



# 3rd Thai-German Community-based Renewable Energy Conference 2018

8<sup>th</sup> February 2018, Eastin Grande Hotel Sathorn, Surasak Ballroom, Bangkok



## Background

GIZ and the Thai Ministry of Energy (MoEn) jointly organized the 1<sup>st</sup> “Thai-German Renewable Energy Community Conference” (CBRE) in October 2015 in Bangkok. The conference was the first of a series of annual events on renewable energy projects of communities in the context of the Project Development Programme (PDP) of GIZ. This year’s event is taking place on the 8<sup>th</sup> of February and is designed in a way to maximize the exchange of communities, renewable energy (RE) companies and international experts in order to evaluate latest models and technologies for RE on community level in an interactive way.

## Objectives

### Goals of the Forum

- Create and maintain a large and unique network of communities in the RE sector of Thailand;
- Discussion and evaluation on latest models and concepts for community-based RE approaches with the communities;
- Present latest technology solutions for RE in communities.

- Support to implement Thai-German community projects.

### Target Group of the Forum

- Thai community representatives or local citizens and different commercial sectors who are interested in developing their own RE project together with Thai and German private sector partners.
- Thai and German technology suppliers, investors and project developers who understand the particular challenges of community projects and intend to develop Thai-German renewable energy communities.
- Thai public officials involved in the regulation of decentralized energy development (PEA, MEA, ERC, DEDE, EPPO, EGAT, PPP, Provincial Energy Officers; national and regional level).
- Media representatives interested in deepening their understanding of the topic.

### Methodology

In keywords: presentation, working groups, panel discussion, expert panel, training, innovation roadshow

The conference will have an interactive setup: After a short introduction in plenum, three **working groups** will be formed on different RE topics: **Solar Rooftop Systems, Renewable Energy Hybrid Grid Systems and Solar Water Pumping**. In each working group international experts will join to share their expertise. The working groups are following each a specific agenda and methodology:

- **Solar Rooftop Systems Working Group**

This session aims to provide quick insight to Thailand solar PV rooftop sector. Successful implementation of solar PV rooftop system will be showcased. Potential financing and technological solutions to implement the system will be presented and discussed in an interactive and insightful panel setup. This session is tailored for factory and commercial building owners who are interested in solar PV rooftop.

- **Renewable Energy (RE) Hybrid Grid Systems Working Group**

In this session, feasibility and business models for RE Hybrid Grid Systems for Thai Islands will be presented. With concrete pilot sites at Koh Mak Noi and Koh Bulon Don, key stakeholders which include project developers, the utility and community representatives will share their motivation, experience and implementation process in a panel discussion.

- **Solar Water Pumping Working Group**

In the solar water pumping group, the small pilot project for household consumption in Nakhon Si Thammarat and specific community project for sustainable agricultural management/ community water supply (project funded by MoEN) will be showcased. System owners and relevant stakeholders will discuss about their motivation, key points to be considered in project development, challenges faced and benefits of the systems in a panel setup.

In the afternoon, the challenges in RE project development, implementation and operation discussed in the working groups will be addressed in four technical hand-on mini **trainings**. Technical input will be delivered by experts from specialized companies. Each participant can select to attend 2 different trainings:

- **A. PV Implementation Guidelines: Step-by-step in Solar PV Project Development**



Despite the falling system cost, development of solar PV rooftop system is not easy as it seems. Several challenges remain. Complicating permitting & licensing procedure in combination with lack of guiding framework on assessing the project often leave interested investor with “where should I start?” question. The solar PV rooftop implementation guidelines were jointly developed by GIZ and USAID Clean Power Asia to make solar PV rooftop project development become easier and more understandable for interested investors, especially for those who are not familiar with the technologies. This hand-on training serves as a quick starter on how to use the guidelines and its associated tools e.g. financial model etc. to address your case. Throughout the training, the participants will use the electronic guidebook to solve certain typical but unknown key questions in each step of solar PV rooftop project development. The whole project life cycle will be covered, from site evaluation until operation & maintenance of the system.

- **B. Centre Piece of Renewable Energy Hybrid Systems: The interaction of components and how they influence each other!**

Renewable Energy Hybrid Grid Systems are a promising solution to electrify remote off-grid communities in a decentralized and efficient way. These stand-alone mini-grids are usually supplied by diesel generators in combination with renewable energy sources (e.g. solar power) and might also integrate storage solutions. This session aims to explain the principle of these systems and starts right at the design and planning phase. After getting a basic understanding of the functions and criteria influencing system type and size, the participants will gain an understanding of the operation and maintenance as well as on the socio-economic impact RE Hybrid Grid Systems might have on their communities. Lastly discussions will be held on monitoring and up-scaling potential of these systems as key for reliable long-term operation.

- **C. Solar and Pumps: The match is important!**

Solar water pumping projects have become increasingly more common as solution for sustainable agricultural management and community water supply. Many communities and project owners encounter problems when operating the system. Accurate system sizing at the early design process is very crucial and will determine the efficiency and sustainable operation of the system. This session aims to explain the principle of the system design and important parameters to be considered. Participants will also gain knowledge in how to match the pump size and type with the water source as well as with the solar system. Technical knowledge and economic benefit will help interested participants to make a well-informed decision. System operation and maintenance to ensure optimized and sustainable system will also be discussed.

- **D. Make My Battery Run! Operation and Maintenance**

This training aims to provide participants with practical understanding of how to monitor and maintain batteries on large and small scale storage systems. Having knowledge to identifying deficient batteries will contribute to the efficiency of the system. Insights from HOPPECKE will be relevant for industries, home owners and communities to ensure secure and reliable power supply at all times.

Before closing the conference, the trainers will summarize the key elements of their trainings to the auditory.

The **innovation roadshow** gives space for different technology providers to exhibit their products, solutions and ideas in the premises of the venue for an interactive networking during the breaks.

The “**Meet the Experts**” **Corner**, organized in parallel with the training sessions, provides space for companies to get in contact with participants who are interested in developing RE projects. Interested participants get the chance to present their cases to the companies and gather information about possible technical solutions and services in a casual atmosphere.

## Date and Location

8 February 2018 at Eastin Grande Hotel Sathorn, Surasak Ballroom, Bangkok

## Language

Main language of the event will be **Thai**. Simultaneous translation in both directions will be available.

## Registration

Participants need to register online. The size of the working groups (morning session) and the trainings (afternoon session) will be limited to app. 40 and 30 participants respectively in order to achieve a good working atmosphere. Online registration form for participants (<https://goo.gl/forms/ha7Ia0MvN1XletG63>)

## Rationale

### Germany and Thailand: First-Mover for Sustainable Energy

Thailand is the frontrunner in renewable energies in South-East Asia and – by setting itself ambitious targets for RE development – aims at remaining in that position. Especially the country’s targets for biomass, wind and solar energy underline its strong commitment. Under the current political framework, several initiatives focus on community level activities with the goal to promote sustainable energy production on a decentralized level.

Germany is one of the world's major renewable energy economies with very ambitious goals towards the energy transition (“Energiewende”). According to the German strategy, 60% of total energy consumption shall be covered by renewable energies by 2050. In 2015 already 30% of Germany's electricity supply was produced from renewable energy sources, and more than 371,000 people worked in the renewable energy business despite the economic slowdown in Europe. More and more German communities are grasping the opportunity to become a part and a driver of that development by implementing their own renewable energy projects that create a variety of benefits for local stakeholders.

### Towards Thai-German Renewable Energy Communities

In Germany, communities play an important role for the development of renewable energy projects. Many thousand renewable energy systems are operated locally in communities by a variety of actors. More than 40% of all RE capacity in Germany is in the hand of citizens. Over 900 energy cooperatives are currently active in Germany owning a total of 700 MW installed capacity. Sharing such experiences with Thai communities will make them more aware of the benefits of local energy production.

In difference to fossil fuel-based generation, the value remains on-site in form of income, jobs, corporate profits, as well as avoided fuel costs, taxes, and charges in the local economic cycle. Those funds increase the scope of action for local authorities: schools can be renovated, roads can be repaired, clubs or associations can be promoted.



The Project Development Programme (PDP) implemented by GIZ on behalf of the German Federal Ministry for Economic Affairs and Energy (BMWi) supports the Ministry of Energy (MoEn) in Thailand in increasing the deployment of renewable energy technologies in the country. In accordance with MoEn's goals, GIZ focusses on increasing the number of renewable energy projects in communities, regions and provinces in Thailand by sharing German experience and know-how. Since especially small and medium sized companies are the carrier of knowledge and technology in this regard, the strategy of the project is to trigger business cooperation between German and Thai companies, while allowing local communities to directly profit from renewable energy projects.

The intention of PDP is to support Thai-German Renewable Energy Communities jointly with MoEn. PDP is aiming to initiate a reference project where German companies share technology and knowledge with Thai companies and thus form a Thai-German RE partnership with a local community. The activities try to achieve a combination of different renewable energy or intelligent grid technologies and develop business models which are beneficial for the community.

## Contact

- Thai and English Language: Ms. Kajarin Yotdam, GIZ  
[kajarin.yotdam@giz.de](mailto:kajarin.yotdam@giz.de)
- German and English Language: Ms. Katrin Lammers, GIZ  
[katrin.lammers@giz.de](mailto:katrin.lammers@giz.de)