 1, 1993 	
Employee Contributions	<ul style="list-style-type: none"> ■ Employee contributions are generally 9.06% of salary 	<ul style="list-style-type: none"> ■ Employee contributions are 11% of salary
Cost-of-Living Adjustment	<ul style="list-style-type: none"> ■ Every three years: 8% increase for monthly pension of up to \$300; 4% increase for monthly pension between \$300 and \$600; 2% increase for monthly pension in excess of \$600 	
Other Benefits	<ul style="list-style-type: none"> ■ Annual bonuses of \$500 (\$400 for Christmas and \$100 for Summer); Funeral benefit of \$1,000 paid as a lump sum; Lump sum of one year's pay at death while active or retired 	

Furthermore, surviving spouses of retired members are entitled to receive a life annuity equal to 30% of the retiree's annual pension level at the time of death.

9.2.1 Other Post-Employment Benefits (OPEB)

For Other Post-Employment Benefits (OPEB), PREPA currently provides postretirement medical benefits outside of the PREPA ERS (i.e., not paid from the pension trust). To be eligible for these medical benefits one needs to have performed 30 years of service. Currently, PREPA provides medical coverage for retirees through a contract with Triple-S. This benefit is included in the PREPA operating budgets, costing approximately ~\$8 million annually under the current contract. There are approximately 8,200 retirees that receive the OPEB medical benefit.

9.3 Liquidity Concerns

The pension system’s assets have been in chronic decline for the past decade due to (a) ongoing and increasing benefit payment outflows from an increasing number of retired plan participants and (b) insufficient employer contributions. For many years prior to PREPA’s Title III petition, ERS had failed to estimate an adequate level of employer pension contributions and maintained a persistently low funded ratio of plan assets to liabilities of less than 50%, as demonstrated in . The insufficient funding requests were driven in part by the use of unrealistic asset return assumptions or discount rates, which drastically understated the total pension liability, and unrealistic assumptions on the go-forward state of PREPA employment levels.

Exhibit 5050: Employer Contributions

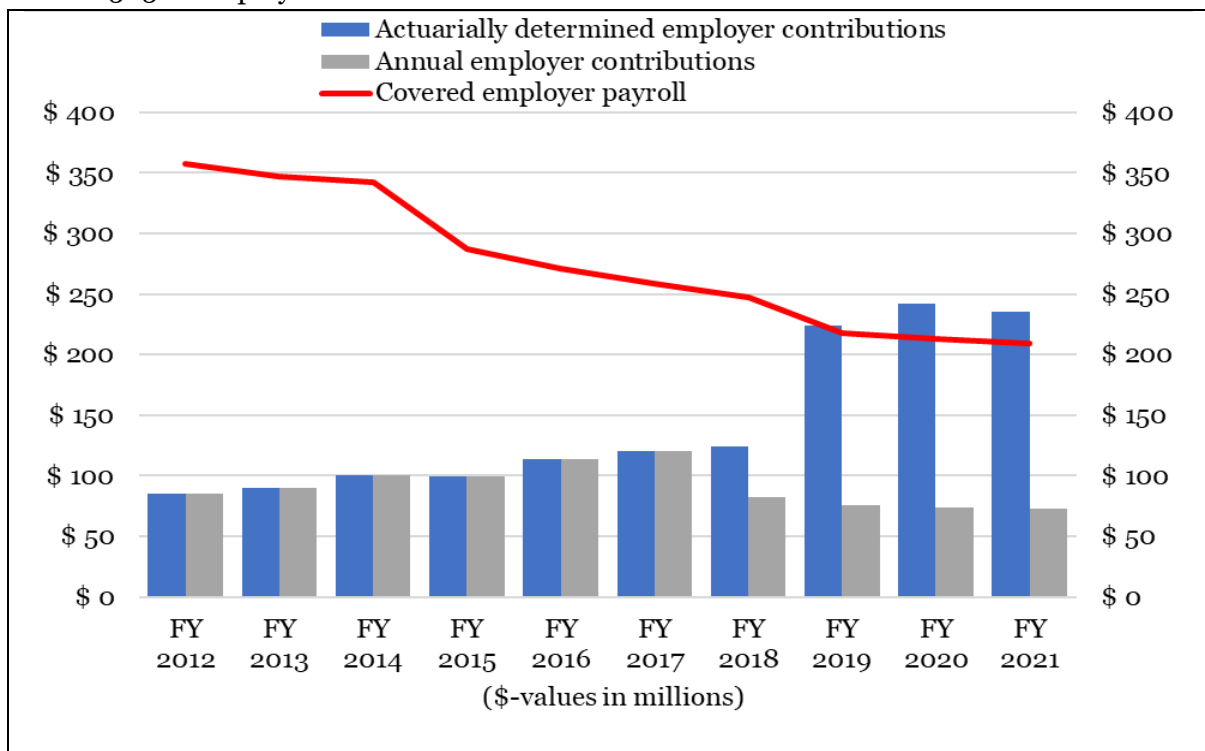
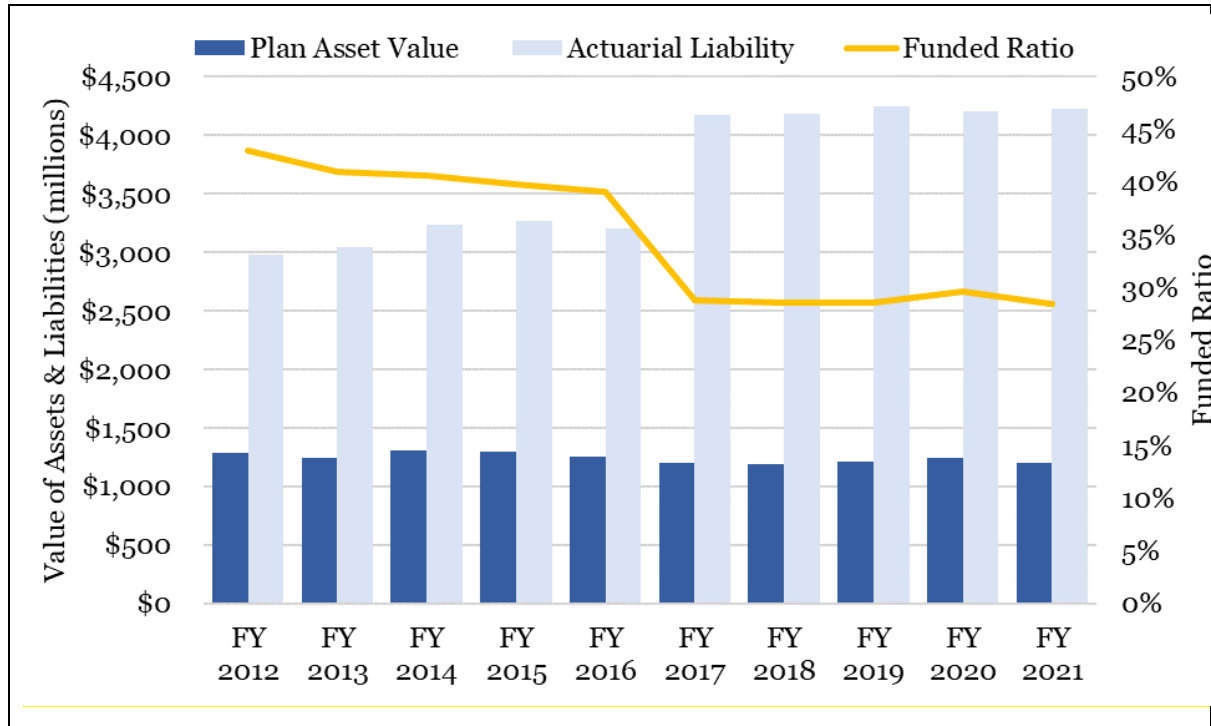


Exhibit 5151: Plan Asset Value and Funded Ratio



On February 24, 2023, PREPA ERS notified the Oversight Board that the pension system would not have sufficient assets to continue making benefit payments as early as May 2023. Recently, PREPA ERS has received or is set to receive additional cash flow arising from multiple sources:

- ~\$8 million from the Commonwealth in connection with amounts budgeted for employer contributions for former PREPA employees who transferred to the Commonwealth in connection with the formation of LUMA (“Mobilized Employees”)
- ~\$65 million via a budget amendment for “emergency PayGo for FY23” funded from PREPA’s operating cash balances.
- ~\$32 million of bad debt recovery from the payment by the Puerto Rico Medical Services Administration (“ASEM,” for its Spanish acronym) paid in January 2023 and March 2023 to settle certain government entities past due accounts receivables for the period prior to LUMA service commencement.
- ~\$25 million of installment payments from the Puerto Rico Aqueduct and Sewer Authority (“PRASA”) pursuant to the settlement as executed under the Memorandum of Understanding dated February 7, 2023, to settle certain government entities past due accounts receivables for the period prior to LUMA service commencement. The \$~17M remaining balance of installment payments will be recognized in the FY2024 budget for additional PREPA ERS bridge funding
- ~\$51 million pursuant to the settlement to be executed under the Global Settlement Agreement prior to the close of FY2023, between PREPA, OMB and Dept of Treasury to settle certain government entities past due accounts receivables for the period prior to LUMA service commencement.

While these contributions will provide temporary relief to allow benefit payments to continue through FY24, PREPA ERS remains insolvent and will require additional funding to continue

making payments to retirees. PREPA ERS has indicated that the current run-rate for maintaining retiree payments (including administrative expenses and death benefits) is ~\$26 million per month, which does not include potential withdrawals from LUMA or General transferees which may increase this rate to a higher amount.

The Oversight Board, in collaboration with the Government, have continued to bridge liquidity needs until the expected implementation of the long-term solution proposed by the Oversight Board under the POA. That said, the Oversight Board urges all stakeholders, including PREPA, AAFAF, PREPA ERS and PREB to take action to implement a dedicated funding source during this calendar year whilst the Title III case is finalized.

From FY2018 to FY2022, PREPA budgeted and contributed an approximately \$66 million per year as the employer portion of the pension system contribution, with the FY2023 contribution decreasing to ~\$18 million. For FY2024, the Certified Fiscal Plan reflects emergency contributions of ~\$201 million which represents the estimated amount required to continue funding pension benefits after the PREPA ERS fully depletes its liquid assets and interim funding resources before a permanent solution is implemented and the system must move to PayGo.

9.4 Structural Pension Reform

9.4.1 Summary of Pension Reform

Per the POA, PREPA addresses the significant underfunded status while minimizing the associated long-term impact the pension system will have on electricity rates. The POA includes the following pension reform measures: (a) close the pension system to future participants; (b) freeze pension benefits as of the Effective Date for current Active Participants, including, for the avoidance of doubt, Mobility Employees; (c) eliminate the COLA for all participants after the Effective Date; (d) convert PREPA ERS from being funded based on ADC's or other annual payroll rates to a PayGo system to fund annual benefits; and (e) establish a PREPA PayGo Trust to support the payment of pensions. These measures are consistent with pension reform measures imposed previously by the Commonwealth government with respect to its Employee Retirement System (ERS) pursuant to Act 3-2013, and by the Oversight Board through the Commonwealth Plan of Adjustment with respect to the Teachers' Retirement System (TRS) and the Judiciary Retirement System (JRS).

The freeze, including COLA elimination, produces material savings over time which will help reduce future costs for ratepayers once implemented through the POA.

9.4.2 Establishment of PayGo Trust

Under the POA, benefit payments will continue to be administered and paid from the current pension trust (PREPA ERS) but the funding structure of PREPA ERS will shift from a funded model to PayGo. The PREPA PayGo Trust will be established to reimburse PREPA ERS for retirement benefits paid and reasonable administrative costs (subject to approval by PREB) as part of operating expenses as defined in the POA. PREPA ERS is entitled to reimbursement of benefit payments so long as the benefit payments reflect the pension reform outlined above (e.g., no COLAs and frozen benefit accruals for active participants) which such reimbursement will be used by PREPA ERS to fund the upcoming monthly benefits. The PREPA PayGo Trust will be funded based on the estimated amounts needed to reimburse PREPA ERS, plus additional amounts needed to build up an approximate on-year reserve of benefit payments ("PayGo+"). This PayGo+ structure will provide a funding backstop in the in the event of

disruptions to the production or sale of electricity and/or collections of amounts due from ratepayers (e.g., due to a hurricane or other natural disaster).

10 Post-Certification Reporting

Electric utilities and energy providers operate critical infrastructure, often as monopolies. To provide transparency and inform regulators, employees, customers, and other stakeholders, regulated energy and utility companies must adhere to strict transparency and reporting requirements mandated by different federal, state, and other regulatory entities. Such reporting requirements are industry standard and apply to PREPA.

Historically, it has been PREPA's responsibility to report on its financial, operational, and reliability indicators. As part of the transformation of Puerto Rico's energy sector and LUMA's role as the operator of the T&D System and Genera as the future Generation Operator, LUMA and Genera have continued to comply with some of these – and certain additional – reporting requirements, as specified in the T&D OMA and the Generation OMA. Both the T&D OMA and the Generation OMA authorize LUMA and Genera to represent PREPA before PREB “with respect to any matter related to the performance of any of the O&M Services provided by Operator”. Both OMAs specify that LUMA and Genera will be responsible for all related filings and other submissions before PREB. Annex I of the T&D OMA and Annex IX of the Generation OMA details the accounting and financial information reporting requirements. These include (among other requirements):

- Quarterly and annual (year-end) financial reporting
- Monthly and annual federal agency reporting requirements
- PREB reporting requirements
- Budget Reconciliation Act of 2017 and other federal and Commonwealth stimulus or funding program reporting requirements
- Department of Energy reporting requirements

To monitor the progress of PREPA's operational and financial reorganization and the transformation of Puerto Rico's energy sector, as well as the health and performance of Puerto Rico's electricity system, the Oversight Board has historically required PREPA to submit additional performance and implementation-related information to the Oversight Board on a regular basis. PREPA must continue to meet these reporting requirements, for which it is still responsible for and has not transferred to LUMA or Genera, until it is no longer a covered territorial instrumentality as designated by the Oversight Board pursuant to PROMESA.

Going forward and as defined in their respective OMAs, the private operators of PREPA's T&D and generation assets will be responsible for certain operational and non-operational reporting and measures. As a result, PREPA will be required to work closely with both entities to fully implement and complete the reorganization and transformation of Puerto Rico's energy sector.

The Oversight Board will use the private operators' reports to PREB and P3A on outcome metrics and implementation status to supplement the information provided by PREPA and continue to monitor the financial health and performance of Puerto Rico's electricity system, while reserving its right to request certain other reports from LUMA and/or Genera either directly or through PREPA.

The sections below describe various reports and metrics that must be submitted by PREPA, LUMA and Genera. Section 10.1 below describes the required information and submission cadence for each non-operational report PREPA must submit to the Oversight Board, or that

LUMA and/or Genera must submit to P3A and/or PREB, and to which the Oversight Board will have access to, as per the agreement with LUMA and Genera. “Non-operational” in this context means that these reports are not tied to specific operational measures but rather indicate the overall performance and health of the electricity system. Section 10.2 includes an overview of the T&D-related metrics that LUMA is submitting to P3A and PREB as per the OMA¹⁵⁵, and to which the Oversight Board will have access to as per the agreement with LUMA. The overview in section 10.3 summarizes generation-related metrics and reports that must be submitted to the Oversight Board. Once the transition of PREPA’s legacy generation assets has been finalized, the generation-related reporting responsibilities will transition from PREPA to Genera. The overview in section 10.4 and its accompanying table summarizes measures reporting that PREPA must submit to the Oversight Board.

PREPA and the private operators will submit reports on a weekly, monthly, quarterly, or annual basis. Per Genera PR’s OMA agreement, reporting obligations, which the operator is required to provide, include monthly facility information (financial and operational) to support the Owner’s financing activities, such as including debt service management, disclosure, and tax requirements as per Sections IV and V of Annex IX. Additionally, the Operator will, upon request, assist the Owner and Administrator in preparing reports to meet the Owner’s reporting obligations and provide any necessary information to the Administrator for it to fulfill its responsibilities under the Agreement.¹⁵⁶ The cadence and process for reporting are described in the table below.

Table 33: Reporting Cadence

Report Type	Submission Timeline
Weekly	Submitted on Wednesdays for the preceding week
Monthly	Expected 15 days after the end of the month
Quarterly	Expected 45 days after the end of the quarter in the form of a consolidated report
Annually	Expected 120 days after the end of a Fiscal Year in the form of a consolidated report

10.1 Non-Operational Reports

Reporting of non-operational matters, i.e., information not tied to specific operational measures describing the performance and health of the electricity system at a more general level, is divided into two categories: (1) Resilience and Resource Planning, and (2) Financial. Resilience and Resource Planning reports provide updates on implementation of the Integrated Resource Plan (IRP), grid modernization, and federal funding efforts. The financial reporting cadence varies based on the nature of the reported metric, ranging from weekly to annual reports.

¹⁵⁵ Final metrics subject to PREB approval

¹⁵⁶ This section references that the Operation and Maintenance Agreement (T&D OMA) dated as of January 24, 2023, by and among PREPA, P3A and Genera PR LLC. All language and statements under this section are meant to be illustrative only and shall be interpreted in accordance with, and subject to, the OMA.

Table 34: Non-Operational Reports

	Report	Detail	Cadence	Responsible Entity
Resiliency & Resource Planning	Implementation of PREB approved IRP and Modified Action Plan	Submission of all PREB required IRP status reports, including a two-year near-term forecast of the system’s expected capacity resource balance on a seasonal basis and its ability to meet peak load and operating reserve requirements with existing and anticipated resources at each of the forecasted intervals.	As determined by PREB	PREPA/ LUMA
	Implementation of Grid Modernization	Grid modernization plan must provide an overview of the major investment categories and projects that LUMA, Genera and PREPA are considering to deliver reliable, resilient power and status of project delivery against milestones	As determined by PREB	LUMA/ Genera/ PREPA
	Permanent and Emergency Work-Related Federal Funding Report & Infrastructure Plan updates	Updates on the 10-year infrastructure plan. Updates on FEMA and CDBG-DR funding programs for permanent and emergency work for generation (including hydro) and T&D assets. Provide the following by PW: <ul style="list-style-type: none"> ■ Intended use and description of project portfolio ■ Obligated amount ■ Received amount ■ Cost-match requirements ■ Cost-match funded (by source) ■ Project timeline and/or milestones 	Monthly	PREPA/ LUMA/Genera
	Budget to Actuals (Reporting requirement is separate from any requirement under Section 203 in PROMESA)	Tracking of certified Budget to Actual for HydroCo and HoldCo based on template to be provided by the Oversight Board, which must include the following: <ul style="list-style-type: none"> ■ Explanation for material variances (greater than 10% and \$30 million) ■ Income statement in the reporting package ■ Monthly budget reporting 	Monthly	PREPA
		Tracking of certified Budget to Actual for GridCo, HydroCo, GenCo and HoldCo based on a consolidated template to be provided by the Oversight Board, which must include the following: <ul style="list-style-type: none"> ■ Explanation for material variances (greater than 10% and \$30 million) ■ Income statement in the reporting package ■ Quarterly budget reporting 	Quarterly	PREPA/ LUMA/Genera

	Report	Detail	Cadence	Responsible Entity
	Accounts Receivable (AR)/Accounts Payable (AP) cash flow reporting	Continued reporting on cash flow, payables and receivables by customer or vendor class.	Monthly	LUMA

10.2 T&D-Related Operational Measures

Per the T&D OMA, LUMA will submit annually to P3A and PREB T&D-related performance metrics relating to: (1) Customer Satisfaction, (2) Technical, Safety & Regulatory, and (3) Financial Performance. LUMA will also submit performance metrics on LUMA’s performance during a Major Outage Event. The specific metrics within each category are included in Section 6.3 *LUMA Performance Metrics*.

In addition, LUMA shall provide to the Oversight Board copies of any monthly, quarterly or annual report submitted to PREB, the P3A, or any other government agency, until PREPA is no longer a covered territorial instrumentality, as designated by the Oversight Board pursuant to PROMESA. Moreover, LUMA will complement their System Remediation Plan updates to the PREB (NEPR-MI-2020-0019) with information related to vegetation management. Specifically, LUMA will provide updates on the number of miles cleared, the municipalities impacted, and the number or percentage of service interruptions caused by it. The Oversight Board will use these reports to supplement the information provided by PREPA in monitoring the financial health and performance of Puerto Rico’s electricity system.

10.3 Generation-Related Operational Metrics and Reports

As Genera commences operations in FY24, they it will take charge of operating PREPA's legacy thermoelectric generation assets, with mandated reporting on related operational measures to PREB and by extension the Oversight Board (See Table 23 in Section 6.2.1 GenCo Performance Metrics for more details).

10.4 PREPA HoldCo and HydroCo Measures and Reports

Table 35: Reports on Reorganization Implementation, Holdco and Hydroco Operational Measures

	Report	Detail	Cadence
Transformation	PREPA Reorganization Plan Implementation	<p>Reporting requirements for execution of the remainder of the PREPA Reorganization Plan, including but not limited to:</p> <ul style="list-style-type: none"> ■ Updated roster lists for HydroCo and HoldCo, consistent with the approved reorganization plan for headcount ■ PropertyCo miscellaneous properties divestment plan updates with expected timeline for execution and estimated revenue targets ■ Capital Contribution Agreements update ■ GridCo asset identification and reconciliation progress report in preparation for subsidiary creation and capital contribution progress report 	Monthly
	HydroCo and Irrigation System Sale of Water report	<p>HydroCo and Irrigation system sale of water report must include but not limited to:</p> <ul style="list-style-type: none"> ■ Gallons (or any other unit of measure used) of water sold ■ Rate charged (\$) ■ Billed and collected monies ■ Breakdown by client type ■ Detailed information about sources of water and current water reserves ■ Analysis of the current and projected water usage and demand, including irrigation needs, hydroelectric power generation, and direct consumer use ■ A/R report tracking HydroCo and Irrigation system sale of water and federal monies deployment 	Monthly
	HydroCo Capital Plan	<ul style="list-style-type: none"> ■ HydroCo capital plan deployment schedule, including but not limited to maintenance and repairing of units and any federally funded project 	Quarterly

11 Conclusion

The 2023 Certified Fiscal Plan marks a huge milestone with the near completion of the unbundling of PREPA’s main operational arms and it also lays out the actions the Government of Puerto Rico must now take to finally complete the transformation of Puerto Rico’s energy system. As laid out in this Certified Fiscal Plan, as well as in the 2023 Commonwealth Certified Fiscal Plan, the full and complete implementation of the Energy Sector Reform is a fundamental component of Puerto Rico’s strategy to promote economic development, improve its attractiveness as an investment destination, and improve the quality of life of its residents.

The steps taken by PREPA and the Government to transition to LUMA as private operator of the T&D system and of Genera as private operator of the legacy generation system coupled with the growing expertise and respect of the independent regulatory framework are important achievements that together provide PREPA’s customers with a sense of hope that a modern, efficient, and reliable energy system is possible. Nonetheless, the overall delays in several other initiatives, including the financial closing of the Tranche 1 PPOAs previously approved by the Oversight Board, PREPA’s reorganization and rightsizing of remaining operations, the slower than anticipated deployment of federal funding and the delay in the procurement of additional renewable resources, among others, pose a clear and present risk to the progress seen thus far. Unless urgent action is taken by actors such as PREPA, LUMA, Genera and PREB, Puerto Rico’s residents may find themselves having to permanently rely on an outdated and unreliable energy system.

PREPA’s resources and focus must be deployed to (1) enable the successful transition of Generation operations to Genera as the selected private operator, as mandated by Act 17-2019, and (2) operate the remaining PREPA legacy entities in the most efficient and cost-effective manner. Similarly, PREPA and the private operators must continue to focus and enhance their efforts on facilitating the access and deployment of federal funds, both towards the improvement of generation resources as well as towards investments in the T&D System to improve the quality and reliability of energy services in Puerto Rico.

In the longer term, updating and implementing the IRP, LUMA and Genera’s improvement programs, will be essential to building a modern, safe, reliable, and resilient electricity sector for Puerto Rico. The 2023 Certified Fiscal Plan sets PREPA on a course to fully transform the energy system with best-in-class operational technology and expertise.