PANELISTS – PLEASE DIAL IN

• Using the phone for audio will help minimize lag, distortion, or other internet connectivity issues.

• Please turn off your computer’s sound.

THANK YOU!
NARUC CENTER FOR PARTNERSHIPS AND INNOVATION

INNOVATION WEBINAR SERIES
APRIL 30, 2020
A NEW ELECTRIC PARADIGM IN PUERTO RICO: THE ROLE OF DISTRIBUTION SYSTEM PLANNING
WHAT IS NARUC

• The National Association of Regulatory Utility Commissioners (NARUC) is a non-profit organization founded in 1889.

• Our Members are the state regulatory Commissioners in all 50 states & the territories. FERC & FCC Commissioners are also members. NARUC has Associate Members in over 20 other countries.

• NARUC member agencies regulate electricity, natural gas, telecommunications, and water utilities.
WHAT IS NARUC’S CENTER FOR PARTNERSHIPS AND INNOVATION?

• Grant-funded team dedicated to providing technical assistance to members.

• CPI identified emerging challenges and connects state commissions with expertise and strategies.

• CPI builds relationships, develops resources, and delivers trainings.

www.NARUC.org/CPI
WEBINAR LOGISTICS

• We’re recording the webinar. It will be posted on NARUC’s CPI webpage: https://www.naruc.org/cpi/

• Because of the large number of participants, everyone is in listen mode only.

• **Please use the question box to send us your questions** and comments any time during the webinar. You may want to direct your question to a specific panelist.

• The panelists will respond to questions typed in the chat box during moderated Q&A, following the presentation.
A NEW ELECTRIC PARADIGM IN PUERTO RICO: THE ROLE OF DISTRIBUTION SYSTEM PLANNING

MODERATOR:
CARL PECHMAN, DIRECTOR, NRRI

PANELISTS:
FERDINAND RAMOS, COMMISSIONER, PREB
SAMIR SUCCAR, DIRECTOR – DISTRIBUTED ENERGY RESOURCES, ICF
JENNIFER DECESERO, SENIOR ADVISOR, U.S. DEPARTMENT OF ENERGY
Today’s Panelists

• (1) Ferdinand Ramos, Commissioner, PREB

• (2) Samir Succar, Director, Distributed Energy Resources, ICF

• (3) Jennifer DeCesero, Senior Advisor, U.S. Department of Energy
A New Electric Paradigm in Puerto Rico:
The Role of Distribution System Planning

Ferdinand Ramos, PE
Puerto Rico Energy Bureau Commissioner
April 30, 2020
Puerto Rico Electric Sector Timeline

1893–1941
Multiple Private Power Companies

1941
Nationalization of Private Electric System

1941
Puerto Rico Electric Power Authority was created

1950–2000
PREPA built Centralized Generation

2000
Independent Power Producers

2014
Puerto Rico Energy Bureau was created
Puerto Rico Electricity Planning

- First IRP was Ordered on May 22, 2015
  - PREPA filed on July 7, 2015
  - Approval of Modified IRP on February 10, 2017
  - IRP became legally binding on March 13, 2017

- Hurricane Maria
  - Altered Resource and Demand assumptions

- IRP Revision was Ordered on March 14, 2018
  - PREPA filed on June 7, 2019
  - Pending Final Decision (expected June 2020)
PREPA’s Distribution System Overview

- 1.5 Million customers
- 31,446 Miles of Overhead Distribution Lines
  (13.2kV, 8.32kV, 4.16kV)
- 1,723 Miles of Underground Distribution Lines
- 341 Substations
- 1,150 Distribution Feeders
- Outdated and poorly maintained
- No Comprehensive Planning
Puerto Rico Distribution System Planning (NEPR-MI-2019-0011)

- **Stakeholder Workshops**
- **Working Groups**
  - Planning Coordination/Hosting Capacity and Data Acquisition/Resiliency
  - Regulation on Distribution System Planning
- **Integrated System Planning**
ENGAGING STAKEHOLDERS IN THE PLANNING PROCESS

National Association of Utility Regulatory Commissioners
A New Electric Paradigm in Puerto Rico: The Role of Distribution System Planning

Samir Succar

30 April 2019
Working Group Objectives

• Increase education and awareness
• Provide opportunity for stakeholder input
• Solicit feedback on initiative objectives
• Build shared expectations around initial utility filings
Stakeholder Process

- Three working groups, three sessions each
- Modified “Chatham House Rules”
- Remote participation and digital engagement
- Cross-sector participation (utility, NGO, trade associations, industry, local communities)
Planning Coordination

Distribution System Planning

- Forecasting
  - Load & DER Forecasts (Scenario Analysis, Non-Deterministic)
- Needs Assessment/Solution ID/Evaluation
  - Current Distribution Assessment
  - Annual Long-Term Distribution Planning
  - Interconnection Studies
- Value of DER
  - Hosting Capacity

Integrated Resource Planning

- High Level Top-Down Zonal Forecast
- Planned/Projected Retirements
- Existing Resources
- Need for New Resources
- Define Suitable Resource Mixes
- Public policy requirements and goals
- Acquire Resources
- Finalize Plans

Finalize/Implement Solutions

- Distribution Investment Roadmap

NARUC - A New Electric Paradigm in Puerto Rico: The Role of Distribution System Planning - April 30, 2020
Draft Scope: Planning Coordination WG

Phase I (near-term)
- Fact-finding, Current State
  - Current system status
  - Prior studies that provide information on the current state of the system
- Planning Baseline
  - Current planning practices and existing studies
  - Planning alignment
  - Data exchange between planning processes
  - Near term opportunities for data exchange and coordination of input assumptions across T, D and G planning
- DER Pilot Opportunities

Phase II+ (longer-term)
- Forecasting Roadmap
  - Temporal and geospatial granularity
  - Non-deterministic forecasts
  - Reflection of tariff structures, policy objectives in forecasts
- IRP Coordination
  - Longer term opportunities for increased integration across transmission, distribution and resource planning including co-optimization
- Beneficial Locations
  - Distribution capacity
  - Distribution voltage and power quality
  - Transmission capacity
  - Resource adequacy
- DER Sourcing
  - Competitive procurement of DER solutions
  - Program approaches to DER deployment
Coordination Across Proceedings
THANK YOU

Samir Succar
samir.succar@icf.com
Jennifer DeCesero

- Jennifer serves as the Director for Recovery and Resilience in the U.S. Department of Energy's Office of Electricity where she leads the Department's long-term energy sector recovery efforts in the U.S. including Puerto Rico and the U.S. Virgin Islands.
QUESTIONS?

1. Use the Question box

2. Direct your question to Panelist by name
NARUC Innovation Webinar series

Hosted on Thursdays each month from 3:00 p.m. to 4:00 p.m. ET

• **Carbon Pricing in Utility Regulation**
  • May 21, 2020 | 3:00 - 4:00 pm Eastern

• **Measuring Energy Efficiency Savings in Real-Time**
  • June 18, 2020 | 3:00 - 4:00 pm Eastern

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NARUC thanks the U.S. Department of Energy
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