

Session Title: Solutions to Integrate High Shares of Variable Renewable Energy

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At the request of the Japanese G20 presidency, IRENA has assessed the most up-to-date information on a select range of innovative solutions to integrate VRE in power systems.

The strong business case for VRE technologies such as wind and solar PV has positioned these technologies at the core of the transition. Innovations being trialled in front-running countries show that power systems can be operated with very high shares of VRE in a reliable and economical way. However, a large gap remains between front runners and countries at early stages of VRE integration.

To bridge the gap, IRENA has developed a toolbox of 30 innovations and 12 solutions that can be deployed to integrate high shares of VRE in an economic way. It incorporates new technologies, market design and regulations, operational practices and business model innovations.

The discussion will highlight insights from the experience of IRENA's 160 member countries how to achieve a successful power system transformation through the deployment of this toolbox.