

The Future of the Grid: how to build and operate reliable power systems to achieve a clean energy transition

13th-14th September 2023
Johannesburg, South Africa



Australian High Commission
South Africa



A two-day international dialogue, learning and knowledge exchange on the effective operation of high variable renewable energy power systems

Facilitated by the University of Cape Town, in partnership with the Presidential Climate Commission; and supported by the Australian High Commission in South Africa

CONTEXT

Globally, the transition from traditional generators to high levels of variable renewable and distributed energy resources is already challenging traditional models of system operations. Yet achieving global net zero greenhouse gas emissions and universal energy access goals will crucially depend on reliable, stable, and decarbonised electricity systems. The reorganisation of electricity systems to integrate high levels of variable renewable energy (VRE) and the associated investment in grid infrastructure are critical interventions in meeting energy security, climate and development goals, and South Africa's just transition aspirations - but are not without their challenges.

This knowledge exchange will synthesise learnings and insights from international system operators (SO) and grid experts in the operation of higher VRE power systems, providing real-world examples of challenges, lessons learned, and current and future interventions to enable higher levels of VRE in different contexts.

THREE INTER-RELATED EVENTS:

1. Online, public training webinar introducing power system basics for a non-technical audience;
2. Hybrid public event and knowledge exchange to synthesise lessons and experiences from system operators and global experts with moving to higher levels of VRE and critical areas for action in South Africa
3. Deep dive technical workshop for invited experts

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