Attachment 2 / Clarification 2 for RFP/2020/005

Study Tour on the Planning and Operation of Grids with High Shares of Variable Renewable Energy

Agenda

Organisers: International Renewable Energy Agency (IRENA), State Grid Corporation of China (SGCC)
Date: 17 - 21 September 2018
Venue: Beijing, ZhangBei County, Tianjing - China

Day 1 — Beijing

09:00 - 12:00 **Visit National Power Dispatching & Control Center of SGCC**

Welcome remarks by IRENA and SGCC

14:00 - 17:00 **Visit the Power Transmission test base**

Highlights:

- Demonstration of the utilization of Ultra-High Voltage (UHV) to transmit RE power from large-scale renewable energy plants to load center to meet the demand in South-East China.

Day 2 — Beijing

09:00 - 12:00 **Visit to SGCC Simulation Center, SGCC Numerical Weather Prediction Center, and SGCC Metrology Center**

Highlights:

- Innovation technology to facilitate renewable energy integration into grid
- Bulk electrical system simulation and stability analysis
- Advanced electrical weather forecast and renewable power prediction
- Smart meters for measurement and monitoring

14:00 - 17:00 **Technical exchanges with CEPRI[1] (China Electric Power Research Institute)**

Highlights:

- Introduction to China's experience in improving system flexibility
- Experience and good practice for renewable energy development;
- Exchanges on operation control, dispatch, power prediction, etc.

[1] CEPRI is a comprehensive and multi-disciplinary research institute affiliated to SGCC. CEPRI leads innovation and excellence in electric power. It is devoted to R & D, technical service and consulting, testing, inspection, and technical standards, etc.

Day 3 — Zhangbei County, Zhangjiakou city

08:00 - 10:30 **Trip to Zhangbei**

10:30 - 16:30 **Visits to National Wind/PV/Energy Storage and Transmission Joint Demonstration Project and to wind power plant**

Highlights:

- The project transform the wind and solar energy, which is difficult to predict, control and dispatch, into high-quality and reliable green power, and integrate into grid, including smart substations, intelligent coordination control, high-precision RE forecasting, energy storage and other key technologies

16:30 - 19:00 **Return Trip to Beijing**

Day 4 — Tianjing

08:00 - 10:00 **Trip to Tianjing**

10:00 - 16:00 **Visit rooftops and smart grid demonstration project in Sino-Singapore Tianjin Eco-city**

Highlight:

- Integration of wind power, photovoltaic power and energy storage into micro-grid
- Auto-distribution, on-line monitoring, intelligent scheduling and intelligent substations, improves power quality and reliability of power supply
- Energy efficiency improvement and demand response

16:00 - 18:00 **Return Trip to Beijing**

Day 5 — Beijing

Free time