

Terms of References

# **Guideline for solar PV project development and investment in the Philippines**

## **1. Background**

The GIZ project „*Support to the Climate Change Commission in the Implementation of the National Climate Change Strategy and the National Climate Change Action Plan*“ (SupportCCC) is implemented within the framework of the International Climate Initiative of the German Environment Ministry (BMU). Among other objectives it aims at supporting the Department of Energy (DOE) and other institutions in implementing and further developing the framework conditions for the generation and feed-in of renewable energies (RE) as outlined in the Renewable Energy Act 2008. Related activities have been incorporated under Component 3 of the Project.

The German international consultancy INTEGRATION has been contracted by GIZ to hold a pool of renewable energy experts in readiness for Component 3 from October 2013 to February 2014. The international and national experts will be drawn from the pool in a flexible and demand-driven manner. The INTEGRATION team is led by Bruno Wilhelm who is closely coordinating each assignment with the component leader.

## **2. Context**

In 2008, the Philippine Government approved the ambitious Renewable Energies Act opening the path for the expansion of RE. It foresees the application of a range of political instruments to support renewable energies: fixed feed-in tariffs (FiT), quota regulations and net-metering. Thus, laying the legal framework for tripling the capacities of RE between 2010 and 2030 to 15,304 MW as stated in the National Renewable Energy Plan (NREP).

Solar energy is expected to contribute 284 MW to the tripling of RE capacity by 2030. Yet, the Philippine government sees a much more vital role for solar energy to play if the aspirational target of 1,528 MW will be achieved in 2030.

With the FiT and the net-metering in place, the solar photovoltaic (PV) market is already growing in the Philippines. The industry experiences increasing demand in the residential and commercial roof top segment as well as in large scale ground mounted PV systems. The first solar plants under the FiT are expected to feed into the grid by 2014. Solar rooftop installations are expected to reach 2.5 MW by next year from a mere of 1.12 MW over recent years according to the Philippine Solar Power Association (PSPA).

Entry points into the grid-connected electricity generation market for PV project developers vary from the FiT regime to bilateral power purchase agreements (PPA) and from contestable consumers under the retail competition and open access scheme (RCOA) to

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direct sales at the whole sale energy spot market (WESM). Own use and net-metering also represent promising on-grid market options for PV developers.

In any case, complex permitting procedures, administrative applications and regulation on grid access are required along the project cycle. Thus, project development often becomes a tedious endeavor. The details of administrative and legal processes are laid down in a number of official documents of DOE, the Energy Regulatory Commission (ERC) and other energy sector institutions. On the local level the administrative processes still lack harmonization and standardization.

Yet, what is missing for PV (and other RE technologies) is a comprehensive overview about the various steps of project development under the different market options. Such guideline would entail a close look at every stage of the project cycle to provide transparency and to clarify the legal, technical and financial requirements for the developer.

Moreover, administrative stumbling blocks and barriers can thus be identified and removed in order to tap the vast potential of solar energy in the Philippines and accelerate the cost efficient deployment of PV. The latter is of utmost importance as administrative barriers have significant impact on the overall system costs.

### 3. Objective

The DOE together with GIZ has already initiated the process of identifying administrative challenges for PV development. Two workshops were conducted in 2012 and 2013 to provide a general understanding of the topic to the energy sector stakeholders and to assess mayor administrative challenges for PV projects.

Now a comprehensive overview about regulations for grid-connected PV projects along the PV project cycle shall be developed. This **PV guideline** should provide complete information and has to

- a) follow the (common) steps for project development;
- b) differentiate where applicable between different market options;
- c) list legal and regulatory provisions;
- d) highlight administrative procedures including requirements for project developers and/or investors;
- e) provide information on how to obtain financial closure; and
- f) illustrate the steps in easy-to-understand flow-charts and figures.

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The PV guideline is designed as close as possible to the needs of project developers and potential investors, promoting transparency and clearness in the projects' pathway.

Furthermore, the PV guideline should specify how much time the single administrative steps of the project cycle consume and how much each steps costs. Thus, allowing an initial estimate of resources that need to be put into PV project development in the Philippines.

By developing the PV guideline, close cooperation with the ASEAN Center for Energy (ACE) is required. ACE through the Renewable Energy Support Program (RESP) of GIZ is coordinating a regional undertaking to develop RE guidelines in Malaysia, Indonesia, Thailand and the Philippines. The PV guideline for the Philippines is catering to this effort and will be used by ACE and integrated into their online tool.

In addition, reference should be made to international best practices. The European project 'PV Grid' ([www.pvgrid.eu/](http://www.pvgrid.eu/)), the 'SEDA' guideline ([www.seda.gov.my](http://www.seda.gov.my)) in Malaysia and the 'Solar Guidelines' ([www.solarguidelines.in/index.php?id=5](http://www.solarguidelines.in/index.php?id=5)) in India are examples for comprehensive RE guidelines.

The PV guideline is meant to provide proper information to project developers/administrative institutions/financial institutions and various other stakeholders to ensure timely implementation of solar projects in the Philippines. Based on the guideline, recommendations for policymakers are developed on how administrative procedures can be improved in order to increase private investment and market activity in the Philippine PV sector.

## 4. Deliverables

For the development of the PV guideline the following tasks shall be carried out by INTEGRATION:

- a) Carry out detailed analysis of the regulatory framework prevailing for RE in general and for PV in particular in the Philippines.
- b) Identify and describe project development cycle steps for on-grid solar PV installations. In accordance with the ASEAN RE guidelines the following project steps shall be considered:

- |                                  |                                       |
|----------------------------------|---------------------------------------|
| I. Investment                    | VII. Construction and installation    |
| II. Site selection               | VIII. Grid connection / commissioning |
| III. Support scheme              | IX. Operation and maintenance         |
| IV. Finance                      | X. Corporate legal/fiscal             |
| V. Power purchase agreement      | XI. Electricity production licence    |
| VI. Administrative authorisation | XII. Grid connection permit           |

*(Project cycle steps may be amended or modified if reasonable.)*

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- c) Conduct of stakeholder interviews guided by and in cooperation with GIZ.
- d) Preparation of exhaustive list of approvals and clearances, regulatory requirements from national and local/regional level entities required for developing a solar PV project in the Philippines.
- e) Identify and map various approvals and clearances, regulatory requirements etc. by various agencies for setting up solar projects under different promotional schemes (e.g. fiscal and non-fiscal incentives; FiT and net-metering) and various market options (e.g. bilateral power purchase agreements (PPA), retail competition and open access scheme (RCOA), whole sale energy spot market (WESM), own use).
- f) Identify and map various approvals and clearances, regulatory requirements etc. by various agencies for setting up solar projects taking into consideration following classifications of installation size:
  - i. Rooftop Installations:
    - a. Small to medium rooftop (1kW – 100kW)
    - b. Large rooftop ( > 100kW)
  - ii. Ground-mounted Installations:
    - c. Small ground-mounted (100kW – 1MW)
    - d. Large to very large ground-mounted (1MW – > 5MW)

*(Different categorisation of capacity sizes may be chosen.)*
- g) Collect data on required time for the successful realisation of the defined project development cycle steps (overall time, waiting time, man days);
- h) Collect data regarding administrative costs for the successful realisation of the defined project development cycle steps (in Philippine Peso & Euro);
- i) Collect relevant documents regarding generation permits and licences (e.g. PPA, model contracts etc.) and project finance and financial closure (e.g. due diligence requirements, project cash-flow analysis)
- j) Identify and describe existing issues (barriers) throughout the project development cycle (technical barriers, legal barriers, economical barriers);
- k) Prepare a guidebook with the obtained results ensuring easy-to-understand illustration of the various steps of the project cycle for PV project development in the Philippines.

Reports and other written outputs on specified topics according to the ToR will be submitted in soft copy (MS Office, PowerPoint) to GIZ project management. Reporting language is English.

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### 5. Organization, extent and time frame

INTEGRATION's consultants coordinate directly with the GIZ Chief Advisor for RE, Hendrik Meller, and the Principal Advisor, Bernd-Markus Liss; and through them with GIZ ASEAN RESP project manager Arne Schweinfurth in Jakarta. Close working relationship with the Renewable Energy Development Bureau of DOE, and other relevant stakeholders have to be established.

The duration of the assignment shall be from 11 November 2013 to 31 January 2014. The extent of the assignment will be broken down as follows

**International expert:** Home office: 8 man days  
(2 man days preparation, 4 man day coordination; 2 reporting and quality control)

**National expert:** Field mission: 4 man days (Stakeholder interviews)  
Home office: 16 man days (Preparation, analysis, compilation and guidebook writing)

**Total extent:** International expert: 8 man days  
National experts: 20 man days