

Concept Note: Asia LEDS Partnership Grid Renewable Energy Community of Practice

Background and context

Countries in Asia are leaders in transforming their national and local economies to low emission pathways that will enable sustained economic growth, resource efficiency, resilience, and environmental protection. Engaging in large scale renewable energy deployment is central to achieving these goals.

The Asia LEDS Partnership's Grid Renewable Energy Community of Practice (GRE CoP) is intended to be an interactive network comprised of national and subnational governments, regulators, system operators, technical institutions, businesses, non-profits and other international organizations addressing real-time policy, financing and technical challenges and solutions related to renewable energy deployment. It is a platform for ongoing collaboration to allow for deeper learning and sustained participation, continuous access to tools and expert assistance, and to foster champions that will serve as role models for other countries in the regions. The GRE CoP is designed to be demand driven to meet members' needs and will offer support and solutions to early movers as needs emerge. The GRE CoP is an initiative of the Asia LEDS Partnership in collaboration with the Energy Working Group of the LEDS Global Partnership.

Priority Topics

In 2018, the GRE CoP gave initial priority to learning and technical collaboration on two topics:

- **Building Blocks for Grid Renewable Energy Development** – enabling holistic approaches for addressing needs for data and analysis, incentives and market design, competitive procurement, integrated power system generation and transmission, planning, financing, and technical grid integration solutions.
- **Renewable Energy Grid Integration** – supporting use of best practices and cost-effective approaches for grid management and operations, transmission and distribution infrastructure, storage, regional integration, demand response, and related solutions.

In 2019-2020, based on feedback from Asia LEDS Partnership members, the GRE CoP will prioritize peer learning, knowledge exchange and expert assistance on two topics: **Energy Storage** and **Long-term Strategies (LTS) for Power Sector Transformation (PST)**.

Energy storage: Growing needs for system flexibility combined with rapidly falling costs in battery technology have enabled battery energy storage systems to play an increasing role in both distributed and bulk power systems worldwide. System operators, utilities, regulators and policy makers in Asia are assessing the value of energy storage to support both grid applications such as voltage support, transmission congestion relief and upgrade deferral, as well as behind-the-meter energy storage considerations such as interconnection and tariff design. The GRE CoP will offer support and solutions to early movers and knowledge exchange for all countries in

1. identifying the challenges and assessing the value of energy storage in high VRE systems
2. sharing energy storage cost data and projects, and
3. implications of energy storage on tariffs, interconnection rules, and related market considerations; and other related topics

Pathways for near and long-term power sector transformation: Countries see long-term strategies as critical to providing a broader vision for NDCs and near-term actions and are interested in understanding

the dynamics of how climate driven targets and renewable energy markets respond to cost reductions and technology and business innovations. Decision makers also want to understand the PST pathways that may align most closely with objectives, factors and technology evolution in their country context. Furthermore, clearly articulated visions for power system transformation can provide a strong signal to the private sector and could help accelerate investment and implementation. The GRE CoP will provide technical assistance and support in understanding and applying pathways for near and long-term transformation of power system, including as a tool to enable stakeholder engagement and visioning for the power sector over the long term given potential innovations, and to identify key actions in the near and medium term to avoid lock in of carbon intensive technologies. This will build on LEDS GP collaborative work on PST pathways and with Fraunhofer Institute on implications of RE cost reductions on achieving NDC goals. The GRE CoP will conduct share information for all countries and provide assistance to early movers on

1. understanding and adapting PST pathways to inform near and long-term power system visions and plans for their country
2. evaluating the implications of technology cost reductions and innovations on achieving climate and development goals and on near and long-term power system investments and policies; and other related topics

Activities

For both topics, the GRE CoP will conduct the following activities:

- Webinars and online moderated discussions on the above topics
- In-person peer learning and training workshops
- No-cost expert technical assistance to select countries and/or peer exchanges to support advancement of
 - Power system energy storage assessment and advice on applications
 - Adaptation and application of PST pathways
- Sharing of existing resources on energy storage and PST pathways and where needed preparation of concise fact sheets or other supplementary resources for the CoP members
- Short case studies highlighting good practices
- Cross country collaboration on briefing documents on above topics to engender dialogue between energy and climate officials

Participants

The GRE CoP includes about 50 participants from Bangladesh, Bhutan, China, India, Laos PDR, Myanmar, Nepal, Philippines, Sri Lanka and Vietnam. The CoP will continue to add additional practitioners across the region to its membership.

The direct and active involvement of participants across Asian countries representing national and sub-national government agencies, regulators, system operators, technical institutions, private firms, NGOs and/or international organizations working on renewable energy analysis, policies and deployment is key to the success of the CoP.

The GRE CoP will offer the opportunity for participating countries to learn from each other and from other experts in the field on specific elements of renewable energy development. Each online session will be designed to include presentations by one or two selected participating countries and other experts in the field, and an open discussion on each country's challenges and approaches. Guiding questions to inform these discussions will be shared with participants two weeks ahead of each online

meeting. Country government participants will also have access to [no-cost technical assistance](#) to support advancement of renewable energy planning and development. Participants are expected to commit to sharing knowledge and experiences, to applying learning and resources, and to providing feedback on results achieved from engagement in the CoP.

Participants' roles:

- Participants will actively engage in the discussions and come prepared to share their country's experience with RE development
- When appropriate, it is encouraged that participants recruit their peers to participate to learn and share information
- It is encouraged that participants share the learning and materials from this CoP with their peers
- It is expected that participants will share with the ALP community how they are applying the learning from participation in this CoP to advance policies, plans and projects in their countries

Expected outcomes

Engagement with the GRE CoP will help participants understand and apply to their country's context, the various building blocks that support long term power system planning, system flexibility and storage that support successful scaling up of grid-scale renewable energy deployment. In addition to producing important learning materials, expected outcomes include improved knowledge, improvements in targets and plans, renewable energy policies and other investment measures, and improved regional collaboration for renewable energy development.

The ALP will also to engage and collaborate with active regional and donor programmes and initiatives in order to enhance learning and impact.

Timeline of Activities

Task	Timeline
In-person training workshop at ACEF 2019 on grid integration, power system flexibility, storage	June 2019
In-person sessions at Asia Pacific Climate Week 2019 on Raising ambition in the Energy Sector and on Clean Mobility and RE integration through Energy Storage	September 2019
In-person training workshop on Energy Storage	October 2019
First moderated online session: country exchange and learning, likely on PST pathways and LT-LEDS background, overview and approaches	December 2019
Second moderated online session	Q1/Q2 2020
Delivery of country specific technical assistance to 2 countries	Initiated until Q2 2020
In-person training workshops at Asia LEDS Partnership Forum 2020, Korea (location tbc) on: Energy storage and Grid integration for large scale RE planning & scale up; and Power sector transformation	Apr 2020 (tbc)
In-person meeting/training at ACEF 2020	Q2 2020
Share existing grid RE tools, curriculum and resources with members, including LEDS GP Good Practices database, Greening the Grid, the Clean Power Hub, Clean Power Asia and others	On-going
Develop fact sheets or other resources highlighting good practices	Until Q2 2020
Collaboration among members on technical resources, case studies, etc.	On-going

To know more on the GRE CoP and become a member:

<http://www.asialeds.org/grid-renewable-energy/>

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