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A Roadmap to the Decarbonization of Electricity with a Microgrid Case Study

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Abstract

The broader trend toward low-carbon sources of electric power necessitates assessment of the best pathway to a reliable, decarbonized grid. Closing the gap to a fully decarbonized and dependable electrical system may be difficult and will require a variety of systems with diverse sources of power. Using the Southwest Research Institute (SwRI) campus as a behind-the-meter microgrid, a team at SwRI analyzed the possibility of decarbonizing SwRI's electric load using renewables, energy storage, and decarbonized generators. The team made comparisons of these systems and developed a techno-economic analysis that highlights the best path to achieving net-zero emissions for the SwRI campus electric grid. This pathway provides insight into possible solutions for decarbonizing electric grids across the globe.

Note: This document will be opened to the participants on IERE website before the Workshop and opened to the public afterward.