

Session Title: Grid Integration of Renewables

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Many countries—reflecting very different geographies, markets, and power systems—are successfully managing high levels of variable renewable energy on the electric grid, including that from wind and solar energy. The presentation will highlight best practices that energy ministers and other stakeholders can pursue to ensure that electricity markets and power systems can effectively coevolve with increasing penetrations of variable renewable energy. Approaches include policies, market designs, and system operations to achieve the system reliability and flexibility needed to successfully integrate renewables. Five strategic areas emerge: lead public engagement, particularly for new transmission; coordinate and integrate planning; develop rules for market evolution that enable system flexibility; expand access to diverse resources and geographic footprint of operations; and improve system operations. The talk will also cover state of the art technology and solutions development that are enabling higher penetrations of renewables while simultaneously realizing affordable, reliable and resilient power systems.