

**GOVERNMENT OF PUERTO RICO  
PUBLIC SERVICE REGULATORY BOARD  
PUERTO RICO ENERGY BUREAU**

<p><del>NEPR</del></p> <p><b>Received:</b></p> <p><b>Feb 25, 2021</b></p> <p><b>6:41 PM</b></p>
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**IN RE:** THE PERFORMANCE OF THE  
PUERTO RICO ELECTRIC POWER  
AUTHORITY

**CASE NO.:** NEPR-MI-2019-0007

**SUBJECT:** Presentation Projected by PREPA  
During the February 22, 2021 Technical  
Conference

**MOTION TO SUBMIT PRESENTATION PROJECTED DURING FEBRUARY 22, 2021  
TECHNICAL CONFERENCE AND TO CLARIFY**

COMES NOW, the Puerto Rico Electric Power Authority (PREPA) through the undersigned legal representation and respectfully submits and prays as follows:

On December 23, 2020, the Energy Bureau of the Public Service Regulatory Board (the “Energy Bureau”) entered Resolution and Order establishing the process that would be followed to determine the performance baseline and compliance benchmarks that will establish baseline targets to be applied to certified electric service companies.<sup>1</sup> The Energy Bureau found that, given the importance of the process, input from the general public and stakeholders was necessary to ascertain key performance metrics that should be targeted for performance incentive mechanisms, the initial baseline and the new compliance benchmarks. Also, the Energy Bureau specifically ordered PREPA and LUMA Energy, LLC as ManagementCo, LUMA Energy ServeCo, LLC as ServCo (collectively, LUMA) to appear in the proceeding and provide comments and input regarding these topics.

In compliance with the Order, PREPA and LUMA have provided their comments and input as stated above, as well as their opinion on which specific metrics should be targeted as

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<sup>1</sup> Resolution and Order entered on December 23, 2020, as amended by subsequent orders entered on December 24, 2020, February 1 and 11, 2021 (all the aforementioned orders are herein referred to as the “Order”).

performance metrics to be applied to electric service companies. Further, the Independent Consumer Protection Office, the Solar and Energy Storage Association and Rocky Mountains Institute submitted their comments as well.

Following the Order's procedural calendar, on February 22, 2021, the Energy Bureau held a Technical Conference in which several entities, including PREPA, were granted the opportunity to present a summary of their comments that had already been submitted in writing and also to answer questions that the Energy Bureau and other stakeholders had. During the Technical Conference PREPA projected a Power Point presentation which the Energy Bureau ordered PREPA to submit and make available for the public.

Accordingly, and in compliance with the bench order given during the February 22, 2021 Technical Conference, PREPA hereby submits the Power Point presentation titled Reply Comments of PREPA Regarding the Establishment of Performance Baseline and Compliance Benchmarks for Electric Service Companies (the "Presentation"). Annex A. PREPA hereby clarifies that the presentation has been edited to delete a reference to LUMA not serving PREPA with a request for information (RFI) of the Transmission and Distribution Directorate's necessary maintenance spending data information. PREPA did receive the RFI and has already addressed the same. In accordance with this, the Presentation's page 14, was edited as follows:

Non-Federally Funded Budget: PREPA's T&D has a Budget and Costs Control Office where spending data is gathered from the different areas, compiled to be available for further actions, and stored. ~~PREPA has never been served with a request for that information or notice of the lack of it from LUMA. However, PREPA will coordinate with LUMA to share this information.~~

WHEREFORE, PREPA request the Energy Bureau to note PREPA's compliance with the Bench Order entered on February 22, 2021.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 25<sup>th</sup> day of February 2021.

/s Katuska Bolaños-Lugo  
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**CERTIFICATE OF SERVICE**

It is hereby certified that, on this same date, I have filed the above motion with the Clerk of the Energy Bureau using the Energy Bureau's Electronic Filing System, at the following address: <http://radicacion.energia.pr.gov> It is further certified that I have sent a copy to [margarita.mercado@us.dlapiper.com](mailto:margarita.mercado@us.dlapiper.com) and [mmercado@mercado-echegaray-law.com](mailto:mmercado@mercado-echegaray-law.com).

In San Juan, Puerto Rico, this 25<sup>th</sup> day of February 2021.

s/ Katuska Bolaños-Lugo  
Katuska Bolaños-Lugo

Annex A



**Puerto Rico  
Electric Power  
Authority**

## **Puerto Rico Electric Power Authority (PREPA)**

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Reply Comments of PREPA Regarding the Establishment of Performance  
Baseline and Compliance Benchmarks for Electric Service Companies  
PREB Technical Conference  
February 22, 2021

# Discussion Outline

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# Introductory Remarks

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**PREPA would like to express its gratitude, and to respectfully commend, the Energy Bureau for a very transparent, inclusive, and collaborative process in establishing Electric Utility Performance Metrics.**

- Today's presentation is intended to fully support the Energy Bureau's efforts to:
  - Establish a baseline and a uniform understanding of the current level of PREPA's performance.
  - Optimize the Energy Bureau's ability to measure PREPA's reliability and stability with the critical data gathered.
  - Identify those areas of lower performance within the PREPA system that may need more attention.
- PREPA would also like to acknowledge that it reviewed the comments filed by LUMA Energy<sup>1</sup> (LUMA), Independent Consumer Protection Office (OICP), Solar and Energy Storage Association (SESA), and Rocky Mountain Institute (RMI).
  - PREPA welcomes the opportunity to continue engaging with the multiple stakeholders involved.

## **The objectives of today's presentation are to:**

1. Support the Energy Bureau's collaborative process in establishing transparent performance metrics.
2. Provide PREPA's view and additional context on its performance in response to LUMA's and other entities' comments.
3. Elaborate on the significant progress PREPA has made in the establishing, measuring, and tracking performance metrics in recent years.

[1] LUMA Energy, LLC as ManagementCo, LUMA Energy ServeCo, LLC as ServCo (collectively, LUMA





# Reply to Entities' Comments

The following summarizes the key points from PREPA's reply to entities' comments:

## Collaborative Stakeholder Process



*PREPA generally agrees with the testimony of RMI and the idea of a collaborative stakeholder process. PREPA also notes that RMI has played an active role as a neutral entity for such collaborative processes in other jurisdictions, and that such a role would be welcomed in this docket.*

## Regulatory Incentives



*PREPA agrees that this is the correct time to assess the current regulatory incentives and align all stakeholders to the critical gaps to help reduce the risk of new incentive mechanisms not addressing the most important gaps, or even producing any perverse incentives.*

## Transition to Renewables



*PREPA concurs with SESA's testimony that performance metrics are important to accelerate the transition to renewable energy sources.*

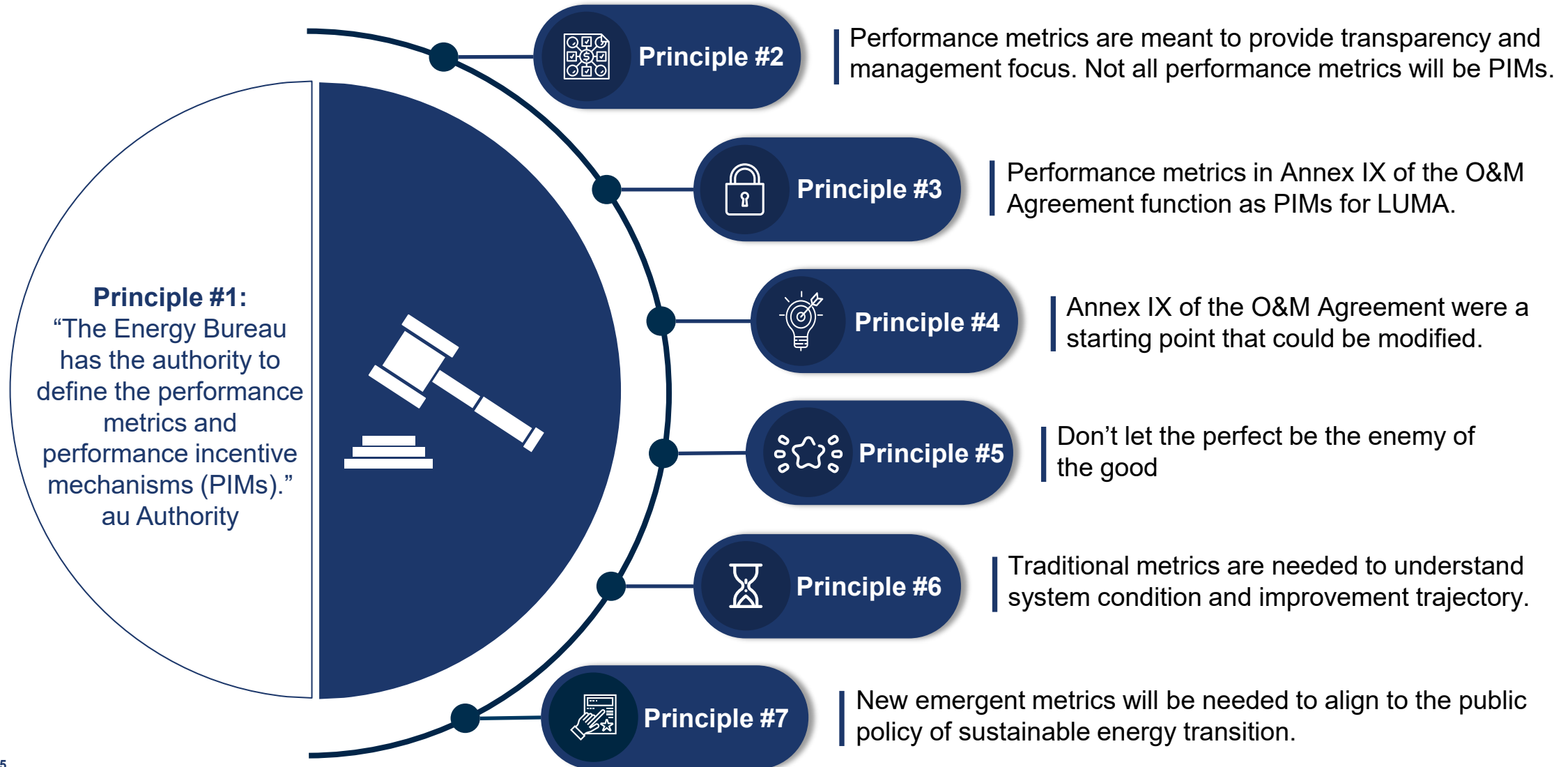
## Customer Experience



*PREPA agrees that reliable metrics and a client-centered approach, based on client satisfaction and accountability, are necessary to create an effective business model for the future of Puerto Rico's electric system. To achieve this, the feedback of the customer and their representatives' (like OICP) is essential.*

# Consensus On Key Principles

All parties have consensus over the following key principles:



# #1 Lesson From LIPA Getting Performance Metrics Right Matters

“The #1 Lesson” from Long Island Power Authority (LIPA) is that getting performance metrics right (early in the process) matters!



T&D Operations and Maintenance (O&M) **contractors** concentrate their **focus on the metrics**.



**Metrics** will need to **change** as the system **needs evolve**.



LIPA has had to **switch O&M contractors**, in part **due to** lack of performance related to **inadequate metrics**.



Being **clear up front** regarding current and emerging metrics will **align LUMA to system needs** and public policy.

# Metrics for Transparency

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**Metrics for transparency on load not served are critical now!**

- Load Not Served is the critical issue, particularly with climate change.
- Reducing Load not served is the benefit that offsets the cost improving the grid.
- Cost to PR ratepayers of load not served varies by type of customer and duration of outage.
- Capturing all the available metrics now, even if imperfect, will allow better accountability and decision making.



# A Collaborative, Transparent Process and Path Forward

**PREPA acknowledges the Energy Bureau authority to undertake a data gathering process with stakeholders in setting the standard of PREPA's performance in order to subsequently support the development of effective PIM for certified electric service companies.**

- PREPA trusts that the collective actions of all stakeholders in this process will be collaborative and transparent.
- To further the progress to date, PREPA respectfully suggests that additional technical meetings, framed as collaborative working sessions, be structured around specific issues that may not be resolved today.
- These topics include, but are not limited to:
  - Emerging consensus on DER interconnection queue
  - Ability to capture Customer Minutes Interrupted (CMI)
  - FEMA compliance metrics
  - Desirability of metrics such as Customers Experiencing Long Interruption Durations (CELID), Customers Experiencing Multiple Interruptions (CEMI<sub>n</sub>) and Momentary Average Interruption Frequency Index (MAIFI); subject to IT and data gaps
- PREPA believes a phased approach to establish the performance metrics is warranted where the initial focus is (1) identifying the metrics, (2) establishing metric baselines, (3) conducting more robust benchmarking, and (4) establishing metric targets.



# Traditional and Emerging Metrics

The table below shows PREPA's view of the relationship between the Energy Bureau and the Government of Puerto Rico's regulatory and public policy goals to specific priority outcomes:

Goal	Type	Priority Outcome
Improve Value to Customer	Traditional	Affordability
		Reliability
		Customer Experience
	Emergent	Interconnection Experience
		Customer Program Engagement (EE, DER, LMI)
		Restoration of Service (major outage event response)
Improve Utility Performance	Traditional	Cost Control
	Emergent	DER integration
		Digitalization
Advance Policy Outcomes	Traditional	Capital Formation and solvency
		Customer Equity
	Emergent	GHG Reduction/RPS
		Resilience
Manage Privatization	Emergent	Asset Stewardship
		Resource Adequacy
		Transparency



# Preamble to Metrics Discussion

- Through its review of comments provided by LUMA and other entities, PREPA identified three types of assertions made related to deficiencies in the baseline performance metrics:
  1. Deficiencies in data collection due to poor Operating Management System (OMS), customer information systems, hand entry of codes/events, lack of system integration between the PREPA IT systems.
  2. Deficiencies in coding the Occupational Safety and Health Administration (OSHA) and reliability events that are not consistent with national standards.
  3. Miscalculations in terms of using the data.
- PREPA believes it is important to provide additional context for some of the deficiencies mentioned by LUMA and other entities.

IT Systems	Data Entry	System Inspections
<ul style="list-style-type: none"> <li>▪ PREPA acknowledges that Information Technology (IT) systems for are not functioning as desired.</li> <li>▪ Little investments made to address IT system deficiencies given the expected migration to future operator.</li> <li>▪ PREPA is aware of the IT system deficiencies, has addressed some issues, and has prioritized resources for events that needed immediate response.</li> </ul>	<ul style="list-style-type: none"> <li>▪ As a result of limited IT system investments, PREPA employees manually input data to specific fields and/or are unable to track certain metrics with the degree of accuracy and timeliness other utilities enjoy.</li> </ul>	<ul style="list-style-type: none"> <li>▪ PREPA has not programmed asset inspections and document its findings for a few years due to:               <ul style="list-style-type: none"> <li>– Employee attrition</li> <li>– Lack of consistent attendance</li> <li>– Focus on natural emergencies</li> </ul> </li> <li>▪ Time and resources needed to perform these tasks were deployed to remediate the impacts of hurricanes Irma and María and the 2020 earthquakes.</li> </ul>

**However, PREPA does not agree with some the deficiencies identified concerning OSHA coding and reliability events. The subsequent slides will elaborate our reasoning and provide additional comments in relation to customer service metrics.**



# Safety Metrics

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- The following occupational health and safety indicators tracked by PREPA are based on the formulas provided by OSHA:
  - Incidence Rate (IR)
  - Long Term Care (LTC)
  - Days Away, Restricted or Transferred (DART) Rate
  - “Severity Rate” Incidents Rate
- PREPA understand that the Energy Bureau considers incidents that have recently occurred in the electrical system (e.g., hurricanes).
- On January 19, 2021, PREPA’s performance was compared with industry standards and the Hawaii Electric Company (HECO).
  - LUMA is recommending the comparison with the Edison Electric Institute (EEI) association.
  - PREPA believes that a fair comparison requires greater uniformity in terms of profits, scale, and infrastructure.
  - PREPA deems more appropriate a comparison with the American Public Power Authority (APPA) association.
- PREPA engaged the world-renowned safety advisor, DuPont Sustainable Solutions (“DuPont”), to help assess tools, training, and reports.
  - PREPA adopted DuPont’s recommendations and suggestions on leading performance indicators (e.g., LTC, DART, etc.).
  - Despite these efforts, concerns were highlighted with a “near miss” indicator (“casi casi”) which is an acceptable indicator by OSHA.
- The following slides will show the APPA-PREPA performance comparison until 2019 (APPA has not yet published the information for 2020)<sup>2</sup>.

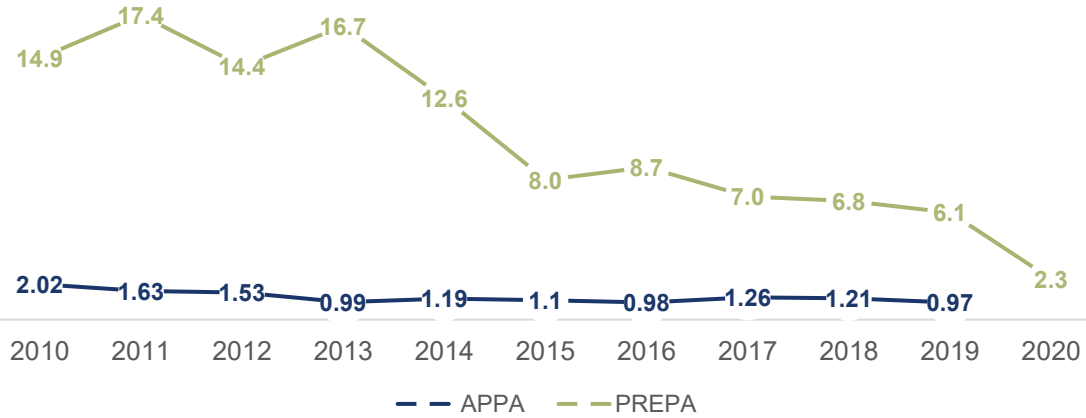
[2] PREPA belongs to group H where the parameter of number of hours worked of exposure in the region is more than 3,999,999



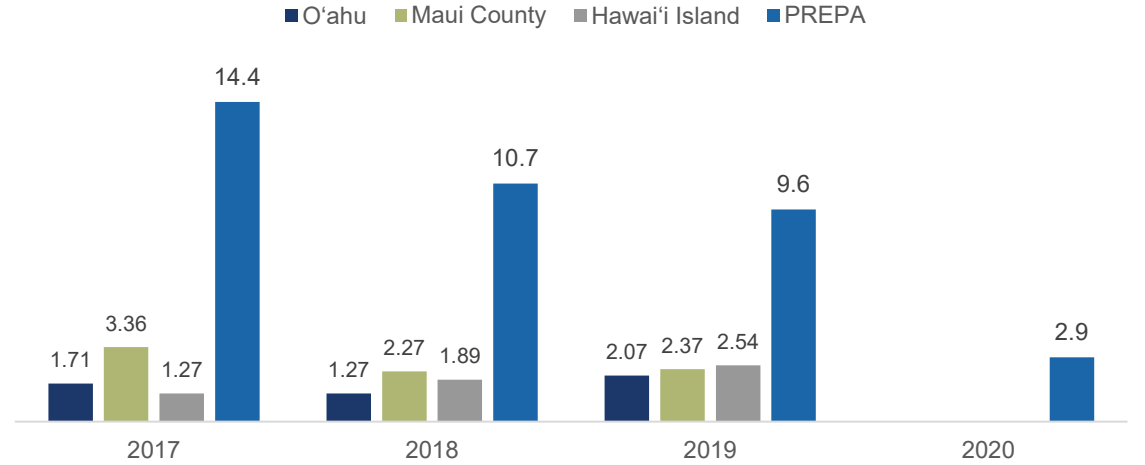


# Safety Metrics (Cont'd)

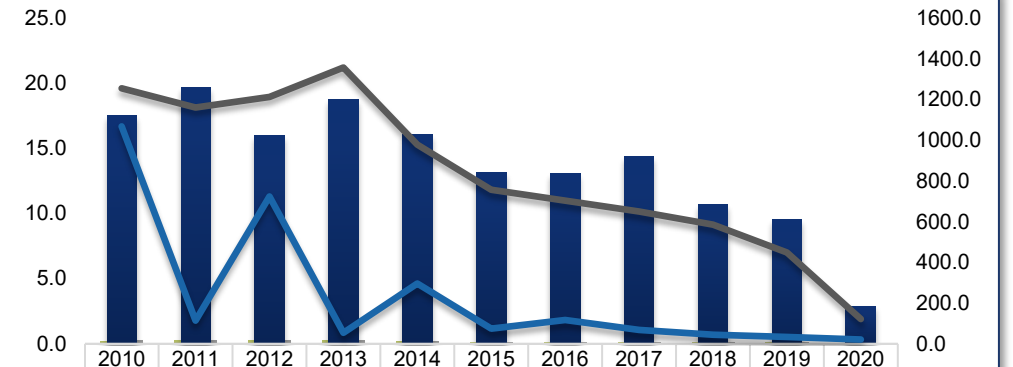
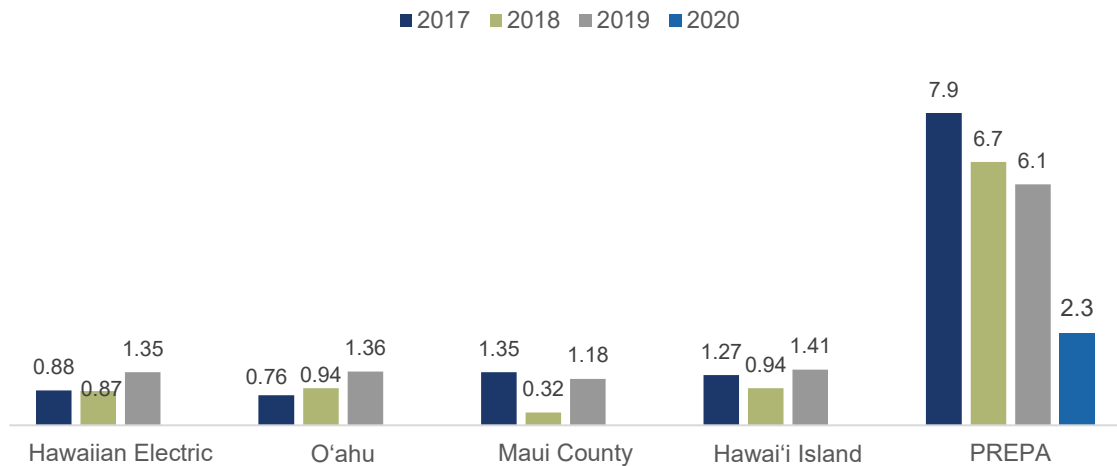
### APPA AND PREPA DART



### HECO AND PREPA IR



### HECO AND PREPA LTR



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
LTC	13.2	16.4	13.7	16.4	12.6	7.9	8.7	7.9	6.7	6.1	2.3
DART	14.9	17.4	14.4	16.7	12.6	8.0	8.7	7.9	6.7	6.1	2.3
IR	17.5	19.7	16.0	18.8	16.1	13.1	13.1	14.4	10.7	9.6	2.9
Severity Rate	1068.5	114.1	724.9	54.2	296.2	75.5	117.7	68.6	44.6	34.5	21.4
Total Incidents	1256	1162	1214	1359	979	757	704	650	587	449	123

# Customer Service Metrics

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**PREPA acknowledges there are opportunities to improve the customer service metrics data collection. The following provides additional context for some of the metrics mentioned in the filed responses:**

- Abandonment Rate (AB): is currently measured with PREPA and third-party vendor data, using three (3) different IT systems: Avaya, Approach and Connect. This situation creates a challenge to calculate accurate data and achieve consistency with industry standards.
- First Resolution Contacts (FRC): PREPA tracks only the calls that escalate to a supervisor level and not the calls that get resolved in that first contact level.
- Average Speed of Answer (ASA): Cortelco, the company that administers the Avaya systems at PREPA's call centers, has provided the IT Directorate with precise data about the call overflow. This limits PREPA's ability to provide call overflow information requested by LUMA.
  - Utilization of three technologies in each of the call centers, does not allow PREPA to ascertain accurate calculations of ASA.
  - To mitigate this, PREPA implemented a rerouting plan with personnel training to comply with service needs during holidays, strikes and other events. This process allows for internal and external personnel to be trained to manage the service request calls, normally only processed in the internal call center, resulting in a reduction of call overflow.
- JD Power Customer Satisfaction: PREPA acknowledges that it has never used the services of this provider. As of today, PREPA has not received the results of the JD Power Customer Satisfaction Survey commissioned by LUMA.
- Customer Claims: PREPA recognizes customers rights to take their claims within all levels allowed by applicable laws and regulations and that the Energy Bureau is the appropriate forum for such claims. However, it is important to note that PREPA's claims records only reflect the number of complaints received each day, without consideration to the final merits of such claims.



# T&D Metrics

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**The following provides additional context for some of the metrics mentioned in the filed responses:**

- T&D Line Inspections & Targeted Corrections: PREPA agrees that a thorough and complete inspection of all the T&D assets is not only appropriate but necessary and that LUMA is the entity to undertake such endeavor. That said, implementing such action is not, in and of itself, a performance metric, it is simply a description of a task to be performed by an electric service company as part of its operation responsibilities.
  - While an operator can report to the Energy Bureau the progress it makes, the actual performance metric is, in fact, the results of the inspections.
  - Asset conditions will benefit from the \$10.7 billion FEMA allocation which LUMA is expected to execute.
- Non-Federally Funded Budget: PREPA's T&D has a Budget and Costs Control Office where spending data is gathered from the different areas, compiled to be available for further actions, and stored.
- System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI): PREPA's data tracking on reliability indicators are related solely to distribution interruptions information. The only database used to calculate reliability indexes and track information is the Distribution Dispatch Office which accurately analyzes the data on the outage events and restoration process including step by step reestablishment of service interruptions.
  - PREPA Distribution Indices are intended to apply to Distribution System as specified in IEEE 1366 IEEE Guide for Electric Power Distribution Reliability Indices. Accordingly, that is the reason why the transmission and substation events, along with the codes for these events, are not included as part of the metrics used.

## **Current Practices and Other Observations**


- PREPA schedules line patrols using its aerial fleet weekly.
- The results of these patrols are divided in two major tasks: vegetation management and structural deficiencies.
- The aerial information is delivered to the corresponding area through digital communications. Given the rugged terrain of the transmission lines, aerial reconnaissance, and reporting. This is a best practice followed by utilities faced with similar situations.
- PREPA understands that deeper assessments might be useful to improve schedule line maintenance. These inspections would need be done by a professional directly (on foot) on every transmission structure. Such task represents a considerable expenditure of manpower and time.



# Additional Proposed Performance Metrics

The table below illustrates PREPA's proposed additional metrics with a brief description:

Goal	Priority Outcome	Priority Outcome	
Improve Value to Customer	Affordability	Average monthly electric bill as % of median disposable income	
	Reliability	Customer Minutes Interrupted (CMI)	
		Momentary Customer Interruptions (MCI)	
		Customers Experiencing Multiple Interruptions (CEMI <sub>n</sub> )	
		Average System Interruption Duration Index load based (ASIDI)	
		Average System Interruption Frequency Index (ASIFI)	
	Customer Experience	No additional recommendations	
	Interconnection Experience	Interconnection queue period (DER PV)	
		Interconnection queue period (Microgrids)	
	Customer Program Engagement (EE, DER, LMI)	EE, DR, and DER program participation: # of participants vs total funded program capacity or milestones	
	Restoration of Service (major outage event response)	Repair/restoration of downed wires (time)	
Restoration of service to 90% of the load (time)			
Restoration of services to 90% of customers. (time)			
Improve Utility Performance	Cost Control	Non-Wires alternatives adopted (MW)	
	DER Integration	% Curtailment of DERs	
	Digitalization	Cybersecurity breaches	


 = Emergent performance metric



# Additional Proposed Performance Metrics (Cont'd)

The table below illustrates PREPA's proposed additional metrics with a brief description (Cont'd):

Goal	Priority Outcome	Priority Outcome
Advance Policy Outcomes	Capital Formation and Solvency	PREPA credit rating
	Customer Equity	Low-income reliability and load not served metrics
	GHG Reduction/RPS	EV Penetration
		Savings from procurement of renewable power above Energy Bureau benchmark
	Resilience	MWh of load not served by customer class
		Customers Experiencing Long Interruption Durations (CELID)
Manage Privatization	Asset Stewardship	System Condition Audit Findings
	Resource Adequacy	Exceeding RPS milestones
	Transparency	FEMA Compliance Failures (#)
		FEMA reimbursements denied (\$)
		Responsiveness to PREB and other stakeholder information requests (time based)

 = Emergent performance metric



# Closing Remarks

Once again, PREPA would like to thank the Energy Bureau's invitation to participate in this process in establishing Electric Utility Performance Metrics. We look forward to the collaborative process and the collaboration with all entities involved.

## “Authority”

1 PREPA respects the Energy Bureau's “**Authority**” to establish the performance metrics for PREPA and other electric service companies.

## “Collaborative”

2 PREPA commends the Energy Bureau for a very inclusive and “**Collaborative**” process to support the transformation of the energy sector in Puerto Rico to one that the island deserves.



## “Phased Approach”

3 PREPA recommends a “**Phased Approach**” with an initial focus in identifying the metrics, then establishing metric baselines, conducting more robust benchmarking, and establishing metric targets. PREPA stands ready to collaborate in this endeavor, as directed by the Energy Bureau.