



Newsletter

Issue 7, May 2017

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

China Officially Joins the Power Partnership

In **December 2016**, China became the newest member country of the 21st Century Power Partnership (21CPP). China is on a pathway to significantly transform its massive power sector. China will also play host to the 8th Clean Energy Ministerial (CEM8) meeting in Beijing in June 2017.

South Africa Program Continues to Accelerate Next-Generation Power System Planning

In **September 2016**, the 21CPP hosted two staff from Eskom's Electricity Planning and Market Development department as 21CPP Fellows at the National Renewable Energy Laboratory (NREL). The Fellows implemented changes to the integrated resource planning (IRP) model identified during a technical audit of South Africa's RIP earlier in the year.

In **February 2017**, 21CPP and Eskom launched the joint South African Grid Integration Study (SAGIS). Phase I of this grid study began with an overhaul of Eskom's long- and short-term planning capabilities by Eskom and NREL experts. These improved modeling capabilities have provided the foundation for a detailed analysis of South Africa's grid and its ability to reliably and cost-effectively incorporate high penetrations of variable renewable energy.

In **April 2017**, 21CPP hosted two Fellows from the Council for Scientific and Industrial Research (CSIR) at NREL. Fellows used the International Jobs and Economic Development (I-JEDI) tool to investigate the potential economic impacts of implementing the IRP in South Africa. With the expertise gained from this fellowship, 21CPP Fellows will help further adapt the I-JEDI tool for South African applications and support broader training and dissemination for other South African stakeholders.

The 21CPP South Africa program is continuing its technical partnership with Eskom to complete a comprehensive grid study. The study will analyze the potential for the South African power system to reliably and cost-effectively integrate high penetrations of renewable energy, both today and under various future expansion scenarios. For more information, contact tim.reber@nrel.gov.

India Grid Integration Study Explores How India's Power System Could Operate with Visionary Targets for Solar and Wind

A recent focus of the 21CPP India program has been on providing power system modeling support and training in tools that address critical needs in India, as identified by India's Power System Operation Corporation. The Government of India has created a visionary target of 175 gigawatts (GW) of installed renewable energy capacity by 2022, including 60 GW of wind and 100 GW of solar, up from 29 GW wind and 9 GW solar at the beginning of 2017. Using a national model that runs quickly, the India modeling team has spotted major trends in operations from a national perspective, such as major energy flows across the country and roles for states not rich in renewable energy to facilitate balancing. The full grid integration report will be released in Fall 2017.

Unleashing Smart Grids in Mexico Event Participants Come Together to Envision a Smarter Grid

In **August 2016**, 21CPP collaborated with the International Smart Grid Action Network (ISGAN) to host an event series focused on Mexico's path towards smart grids and grid modernization. The interactive workshop was the first meeting of its kind in which the key Mexican stakeholders tasked with managing the transition of the power sector came together for an in-depth dialogue with international peers with valuable smart grid development experience. The second event was a public conference that included stakeholders from the private sector, public sector, and academia to share their ideas for Mexico and smart grid deployment experiences through panel discussions and a few brief presentations.

Global Report Released: Policies for Enabling Corporate Sourcing of Renewable Energy

This paper explores the policy and regulatory enabling environment for corporate sourcing of renewables. The paper finds that policy certainty is essential to creating vibrant markets for renewable energy. While policymakers may need to adjust policy mechanisms over time as markets go through different stages of maturity, they can also consider the economic decisions that end-users make in evaluating projects. Policy interaction is also important to consider because buyers seek assurances that their investments in renewables have impact and wish to make clear claims about their renewable energy purchases. Find this report and other 21CPP publications at 21stcenturypower.org/publications.cfm.

Power Systems of the Future: Next-Generation Performance-Based Regulation Report Scheduled for Summer 2017 Release

In 2015, the *Power Systems of the Future* 21CPP report laid out a framework for decision-making for power system transformation. In 2016, a second report explored one identified pathway, Clean Restructuring, in more detail. This summer, a third report will explore another identified pathway: next-generation performance-based regulation. In this pathway, vertically integrated utilities remain in a recognizable form but evolve to prioritize delivery of value instead of minimizing costs.

Power System Transformation Status Report: 2017 Update Coming Soon

Power system transformation is a complex, active process that is taking place at different rates and in different forms around the world. This transformation has multiple drivers, including technological advances, policy goals, and social change, and multiple enablers, especially policy, financial, and business model innovation. A 2015 status report brought the power system transformation picture into sharper focus, bolstering the evidence base for power system transformation by providing a collection of empirical examples of the types of innovations that are emerging around the world. The 2017 update will revisit the status of power system transformation around the world.

Public-Private Leadership Forum Activities Continue to Span Power System Landscape

21CPP's Public-Private Leadership Forum (PPLF) catalyzes private sector engagement in transforming global power systems. The PPLF convenes stakeholders from across the power sector, spanning electricity supply, delivery, and end-use, and plays a key role in guiding the strategic direction of the Power Partnership. To get involved, contact 21stcenturypower@nrel.gov.

INSTITUTIONAL PARTNERS AND COLLABORATORS

As the operating agent, the National Renewable Energy Laboratory (NREL) and its institutional affiliate, the Joint Institute for Strategic Energy Analysis (JISEA), lead 21CPP and serve as the liaison to the CEM Secretariat.

Clean Energy Ministerial (CEM)
cleanenergym ministerial.org

International Energy Agency
iea.org

Regulatory Assistance Project (RAP)
raponline.org

Clean Energy Solutions Center
cleanenergysolutions.org

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

Leonardo Energy
leonardo-energy.org