

APPLYING ADVANCED GRID TECHNOLOGIES FOR IMPROVING RESILIENCY OF CRITICAL LOADS

THURSDAY, SESSION 1 TRACK 3

SESSION CHAIR

Charlie Vartanian, Pacific Northwest National Laboratory

PRESENTERS

- Clay Koplín, Cordova Electric Cooperative
- Dan Borneo and Waylon Clark, Sandia National Laboratory
- Lauren Khair, National Rural Electric Cooperative Association
- Frank Tuffner and Jeremy Twitchell, Pacific Northwest National Laboratory

SESSION ABSTRACT

The Department of Energy Office of Electricity Energy Storage (DOE OE ES) Program's joint R&D collaboration with the Cordova Electric Cooperative (CEC) has delivered several advanced grid technologies that are providing benefits today to Cordova's electricity users. The advanced technologies that have leveraged this joint R&D in-service today include a 1MW BESS, and enhanced monitoring (e.g. PMU's) to help better understand the operational impacts of the added BESS resource to CEC's overall grid infrastructure. There are several planned and proposed joint projects that will build on these deployed advanced grid infrastructure to continue optimizing resources (e.g. capture and use otherwise 'spill' hydro energy using electrical and thermal storage) PLUS add increased resiliency of a critical community load, the Cordova Community Medical Center. This special session will draw from CEC's and their advanced-tech project partners' experience to explore the general question of the role of the utility in addressing resiliency needs of critical loads. Cordova will outline the deliberative steps their utility has taken to improve reliability, in general, and plans to apply some of these enhanced shared utility capital assets to meet emergency needs of their local hospital under emergency conditions. Sandia National Labs ES Project team will discuss how their project commissioning support provided to CEC's BESS and other early deployers of BESS's is supportive of making sure critical resources used to meet load resiliency are available and reliable. PNNL will outline planned use of utility's system wide information and tools (microPMU's, network models, and load flow simulation) to assure deliverability of power and energy by the utility to specific critical load under emergency system conditions. NRECA will provide an overview of several member projects planned or deployed that are intended specifically for reliability and/or resiliency



improvement. And in conclusion, several core regulatory policy points will be highlighted that support use of a utility's shared assets (e.g. rate based for investor owned utilities) for support of a single critical loads/meter under certain emergency conditions.