



Distribution Systems and Planning Training for Midwest Public Utility Commissions

Jan. 16-17, 2018
Minnesota Public Utilities Commission – Large Hearing Room
121 7th Place East, Suite 350, St. Paul, MN 55101

AGENDA

Jan. 16, 2018

| TIME | TOPIC |
|---------------------|--|
| 9:00 – 9:15 am | Welcome and opening remarks – Chair Nancy Lange (Minnesota PUC), Kerry Worthington (NARUC), Tanya Paslawski (OMS), Lisa Schwartz (Berkeley Lab) |
| 9:15 – 10:45 am | Distribution systems 101 – Kevin Schneider (PNNL) and Emma Stewart (LLNL) |
| 10:45 – 11:00 am | Break |
| 11:00 am – 12:30 pm | Utility distribution planning 101 – Mike Coddington (NREL) and Kevin Schneider (PNNL) |
| 12:30 – 1:15 pm | Lunch and presentation U.S. DOE's Next Generation Distribution System Platform (DSPx) – Joe Paladino, DOE <ul style="list-style-type: none">• Distribution grid evolution• Integrated planning considerations• Architectural considerations• Timing and pace considerations, with examples |
| 1:15 – 1:30 pm | Break |
| 1:30 – 3:00 pm | Distributed energy resources – Mike Coddington (NREL), Emma Stewart (LLNL), Rebecca O'Neil (PNNL) |



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| 3:00 – 3:15 pm | Break |

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| 3:15 – 4:15 pm | Distribution system controls and automation – Barry Mather (NREL) and Kevin Schneider (PNNL) |
| 4:15 – 5:00 pm | Metrics and valuation frameworks for distribution system planning and proposed investments – Michael Kintner-Meyer (PNNL) |

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| TIME | TOPIC |
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| 8:30 – 9:15 am | Reliability metrics and reliability value-based planning – Joe Eto (LBNL) |
| 9:15 – 9:45 am | PUC distribution planning practices – Lisa Schwartz (LBNL) |
| 9:45 – 10:00 am | Break |
| 10:00 – 11:00 am | Regulation of modernizing power distributors: Lessons from research on performance-based regulation – Mark Lowry, Pacific Economics Group |
| 11:00 am – 12:00 pm | Forecasting load on the distribution and transmission system with distributed energy resources – Andrew Mills (LBNL) |
| 12:00 – 12:45 pm | Lunch |
| 12:45 – 1:45 pm | Emerging distribution planning analyses – Debra Lew, GE Energy Consulting <ul style="list-style-type: none"> • Multiple scenario forecasts • Hosting capacity analysis • Locational net benefits analysis |
| 1:45 – 2:45 pm | Walk-through of long-term utility distribution plans: Traditional plans, grid modernization plans, and plans for high levels of distributed energy resources - Lavelle Freeman and Debra Lew, GE Energy Consulting |
| 2:45 – 3:00 pm | Break |
| 3:00 – 4:00 pm | Walk-through of long-term utility distribution plans (<i>continued</i>) |
| 4:00 – 5:00 pm | Impacts of distributed energy resources on transmission systems: The distribution/transmission interface – Randy Berry and John Miller, Power Systems Consultants, Inc. |
