2nd IGE on the PR PSSTF for Puerto Rico

Guest Speakers and Panel

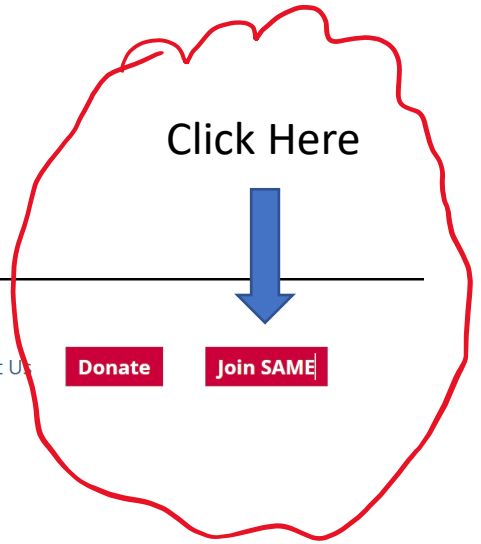
Agenda

- Call to Order
- Invocation
- Introduction
- Presentation Guest
- Panel for IGE
- Questions from the Floor
- Wrap up and Summary
- Thank you

Industry

- Floor Open for Industry to SAME Panel
- Please state your firm’s name, line of business, bond capacity (if a construction contractor), federal contract experience, and your question/suggestions for the IGE Panel.
- Observations
  - Please be polite
- Summary

Join SAME - San Juan Chapter



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Thank you

- Colonel Bennett and Mr. McElmurray
  - Note a small token
- Public
- Support for the Activity

GeneraPR

Puerto Rico's Energy Grid

March 16, 2023

Puerto Rico's energy grid today

A stable grid needs

2950MW
baseload

+

700MW
spinning reserve

Legacy generation assets are insufficient today:

	3.6GW	potentially usable capacity; **availability average only 2.086GW**
−	**capacity**	long-term M&R required
−	**capacity**	at risk
−	**capacity**	retiring
=	**inadequate**	effective capacity

Antiquated, undermaintained generation fleet

- Some units nearing 50 years old, most began operations in 1960's and 1970's
- Forced outage rates up to 5x worse than industry average
- Inadequate supply resources to deliver system reliability
- 2023 loss of load expectation 8.81 days/year (88 times utility benchmark of .10 days/year)

(i) https://www.p3.pr.gov/wp-content/uploads/2023/01/LGA-Partnership-Report.pdf
(ii) https://energia.pr.gov/wp-content/uploads/sites/7/2022/09/Motion-to-Submit-Lumas-Resource-Adequacy-Study-NEPR-MI-2022-0002.pdf

The future of Puerto Rico's energy grid

The IRP calls for significant changes to Puerto Rico's grid

TODAY

42.0 TBtu natural gas

55.9 TBtu HFO

19.9 TBtu diesel

117.8 TBtu total

FUTURE

Less natural gas

Less HFO

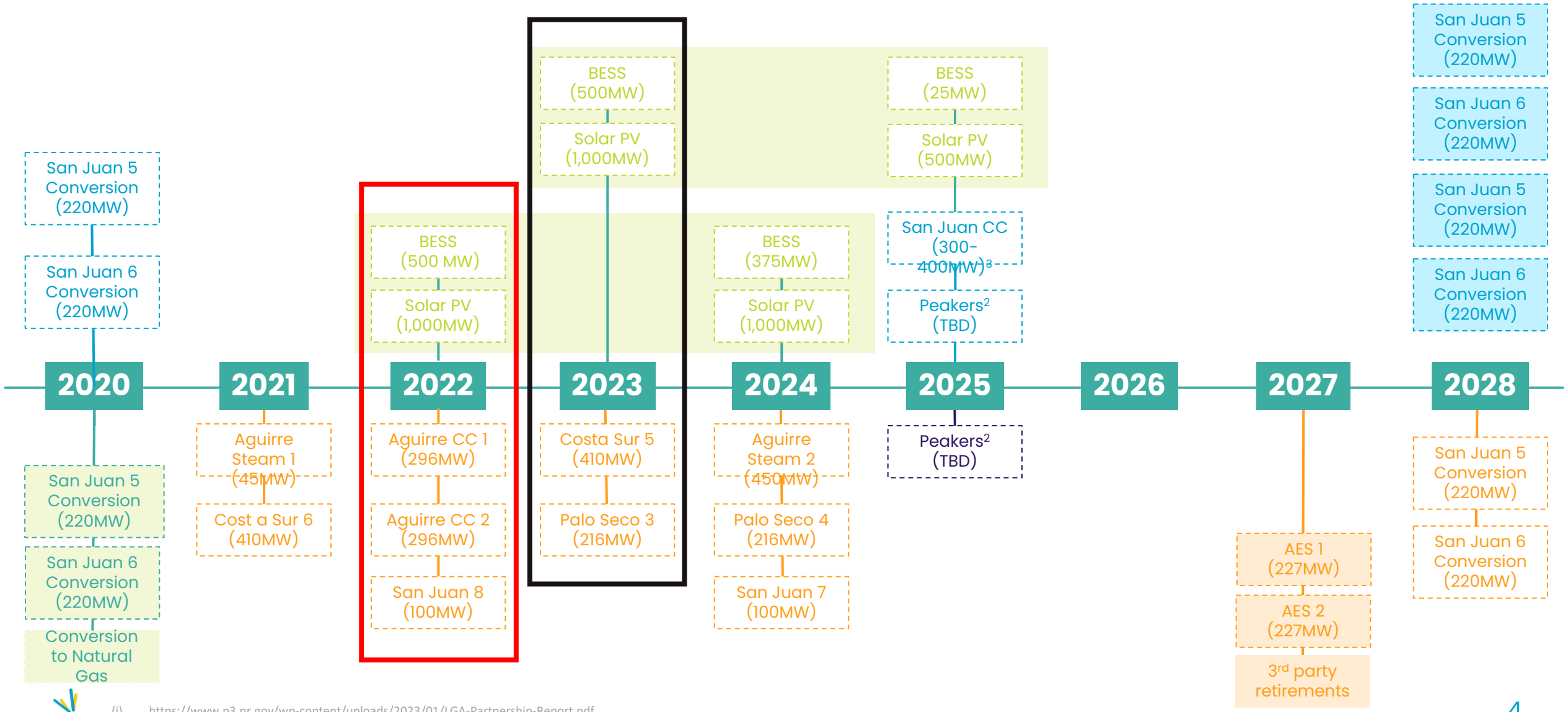
Less diesel

More renewables & batteries

100% renewable by 2050

To accomplish this, IRP called for RFPs for at least 3,500MW of new solar and at least 1,360MW of batteries by 2025

Integrated Resource Plan road map



(i) https://www.p3.pr.gov/wp-content/uploads/2023/01/LGA-Partnership-Report.pdf

Need for grid stabilization

2,950MW: required availability to meet peak demand

~710MW: required reserves

PREPA only averages **2,086MW** since 2020

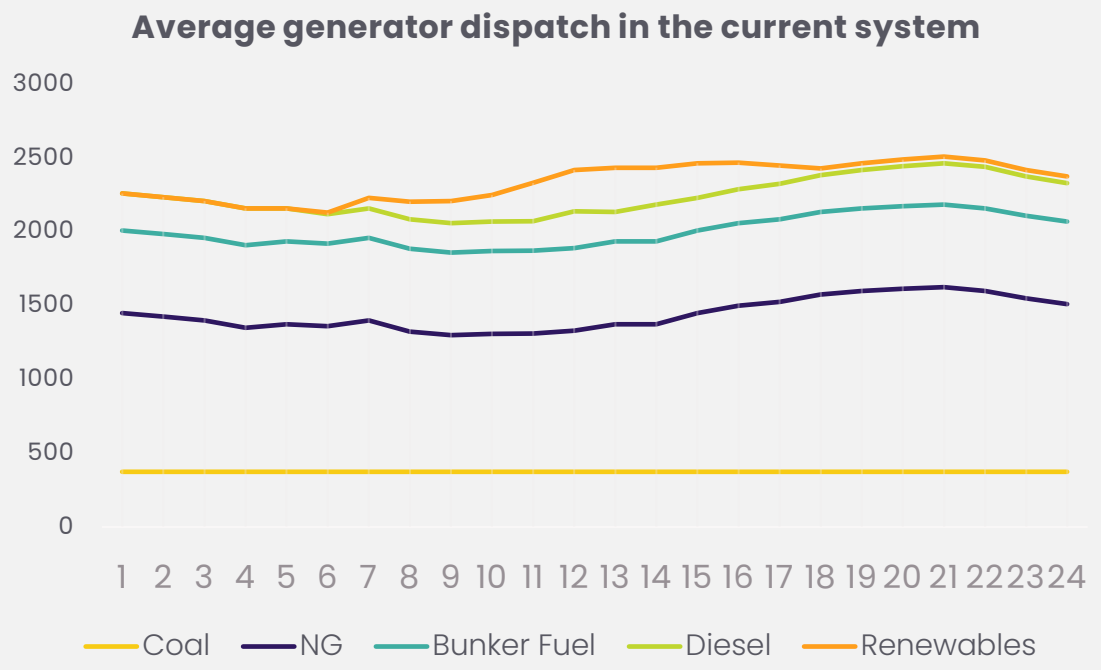
There's not enough reserve capacity to conduct planned maintenance required for reliability, particularly in hurricane season

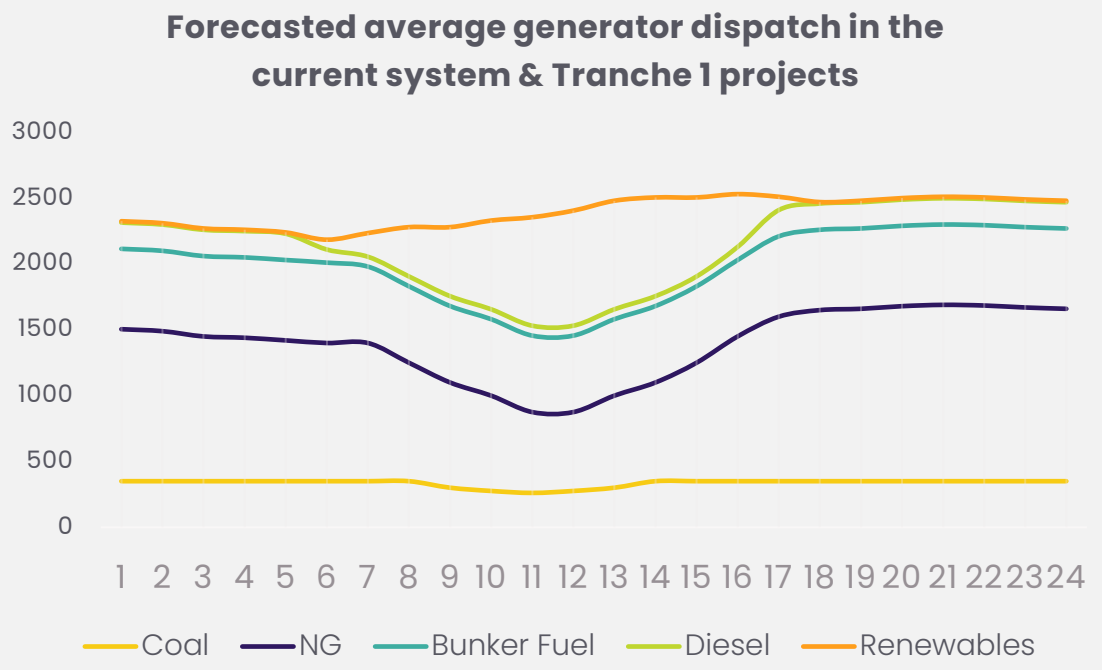
- Large generator outages, like Costa Sur 5 have **eliminated net margin**
- **Loss of load expectation of 8.81 days/year** (88 times utility benchmark of .10 days/year)
- Aguirre, San Juan, Costa Sur 5 are experiencing **higher forced outage rates** since Fiona

(i) https://energia.pr.gov/wp-content/uploads/sites/7/2022/09/Motion-to-Submit-Lumas-Resource-Adequacy-Study-NEPR-MI-2022-0002.pdf

Need for grid stabilization

Integrating renewables requires more quick start, dispatchable thermal generation in addition to batteries





(i) https://energia.pr.gov/wp-content/uploads/sites/7/2022/09/Motion-to-Submit-Lumas-Resource-Adequacy-Study-NEPR-MI-2022-0002.pdf

Grid stabilization initiative

On 11/15, Governor Pierluisi & FEMA announced FEMA's power stabilization initiative to install 700MW

The goal:
Reduce load shedding and perform necessary maintenance and repairs

LUMA's detailed resource adequacy study found adding ~675MW of perfect capacity is the only way to align LOLE with industry benchmarks:

Scenario	Loss of Load Expectation (LOLE)	Loss of Load Hours (LOLH)
Current system	**8.81** days/yr	**40.77** hours/yr
Current system + 675MW of perfect capacity	**0.10** days/yr	**0.36** hours/yr
Industry benchmark target	**0.1** days/yr	-

To meet the desired end state of 3650MW, we will undertake an aggressive maintenance program

- **Improve efficiency**
- **Improve reliability**
- **Improve resiliency**

(i) footnotes

Partner opportunities

We are putting together 3 multiple award task order contracts

1

Professional engineering services

Project formulation, design, management and closeout

$100mm
of capacity

2

Emergency work

Critical rapid response needs in the event of an emergency

$300mm
of capacity

3

Maintenance and repair work

Maintenance and repairs at each plant site or by regions

$500mm
of capacity

Longer term decommissioning and other activities

Puerto Rico Power System Stabilization Program

Industry-Government Exchange

March 16, 2023

US Army Corps of Engineers®

Working Today to Build a Better Tomorrow

SUMMARY SCOPE OF WORK

- Procure, install, and operate temporary power generation of 350-700 Megawatts (MW) at various locations throughout Puerto Rico.
- Rapidly mobilize and commission land-based turbine-style generation units, capable of dual fuel (primarily LNG) operation, at existing power generation facilities. Perform all work necessary to interface with existing power grid and operate for an estimated 6-18 months.
- Procure and install temporary transformers, control cabling, breakers, switches, relays, and/or other equipment necessary to operate a power system.
- Repair and/or replace various components of existing power generation facilities (generating units, transmission substations, gas-insulation systems, etc.).
- Repair and/or replace various components of existing transmission and distribution facilities (115 and 230kV).
- Coordinate all work with applicable entities including PREPA, Genera PR, and LUMA, as needed.

*Note that these items are subject to change or elimination. Final requirements will be detailed in the contract solicitation.

BACKGROUND – WHAT IS A MATOC?

- Multiple Award Task Order Contract
- An Indefinite Delivery Indefinite Quantity (IDIQ) contract with multiple awardees
- Provides the Government flexibility to order as much or as little as needed over a specified period within defined minimum and maximum amounts.
- All awardees (i.e., the MATOC pool) are pre-selected based on their capability to perform the overall requirements described in the base contract – However, being awarded a MATOC contract does not guarantee work.
- Individual requirements (Task Orders) are issued as separate RFPs to the MATOC pool which compete for award of the Task Order.

ACQUISITION STRATEGY

BLUF:

- 2 Task Orders from existing Rapid Disaster Infrastructure (RDI) MATOC (USACE Omaha District) ~$750M to $1B
- 2 New IDIQ contracts:
  - $5B Unrestricted Power Generation and Repairs MATOC;
  - $50M Small Business-Set Aside Transmission and Distribution (T&D) Repairs MATOC)

New Contract Development

RDI Existing Contract
Cost Plus Fixed Fee MATOC

- 2 Task Orders:
  - San Juan: 200 MW
  - Palo Seco:150 MW
- 6-month operation
- Advertise: Dec-Feb 2023
- Award: Feb/Mar 2023
- Transition O&M to new Power Generation/Repairs MATOC

Power Generation and Repairs

- Unrestricted MATOC Services
- 350-700 MW of power generation and repairs at existing power generation facilities
- $5B estimated value
- Transfer O&M responsibilities from RDI contract
- Potential generator lease to own option

Transmission and Distribution Repairs

- SB Set-Aside Services
- Priority T&D repair projects, procure and install
- $50M estimated value

Estimated Milestones for New MATOCs

Acquisition Planning/ Market Research	Jan
Approvals	Feb-Apr
Advertise	May
Source Selection	Jun-Jul
Award	Aug-Sep

NEXT STEPS

- Ensure that you are registered in SAM.gov
- Look for existing and future sources sought announcements and future pre-solicitation notice posted to SAM.gov
- More information available at USACE website: https://www.usace.army.mil/Business-With-Us/Contracting/Contracting-in-Puerto-Rico/Indefinite-Delivery-contracts/