

Smart Grid Subcommittee Report

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Subcommittee Chair

Electricity Advisory Committee
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DER Valuation & Integration

- Following up on March Panel with:
 - Transactive Energy Panel
 - May Subcommittee Call: Topics for Potential DER Work Product & Update on DOE Work
 - June Subcommittee Call with Utility Distribution Planners
 - Potential DER Work Product: Preliminary list of topics that may be considered:
 - DOE Support for Common Understanding of Terminology and Valuation Frameworks:
 - DER, Products that DER can provide, Tradeoffs between the provision of real power, reactive power & reserves
 - Administrative / Planning (LMP + D) or Market (DLMP)
 - R&D on tools for and evaluation of variability in time-, location-, & product-specific marginal costs & Value of DER
 - R&D on tools for and analyses of additional factors impacting DER valuations, e.g. impacts of voltage constraints, marginal distribution losses, equipment life impacts, economies of scale, diminishing locational value with additional investment, real options value, contributions reliability & resilience, environmental impacts, & risk allocation
 - R&D on grid control architecture for high DER environments, including:
 - Continuation of PNNL architecture work
 - Architecture models for systems in which security constrained dispatch of DER becomes generally impractical, including consideration of DLMP markets, proximal messaging, & semi-autonomous grid edge controls
 - Integration of DER into distribution planning, forecasting, and operations
 - Developing an understanding of structural & regulatory barriers & opportunities & of stakeholder concerns that impact moving DER technologies into the market
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Plan for the Remainder of 2016

- Welcome any new members of the Subcommittee, identify their interests
- Continue examination of DER Valuation and Integration Issues, including:
 - Gain a more detailed understanding of on-going DOE work
 - Consider development of a work product and recommendations
- Review DOE responses to prior EAC recommendations
- Kick-off consideration of the impacts of the Internet of Things on Power Systems
 - Consider whether it is feasible to develop a panel for Fall EAC meeting

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