

## SOUTH AFRICA AND THE 21ST CENTURY POWER PARTNERSHIP

Paving the Way to a Clean, Reliable and Resilient Power System



### Mission & Objectives

Power systems are a foundational element of inclusive economic growth and social development. Integrating these objectives into viable power system policy frameworks is the central challenge of policymakers in the 21st century. The 21st Century Power Partnership (21CPP) serves as an open, collaborative platform for sharing policy and regulatory best practices in the service of power system transformation.

Established in 2012, the 21CPP South Africa Programme is a global initiative that connects South African stakeholders with an international community of expertise. The overall goal of this program is to support South Africa's power system transformation by accelerating the transition to a reliable, financially robust, and low-carbon power system. 21CPP activities focus on achieving positive outcomes for all participants, especially addressing critical questions and challenges facing system planners, regulators, and operators. In support of this goal, 21CPP taps into deep networks of expertise among leading industry practitioners.

The 21CPP South Africa' Programme's primary objectives are to:

- **Accelerate "next generation" power system planning** by supporting South Africa's Integrated Resource Plan (IRP),

### About the 21st Century Power Partnership

The 21CPP is a multilateral effort of the Clean Energy Ministerial (CEM) that provides targeted technical assistance in the following areas:

- Large-scale deployment and integration of renewable energy into power systems
- Deep energy efficiency in the industrial, commercial, and residential sectors
- Smarter grids to enable clean, reliable, and efficient power systems

21CPP activities span a range of activities, such as on-demand expert consultation, peer-to-peer workshops and exchanges, high-level roundtable events, and collaborative thought leadership.

identifying policy approaches to distributed generation and grid codes for large-scale generators, and undertaking a comparison of power planning system tools.

- **Mitigate near-term power supply shortages** through operational and policy support for grid integration of distributed and bulk power renewable energy, in combination with energy efficiency and smart grid deployment measures.
- **Assist the Government of South Africa to build a workforce of power system experts** through dedicated workshops and trainings, staff exchanges, consultations and peer engagements.

## 2014-2015 Program Highlights

- **Supported NERSA and Eskom Action on Distributed Renewable Generation**

Facilitated multi-country expert review of NERSA's small-scale renewable embedded generation (SSREG) regulatory framework discussion paper; co-convened global stakeholder forum on distributed photovoltaics (PV) and enabling technology; ad hoc regulatory consultations; curated library of regulation resources.

- **Reviewed Eskom's Planning Capabilities**

Conducted detailed audit of Eskom's Medium-term Outlook; Assessed viability of alternative planning tools.

- **Facilitated Visit by Government of Mexico Officials**

Coordinated focused dialogues between officials from Mexico's Ministry of Energy, Energy Regulator and System Operator with Eskom, NERSA, National Treasury and South Africa



*Thabang Audat, South Africa DOE, and Shirley Salvoldi, Eskom, during a 21CPP-hosted stakeholder discussion on the financial impacts of DG.*

## 2015-2016 Planned Activities

- **Support South Africa's Integrated Resource Plan (IRP)**

Coordinate multilateral audit of renewable energy representation in South Africa DOE's IRP modelling exercise.

Partners: Eskom; South Africa Department of Energy (SADOE)

- **Assist Formulation of Solar Policy Roadmap**

Provide reviews and advisory support for solar roadmap and supporting analysis.

Partners: SADOE

- **Technical Support for SSREG Program**

Facilitate expert consultations on distributed generation (DG) tariff design, technical integration of DG in low-voltage networks, and cost-benefit analysis pilots of financial and operational impacts.

Partners: SADOE, Eskom, NERSA, SALGA

- **Trainings for Municipal Asset Valuation**

Support robust asset valuation methodologies and practices for municipal distributor cost of supply studies.

Partners: NERSA, SALGA

- **Build Workforce Capacity in Energy Modelling**

Support fellowships, trainings and expert consultations on power sector planning and operations modelling techniques.

Partners: Eskom; SADOE, NERSA

- **Explore Best Practices in Parastatal Utility Operation and Transformation**

International dialogues and written report on institutional frameworks for parastatal utilities operation and transformation

Partners: United Nations University; National Treasury

- **North American Study Tours**

Facilitate North American study tours focused on business, regulatory, and market models for independent transmission infrastructure investment and/or ownership and renewable energy integration.

Partners: SADOE, Eskom, NERSA

- **Host Global Power Sector Events**

Convene workshop on "Electric Utility Business and Investment Models of the Future"; provide advisory support for South Africa International Renewable Energy Conference (SAIREC).

Partners: South African National Energy Development Institute