

ASIA CLEAN ENERGY FORUM 2019

PARTNERING FOR IMPACT

MANILA | 17–21 JUNE 2019



Deep Dive Workshop

Utility-Scale Renewables: Challenges in Developing Solar and Wind Energy Projects



USAID
FROM THE AMERICAN PEOPLE



PFAN
Accelerating Investment
for Climate and Clean Energy



Point of Contact:

Nathan Lee, NREL

(Nathan.Lee@nrel.gov)

Joost Siteur, USAID Clean Power Asia

(Joost_Siteur@abtassoc.com)

Peter du Pont, Asia Regional Coordinator PFAN,
and Co-Chair, Asia Clean Energy Forum

(peter.dupont@asiacleanenergypartners.com)

Background

As the investment cost of renewables continues to fall, and utility-scale solar and wind become increasingly cost-competitive with conventional power generation, private developers, policymakers, and power system planners are searching for opportunities to invest in and promote renewable energy-based generation. Yet the rate of deployment of capital and the rate of installation of renewable energy capacity is far lower than needed to achieve the ambitious national targets set by countries through their participation in the Paris Climate Agreement.

This Deep Dive Workshop (DDW) will focus on challenges in the development of utility-scale wind energy and solar PV projects through a deep examination of the range of challenges faced by project developers, investors, and governments—the key stakeholders that need to work together in order to unleash a revolution in renewable energy.

The workshop is organized by the United States Agency for International Development (USAID), the Private Financing Advisory Network (PFAN), ADB's Environmental Thematic Group, and the U.S. Department of Energy's National Renewable Energy Laboratory (NREL), USAID's Clean Power Asia program, and the Association of Southeast Asian Nations (ASEAN) Centre for Energy (ACE).

Objective

This DDW aims to improve understanding of the real, on-the-ground challenges faced by project developers and their investors/bankers, with a focus on utility-scale wind energy and solar PV projects. It will achieve this objective by a mix of presentation on tools and resources; panel discussions with three main stakeholder groups (project developers, investors/bankers, and governments/utilities); and detailed, “deep dive” case studies of a sample of wind and solar energy projects

DDW Approach:

The DDW will be divided into three parts: (1) Setting the scene: Opportunities and barriers updated costs for renewable energy; (2) Stakeholder perspectives; and (3) Deep-dive case studies.

Part 1: Setting the scene: Opportunities and barriers updated costs for renewable energy

A critical gap to identifying opportunities and scaling up renewable energy is the lack of quality data and analyses to support decisions on the investment and deployment of renewables. The workshop will present first-of-their-kind results of a spatial levelized costs of energy (LCOE) analysis across the ASEAN and launch the Cost of Energy Mapping Tool within the ASEAN Renewable Energy Data Explorer (RE Data Explorer), which provides renewable energy data, analytical tools, and technical assistance to developers, policymakers, and decision makers in the region. Part 1 will also include presentation of a recent survey of private sector stakeholders on barriers to clean energy investment in emerging markets and an interactive poll of audience members.

Part 2: Stakeholder perspectives

Part 2 will set the stage for the afternoon discussions through two 45-minute panel discussions highlighting the perspectives, challenges, and lessons offered by four groups of stakeholders: (a) project developers; (b) investors and lenders (c) government and utilities; and (d) international donor agencies supporting renewable energy development in Asia.

Part 3: Case studies

Part 3 will consist of two parallel tracks: one for wind energy projects and one for solar PV projects. Each track will consist of a curated set of three case studies, demonstrating particular aspects of project development, financing, and implementation, including the range of issues from environmental assessment, community engagement, land procurement, PPA development, securing of investment, effective project implementation, and eventual exit of initial investors.

Indicative Agenda

9:00 – 9:15 **Opening remarks, Learning Objectives, and Agenda Overview**

PART 1: SETTING THE SCENE: OPPORTUNITIES AND BARRIERS FOR RENEWABLE ENERGY

- 9:15 – 10:00 **What are the costs and barriers to investment in grid-connected wind and solar generation in the ASEAN region?**
- Results from recent analysis of costs (LCOE) and geospatial location of energy resources, for planning and investment in Southeast Asia.
 - Informing analyses with the ASEAN RE Data Explorer and the Cost of Energy Mapping Tool.
 - Despite abundant renewable resources, barriers to private sector investment in utility scale wind and solar PV persist.

Presenter(s): NREL and ACE

10:00 – 10:30

Barriers and opportunities to private sector investment: an interactive activity on private sector investment opportunities and results of a recent survey

- Interactive session engaging audience to identify critical knowledge gaps, tools, barriers and solutions to private sector investment in Asia.

Facilitator(s): NREL

10:30-11:00

Tea/Coffee Break

PART 2: STAKEHOLDER PERSPECTIVES: PRACTITIONER VOICES

11:00 – 11:45

Panel Discussion with Project Developers, Investors, and Lenders

- What are the major challenges and obstacles faced by wind and solar project developers, investors and lenders?
- How can countries in the region address these challenges in order to facilitate development of utility-scale wind and solar projects and can countries address these challenges and open up investment opportunities?
- What innovative approaches are the panelists using or seeing that could support the scale up of renewables in the region?

Facilitator: PFAN and USAID Clean Power Asia

11:45 – 12:30

Panel Discussion with Government, Utility and Donor Representatives

- What are the major challenges and obstacles faced by government and utility representatives in attracting investment in the renewable energy?
- How can countries in the region open investment opportunities and address these challenges?
- What innovative approaches are the panelists using or seeing that could support the scale up of renewables in the region?

Facilitator: USAID Clean Power Asia

12:30 – 2:00 pm

Lunch break

PART 3: WIND AND SOLAR ENERGY “DEEP DIVE” CASE STUDIES

2:00-3:30

Wind Energy Case Studies

- Case study 1
- Case study 2
- Case study 3

Solar Energy Case Studies

- Case study 1
- Case study 2
- Case study 3

3:30-4:00 pm

Tea/Coffee Break

4:00-4:30 pm

Wind Energy Case Studies

Case study 4

Solar Energy Case Studies

Case study 4

4:30-5:30 pm

Wrap-up

- Summary of presentations, lessons learned and recommendations for the group on innovative or good practices to support project development that could be leveraged across Asia

Closing remarks

Speakers

Jennifer Leisch, Climate Change Mitigation Specialist, USAID

Representative(s) of the ADB Office of Public-Private Partnership, TBD

Peter du Pont, Asia Regional Coordinator, PFAN

Representative(s) of PFAN, PFAN

Aloysius Damar Pranadi, Research Analyst of Policy Research and Analytics Programme, ACE

Joost Siteur, Investment Mobilization Lead, USAID's Clean Power Asia Program

Nathan Lee, Researcher – Power Sector Planning, NREL

Carishma Gokhale-Welch, Project Leader, NREL

Private sector investment representatives [for panel discussion and/or pilot study presentation from PFAN network], Asia

Power utility representatives [1 or more for panel discussion], Asia

Government energy ministry/department decision maker representatives [1 or more for panel discussion], Asia

Regional clean energy project investor representatives [1 or more for panel discussion], Asia

Regional Public-Private Partnership Program Participants [1 or more for discussions from ADB's Office of Public-Private Partnership work], Asia

About the Organizers

The United States Agency for International Development (USAID) - USAID is the lead U.S. Government agency that works to end extreme global poverty and enable resilient, democratic societies to realize their potential. USAID's work safeguards this mission and puts countries on a path to pursue clean energy growth and resilient, low-carbon development. Countries around the world are feeling the effects of climate change, from more intense heat waves, droughts, floods and storms to slower-moving changes like ocean acidification. USAID is sharing world-class knowledge, data and tools to ensure countries can predict, prepare for and adapt to change. USAID also helps countries lay the foundations for sustainable growth powered by clean energy and healthy landscapes. <https://www.usaid.gov/>

The Private Financing Advisory Network (PFAN) - PFAN is a global network of climate and clean energy financing experts, that aims to bridge the gap between entrepreneurs developing climate and clean energy projects and private sector investors. PFAN achieves this by providing free business coaching to projects, increasing the chances of attracting investment; and growing its investor outreach. PFAN coordinates in 14 Asian countries in the region to support the origination of clean energy projects, typically in the range of 1-50 million U.S. Dollars, but sometimes up to as high as \$100 million. <https://pfan.net>

USAID's Clean Power Asia program (USAID Clean Power Asia) - Implemented by Abt Associates, the USAID Clean Power Asia program works with Lower Mekong countries and other Association of Southeast Asian Nations (ASEAN) member states to encourage power sector investments in environmentally friendly, grid-connected renewable energy sources. The program focuses on incorporating renewable energy into planning, promoting smart incentives, building an enabling environment for renewable energy policies and frameworks and mobilizing finance. <http://usaidcleanpowerasia.aseanenergy.org/>

The ASEAN Centre for Energy (ACE) - ACE is an intergovernmental organization within the Association of Southeast Asian Nations' (ASEAN) structure that represents the 10 ASEAN Member States' (AMS) interests in the energy sector. The Centre accelerates the integration of energy strategies within ASEAN by providing relevant information and expertise to ensure the necessary energy policies and programs are in

harmony with the economic growth and the environmental sustainability of the region.

<http://www.aseanenergy.org/>

The U.S. Department of Energy's National Renewable Energy Laboratory (NREL) - NREL focuses on creative answers to today's energy challenges. From breakthroughs in fundamental science to new clean technologies to integrated energy systems that power our lives, NREL researchers are transforming the way the world uses energy. NREL analysis informs policy and investment decisions as energy-efficient and renewable energy technologies advance from concept to commercial application to market penetration. With objective, technology-neutral analysis, NREL aims to increase the understanding of energy policies, markets, resources, technologies, and infrastructure and connections between these and economic, environmental, and security priorities. <https://www.nrel.gov/>