



The 21st Century Power Partnership is a multilateral effort of the Clean Energy Ministerial and serves as a platform for public-private collaboration to advance integrated policy, regulatory, financial, and technical solutions for the large-scale deployment of renewable energy in combination with deep energy efficiency and smart grid solutions.

NEWS & EVENTS

South Africa Program Tackles the Next Generation of Power Sector Planning Issues

In **October 2015**, the 21st Century Power Partnership (21CPP) Executive Director Doug Arent participated in the South Africa International Renewable Energy Conference (SAIREC), hosting an official SAIREC Side Event titled 'Roadmaps for Power System Transformation: Key Enabling Factors for Variable Renewable Energy Deployment.' The event brought together stakeholders from around the world to discuss key components for creating an enabling environment for variable renewable energy investment.

In **March 2016**, 21CPP hosted two staff from Eskom's Electricity Planning and Market Development department at the National Renewable Energy Laboratory (NREL) to perform a detailed technical review of Eskom's Integrated Resource Planning model. The review provided detailed suggestions for model and process enhancement.

In **April 2016**, 21CPP organized a public forum in Johannesburg titled 'Planning for 21st Century Power Systems' to discuss international experiences and lessons in the next generation of power system planning. The event was co-hosted by the South African Department of Energy, the South African National Energy Development Institute, Eskom, and the Council for Scientific and Industrial Research.

Global Report Released: Status Report on Power System Transformation

This report provides a collection of empirical examples of the types of power system transformation innovations that are emerging around the world. This survey provides real-world examples—and inspiration—to enable decision makers to take transformative action. Find this report and other 21CPP publications at 21stcenturypower.org/publications.cfm

Mexico Renewable Energy Integration Study for Baja California Sur Underway

In collaboration with Mexico's National Energy Control Center (CENACE), 21CPP is conducting a study to evaluate various scenarios for the transformation of the Baja California Sur (BCS) power system. This study will have a technical review committee formed by CENACE, NREL, Mexico's Ministry of Energy, the regulatory commission, the state-owned utility, and the renewable energy power producers in BCS.

21CPP Mexico Presents Distributed Generation and Smart Grid Public Policy Recommendations

In collaboration with Mexico's Ministry of Energy, 21CPP recently presented a series of recommendations to various public and private institutions on design of distributed generation and smart grid policies to meet Mexico's clean energy goals. 21CPP continues to assist the government of Mexico with analysis of the various recommendations.

21CPP Mexico to Work with Mexico's Consultative Council for Energy Transition

The 21CPP Mexico program was invited to collaborate and will work closely with the four working groups of the new Mexico Consultative Council for Energy Transition (CCET). On April 7, the CCET was designated as the permanent advisory group to the Ministry of Energy, advising on the necessary measures to comply with the country's clean energy and energy efficiency goals.

Clean Restructuring Global Report Scheduled for Summer 2016 Release

Last year, the *Power Systems of the Future* 21CPP report laid out a framework for decision-making for power system transformation. One identified pathway, Clean Restructuring, will be explored in an upcoming report this summer. The 'Clean Restructuring' pathway represents an update to previous power system restructuring, improving long-standing objectives like reduced electric rates and a diverse generation portfolio, but also including novel elements designed to incorporate clean energy technologies and reduce environmental impact. Clean restructuring also presents an opportunity to create forward-looking wholesale market frameworks that might eventually incorporate dynamic and participatory distribution systems. The report will summarize current and emerging market design opportunities that can help to support increasing levels of variable resource renewable electricity generation. Case studies included in the report will also highlight the specific experience of a few key countries that have undergone market reform that could provide valuable lessons learned.

Library of Distributed Generation Regulation and Policy Resources Now Available

This online curated library of resources samples the best available written resources in the space of distributed generation regulation and policy—from academic literature to toolkits to case study reports. The library is available at 21stcenturypower.org/dglibrary.cfm.

India National Renewable Energy Integration Study Underway

21CPP is conducting a national-level evaluation of the impacts to grid operations of India's 175 GW renewable energy target and cross-state opportunities to improve renewable energy integration. The study complements a larger initiative funded by the U.S. Agency for International Development (USAID) that is enhancing efforts to manage large-scale renewable energy grid integration, including regional integration studies and implementation pilots. The study is conducted in partnership with several Indian organizations, including the Power System Operation Corporation, the Power Grid Corporation of India, Central Electricity Authority, and state load dispatch centers and transmission utilities.

Wheeling and Banking for Renewable Energy Deployment: International Experiences from the United States, Mexico, and India

This paper defines the principles of wheeling (i.e., transmission) tariffs and renewable energy banking provisions and their role in renewable energy deployment in countries with plans for large-scale renewable energy. The report reviews experiences to date in the United States, Mexico, and India and discusses key policy and regulatory considerations for devising more effective wheeling and/or banking provisions for countries with ambitious deployment targets. The paper addresses the challenges of competing needs of stakeholders, especially those of renewable energy generators, distribution utilities, and transmission network owners and operators. The report aims to benefit policymakers and regulators as well as key renewable energy stakeholders. The paper was sponsored by 21CPP and the Clean Energy Solutions Center as part of the Clean Energy Regulators Initiative and was authored by NREL staff and regulators from India and Mexico. Read the paper at nrel.gov/docs/fy16osti/65660.pdf.

Power System Challenge Outputs to be Unveiled at CEM7

Key outputs of the Power System Challenge (PSC) campaign will be unveiled at CEM7 in San Francisco. The PSC was endorsed by 14 countries at CEM6 last year and aims to establish a shared vision for power system transformation. A side event focused on the Power System Challenge will take place on May 31.

CONTACT US

We ask all Power Partnership partners for suggestions on priority areas for Power Partnership research, peer-to-peer consultation, and events. Contact us at 21stCenturyPower@nrel.gov or visit us online at www.21stCenturyPower.org

INSTITUTIONAL PARTNERS AND COLLABORATORS

The National Renewable Energy Laboratory (NREL) and its affiliated Joint Institute for Strategic Energy Analysis (JISEA) serve as the inaugural opening agent of the Power Partnership. Collaborators include:

Clean Energy Ministerial (CEM)
cleanenergyministerial.org

Regulatory Assistance Project (RAP)
raponline.org

International Smart Grid Action Network (ISGAN)
iea-isgan.org

Global Green Growth Institute (3GI)
3gi.org

Clean Energy Solutions Center
cleanenergysolutions.org

Leonardo Energy
leonardo-energy.org