

Moderated discussion: How are states beginning to engage in distribution system planning?

Ackermann, Galbraith, Harris, Parsons, Scanlan, Twitchell

Moderated by Lisa Schwartz, Berkeley Lab

**Distribution Systems and Planning Training
for Western States, May 2-3, 2018**

Topics

- ▶ Value of state engagement – Chair Jeff Ackermann (CO PUC)
- ▶ Barriers to state engagement – Maury Galbraith (WIEB)
- ▶ Less time-intensive approaches vs. full-scale DSP – Jeremy Twitchell (PNNL)
- ▶ Oversight roles – Dallas Harris (NV PUC)
- ▶ Integrating DSP with other forms of planning – Dave Parsons (HI PUC)
- ▶ Stakeholder engagement – Kathi Scanlan (WA UTC)

Distribution Planning and the Value of State Engagement – Chair Jeff Ackermann, Colorado PUC



► Historical Perspective on Utilities and Regulation

- Past: Utility as Owner/Operator of

Generation >> Transmission >> Distribution >> Meter

- Present: Steady, Ongoing Disruption

- Generation: IPP's; Divestiture
- Transmission: Regionalization; Competition
- Meters: From “dumb” to “smart;” behind-the-meter services

Evolving Distribution System Requires Evolution in State Engagement

- ▶ **Distribution:**
 - DER's
 - Emerging alternatives to a “more and bigger” approach to distribution planning
 - Storage
 - Targeted DER,, DSM Rate
 - ??
- ▶ **Before rate cases & other after-the-fact regulatory oversight:**
 - Reframe utility investment decision making re: Distribution System
- ▶ **On the Horizon...**
 - Regulatory Engagement Criteria
 - ◆ When to Engage
 - ◆ How to Compare Options
 - ◆ Use of Competition

Barriers to States Engaging in DSP – Maury Galbraith, WIEB



Procedural Barriers:

- Culture of retrospective decision-making.
 - The current Commission cannot bind future Commissions.
 - The current Commission cannot pre-approve utility decisions.
- Reluctance to send messages to future Commissions.
 - The current Commission can send messages to future Commissions.
 - “Acknowledgement” of a utility DSP is a message in a bottle. It is a statement of what is known near the time of a utility decision. Future Commissions can read the message to judge the prudence of utility decisions.

Resource Barriers:

- Planning can be time consuming for the Commission and the utility.
- DSP requires Commission Staff with different knowledge, skills, and abilities.
- Scope creep can affect time, costs, and resources.
 - Risk that DSP evolves to be as complex as integrated resource planning.
 - DSP becomes a continuous activity. Finish the current plan and begin working on the next plan.

Barriers to States Engaging in DSP – Maury Galbraith, WIEB

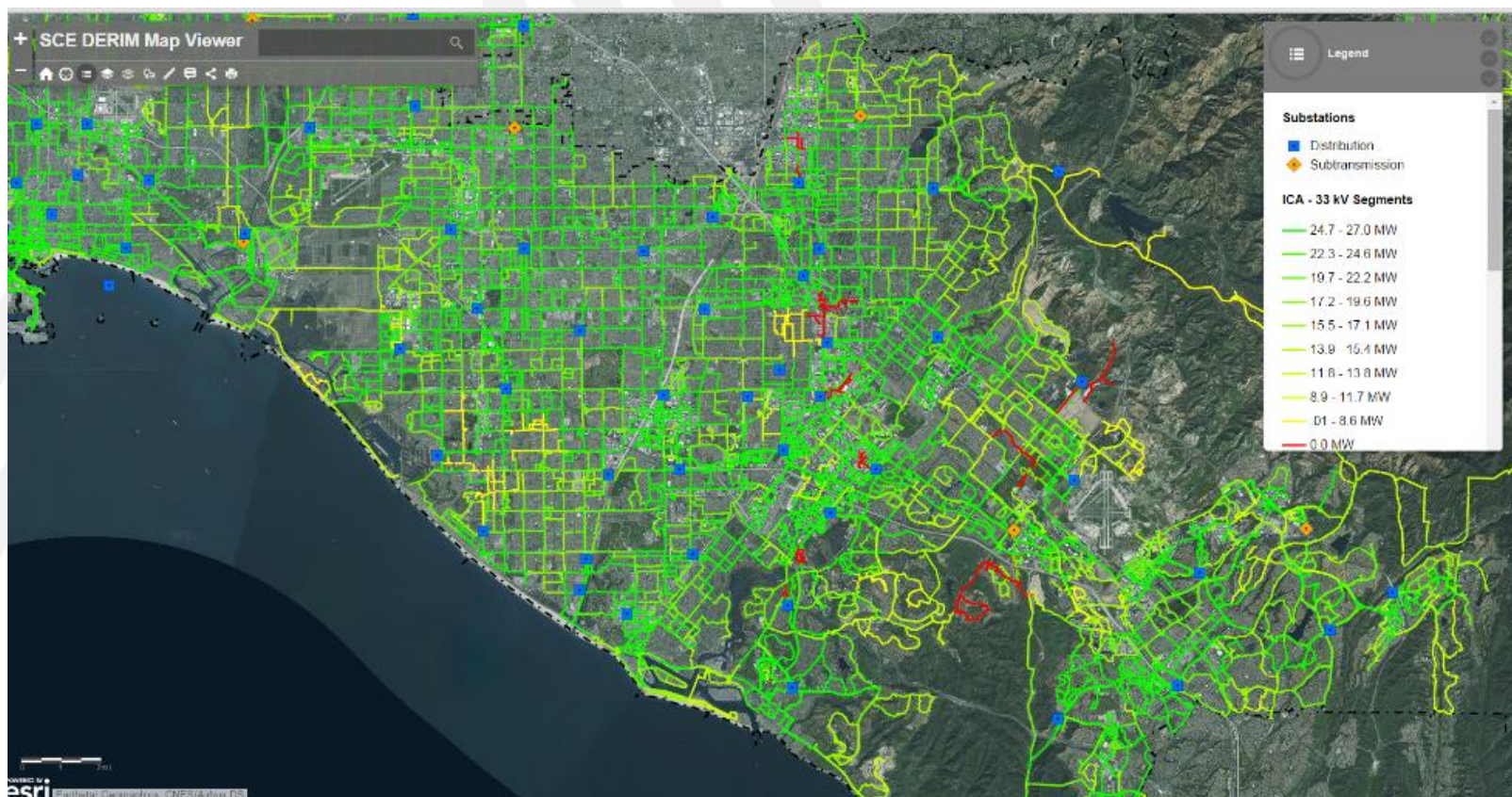
Analytical Barriers:

- Planning objectives are unclear.
 - Minimization of distribution system cost?
 - Maximization of DER hosting capacity?
 - Improved reliability or safety?
 - Best combination of all of these objectives?
- Feeders are disparate, and there are so many of them.
 - Utility distribution systems are comprised of many feeders.
 - Not all feeders are alike.
 - What are the criteria for selecting specific feeders for analysis?
- Difficult to compare non-wires alternatives to traditional distribution system solutions.
 - What are appropriate asset lives for these alternatives?
 - What is the appropriate planning period for DSP?
- Access to data and information is limited.
- Innovation results in technology evolving faster than planning.

Less Time-Intensive Approaches vs. Full-Scale DSP – Jeremy Twitchell, PNNL

DSP: The Advanced Version

SCE Distribution Grid Heat Map



Southern California Edison

DSP: The Incremental Version

- ▶ A needs-based approach
 - ❑ Rather than going circuit by circuit, focus on “hot spots”
 - ❑ Limited scope allows for learning by doing
 - ❑ Applies traditional planning principles to distribution investment decisions

- ▶ Build on existing filings: What useful information is the utility providing?
 - ❑ Reliability reports
 - ❑ Distributed generation reports
 - ❑ Load and DER forecasts

- ▶ Identify data gaps
 - ❑ How will the utility identify locational needs and values?
 - ❑ How deep does the utility’s SCADA data go? What is the resolution?
 - ❑ If data is unavailable/insufficient, what is the utility’s plan to acquire it?

State Commission Oversight Roles – Dallas Harris, Nevada PUC

- ▶ **Determining Planning Requirements**
 - ❑ Multi-stakeholder (iterative) process
 - ❑ Substance
 - ❑ Procedure
 - ❑ **Flexibility**
- ▶ **Transparency in the Process**
 - ❑ Keep burden of proof on utility
 - ❑ Require documentation
 - ❑ Public is the default
- ▶ **Proper Oversight**
 - ❑ File report with the Commission
 - ❑ Implement multi-stakeholder solution
 - ❑ Follow up

Integrating DSP With Other Forms of Planning – Dave Parsons, Hawaii PUC

Integrated Grid Planning in Hawaii

- ▶ In early stages of attempting to integrate planning for needs at all levels of power system: bulk power generation, transmission, and distribution, including customer-sited resources
- ▶ Goal: identify and procure an optimal mix of distributed and grid scale resources to increase customer value and reduce risk
 - Grid solutions will be identified that address multiple resource, transmission, and distribution needs collectively
 - Market-based procurements incorporated into planning process
- ▶ Active engagement with customers, stakeholders, independent technical advisors, and regulators at key junctures is essential to the integrated planning effort
- ▶ 18-month planning process intended to result in a 5 year integrated plan



Stakeholder Council
Public Engagement

18 months

Forecast
& Other Planning
Inputs

Resource Needs
Planning

Resources &
Grid Services

2045 Long-Term Planning
Resource and T&D Needs & Long-term Considerations

5-year Resource Solution Sourcing
Resource Procurement (Grid Scale, Aggregated
DER/DR)
DER and DR Programs
Tariffs
Utility Resource Development

PUC & CA
Sourcing Review

Solution/Bid
Evaluation &
5yr IGP Plan

Grid Resources
Grid Services
NWA

PUC & CA
Needs Review

T&D
Needs
(Resource)

PUC & CA
Needs Review

T&D Solution
Sourcing

Targeted DER Programs
NWA Competitive Bid
Grid Modernization
Traditional Grid Solution
estimate

PUC & CA
Sourcing Review

T&D Needs Planning
(Non-Resource)

Forecast WG

Technical Advisory Panel

Market WGs

Regulatory Approval: ←
Seek PUC approval of IGP 5 yr plan & related applications

Stakeholder Engagement: Washington's Approach – Kathi Scanlan, WUTC



Goals: Increase touchpoints; increase buy-in

Improve transparency of distribution system planning (DSP)

DSP is under the umbrella of Integrated Resource Planning (IRP)
Rulemaking:

- Informal Comment Periods—concept paper/framework, draft rules
- Draft Rule WAC 480-100-238 (comment period April - May 2018)
- Notices—series of discussion questions for developing framework or rules
- Public Workshops—utility presentations; Commissioner and staff questions
- Flexible approach to advisory groups/committees—in the process of determining whether they should be open or closed to the public, required or optional

“A utility may convene separate advisory groups for integrated resource planning and distribution system planning, where the distribution planning advisory group is composed of a subset of members of the integrated resource planning advisory group and other interested parties who have demonstrated subject matter expertise in distribution system planning...”

(Draft Rule, Apr.2018)