



# Advanced Power Plant Flexibility (APPF)

Campaign associated with Multilateral Solar and Wind Working Group (MSWWG) and 21st Century Power Partnership (21CPP)

## Goals

The APPF Campaign seeks to build strong momentum and commitment from governments and industry to implement solutions that make power generation more flexible, offering opportunities to leverage international experience for enhancing the impact of domestic policies and actions and for improving planning processes. The Campaign was launched at CEM 8 in 2017 and it plans to evolve into new campaign.

## Rationale for being included in the CEM

The APPF Campaign specifically serves to overcome the barriers for the deployment of renewable energy technologies via elevating innovative policies and solutions from the technical level to the highest political level.



Photo credit: EPPEI, March 2018  
APPF China workshop and study tour, Dalian.

- **To integrate variable renewable energy.** The growth of VRE capacity calls for increased system flexibility. Flexible dispatchable power plants are a main source of flexibility in power systems, alongside grids, demand shaping, and storage.
- **To unlock the flexibility potential.** In many power systems, regulations, market design, and contractual arrangements may encourage an inflexible operation of power plants.
- **To optimise the utilisation of generation assets.** A better understanding of the capabilities that are needed in the power system of the future can foster a better use of existing power generation assets.
- **To highlight today's success.** Many countries are demonstrating that a flexible power supply can successfully deal with fluctuations in supply and demand.

## Activities and deliverables

The campaign facilitates a unique global dialogue, and allows to learn from best practices, to discuss the necessary broader regulatory, market and contractual framework, and to optimise the utilisation of existing generation assets. Current activities include:

- International kick-off workshop, 18 September 2017 in Paris, France.
  - A workshop for policy makers, technical experts and industry representatives as conducted on 1 November 2017 in Berlin, Germany, followed by a two day study trip.
  - A workshop and a study tour from March 6 to March 8 in Dalian, China.
  - Series of four regional workshops on Power System Flexibility with dedicated sessions on Advanced Power Plant Flexibility, 16-23 April.
  - A final workshop and a final study tour will be held in Copenhagen, Denmark as a part of the conclusion of the campaign in May 2018.
  - Multiple reports, including a joint IEA and US National Renewable Energy Laboratory (NREL) report on Status of Power System Transformation 2018 – Power Plant Flexibility in 21st Century Power Systems.
  - Ministerial roundtable at CEM9.
- A new campaign – power system flexibility** will be launched at the CEM9 as the continuation of the APPF but with full scope of power systems from generation, grid, storage and demand side.

Lead CEM Member(s)



Germany Denmark China

CEM Member Participant(s)



Operating Agent(s)/ Coordinator(s)

Business Participant(s)

COWI, ENEL, Energinet.dk, General Electric (GE), J-Power, Siemens, Kyushu Electric Power Co. Inc. Man Diesel & Turbo, Mitsubishi Hitachi Power Systems, Ørsted.

Global and In-Country Partner(s)

Chinese Electrical Power Planning and Engineering Institute (EPPEI); Agora Energiewende; VGB Powertech E.V. (VGB); Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); Danish Energy Agency (DEA), China National Renewable Energy Center (CNREC).