

# MADRI WORKING GROUP MEETING #51 – November 27, 2018

## INTEGRATED DISTRIBUTION PLANNING

**District of Columbia Public Service Commission  
8th Floor – Commission Hearing Room  
1325 G Street NW  
Washington, DC**

**Remote Participation**

**Web Address: <https://pjm.webex.com>**

**Meeting Name: MADRI**

**Meeting number: 299 929 215**

**Meeting password: mad1127pjm**

**Teleconference call-in number: 1-866-546-3377 (US)**

**Participant passcode: 548041**

In recent years, electric utilities in PJM and elsewhere have seen a rapid increase in the deployment of small-scale, grid-connected distributed energy resources (DERs) – including energy efficiency, demand response and flexible loads, distributed generation (primarily solar photovoltaic systems), energy storage systems, and electric vehicles. There has also been an increasing interest in microgrids. Deployment of these DERs is expected to increase in coming years. In most cases, the utilities do not own or control these DERs, and in some cases they do not even have knowledge of the DER's existence, location, capabilities, and status (i.e., "visibility").

These trends are leading to new challenges for utilities in planning their infrastructure investments and managing power quality at the level of the distribution system. A few jurisdictions in the US have begun experimenting with integrated distribution planning mechanisms that seek to methodically anticipate such challenges and find least-cost solutions for addressing them.

The MADRI steering committee has decided to focus this year's meetings on the topic of integrated distribution planning (IDP), with the goal of ultimately developing a Commission Guide to inform the actions of state public utility commissions and other stakeholders. Today's meeting will focus on aspects of IDP that will need to be addressed in the Commission Guide such as forecasting load and distributed generation and assessing the technical capabilities and limitations of existing distribution system assets. We'll also examine some of the opportunities and challenges that IDP presents for utilities, consumers and DER service providers. We'll then conclude with a brief update on IEEE 1547 implementation.

## AGENDA

**9:30 – 10:00am            Networking with attendees**

**10:00 – 10:15am        Introductions**

The Honorable Betty Ann Kane, Chairman, DC Public Service Commission  
John Shenot, Regulatory Assistance Project

**10:15 – 11:30am**

**Forecasting Load and DER Deployment in IDP Planning**

Ben Sigrin, NREL

Scott Baker, PJM

How should DERs be treated in planning? Should DER's be viewed as reductions in demand or as supply-side resources that can help strengthen the distribution system and perhaps even the bulk power system? What methodologies should be used for forecasting load and DER deployment? This session will discuss these questions and will provide examples of exercises where DER forecasting is being used to support planning, with an emphasis on DER adoption forecasts (including estimates of DER capacity, number of customers with DER, etc.).

**11:30am – 12:45pm**

**Engineering Assessment of Distribution System Capabilities and Limitations**

Curt Volkmann, GridLab

Hilal Katmale, Microgrid Energy Solutions

Identifying the technical capabilities and limitations of existing distribution system assets will be a critical component of IDP planning. This assessment will help to determine where load is likely to outgrow existing capacity, where aging equipment might need replacement, and where distributed generation, demand response, microgrids or other DERs might be cost-effective. This session will explore methods for identifying the weaknesses and constraints on the distribution grid and criteria for prioritizing grid upgrades. It will also address the attributes of DERs and how to value DERs.

**12:45 – 1:30pm**

**Lunch**

**1:30 – 2:45pm**

**Opportunities and Challenges for Utilities, Consumer Advocates and DER Providers**

Bill Fields, Maryland Office of People's Counsel

Matt Knott, Oracle Utilities

Steve Steffel, Pepco Holdings

We will finish the day with a lively discussion and debate on the opportunities and challenges facing stakeholders with respect to planning for the integration of DERs into the grid. First, panelists representing each perspective will be given time to discuss the challenges and barriers they face. This will be followed by a short response by each panelist to the other's comments, and then questions from the audience.

**2:45-3:00pm**

**PJM Guidance Process for Ride-through Provisions of IEEE 1547-2018**

Lori Murphy Lee, PJM

PJM will provide an update on the guidance process for implementing IEEE 1547-2018 for smart inverters, with specific focus on ride-through provisions. PJM has continued to have discussions with stakeholders and will provide a brief overview of these meetings.

**3:00 – 3:15pm**

**Wrap-Up, Adjournment**

The Honorable Betty Ann Kane, Chairman, DC Public Service Commission  
John Shenot, Regulatory Assistance Project