

Above 100 kWp

Renewable Energy Guideline on Large Solar Photovoltaic Project Development in the Philippines

On behalf of

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany



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- Support to the Climate Change Commission in the Implementation of the National Framework Strategy on Climate Change (SupportCCC) Project
- Renewable Energy Support Programme for ASEAN (ASEAN-RESP)

Manila, October 2014

Disclaimers

Highest effort has been given to ensure and maintain accuracy of the Guidelines. Regulations and procedures for RE project development in Indonesia are complex, include numerous actors and are likely to be changed or updated over time. It is therefore not possible to cover all aspects and eventualities of RE project development with these Guidelines. The Guidelines are regularly updated in order to ensure correctness and completeness. However, GIZ and its implementing partners cannot be held responsible for any use of the Guidelines. The Guidelines shall not, in any case, replace or be used instead of existing laws, regulations and official guidelines issued by the relevant authorities in Indonesia.

Suggestions, feedbacks and updates are very welcome and can be addressed to asean-resp@giz.de.





Director Mario Marasigan

Department of Energy

In 2008 the Philippines enacted the Renewable Energy Act (Republic Act 9513), opening the path for the expansion of renewable energies (RE) in the country. The Department of Energy (DOE) is committed to lay down the tracks for tripling the capacities of RE between 2010 and 2030 to 15,304 MW as outline in the National Renewable Energy Program (NREP). Thus, the implementation of RE support mechanisms, such as feed-in tariffs (FIT) and net-metering, is a top priority for DOE.

With an aspirational target of 1,528 MW until 2030 solar energy is meant to play a crucial role in the future energy mix of the Philippines. Presently, DOE underlined its commitment for solar PV in increasing the installation target for solar PV under the FIT regime to 500 MW.

With the FIT and the net-metering in place, solar power is expected to grow exponentially in the Philippines. This can be attested by substantial numbers of RE developers who were granted RE service contracts under the FIT regime. However, the conversion of service contracts into actual RE plant construction has suffered significant delays, largely due to complex permitting procedures along the project cycle.

Most of the administrative and legal procedures for RE projects are taken from procedures for constructing traditional power stations and have not yet been fully adapted to the specific characteristics of RE projects. Moreover, there is also lack of harmonization and standardization of the administrative processes at the national and local level which creates further risks of non-compliance and delays for the RE project developer.

Foreword

“...With an aspirational target of 1,528 MW until 2030 solar energy is meant to play a crucial role in the future energy mix of the Philippines..”

Director Mario Marasigan

Department of Energy

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DOE's ultimate goal is to have well-coordinated, transparent and streamlined administrative procedures to ease doing business in the RE sector. The first step for this is to give a clear picture to the stakeholders (both the administrators and the developers) on the processes involved in project permitting.

As such, DOE lauds the effort of GIZ to come up with the Solar PV (SPV) Guidebook, that provide an overview of the project cycle and all related administrative requirements for the development and implementation of SPV projects. The SPV Guidebook will serve as a springboard for policymakers to assess the administrative procedures and streamline them for efficient solar PV market development.

Finally, the SPV Guidebook was developed in close coordination with the ASEAN Center for Energy (ACE) under a regional undertaking that will produce similar RE guidelines in Malaysia, Indonesia, and Vietnam. This will afford us the opportunity to gauge our own competitiveness vis-à-vis our ASEAN neighbours. With regard to the forthcoming ASEAN market integration by 2015 this is of great importance.

We need to be ready and we need to be efficient to attract RE investors in our shores.

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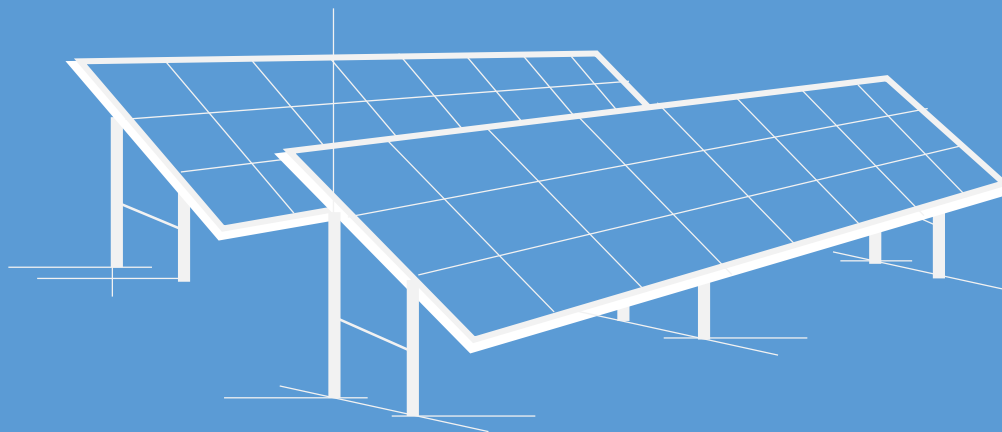
How it work?

Procedure: Step-by-step Large solar PV - The Philippines

Procedure for developing a solar PV power plant in the Philippines with capacity of more than 100 kWp under three business schemes; the processes are presented in Gantt's chart and flow chart

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Support mechanisms for on-grid RE projects in the Philippines



Solar PV in the Philippines

Background information

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The Philippines is located just right above the equator. It is blessed with a good potential for solar energy. The average solar radiation ranges from 128 - 203 W/m² [5] which is equivalent to around 4.5 - 5.5 kWh/m²/day. In the Philippines, where import of fossil fuel is relatively high, solar energy is an alternative solution. The government has set the aspirational target of 1,528 MW in the National Renewable Energy Plan (NREP) to be reached by 2030.

In the Philippines, there are three possible business model for large solar PV project development according to the Renewable Energy Act of 2008 (Republic Act 9513) :

1. Projects availing the Feed-in Tariff (FIT) (hereinafter referred to as **“FIT Scheme”**) according to Section 7 of the RE Act
2. Power supply agreements with distribution utility (DU) in on-grid areas (hereinafter referred to as **“PSA Scheme”**) according to Section 6 of the RE Act
3. Power supply agreements with commercial bulk consumers (hereinafter referred to as **“B2B Scheme”**) according to Section 31e of the Electricity Power Industry Reform Act (EPIRA)
4. Net-metering with DU (hereinafter referred to as **“NM Scheme”**) according to Section 10 of the RE Act

This guideline cover only a large solar PV project under the FIT, PSA, and B2B scheme. Its sister publication, “Small Solar PV Project Development in the Philippines” covers the NM Scheme. It can also be downloaded from the ASEAN RE Guidelines web platform (www.re-guidelines.info)

Key Statistics of the Philippines

Population (2014 estimation)

100 million [1]

Nominal GDP (2013 estimation)

USD 272 billion [2]

Nominal GDP per capita (2013 estimation)

USD 2,790 [2]

Installed power capacity

17 GW [3] (*on-grid only*)

Electricity Production (2012)

72,922 GWh [3]

Electricity Consumption (2012)

59,211 GWh [3]

Electrification Ratio (2014)

81% [4] (*with connection to power networks*)

Source:

[1] Philstar; 2014

[2] IMF; 2013

[3] DOE Website (accessed July 2014)

[4] NEA Website (accessed July 2014)

[5] NREL; 2012

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Solar PV in the Philippines

Background information

RE project developments under the FIT, PSA, and B2B schemes are entitled to specific fiscal incentives¹. Example of these incentives are included but not limited to:

- Income tax holiday for the initial seven years from the start of commercial operations
- Duty-free on importation of RE machinery, equipment, and materials during the first ten years from the issuance of a Department of Energy (DOE) Certificate of Registration to an RE developer
- Tax credit equivalent to 100% of VAT and customs duties on imported products for machinery, equipment, materials, and parts purchased from a domestic manufacturer, fabricator or supplier
- Reduced realty tax rates on equipment and machinery

General requirement for the availing of these incentives is the DOE Registration and DOE certification of the RE Developer and of its PV projects according to the rules and requirements set in the RE Act and the relevant by-laws issued by DOE and the Energy Regulatory Commission (ERC).

Projects availing the Feed-in Tariff (FIT)

The Renewable Energy Act of 2008 (Republic Act 9513) defines the FIT system as a scheme involving the obligation of the electric power industry to source electricity from renewable generation at a guaranteed fixed price applicable for a given period of time, which shall in no case be less than 12 years. The FIT System includes furthermore:

- Priority connection to the grid for electricity generated from RE resources, such as solar PV
- Priority purchase, transmission of, and payment for such electricity by the grid system operators

Note 1: For an RE project under the NM Scheme, these incentives are not available.

Solar PV in the Philippines

Background information

The feed-in tariff (FIT) price and the period of its applicability are to be decided by Energy Regulatory Commission (ERC), which on 27 July 2012 issued ERC Resolution No. 10, Series of 2012 approving the feed-in tariff (FIT) rates and installation targets RE technologies. In its Circular No.: 2013-05-0009, the Department of Energy (DOE) issued the Guidelines for the Selection Process of RE Projects under FIT System and the Award of Certifications for Feed-In Tariff Eligibility (so-called “*FIT Guidelines*”). According to this document:

- Only those RE Developers with valid and subsisting Renewable Energy Service Contract (RESC) may apply for the eligibility and inclusion of their project under the FIT system.
- In their application for conversion of the RESC from pre-development stage to the development stage, RE developers must indicate that their Declaration of Commerciality is based upon the approved FIT rate.
- A RE developer holding an RESC for the development stage may apply for FIT eligibility provided it includes in its submission a notarized proof and/or declaration that the project is not bound under any contract to supply its generated energy to any Distribution Utility (DU) or consumer.
- For on-grid solar PV projects, the approved FIT was PHP 9.68 /kWh (~ cent USD 22 /kWh) with a digression rate of 6% after one year from affectivity of the FIT. The current installation target for solar PV projects availing the FIT was 500 MWp¹.
- After the issuance of Certificates of Commerciality (COC) covering the cumulative installation target of a particular technology, the DOE, in co-ordination with the National Renewable Energy Board (NREB), shall initiate a review of the next installation target.
- Any RE plant operating under any of the above listed options may be issued a Certificate of Endorsement (COE) for FIT Eligibility until the new installation target is fully subscribed. It can be issued by DOE after the confirmation of DOE on the electromechanical completion of the plant.

Note 1: The installation target was earlier at 50 MWp. It was later increased by Department of Energy (DOE) to 500 MWp.

Solar PV in the Philippines

Background information

First-come-first-serve for a Certificate of Endorsement (COE) for feed-in tariff (FIT) eligibility

The Department of Energy (DOE) can issue a Certificate of Endorsement (COE) for feed-in tariff (FIT) eligibility to RE developers under the FIT scheme, provided the installation target of the RE technology has not yet been oversubscribed. The installation target for solar power is 50 MW and was increased by the DOE to 500 MW in April 2014. COEs are granted to RE developers on a first-come-first-serve basis until the installation target is reached. When the installation target is fully subscribed, RE developers can no longer apply for a COE, hence, they cannot enter into the FIT Scheme. After the COE, final approval from the Energy Regulatory Commission (ERC) is required to avail the FIT.

At the time when RE developers apply for a COE after 80% of their power plant has been built, it is possible that the installation target has already been fully subscribed. This prevents the project from receiving FIT and poses a high risk to the RE developer. In such a case, the RE developer has some alternative options to sell their electricity under other business schemes:

- Entering into a bilateral agreement with a distribution utility (DU) or any off-taker
- Exporting the power generated directly to the Wholesale Electricity Spot Market (WESM), subject to the FIT guidelines on “*must-dispatch*”

The RE developer must notify the DOE regarding the option chosen.

Although the FIT scheme is the most important supporting mechanism, there are many challenges faced by RE developers, such as:

- Only a limited number of RE developers can secure a COE from the DOE, allowing them to enter into the FIT Scheme. This is based on a first-come-first-serve basis as mentioned above. There is no guarantee that a solar PV power plant, after construction has finished, will be entitled to the FIT.
- The administrative procedures for the FIT Scheme implementation are not yet in place. As of October 2014, the procedure for the FIT Allowance (FIT-All) still has yet to be approved.

Solar PV in the Philippines

Background information

Power Supply Agreements with Distribution Utilities in On-Grid Areas (PSA)

Distribution utility (DU) in on-grid areas are usually negotiating an intended power supply agreement¹ (PSAs) for the supply of electricity from renewable sources directly with RE developers. A competitive selection process (CSP) is required for PSAs of DUs in off-grid areas (which are however not included in the scope of this guideline)

Power Supply Agreements with Commercial Bulk Consumers (B2B)

The retail competition and open access (RCOA) was introduced by the Electricity Power Industry Reform Act of 2001 (EPIRA). It allows large electricity consumers² in the Philippines to source their electricity from any retail electricity supplier in the electricity market. Contracts will be made between consumers and the retail supplier (Business-to-business, B2B). The RCOA ensures "open access" to a power network, and allows distribution and transmission grids to be used as a means to transport the traded electricity under the B2B scheme.

As of November 2012, ERC reported that there are 1,574 bulk users who are qualified to source their electricity supply from any generator on the electricity market.

Note 1: The term power supply agreement (PSA) used in the Philippines has different meaning from similar terms applied in other part of the world. Here, PSA means an agreement that power generator supply electricity to power utility. The term PSA in some other country mean a contract of electricity supplied by utility to consumers

Note 2: During the initial implementation of RCOA, large consumer is defined as an end-user with a monthly average peak demand of at least 1 MW for the preceding 12 months. After some certain time the definition of demand level will be gradually decrease to allow more consumer to participate in the scheme.

About the Guidelines



In recent years, ASEAN member states (AMS) made considerable effort to tap into the vast wealth of renewable energy (RE) resources in the region. Several countries introduced feed-in-tariffs (FIT) or regulations for RE as well as other supportive policies, for example tax and customs exemptions or tax holidays.

Despite those efforts and some promising developments, a large scale market for RE applications has not yet been set in place in the region. In particular, complex administrative procedures, lack of transparency in the project cycle and permitting procedures as well as insufficient access to financial resources can be identified as important obstacles to an effective market and industry development.

The ASEAN RE Guidelines are developed to facilitate an increase in private sector activity and investment in the RE sector of the ASEAN region. Since the confidence of project developers and investors is needed in order to boost region-wide RE deployment, the provision of transparent project development and permit procedures is a necessity.

To this end, the Renewable Energy Support Programme for ASEAN (ASEAN-RESP), jointly implemented by the ASEAN Centre for Energy (ACE) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), is developing a comprehensive, easy-to-access and regularly updated online tool which includes complete information on ideal RE project development cycles in the respective countries. The ASEAN RE Guidelines:

- highlight administrative procedures, including requirements for project developers and/or investors;
- list legal and regulatory provisions as well as necessary permits;
- identifies country-specific challenges for project development; and
- provide information on how to obtain financial closure.

The ASEAN RE Guidelines are designed as close as possible to fit the needs of project developers and potential investors, as well as promote transparency and clarity in the RE projects' pathway. The Guidelines lead through the various procedures and help identify risks embedded in each step, all so that proper mitigation measures can be designed and implemented.



About the Guidelines

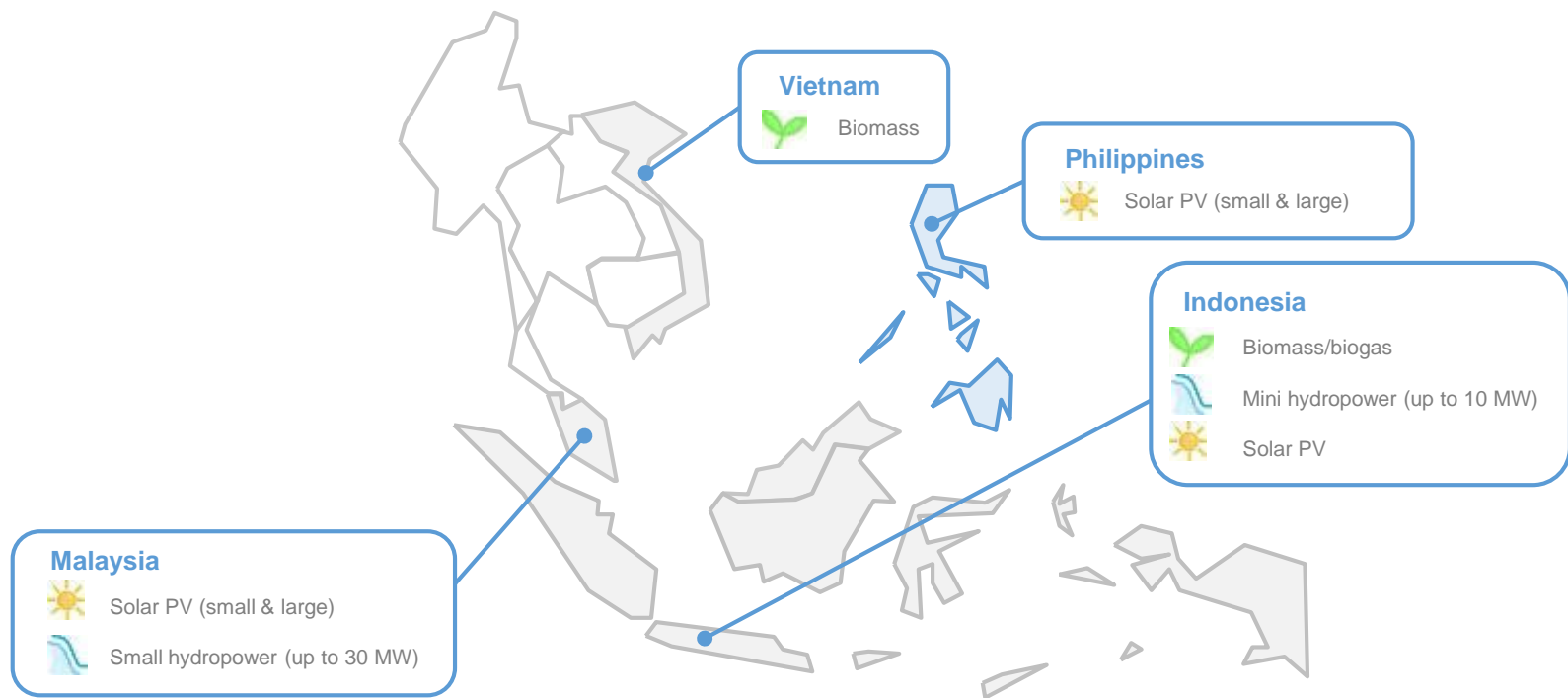
ASEAN RE Guidelines

This Guideline

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The ASEAN RE Guidelines are developed for different technologies in several ASEAN member states. A precondition is that a clear legal framework exists and that minimum market readiness exists. The ASEAN-RESP is working closely with relevant organisations and projects in the respective member states in order to ensure quality, completeness and accuracy of data.

Against this background, ASEAN-RESP developed the Guideline on “Large Solar Photovoltaic (PV) Project Development in the Philippines”. This guideline covers solar PV installations with an installed capacity of over 100 kWp. A sister guideline, “Small Solar PV Project Development in the Philippines”, covers solar PV installations below 100 kWp and focuses on a net-metering scheme.



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About the Guidelines

The Department of Energy (DOE) together with the Deutsche *Gesellschaft für Internationale Zusammenarbeit* (GIZ) under the “Support of the Climate Change Commission” (SupportCCC) project funded by the International Climate Initiative of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB; *Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit*) developed the Solar Photovoltaic (SPV) Guidebook to provide a clear overview of the administrative and regulatory requirements for on-grid solar PV project development in the Philippines. The SPV Guidebook was later split into two electronic guidebooks (E-Guidebook) under the ASEAN RE Guidelines Initiative: (i) Large Solar PV Project Development in the Philippines and (ii) Small Solar PV Project Development in the Philippines.

The E-Guideline for small solar PV provides guidance to RE developers in the development of a solar PV system under three business schemes. It also gives information to decision makers within the Philippines’ energy sector and other stakeholders to ensure efficient administration and timely implementation of solar PV projects in the Philippines. It is the goal of guideline developers that recommendations for policymakers can be formulated, based on the information given by the guidelines, on how administrative procedures can be improved o increase private investment and market activity in the Philippine solar PV sector.

Legal and administrative milestones and procedures are analysed in order for them to fulfil the conditions for availing incentives and other privileges as specified in Chapter VII of the Renewable Energy Act of 2008 (Republic Act 9513) and in Section 18 of the Implementing Rules and Regulations (IRR) of the Republic Act 9513.

This guideline is integrated into the online ASEAN RE Guidelines platform, developed by ASEAN Centre for Energy (ACE) and the Renewable Energy Support Programme for ASEAN (ASEAN-RESP). The guideline is catering to this effort and will be used as part of regional knowledge sharing. Further information is available at www.re-guidelines.info.

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ASEAN RE Guidelines

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The scope of the guidelines are as following:

Project characteristics

The guideline covers solar PV project with a capacity above 100 kWp and only a grid-connected project.

In the Philippines' context, the "grid" means a backbone high-voltage power network that is operated and maintained by National Grid Corporation of the Philippines (NGCP). So, "grid connection" means a connection of a system to the said grid. This also includes a connection of a system to a distribution network which connected to NGCP's transmission network. In general, most projects located in the three main islands (i.e. Luzon, Visaya, and Mindanao) and some smaller islands (e.g. Samar, Leyte, Cebu, Negros, Mindoro and Panay islands) can be considered as on-grid system.

Transmission and distribution networks in other small islands may not be operated by NGCP. Therefore, systems connected to such networks are defined as "off-grid system". They are not included in the scope of this guideline as they have their own particular models and different milestones. A project on following islands are considered as an off-grid system: Palawan, Masbate, and others.

The "on-grid" and "off-grid" definitions are important. Project developer must be aware of the fact that although a power plant is connected to the local grid in the area, it may be considered as off-grid project.

Technical Aspects

A large solar PV project with a capacity above 100 kWp is usually a ground-mounted system, not a rooftop installation, Therefore, the technical parts of this guideline covering site selection, construction and installation, etc.. are formulated to explain in detail the development of a ground-mounted system.

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About the Guidelines

Business Models

Three major business models, which are foreseen according to the RE Act and the Implementing Rules and Regulations (IRR) are briefly outlined:

- Projects availing the Feed-in Tariff (*FIT Scheme*); Section 7 of the RE Act
- Power supply agreements with Distribution Utilities in On-Grid Areas (*PSA Scheme*); Section 6 of the RE Act
- Power supply agreements with commercial bulk consumers (*B2B Scheme*); Section 9 of the RE Act together with Section 31e of the Electric Power Industry Reform Act (EPIRA)

Another possible business model in the Philippines is a solar PV project under the net-metering scheme. However, this type of system is limited to 100 kWp. This is described in detail by “small solar PV project development in the Philippines” guidebook, a sister publication.

Project cycles

This E-Guidebook aims to cover the entire spectrum of project development, from site selection until operation and maintenance. In the Philippines, RE project development can be divided into the four following phases:

- Phase 1: Project preparation (including selection of site and business model)
- Phase 2: Predevelopment
- Phase 3: Development and commercialisation
- Phase 4: Registration and connection

About the Guidelines

However, in order to cover the entire project development cycle, this E-Guidebook introduces an additional phase:

- Phase 5: Operation and Maintenance

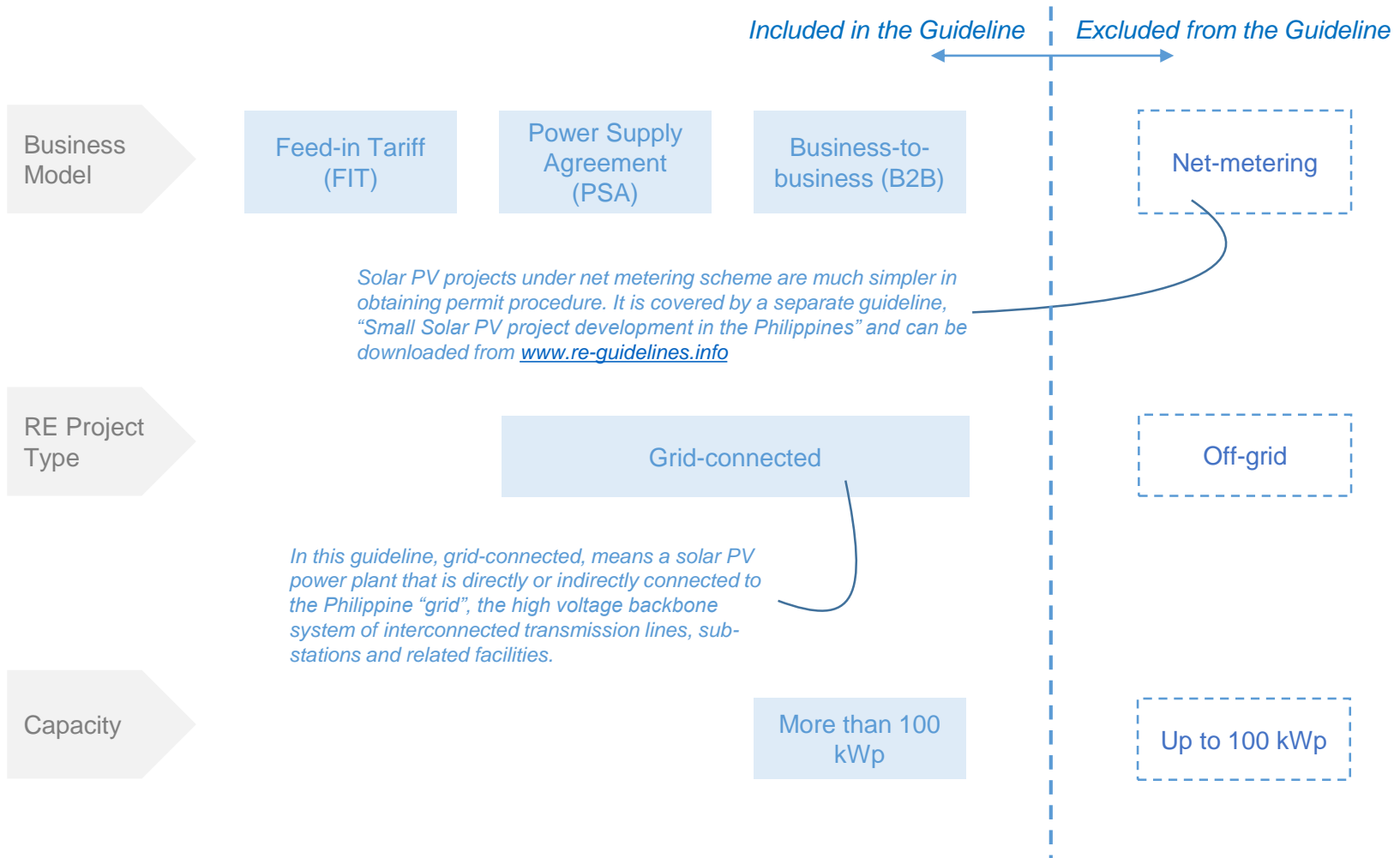
As there are not many solar PV projects in the Philippines at the moment, not much in the way of lessons learned and experience can be collected from the field. Therefore, in the first edition of this guidebook, the Operation and Maintenance (OPM) step does not contain detailed information. After more information becomes available and can be collected, more details will be provided on the OPM step in the next edition of the guideline.

Sub-step's details

The information provided for each step or sub-step are:

- Legal framework – Laws and regulations that are relevant to particular step of project development
- Reference documents – The documents or sources of information that are not legal documents e.g. study, report, website that contain useful information etc.
- Involved authorities from different level – The authorities or government institutions that directly involved in particular sub-step
- Applied procedures
- List of required documents – The list of documents that must be prepared and submitted to authorities in particular sub-step
- Incurred fees – Official fee according to the regulation that must be paid to authorities in each sub-step (if any)
- Challenges and recommendations – Challenges associated in each step and recommendations how to overcome them

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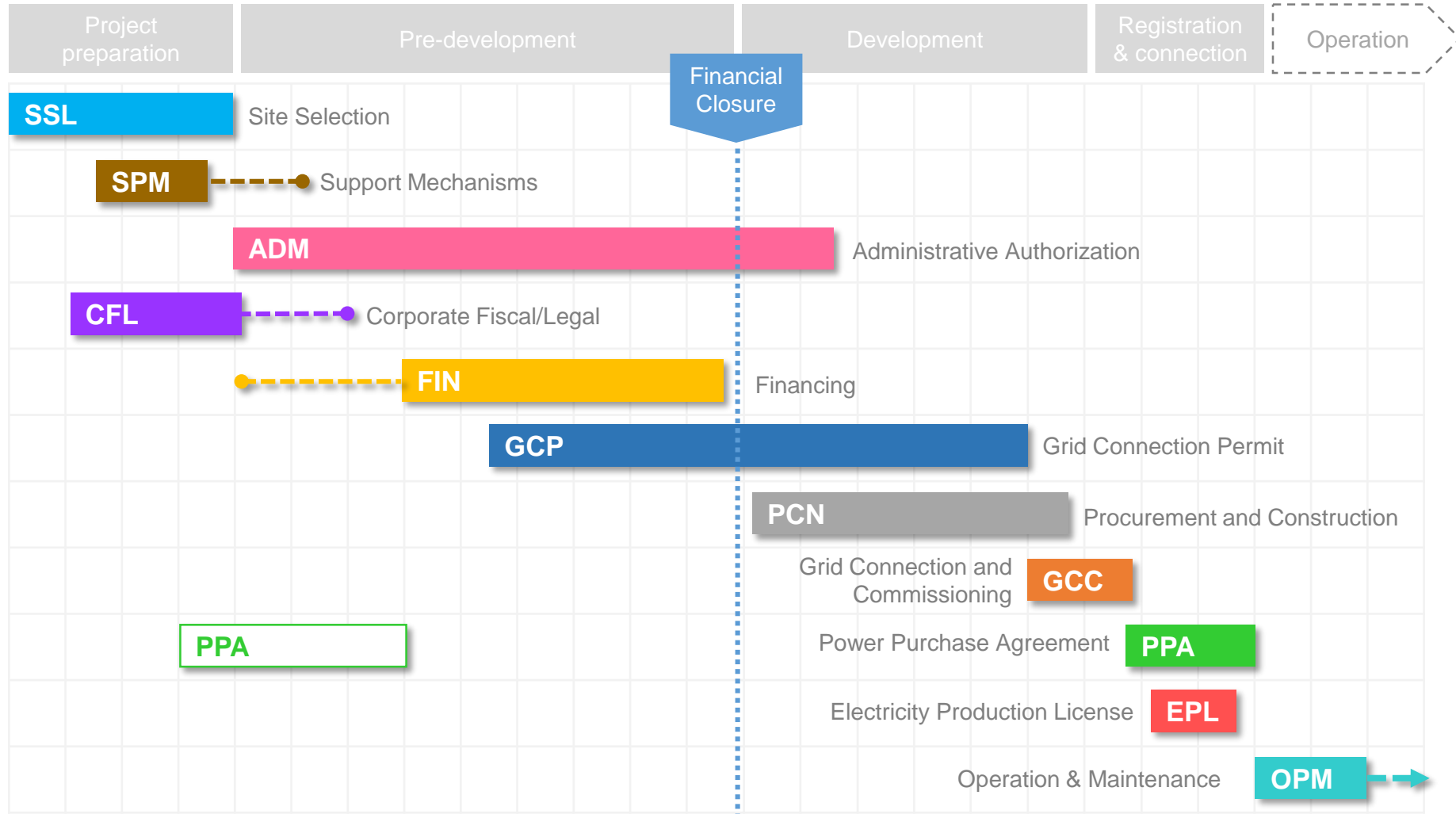
Procedures: Step-by-Step

Large Solar PV Project Development in the Philippines

Gantt's Chart

Flow Chart

Description



Note: The bar length on the Gantt's chart is not to scale. It should be used for qualitative comparison only.

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Procedures: Step-by-Step

Large Solar PV Project Development in the Philippines

Gantt's Chart

Flow Chart

Description

Project preparation

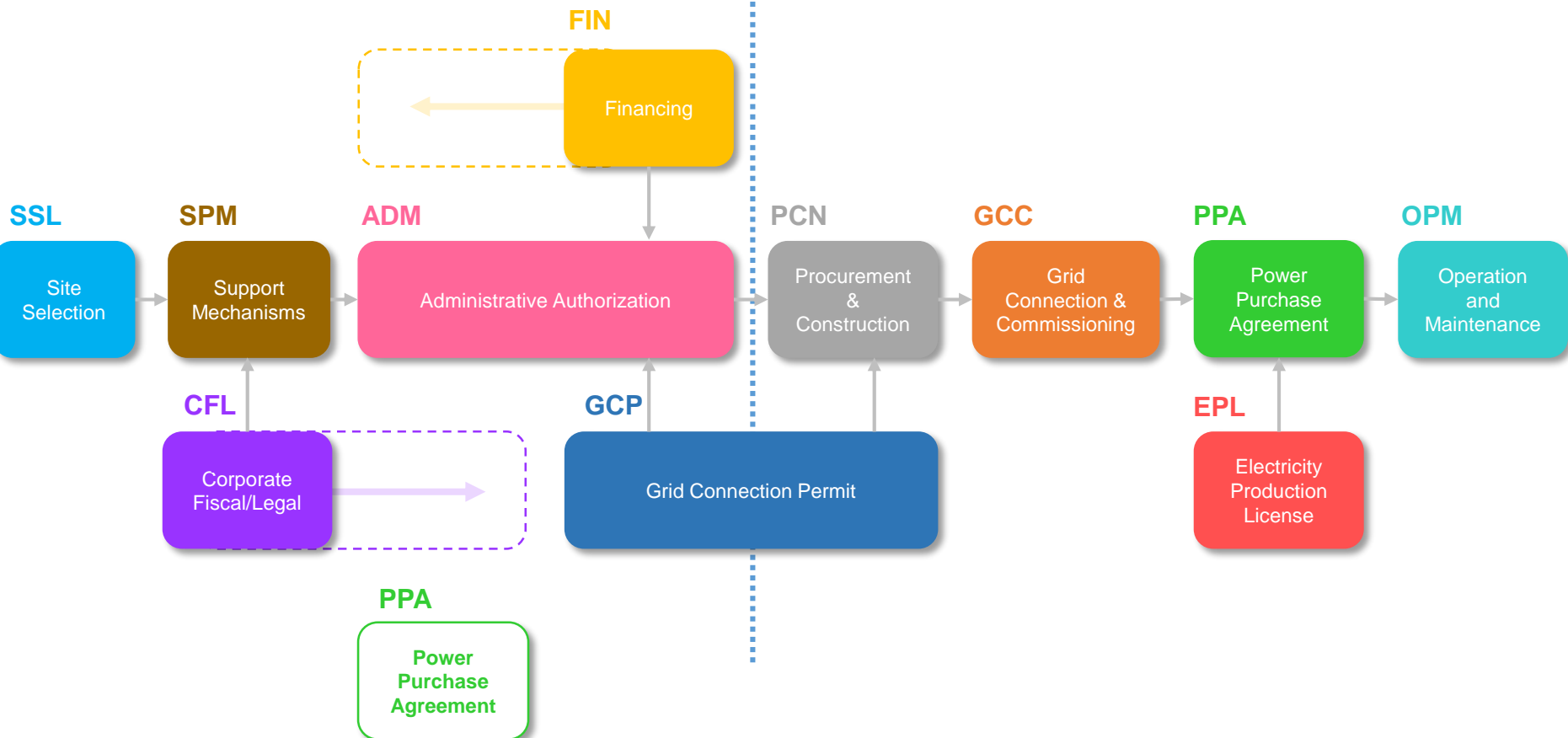
Pre-development

Financial Closure

Development

Registration & connection

Operation



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Procedures: Step-by-Step

Large Solar PV Project Development in the Philippines

Gantt's Chart

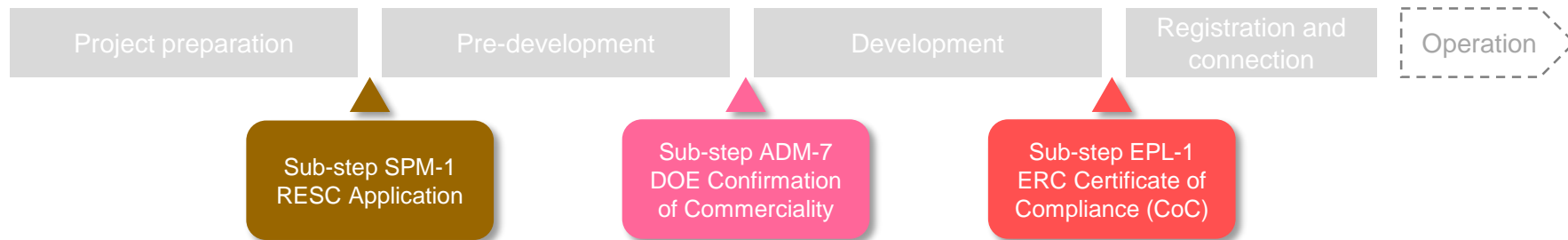
Flow Chart

Description

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The process for the development of on-grid SPV projects of the FIT, PSA, or B2B type is divided into four phases. They are: (1) project preparation, (2) pre-development, (3) development, and (4) registration and connection. The interfaces between these phases are marked by three major milestones of project development. The last phase, operation, was added to cover the entire project development cycle.



RE Service Contract (RESC) issued by the Department of Energy (DOE)

A service agreement between the Philippine Government through the DOE and RE developer, allowing exploration, development or utilization of renewable energy resources and actual operation of RE systems/facilities converting RE resources into useful energy forms, e.g., electricity.

Confirmation of Commerciality issued by the DOE

With the Confirmation of Commerciality, DOE approves the successful completion of the pre-development stage of the project and converts the RESC to the development stage.

Certificate of Compliance issued by the Energy Regulatory Commission (ERC)

A certificate given to a RE Developer to engage in the operation of a power plant facility used to generate electricity pursuant to Section 6 of R.A. 9136 and Section 4 of the Implementing Rules and Regulations of R.A. 9136. No person may engage in the generation of electricity as a generation company unless it has secured a Certificate of Compliance (CoC) from the ERC to operate facilities used in the generation of electricity.

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Procedures: Step-by-Step

Large Solar PV Project Development in the Philippines

Gantt's Chart

Flow Chart

Description

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Project Preparation

In this stage, the RE developer determines a suitable location for RE project development (**SSL**; Site Selection). The necessary collection of data / information must be done, along with desk studies and site surveys. A feasibility study (F/S) must also be prepared.

Permission to develop a RE project in the Philippines is given by the so-called “blocking system”. RE developer must apply for a RE service contract (RESC) at the Department of Energy (DOE). This is to avail necessary supporting mechanisms (**SPM**; Support Mechanisms) for their RE project.

Pre-development

The RE developer may form a company to conduct the project development (**CFL**; Corporate Fiscal / Legal). This must be done early on as the documents regarding the company's establishment are required in an application of several permits / licenses.

Numerous permits or licenses must be obtained from various authorities (**ADM**; Administrative Authorization) e.g. the Department of Environment and Natural Resources (DENR), the Department of Agrarian Reform (DAR), the National Commission on Indigenous People (NCIP), the Department of Energy (DOE), and local governments unit (LGU) etc.

Financial support must be secured and mobilised from local bank(s) (**FIN**; Financing). A financial closure must be reached in order to commence physical construction and equipment procurement.

The RE developer must also approach power utilities to obtain necessary licenses and agreement to connect and use their networks (**GCP**; Grid Connection Permit)

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Procedures: Step-by-Step

Large Solar PV Project Development in the Philippines

Gantt's Chart

Flow Chart

Description

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Development

After the financial closure, equipment procurement and physical construction of the solar PV power plant can begin (**PCN**: Procurement and Construction).

When the progress of the power plant's construction reaches 80%, a final inspection can take place (**GCC**; Grid Connection and Commissioning)

Registration and Connection

Several permits / certifications must be obtained from authorities before the power plant can begin its commercial operation. In the case of an RE project under a feed-in tariff scheme (FIT), a certificate of FIT endorsement (COE) must be obtained from DOE. In instances of an RE project under a power supply agreement (PSA), ERC approval is required (**PPA**; Power Purchase Agreement)

The RE developer must obtain a certificate of compliance (COC) from the Energy Regulatory Commission (ERC) in order for the power plant to generate electricity (**EPL**; Electricity Production License)

Operation

To ensure a long life for the solar PV power plant, appropriate operation and preventive maintenance measures must be planned and implemented. (**OPM**; Operation and Maintenance). However, due to a lack of reference projects at the time of publication, this part is not included in this edition of the guideline.

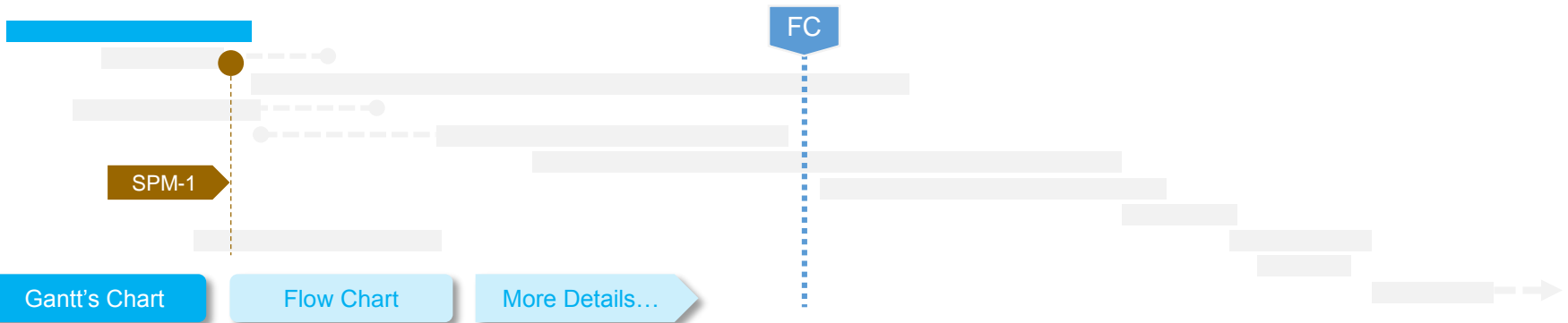
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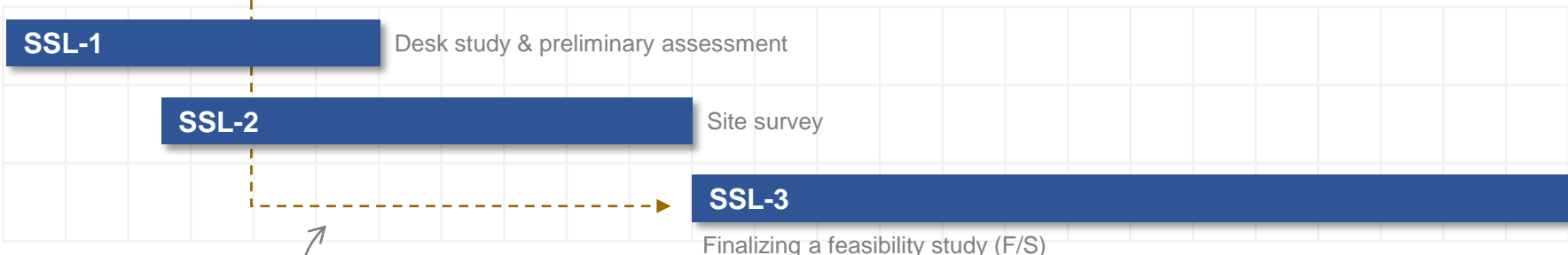
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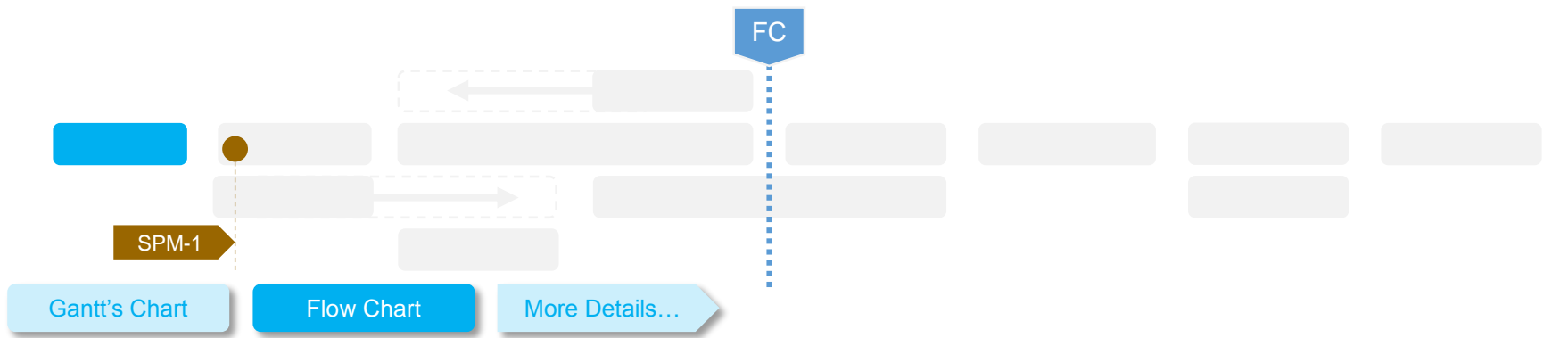
SSL | Site Selection



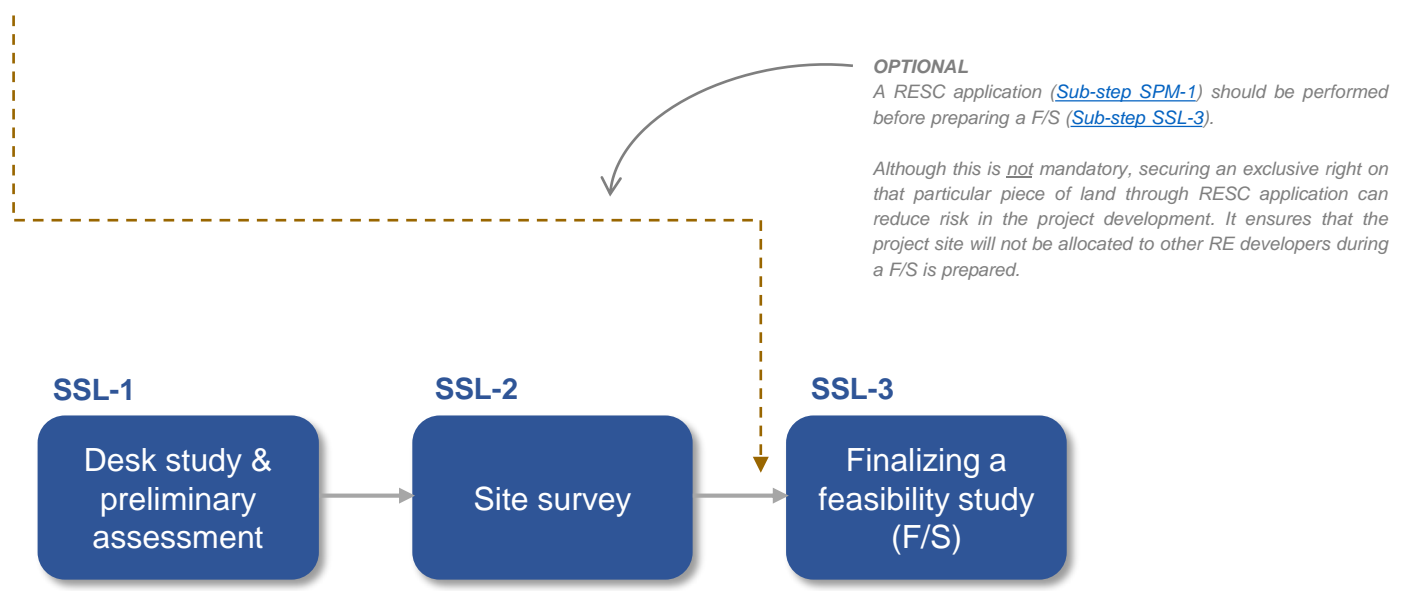
OPTIONAL
 A RESC application ([Sub-step SPM-1](#)) should be performed before preparing a F/S ([Sub-step SSL-3](#)).

Although this is not mandatory, securing an exclusive right on that particular piece of land through RESC application can reduce risk in the project development. It ensures that the project site will not be allocated to other RE developers during a F/S is prepared.

RESC: Renewable Energy Service Contract



SSL | Site Selection

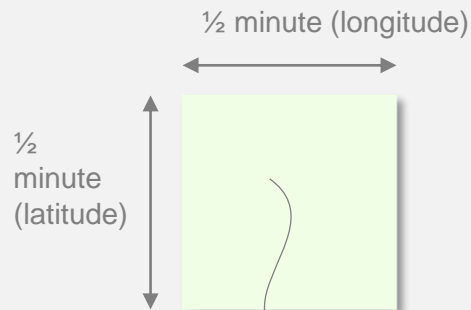


Step Description

The first step for a solar PV project development is to find the right spot to construct a power plant. Several factors must be taken into account, e.g., land use zoning, accessibility and availability, cost of land acquisition, business model of the project, peace and order situations, relationships with concerned parties, etc. In the Philippines, the "*RE blocking system*" is used to allocate areas for RE project development.

The RE developer must collect necessary information / data, allowing for a desk study and assessment ([Sub-step SSL-1](#)) to be conducted with the highest level of accuracy. For a solar PV project in the Philippines, crucial information and data are, for example: maps showing available and occupied RE blocks, the utility's cost of power generation in the area, local grid capacity including future development / expansion plan, solar irradiance data etc. A site survey ([Sub-step SSL-2](#)) must be conducted after the desk study, allowing the RE developer to verify the accuracy of the results of the desk study and assessment, as well as check the actual condition at site (e.g. actual measurement of solar irradiance, road access, surrounding infrastructure and facilities etc.). Finally, a feasibility study (F/S) shall be prepared ([Sub-step SSL-3](#)).

What is the Philippine's "RE Blocking System"?



81 Hectares

The RE Blocking System in the Philippines is a subdivision of the Philippines's territory by the Department of Energy (DOE), into meridional blocks of half minute of latitude and half minute of longitude with Geographic projection and datum of the Philippines Reference System (PRS) from 1992. Each block has an area of 81 hectares, along with a designated block number.

Step Description

Although not mandatory, the Supporting Mechanisms (**SPM**) step may be done in parallel with this step. An RE developer can apply for a RE Service Contract (RESC) with the Department of Energy (DOE) ([Sub-step SPM-1](#)) for the pre-development phase as soon as the project site has been determined. By obtaining an RESC, the RE developer can thereby secure exclusive rights to explore and perform a feasibility study (F/S) on that particular tract of land.

... Gantt's / Flow Chart

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Related Regulations

Regulation No.	Name
-	-

No regulations governs this step (as of October 2014)

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... Gantt's / Flow Chart

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Related Documents

Document Name	Description
Renewable Energy Law Booklet	The book, published by the Department of Energy (DOE), contains a collection of the RE Act of 2008 (R.A. 9513) and its related implementing regulations.

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Identified Challenges

Availability of the site for solar PV project development

An RE developer may not be able to legally acquire an area for the PV installation due to a variety of reasons, e.g., unwillingness of the property owner to sell / rent their land, land ownership issues, right-of-way concerns, etc.

Furthermore, locations for RE project development in the Philippines are allocated to RE developers according to the "*RE blocking system*". Each block is reserved for one RE developer on a first-come-first-serve basis. For late applications, an RE developer may not have the right to develop the project in the desired area as it has already been allocated to another party. In such a case, a new location must be searched for, resulting in more expenditures.

Recommendation: RE developers should dedicate a sufficient time and effort to approach land owners and check the land's status at the project site. RE developers should also check the list of existing RE projects in the pipeline. This can lower the risk that the planned RE project is on an occupied RE block. As soon as the project location has been determined, the RE developer in question should apply for a RE Service Contract (RESC) to secure an exclusive right to explore and perform a feasibility study (F/S) on that RE block.

Identified Challenges

Remote site	<p>A good site for solar PV project development may be located in a remote area. With high costs for building roads and transmission lines, the project may not be economically feasible.</p>
Poor quality of the feasibility study (F/S)	<p>A F/S may not be reliable or accurate as it is poorly developed. This can cause problems in the financial viability of the project in subsequent steps, e.g., during construction and installation.</p> <p><u>Recommendation:</u> RE developers must be careful in choosing the right consultant to develop a project F/S. Only a consultant with sufficient experience and a good track record should be considered. RE developers shall closely monitor the F/S preparation.</p>
Land use conversion	<p>If the identified project site falls under a land use zone that is not categorised as industrial land, RE developers must perform a land conversion process. This can be very time consuming and complicating.</p> <p><u>Recommendation:</u> RE developers should first focus on sites which do not require any land conversion. However, if they want to proceed with the RE project development in an area where land conversion is required, comprehensive cost and time estimation must be made and included in the overall project planning.</p>

Desk Study & Preliminary Assessment

Sub-step Details

RE developers shall collect necessary information from various sources. Important information includes, among others:

- **Maps showing available and occupied RE block**

As the allocation of area for RE project development is in accordance with the Philippines *“RE Blocking system”*, it is important to know which areas are still available for project development.

- **Utility's cost of power generation in that area**

Cost of power generation in the area is important for the financial analysis of the RE project. Information of the cost of electricity generation is readily available. This information can be obtained from the local electric distribution utility or company of the targeted project solar PV installation site.

- **Grid capacity in the area**

Grid access is major criteria for any large scale RE project. The developer should approach the relevant power utilities in the area for this information. The RE developer should be aware of future grid development and expansion plans in the area as well.

How is power generation cost in the Philippines determined?

The cost of power generation in the Philippines varies from one area to another. Electricity price and cost structure are determined and approved by the Energy Regulatory Commission (ERC). The factors, considered by the ERC to determine the price of electricity, include:

- type of power generation source (e.g. diesel, hydro, geothermal, gas, coal, RE, etc.)
- investment
- operating and maintenance
- financial parameters (e.g. return of investment; ROI)
- transmission and distribution costs
- etc.

Desk Study & Preliminary Assessment

Sub-step Details

▪ Solar resource irradiance data

Solar irradiance data and sunlight hour are important information for any solar PV project. There are many online sources which the RE developer can refer to during a preliminary study. The National Renewable Energy Laboratory (NREL) reveals the annual insolation 3.6 kWh/m²/day ^[1]. The study revealed that the spatial variation of the solar resource across the Philippines in any given month is low (approximately 10% to 20%), while the variation between the wet and dry seasons is quite high (30% to 50%). Thus, the solar energy resource of the country is affected by the monsoon system. Further, detailed data can be accessed from the Philippine Atmospheric, Geophysical & Astronomical Services Administration (PAGASA), the country's weather bureau. However, RE developers should not rely too heavily on satellites data. Actual measurements on sites are necessary during site visits ([Sub-step SSL-2](#))

A local consultant should be contracted to support with the project development from the outset. Typically, local consultants with sufficient experience will know how to obtain mentioned information / data.

[1] Science Garden

Site Survey

[Sub-step Details](#)[Recommendations for site survey](#)

After a desktop study and preliminary assessment ([Sub-step SSL-1](#)) have been performed, RE developers should be able to screen out some locations that are not suitable for the RE project development. The remaining sites should be visited in order to investigate issues they were unable to cover during the desktop study.

Adequate planning and preparation are important and must be ensured even before the surveys. The RE developer may contract an expert to perform such a survey. Although not always necessary, this should be the same consultant who performs the desktop study. The purpose of the site survey should be made clear before each visit, and the list of items to be investigated / verified at the site must be prepared. After each site survey, a site survey report should be prepared.

Site Survey

Sub-step Details

Recommendations for site survey

The following are recommended issues / activities that should be checked and performed during the site survey.

- **Access to the site**

The following questions should be addressed during the visit: How can the site be accessed? Can it be accessed year round? What are the possible modes of transportation? What is the carrying capacity (man & goods) of each mode of transportation?

- **Local assessment on solar resource**

- Inconsistency of solar irradiance data between actual and satellite data can be a problem. Therefore, RE developers must perform an actual ground measurement at the site to check if the satellite data is still valid for that particular location. Furthermore, some issues that cannot be visualized during the desktop study should be checked, e.g., shadow assessment, surrounding structures that may obstruct the solar radiation, etc.

- **Suitability of the site for civil construction**

The grade (level) of the location/terrain, type of soil and its strength, and topography of the site should be prepared.

- **Visit to local community / authorities**

Some local authorities can be approached during the visit. They may be able to provide useful information and offer helpful insights. However, RE developers must make it clear to the involved parties that the project is still under investigation and may or may not take place in the area. This is to avoid having the expectations from the local community / authorities being too high.

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Finalizing a Feasibility Study (F/S)

[Sub-step Details](#)[Recommendations on F/S](#)

Once the site survey is complete ([Sub-step SSL-2](#)), RE developers shall compare all sites and assess them based on the defined criteria. The final decision shall be made on the project location. As soon as the project location has been determined, the RE developer should perform a RESC application immediately ([Sub-step SPM-1](#)) to secure exclusive rights on that particular location (securing a *“RE block”*).

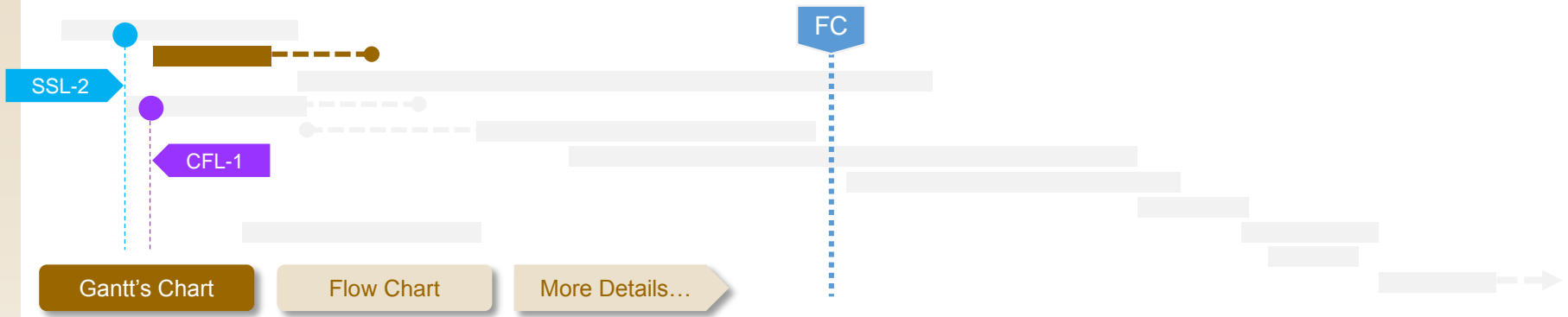
A feasibility study (F/S) shall be prepared on the selected location. This is the last sub-step under the Site Selection ([SSL](#)) step. F/S is a comprehensive analysis of the potential of an RE project. This is a very important document that must be prepared carefully. RE developers should secure the services of an experienced consultant to carry out this task. Ideally, this should be the same consultant that performs the site survey.

Finalizing a Feasibility Study (F/S)

[Sub-step Details](#)[Recommendations on F/S](#)

Typically, a feasibility study (F/S) report for a solar PV project should contain the following information:

- Background of the project
- Project specification i.e. installed capacity [*kWp*], footprint area, types of PV module & tracking system (if any) etc.
- Financial analysis, including estimated investment cost, return of investment (ROI), annual energy sale revenue, payback period
- Calculated annual energy yield [*GWh or MWh*]
- Location of grid connection
- Layout of the power plant
- System diagrams showing all major components
- List of identified risks in the project development
- etc.



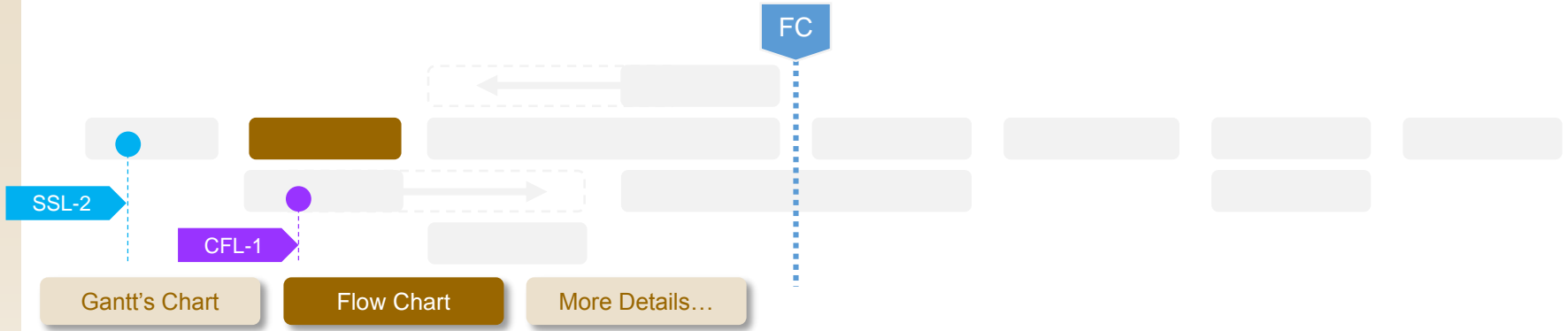
SPM | Support Mechanisms



OPTIONAL
 After the site survey ([Sub-step SSL-2](#)), if RE developer has already determined the final project location, A RE Service Contract (RESC) application ([Sub-step SPM-1](#)) may be done immediately to secure an exclusive right on that particular piece of land.

OPTIONAL
 A special purpose company (SPC) may be established ([Sub-step CFL-1](#)) before a RE Service Contract (RESC) application to be done ([Sub-step SPM-1](#)). This allows the RESC to be granted directly to the SPC. However, it is possible that a SPC is established later on. In this case, RE developer's partner who is Filipino can initially apply for a RESC under his/her name. The name change on the RESC can be done later on providing that the Department of Energy (DOE) is informed.

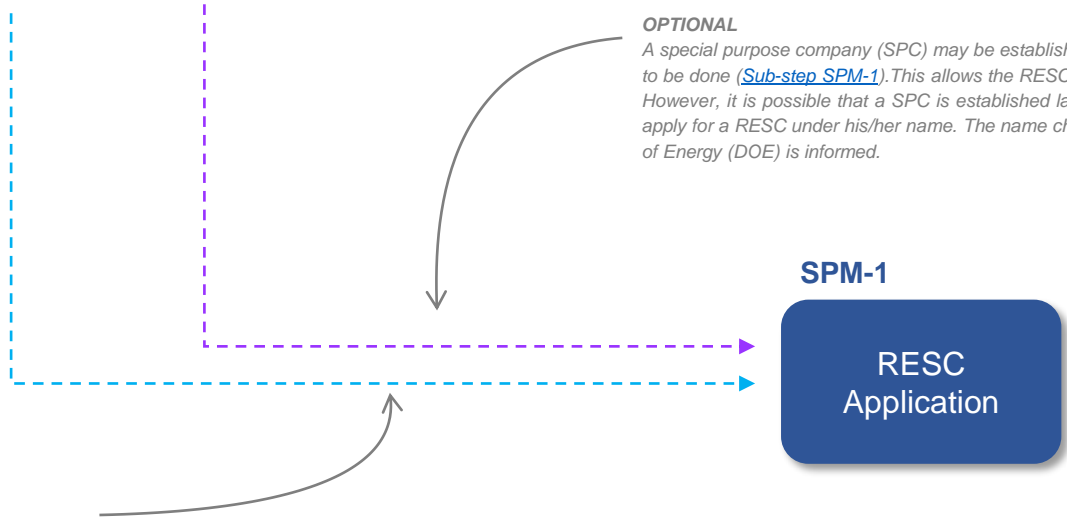
RESC: Renewable Energy Service Contract



SPM | Support Mechanisms

OPTIONAL

A special purpose company (SPC) may be established ([Sub-step CFL-1](#)) before a RE Service Contract (RESC) application to be done ([Sub-step SPM-1](#)). This allows the RESC to be granted directly to the SPC. However, it is possible that a SPC is established later on. In this case, RE developer's partner who is Filipino can initially apply for a RESC under his/her name. The name change on the RESC can be done later on providing that the Department of Energy (DOE) is informed.



OPTIONAL

After the site survey ([Sub-step SSL-2](#)), if RE developer has already determined the final project location, A RE Service Contract (RESC) application ([Sub-step SPM-1](#)) may be done immediately to secure an exclusive right on that particular piece of land.

RESC: Renewable Energy Service Contract

Step Description

In the Philippines, there are several supporting mechanisms for RE developers according to the RE Act of 2008 (Republic Act 9513) and Section 13 of the Implementing Rules and Regulations (IRR) of the RE Act (Department Circular no. 2009-07-0011 of the Department of Energy; DOE)

What incentives are available for RE developers in the Philippines?

Examples of these incentives include but are not limited to:

- Income tax holiday for the first seven years from the start of commercial operations
- Duty-free on importation of RE machinery, equipment, and materials during the first ten years from the issuance of a DOE's Certificate of Registration to an RE developer
- Tax credit equivalent to 100% of VAT and customs duties on imported products for machinery, equipment, materials, and parts purchased from a domestic manufacturer, fabricator or supplier
- Reduced realty tax rates on equipment and machinery

The most important support mechanism at the moment, particularly for a large solar PV project, is the feed-in tariff (FIT). The Philippines introduced its FIT when the RE Act was passed in 2008. The rules and the tariff rate were approved in 2012 by the Energy Regulatory Commission (ERC), allowing its implementation to commence. The RE Act give priority status to RE projects under the FIT Scheme, e.g., for grid connections, transmission, payment, etc. The electricity is to be purchased at a fixed rate (with a digression rate of 6%, starting from one year after the project is eligible for the FIT scheme) for at least 12 years.

The FIT rate for a solar PV project is PHP 9.68 (~ cent USD 22) per kWh, one of the highest FIT in the region. There is a quota for FIT scheme, which is defined as the installation target(s). For solar PV technology, the target is currently set at 500 MW (previously the target was set at 50 MW, but later increased in April 2014).

Step Description

To avail these supports, RE developers must first sign a contract with the DOE, allowing the project development to be performed on that particular tract of land. This contract is called an "*Renewable Energy Service Contract (RESC)*" or "*Solar Energy Service Contract (SESC)*" for a solar energy project. Essentially, it is a service agreement between the Philippine Government through the DOE and RE developer who is engaged in the exploration, development or utilisation of RE resources and/or operates systems / facilities which convert RE resources into useful forms of energy, e.g. electricity. The DOE's Certificate of Registration is an important document that will be requested by other government agencies during the Administrative Authorization (*ADM*) step.

The Renewable Energy Service Contract (RESC) is divided into two phase: (1) RESC for the pre-development stage and (2) RESC for the development stage. In this Supporting Mechanisms (*SPM*) step, the RE developer first applies for the RESC for the pre-development stage. The conversion of the RESC from the pre-development stage to the development stage will be done later ([Sub-step ADM-7](#))

Obtaining an RESC is a way to secure an RE block. RE developers should apply for an RESC ([Sub-step SPM-1](#)) immediately after the project location has been determined.

Related Regulations

Regulation No.	Name
Republic Act No. 9513 (2008)	Renewable Energy Act of 2008 <i>Full title: "An act promoting the development, utilization, and commercialization of renewable energy resources and for other purposes"</i>
Department Circular (DOE) No. 2009-05-0008	Implementing Rules and Regulations (IRR) of Republic Act no. 9513

DOE: Department of Energy

SPM | Support Mechanisms

... Gantt's / Flow Chart

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Related Documents

Document Name

Description

Renewable Energy Law Booklet

The book, published by the Department of Energy (DOE), contains a collection of the Renewable Energy Act of 2008 (Republic Act 9513) and its related regulations.

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Identified Challenges

Availability of the site for solar PV project development

Locations for RE project development in the Philippines are allocated to RE developers according to the "*RE blocking system*". Each block is reserved for one RE developer on a first-come-first-serve basis. For a late application, the RE developer may not have the right to develop the project in the desired area as it has already been allocated to another party. In such a case, a new location must be searched for, resulting in more expenditures.

Recommendation: RE developers should also check the list of existing RE projects in the pipeline. This can lower the risk that the planned RE project is on an occupied RE block. As soon as the project location has been determined, RE developer should apply for an RE Service Contract (RESC) to secure an exclusive right to explore and perform a feasibility study (F/S) on that RE block.

RESC Application

Sub-step Details

Required Documents

Incurred Fee

About RESC

An RE Service Contract (RESC) is a service agreement between the Philippine Government through the Department of Energy (DOE), and an RE developer who engages in the exploration, development or utilisation of RE resources and operation of RE systems / facilities converting RE resources into useful energy forms such as electricity. The DOE Certificate of Registration of the RESC is issued to the RE developer as proof of entitlement to incentives under the RE Act of 2008 (Republic Act 9513).

The RESC gives the RE Developer the exclusive right to explore, develop or utilise a particular RE contract area. It is divided into two stages: (1) pre-development stage and (2) development/commercial stage. In this sub-step, the RE developer applies for an RESC for the pre-development stage first. The conversion of an RESC from the pre-development stage to the development / commercial stage will be done in the DOE Confirmation of Commerciality ([Sub-step ADM-7](#)).

The procedure for the application of an RESC are as follows:

- The RE developer submits required documents to Renewable Energy Management Bureau (REMB) under DOE;
- REMB checks completeness of submitted documents;
- If the submitted documents are complete, REMB will issue an order payment to the RE applicant to pay the application fee. In instances where the submitted documents are incomplete, REMB will notify the RE developer to resubmit the complete document within 30 days. Failure to resubmit the complete documents within 30 days will result in the disqualification of the RE developer.

Related Authorities

Central government	<ul style="list-style-type: none"> ▪ Department of Energy (DOE) - Renewable Energy Management Bureau (REMB)
Local government	<i>(none)</i>

RESC Application

Sub-step Details

Required Documents

Incurred Fee

About RESC

- RE developer submits proof of payment
- DOE announces the RE developer's application on the DOE website (www.doe.gov.ph)
- DOE evaluates the RE's application and negotiates the terms and conditions of the RE contract. This process takes a maximum of 120 days. Legal qualification of the RE developer is reviewed first. Only if the RE developer is legally qualified, the technical and financial capability will be further evaluated.
- The review committee recommends the DOE Secretary regarding award of RE service contract.
- The RE developer is notified about the schedule of the RE contract signing ceremony.
- Signing of RESC
- DOE issues Certificate of Registration upon affectivity of the RESC

For a solar PV project, the official documents may be named “Solar Energy Service Contract (SESC)”. This is the same as the RESC.

RESC Application

Sub-step Details

Required Documents

Incurred Fee

About RESC

A | Legal Requirements

For Individual or Single Proprietorship

- Birth certificate
Note: This document must be duly authenticated by the National Statistic Office (NSO)
- Business permit *(certified true copy)*
- Department of Industry & Trade Registration *(if applicable)*

For Corporation/Joint venture/Consortium

- Securities Exchange Commission (SEC) Registration
Note: This document must be certified by SEC
- By-Laws & Articles of Incorporation
Note: This document must be certified by SEC
- Certification authorizing representative to negotiate and enter into RE contract with the Department of Energy (DOE)
- Business permit *(certified true copy)*
- Controlling stockholders and percentage of their holdings
- Organizational chart of the Company
- Parent/Subsidiary/Affiliates *(if applicable)*
- Company profile

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RESC Application

Sub-step Details

Required Documents

Incurred Fee

About RESC

B | Technical Requirements

- Track record or experience
- Work program with financial commitment per activities
- Curriculum Vitae (CV) of management and technical personnel
- List of consultant with corresponding contract between the developer and consultants showing respective qualifications
- List of equipment owned or leased by the company for the RE project

C | Financial Requirements

- Audited financial statement for the last two years and unaudited financial statement if the filling date is three months beyond the date of submitted audited financial statement
 - Bank certification to substantiate the cash balance
 - Projected cash flow statement for two years
- For newly-organized or subsidiary corporation with insufficient funds*
- Audited financial statement and duly notarized guarantee or letter of undertaking / support from the mother company.
- For foreign company*
- Audited financial statement and guarantee or letter of undertaking / support from duly authenticated by the Philippines Consulate Office that has consular jurisdiction over the parent said company

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RESC Application

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Required Documents

Incurred Fee

About RESC

D | Other Requirements

- Letter of Intent for RE Service Contract (RESC) application
- Duly accomplished RESC application form
- Map showing the applied area with information regarding the RE Blocking System
- Draft of RESC for the pre-development stage

RESC Application

Sub-step Details

Required Documents

Incurred Fee

About RESC

A | Application fee

Fixed application fee (per application)	PHP 1,600 <i>(USD 36)</i>
Area fee (per hectare of public domain area in the RE block)	PHP 6.50 <i>(US 15 cents)</i>

B | Processing fee

Processing fee (per application)	PHP 4,350 <i>(USD 99)</i>
----------------------------------	------------------------------

C | Signing Bonus

Depends on the size of project

D | Performance Bond

Depends on the capability of the RE developer

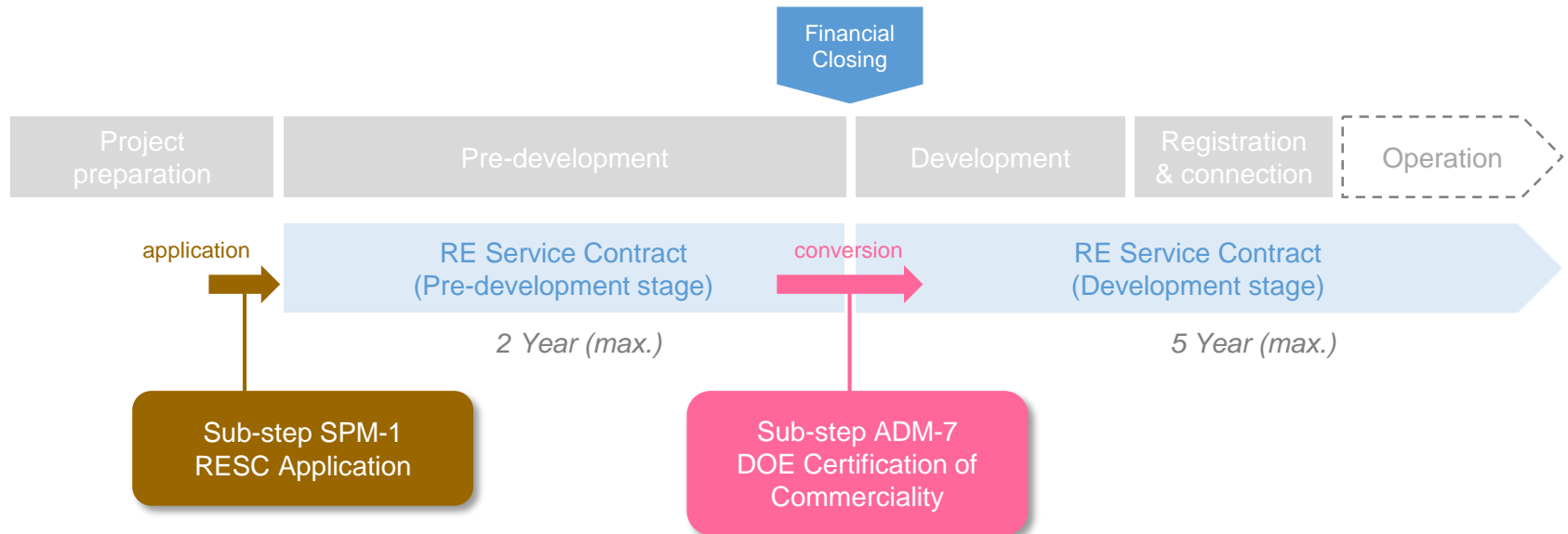
Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

RE Application

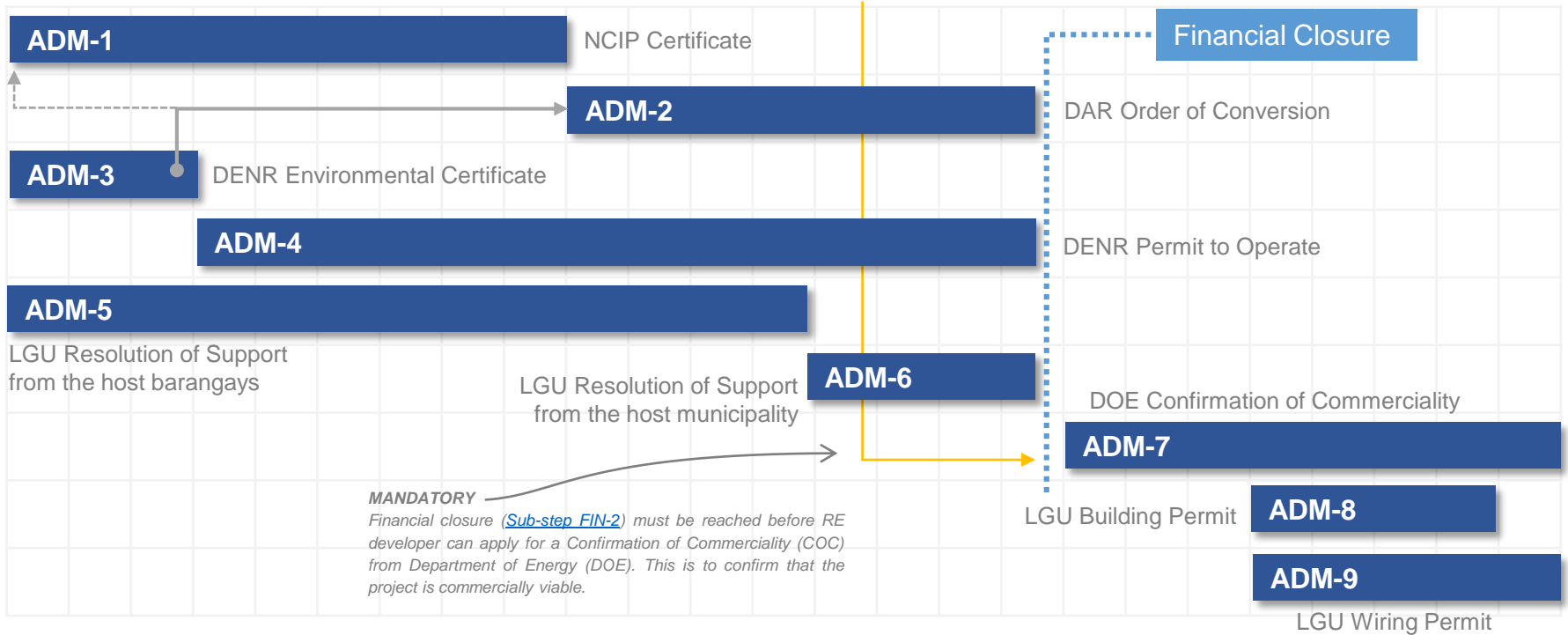
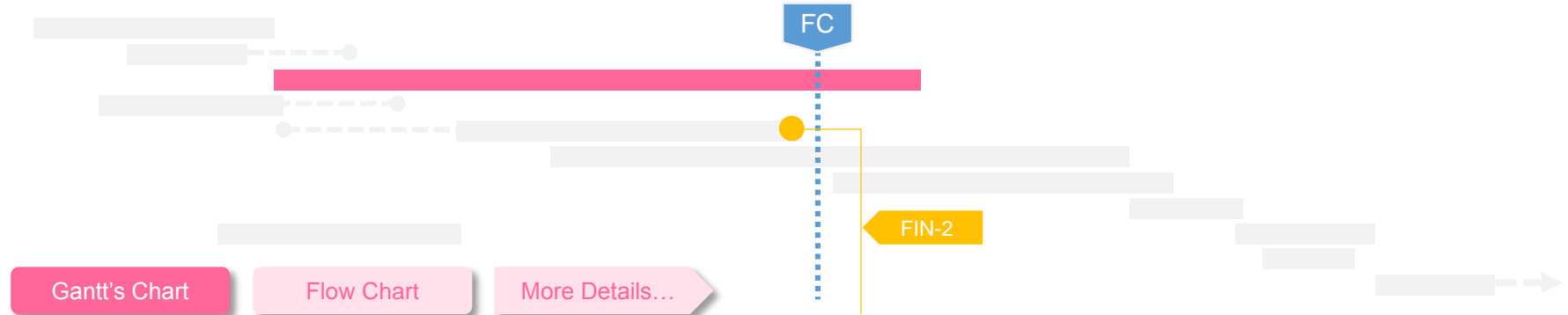
- Sub-step Details
- Required Documents
- Incurred Fee
- About RESC

The RE Service Contract (RESC) can be divided into two stages.

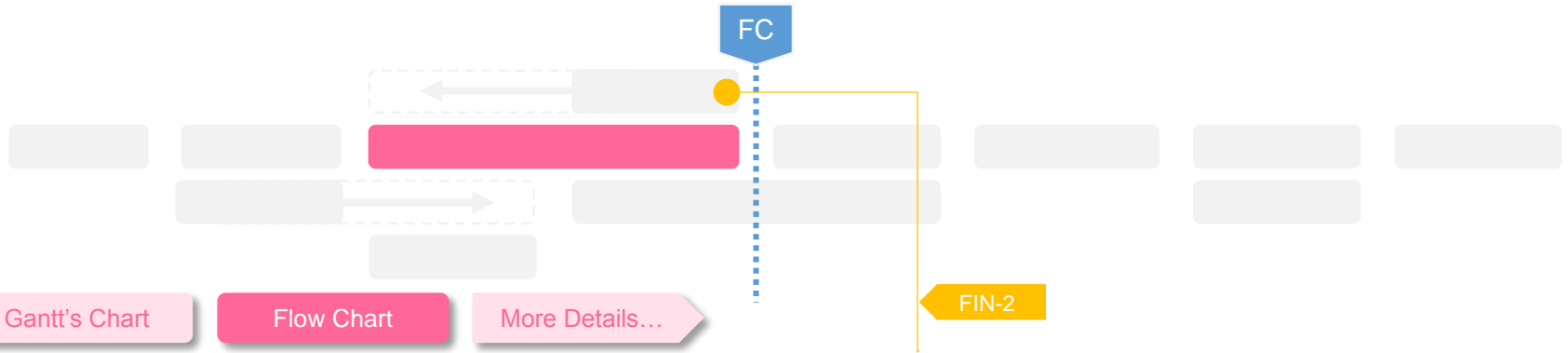
- **Pre-development stage** - This contract is used during the preliminary assessment and feasibility study until the financial closing of the RE project. Validity of the pre-development RESC is in general limited to two years.
- **Development/commercial stage** - This contract is used during the development, production or utilisation of RE resources, including the construction and installation of relevant facilities up to the completion of commissioning of the solar PV power plant. Validity of the development RESC is in general limited to five years.



ADM | Administrative Authorizations



DAR: Department of Agrarian Reform; DENR: Department of Environment and Natural Resources; DOE: Department of Energy; LGU: Local Government Unit; NCIP: National Commission on Indigenous People

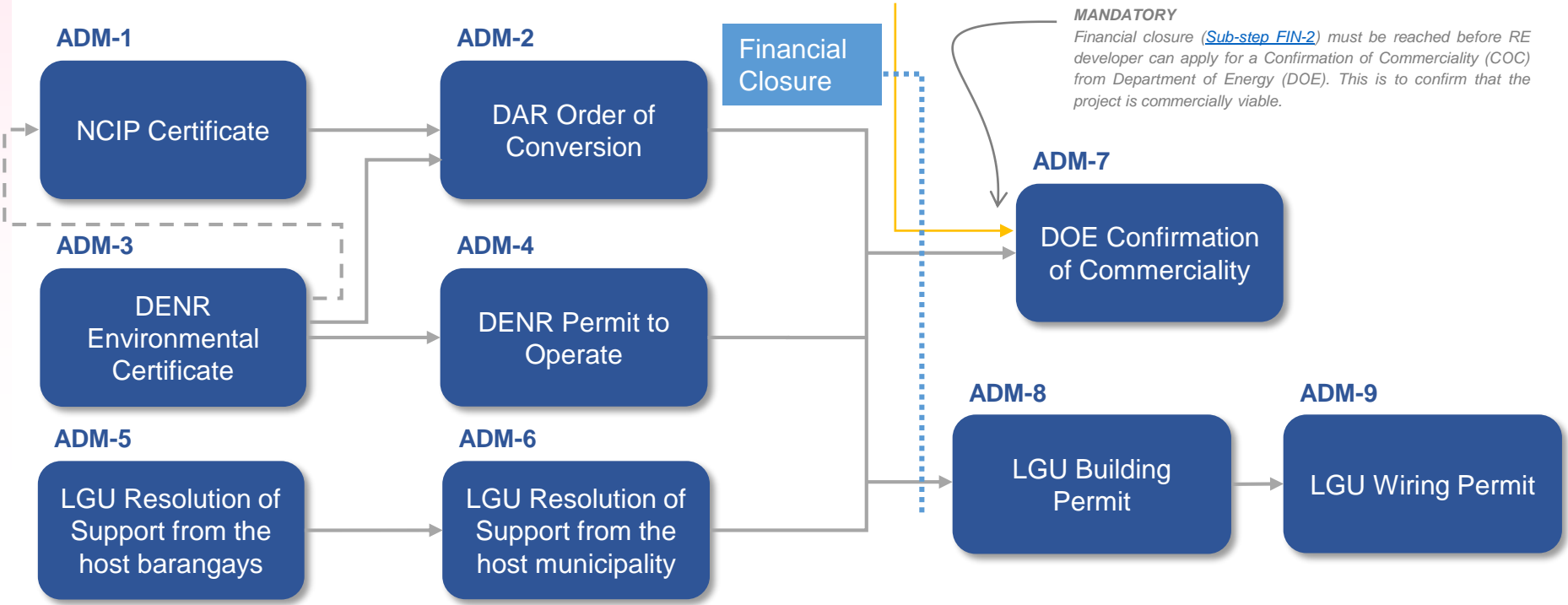


Gantt's Chart

Flow Chart

More Details...

ADM | Administrative Authorizations



DAR: Department of Agrarian Reform; DENR: Department of Environment and Natural Resources; DOE: Department of Energy; LGU: Local Government Unit; NCIP: National Commission on Indigenous People

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Step Description

Scope of this guideline

1. The guideline lists only the most important and crucial licenses in developing an SPV power project. It does not list all the necessary documents to establish, operate and maintain a business firm or entity in the Philippines as this is not the main focus of the guideline.
2. In the Philippines, the Local Government Code (Republic Act 7160) defines the standard procedures for acquiring various permits (e.g. business permit, construction permits, etc.) at the local level. The local government unit (LGU) is allowed to set its own procedure on and define incurred fees for required documents. Therefore, the exact procedures may differ from one place to another. Additional licenses and permits may be required in some cases. The developer must always re-check with the local government if additional fees, licenses or permits are needed.

The Administrative Authorization (**ADM**) step involves obtaining the necessary licenses or permits from various national and local government agencies. These authorisations cover many areas, i.e. indigenous people, local community, environment, land use, etc.

▪ Indigenous people

The National Commission of Indigenous People (NCIP) is mandated to protect rights, cultures and sites of indigenous people (IP) in the Philippines. The NCIP shall ensure that RE projects do not have a negative impact on IP. Several types of certificates can be issued by the NCIP. They are: (1) a Certificate of Non-Overlap (CNO), attesting that the area where the particular plan, programme, project or activity will be done does not overlap with, or affect, any ancestral domain; and (2) a Certification Precondition (CP) to the grant of Free and Prior Informed Consent (FPIC) by the concerned Indigenous Cultural Communities (ICCs) or Indigenous Peoples (IPs). RE developers must secure one of them depending on the project's location and its characteristics.

Step Description

▪ Indigenous people (cont.)

Normally, RE developers can apply for a National Commission on Indigenous People (NCIP) certificate right at the start ([Sub-step ADM-1](#)). This certificate will be required for an application for an Order of Conversion ([Sub-step ADM-2](#)) from the Department of Agrarian Reform (DAR). For a project in which an Environmental Impact Statement (EIS) is required¹, a DENR Environmental Certificate ([Sub-step ADM-3](#)) must be obtained first.

▪ Local communities

To ensure acceptance of a host community on an RE project, the RE developer must seek a resolution of support from the local populace through the respective local government unit (LGU). A resolution of support from the host barangay ([Sub-step ADM-5](#)) must be first obtained before an application for a resolution of support from the host municipality / city ([Sub-step ADM-6](#)). If required, a resolution of support from the province can then be obtained²

▪ Land use

A tract of land to be used for a solar PV project development must be converted into the appropriate land type for the purposes of power plant construction. If the project site has not yet been classified as an industrial land, a Land Use Conversion must be performed. An Order of Conversion ([Sub-step ADM-2](#)) must be obtained from the Department of Agrarian Reform (DAR).

Some RE developers have gone in different manner because of their resources, style, opportunities, etc. Depending on the location of the site and the land use on site, additional clearance may be required from development authorities, e.g., the National Forest Management Bureau (FMB) and the Laguna Lake Development Authority (LLDA).

Note 1: The EIS is required for a large power plant with installed capacity above 100 MW

Note 2: It is not required by the regulation to obtain a resolution of support from the respective province. However, some RE developer secure it as well just to be on a safe side.

Step Description

▪ Environment

To ensure that a solar PV project is environmentally friendly, two certificates must be obtained from the Department of Environment and Natural Resources (DENR).

First, RE developers must first obtain a DENR Environmental Certificate ([Sub-step ADM-3](#)), confirming that the project does not cause any negative environmental impact to the extent considered as unacceptable. Depending on the size of the RE project, different types of certificates are required, e.g., a Certificate of Non-coverage (CNC) for projects smaller than 5 MW; an Environmental Compliance Certificate (ECC) with initial environmental checklist for a 5-100 MW project; and an ECC with an Environmental Impact Statement (EIS) for projects with more than 100MW installed capacity. The processes are also different, depending on the project's characteristics: (1) A project outside the purview of the Philippines' EIS system; (2) an environmentally-critical project (ECP); or (3) a project located in an environmentally-critical area (ECA).

The second permit that must be obtained from the DENR is a Permit to Operate ([Sub-step ADM-4](#)). It confirms that the power plant does not emit air pollution above the set limit. Even if it is clear that a solar PV power plant does not emit any air pollution, a DENR Permit to Operate is still required based on the current regulatory framework. However, the application procedure, processing time, and the list of things required are much more simple for a solar PV project.

Step Description

▪ DOE Confirmation of Commerciality

As mentioned in the Support Mechanisms (**SPM**) step, RE developers obtain an Renewable Energy Service Contract (RESC) for the pre-development stage through an RESC Application ([Sub-step SPM-1](#)). The RESC for the pre-development stage must now be converted into an RESC for the development stage. This can be done by obtaining a Confirmation of Commerciality (COC) from the Department of Energy (DOE). The COC can be applied for only after the financial closure ([Sub-step FIN-2](#)) has been reached. The Financing (**FIN**) step must therefore be done in parallel. Furthermore, several documents from the National Transmission Corporation (TRANSCO) are required. Parts of the Grid Connection Permit (**GCP**) step must also be performed at this point in time.

▪ Building and Electrical Installation Permit

Permits allowing the construction of a power plant ([Sub-step ADM-8](#)) and installation of electrical system ([Sub-step ADM-9](#)) must be obtained from the respective local government unit (LGU). They are needed before physical construction of the power plant can begin. Both permits are issued at the local level. Exact procedures and requirements might differ from region-to-region.

Related Regulations

Regulation No.	Name
Republic Act No. 9513 (2008)	Renewable Energy Act of 2008 <i>Full title: "An act promoting the development, utilization, and commercialization of renewable energy resources and for other purposes"</i>
Republic Act No. 8749 (1999)	Philippine Clean Air Act of 1999 <i>Full title: "An act providing for a comprehensive air pollution control policy and for other purposes"</i>
Republic Act No. 6969 (1990)	Toxic Substances, Hazardous and Nuclear Waste Control Act of 1990 <i>Full title: "An act to control toxic substances and hazardous and nuclear wastes, providing penalties for violations thereof, and for other purposes"</i>
Republic Act No. 8371 (1997)	Indigenous Peoples Rights Act of 1997 <i>Full title: "An act to recognize, protect, and promote the rights of indigenous cultural communities / indigenous peoples, creating a national commission on indigenous peoples, establishing implementing mechanisms, appropriating funds therefor, and for other purposes"</i>
Republic Act No. 7160 (1991)	Local Government Code of 1991 <i>Full title: "An act providing for a local government code of 1991"</i>
Presidential Decree No. 1586 (1978)	Establishing an Environmental Impact Statement (EIS) system, including other environmental management related measures and for other purposes

Related Regulations

Regulation No.	Name
Administrative Order (NCIP) No. 3 (2012)	The revised guidelines on free and prior informed consent (FPIC) and related processes
Administrative Order (DENR) No. 2004-24 (2004)	Implementing rules and regulations (IRR) of the Republic Act 8749 (amendment) <i>Note: The Administrative Order (DENR) no. 2004-24 amends rule XIX of Administrative Order (DENR) No. 2000-81.</i>
Administrative Order (DAR) No. 1 (2002)	Revised rules and regulations governing conversion of private agricultural land to non-agricultural uses
Department Circular (DOE) No. 2009-07-0011 (2009)	Implementing Rules and Regulations (IRR) of the Republic Act no. 9513
Memorandum Circular (DAR) No. 2 (2002)	Guidelines for the Processing of Land Use Conversion Applications Pursuant to Administrative Order No. 1, Series of 2002 entitled "2002 Comprehensive Rules on Land Use Conversion" <i>Note: This is a comprehensive rules on land use conversion in the Philippines</i>
ERC Resolution No. 16, Series of 2010	Feed-in tariff rules <i>Note: The relevance of this rules in the Administrative Authorization (ADM) step is in section 1.4</i>

Related Documents

Document Name	Description
DOE Energy Investors' Guidebook	A guidebook published by the Department of Energy (DOE)
Renewable Energy Law Booklet	A book published by the Department of Energy (DOE), which contains a collection of the Renewable Energy Act of 2008 (Republic Act 9513) and its related implementing regulations.
Official website of EMB	The official website of Environmental Management Bureau (EMB) can be accessed at: www.emb.gov.ph
Official website of NCIP	The official website of the National Commission on Indigenous Peoples (NCIP) can be accessed at: <ul style="list-style-type: none">▪ www.ncip.gov.ph (official website)▪ ncipro67.com.ph (official website of NCIP region VI and VII)

Identified Challenges

Challenges

Details

Long processing time for permits / licenses

Some permits / licenses may subject to very long review period by the authorities. Due to the high number of applications, some relevant authorities do not have the sufficient manpower to review and handle the applications in a timely manner. Delays in the issuance of a permit/license can cause delays to the RE project development.

Opposition from local communities

For development of a large PV project in the Philippines, local communities must be involved in the process. If an RE developer does not communicate clearly or does not sufficiently involve the local communities, opposition from locals may occur. Opposition from local communities can lead to complete failure in the RE project development or may even cause some risks to assets and persons.

Recommendation: It is the RE developer's responsibility to involve the local community from the early phase of the project development. RE developers must present benefits and impacts of the RE project clearly and make it transparent to the local communities. Some key persons in the communities should be involved, or at least informed, in any important decision making. RE developers may offer some benefits to local communities in order to build trust and gain approval, e.g., community development, event sponsor, etc. In a situation where the local opposition is very strong, RE developers should reconsider developing the project in that area.

Change of local policy / plan

Government plans, when changed, may affect the RE project and its feasibility, e.g., revision of regulation regarding real estate taxes, other fees at the local level, etc.

Identified Challenges

Challenges

Land acquisition

Details

Like many parts of the world, land acquisition in the Philippines can be challenging. RE developers may not be able to develop an RE project on a particular tract of land as the land is not alienable or disposable. It may still be economically feasible and sound for agricultural purposes or it may be located within protected or critical areas as defined by the Department of Environment and Natural Resources (DENR) and cannot be used. Also, there is a risk that the land conversion, even if initially success, may have its land conversion order revoked if the development of the land is delayed.

Even when RE developers acquire land directly from landowners, some challenges may arise. For example, some properties have land titles with single-named owners and are managed by one person. However, the land may in fact be owned by several persons. This happens when the original land owner died without properly transferring the property to his/her desired heir(s). This complication can significantly delay the land clearance.

The Philippines government requires RE developers to compensate tenants / settlers at the project site who are affected by the project development according to the policies and regulations. This compensation is applicable even when tenants / settlers reside informally at the project site and do not hold any legal ownership of the land.

Recommendation: RE developers shall seek legal advice from experienced legal consultants during the land acquisition process. RE developers also have to ensure that they acquire the land from the proper legal owner(s).

Identified Challenges

Challenges

Unable to comply with environmental standards and documentation in long-term

Unable to reach the agreed milestone according to the RESC

Details

A Department of Environment and Natural Resources (DENR) certificate, despite having been granted to an RE developer, can be later revoked if the solar PV project violates some of the requirements. This can cause an interruption in the operation of the power plant.

Recommendation: RE developers must always monitor the power plant to ensure that it meets all environmental requirements set by DENR. RE developers shall not take for granted that once a DENR environmental certificate is issued, the power plant operation is guaranteed for the long term.

According to the Department of Energy (DOE)'s policy, an RE developer has two years before the validity of the pre-development RE Service Contract (RESC) expires. Although proper planning and resource management are employed by the RE developer, some delays are beyond their control.

NCIP Certificate

Sub-step Details

Required Documents

Incurred Fee

The National Commission on Indigenous People (NCIP) is an agency of the government of the Philippines to protect and promote the interests and well-being of indigenous peoples.

For any RE project development in the Philippines, a certificate from the NCIP is required to ensure that the interests of the indigenous people are protected. There are two types of certificates issued by the NCIP to an RE developer:



Certificate of Non-overlap

Attesting to the fact that the area where the RE project will be developed does not overlap with or affect any ancestral domain



Certification Precondition

Attesting to the grant of Free and Prior Informed Consent (FPIC) by the concerned Indigenous Cultural Communities (ICCs) / Indigenous People (IPs).

The CP is referring to either

- *Resolution of Consent; or*
- *Resolution of Non-Consent*

It is issued by the affected ICCs / IPs following a comprehensive process of information, hearings and negotiations.

Related Authorities

Central government

- National Commission on Indigenous People (NCIP)

Local government

- Regional NCIP

NCIP Certificate

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)

Applied procedures are as following:

- RE developer submits the required documents to the National Commission on Indigenous People (NCIP)
- NCIP reviews the completeness of documents
- The regional director of NCIP constitutes the NCIP's Field-Based Investigation (FBI) team
- The pre-FBI conference is conducted
- Announcement of the FBI to concerned Indigenous People (IP)
- Conduction of the FBI – The maximum duration for FBI is ten working days
- The FBI team submits the FBI report

When the area is patently and publicly known to be outside any ancestral domain, or the activity is determined, after the FBI, not to affect an ancestral domain, the Regional Director, with the concurrence of the concerned Commissioner, shall issue a certificate of non-overlap (CNO) to the RE developer. In case the IPs were absent during the investigation, the process will be repeated again.

If an IP is involved, there are additional procedures to be conducted.

- The Regional Director of NCIP constitutes the Free and Prior Informed Consent (FPIC) team
- Pre-FPIC Conference is conducted
- Hold assembly of the IP, RE developer, NCIP and other relevant stakeholders. The number of assemblies will depend on how long it takes before the IP accepts (or rejects) the project proposal

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NCIP Certificate

Sub-step Details

Required Documents

Incurred Fee

In case the consensus of Indigenous Cultural Community (ICC) / Indigenous People (IP) is not favorable, a Resolution of Non-consent shall be signed and released. In case the Memorandum of Agreement (MOA) is agreed and finalised, a Resolution of Consent of the community will be signed and released. In the latter case, the following steps must be undertaken:

- The Free and Prior Informed Consent (FPIC) team submits an FPIC report with recommendations and the MOA to the concerned Regional Director
- The Regional Review Team (RRT) reviews the FPIC report and the MOA

The review of FPIC review by the regional director and the Regional Review Team must be done within five working days. In case of favorable result, the director shall endorse the record of the FPIC process undertaken.

- Submit for approval by NCIP
- RE developer secures a bond with a reputable bond company with consent of the NCIP or deposits a cash bond with NCIP
- The MOA is signed between IP and RE developer. The MOA is reviewed and endorsed by the Legal Affairs Office (LAO)
- Certification Precondition (CP) is issued

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NCIP Certificate

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Letter of Endorsement from the Department of Energy (DOE)
- Company profile
- Project details – As minimum, following information must be included:
 - Project's purpose and objectives;
 - Location map showing the names of sitios / barangays that will be affected by the project
 - Abstract of the project describing size, pace, reversibility and scope
 - Duration of the project development,
 - Preliminary assessment of economic, social, cultural and environmental effects including potential risks and how these will be addressed;
 - Indicative budget;
 - Persons involved in the project,
 - Operational plan and activities;
 - Profile of RE developer
- Applicant's business documents
- The Philippines Environment Impact Statement (EIS) from the Department of Environment and Natural Resources (DENR)
Note: Refer to [Sub-step ADM-3](#). The EIS is only required for a very large solar PV project (above 100 MWp)

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NCIP Certificate

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For Certificate of Non-overlap (CNO)

A | Certification Fee

- | | |
|---|----------------------------|
| <ul style="list-style-type: none"> ▪ Certification fee | PHP 500
<i>(USD 12)</i> |
|---|----------------------------|

For Certificate Precondition (CP)

B | FBI and FPIC fees

- The fees associated with the Field-based Investigation (FBI) and Free and Prior Informed Consent (FPIC) shall be agreed between the RE developer, the concerned Indigenous Cultural Community (ICC) / Indigenous People (IP) representatives, and the National Commission on Indigenous People (NCIP) during the pre-FBI / pre-FPIC conference.
- In general, the fees include, among others, estimated cost for food and snacks, lodging and transportation for people involved in the FBI process, cost for documenting FBI activities, and others as agreed.
- Calculation is based on rates applicable in the area where the FBI / FPIC is to be undertaken.

Note 1. Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

Note 2. Fees and other related expenses for the investigations and seeking the approval of the IPs (if applicable) will depend on the agreed work and financial plan between NCIP and RE developer.

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DAR Order of Conversion

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)

The Philippine government must preserve prime agricultural lands to ensure food security. Therefore, any conversion of agricultural lands to non-agricultural uses are strictly regulated.

A piece of land in which an RE project will be developed on may be previously used for different purpose, e.g., agriculture, non-agriculture, etc. The RE developer must convert the land into a land use classification that is suitable for RE project development. The Department of Agrarian Reform (DAR)'s Order of Conversion is a document approving such conversion that the RE developer must obtain.

The applied procedures are as follows:

- RE developer submits an application to the authorities
- Fees, inspection cost, and bond are assessed
- Evaluation of application
- Field investigation
- Deliberate and resolution of application
- Conditions of conversion order
- Release of transmittal of order
- Disposition of bond
- Posting of bond

Related Authorities

Central government

Depend on the land area

[See Details...](#)

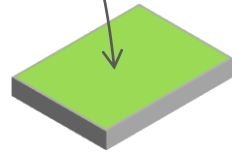
Local government

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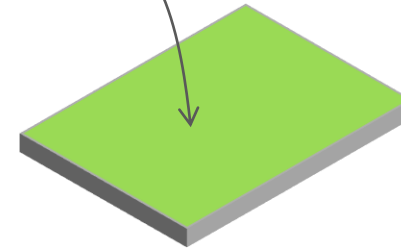
DAR Order of Conversion

- Sub-step Details
- Required Documents
- Incurred Fee

Area of the land:
Up to 5 hectare



Area of the land:
More than 5 hectare



Related Authorities

Central government	(none)
Local government	<ul style="list-style-type: none"> Regional Office and/or Municipal Agriculture Office (MARO) Regional Center for Land Use Policy Planning and Implementation (RCLUPPI)

Related Authorities

Central government	<ul style="list-style-type: none"> Department of Agrarian Reform (DAR) Center for Land Use Policy Planning and Implementation (CLUPPI)
Local government	(none)

Depending on the type of previous land use, additional clearance may be required, e.g., from the National Irrigation Administration (NIA), Philippine Coconut Authority (PCA), Sugar Regulatory Authority (SRA), etc.

DAR Order of Conversion

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Duly accomplished Land Use Conversion (LUC) form no. 1: Sworn application for land use conversion
- Duly accomplished LUC form no. 2: Affidavit of undertaking
- Duly accomplished LUC form no. 3: Certification for land use conversion application
- Official receipt showing proof of filing fee and inspection cost
- Official receipt showing proof of posting of bond or original copy of the Government Service Insurance System (GSIS) surety bond
- True copy of Original Certificate of Titles (OCT) or Transfer Certificate of Title (TCT) of the subject land certified by the Register of Deeds
Note: True copy of OCT/TCT as of 15 June 1988 shall be provided and all successor Titles until the present Title/s of the subject landholding(s).
- True copy of the current Tax Declaration covering the subject property
- Feasibility study (F/S) of the project
Note: Refer to [Sub-step SSL-3](#)
- Joint venture agreement or any business arrangement on the use of the land between landowner/land users and developer
- Description of the development plan
- Proof of financial and organizational capability of the developer. As minimum, it shall include:
 - Statement of project cost and availability of potential funding source(s);
 - Developer profile;
 - Certificate of Registration;
 - Recent General Information Sheet (GIS) issued by the Security Exchange Commission (SEC).
- Socio-economic benefit cost Study of the proposed project
- Photographs of the land and billboards *(based specifications of Department of Agrarian Reform; DAR)*

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DAR Order of Conversion

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements (cont.)

- Notice of Land Use Conversion (LUC) in English (LUC form no. 4) and in local dialect (LUC form no. 4A)
- Certification from the Housing and Land Use Regulatory Board (HLRUB) Regional Officer on the actual zoning or classification of the subject land
- Certification from authorised Department of Environment and Natural Resources (DENR) official stating that the land has ceased to be economically feasible and sound for agricultural purposes
- Certification from the DENR (LUC form no. 6) stating that the land is not within the National Integrated Protected Area System (NIPAS) or Environmentally Critical Area (ECA), or it will not be relevant to Environmentally Critical Project (ECP)
- Environmental Compliance Certificate (ECC) when the subject land is within an ECA or involve the establishment of an ECP
- Provincial Agrarian Reform Officer (PARO) Certification (LUC form no. 9) (*if applicable*)
- Map of the development plan
- Directional sketch of the property

Note: The sketch must be according to the DAR's specifications

Note: Refer to [Sub-step ADM-3](#)

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DAR Order of Conversion

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements (cont.)

Additional documents: in case the property is encumbered

- Concurrence letter of the mortgagee or individual / entity in whose favour the encumbrance was constituted

Additional documents: in case the application involved a priority development area or project

- Endorsement from the concerned government agency (i.e. Department of Energy; DOE)

Additional documents: in case the applicant's landowner is a beneficiary of the agrarian reform programme

- Land Bank of the Philippines (LBP) Certification (Land Use Conversion form no. 8) attesting that the applicant-landowner has fully paid his obligations to the LBP

Additional documents: in case of untitled land

- Certification from Community Environment and Natural Resources Office (CENRO) of Department of Environment and Natural Resources (DENR) stating that the landholding has been classified as alienable and disposable

- Certification from the CENRO or Clerk of Court that the titling process has commenced and that there are no adverse claimants

Additional documents: in case the applicant is not the registered owner

- Special Power of Attorney (SPA)

Additional documents: In case the property is in upland, hilly, or mountainous area

- Topographic map



DAR Order of Conversion

Sub-step Details

Required Documents

Incurred Fee

*For areas of up to 5 hectares***A | Filing fee**

▪ Filing fee	PHP 1,000 (USD 23)
--------------	-----------------------

B | Inspection cost

▪ If the subject property is within the same island as that of the Office of the Regional Director	PHP 10,000 (USD 230)
▪ If the subject property is not within the same island as that of the Office of the Regional Director	PHP 15,000 (USD 345)

*For areas of more than 5 hectares***A | Filing fee**

▪ Filing fee	PHP 2,000 (USD 46)
--------------	-----------------------

B | Inspection cost

▪ If the property is on the island of Luzon (except Bicol Peninsula)	PHP 10,000 (USD 230)
▪ If the property is in Regions I to IV but not located on the main island of Luzon	PHP 15,000 (USD 345)
▪ If the property is on Bicol Peninsula or the Visayas group of islands; or	PHP 15,000 (USD 345)
▪ If the property is on the Mindanao group of islands	PHP 20,000 (USD 460)

Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

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DAR Order of Conversion

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)

For all (up to 5 hectares and above 5 hectares)

C | Cash bond

- Certificate Cash Bond (assessment form – land use conversion, LUC, form C) against premature conversion computed at 2.5% of the zonal value of the land.
- In lieu of a cash bond, the applicant may post a surety bond issued by the Government Service Insurance System (GSIS) of Non-Overlap (CNO)

DENR Environmental Certificate

- Sub-step Details
- Required Documents
- Incurred Fee
- EIS System

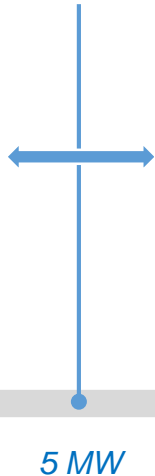
All projects are generally required to secure environmental clearance from the Department of Environment and Natural Resources (DENR). This can be a Certificate of non-Coverage (CNC) or Environmental Compliance Certificate (ECC).

Depending on the location of the site and the land use on site, additional clearance may be required from the National Forest Management Bureau (FMB), the Laguna Lake Development Authority (LLDA) or other local development authorities.

Related Authorities

Central government	<ul style="list-style-type: none"> Department of Environment and Natural Resources (DENR) Environmental Management Bureau (EMB) under DENR
Local government	(none)

Less than 5 MW rated capacity
Category D
 Certificate of Non-Coverage (CNC) is required.



From 5 MW until less than 100 MW rated capacity
Category B
 Environmental Compliance Certificate (ECC) is required with Initial Environmental Examination (IEE) is required



More than 100 MW rated capacity
Category B
 ECC is required with Environmental Impact Statement (EIS)



Power plant capacity

Note: The images of solar PV power plant shown above is just for illustration purpose. It no. of PV modules and their size do not present their actual power plant capacity.

DENR Environmental Certificate

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)[EIS System](#)

In case of Environmental Compliance Certificate (ECC) application

The ECC is part of the Environment Impact Assessment System (EIS) that was established to facilitate the attainment and maintenance of rational and orderly balance between socio-economic development and environmental protection.

The procedures are as follows:

- The RE developer performs technical scoping and public consultation for the scope of Environmental Impact Assessment (EIA)
- The RE developer conducts EIA and prepares an EIA report;
- The RE developer submits the report and supporting documents to Department of Environment and Natural Resources (DENR)
- Environmental Management Bureau (EMB) under DENR screens the EIA report;
- The RE developer pays the applicable fees
- The project information is registered on DENR's online system for public viewing
- Various EMB units review the EIA report in details
- Endorsement to the DENR Secretary
- The ECC is signed and issued
- The ECC is published on the DENR's website

DENR Environmental Certificate

Sub-step Details

Required Documents

Incurred Fee

EIS System

In case of Certificate of Non-Coverage (CNC) application

The application can be done through the Automated Processing System (APS). It is much more simplified compared to an Environmental Compliance Certificate (ECC) application and can be done within a day.

- The RE developer fills in and submits a one-page CNC application form.
- Basic information is encoded in the APS. The proposed project is screened.
- The Environmental Impact Assessment (EIA) Chief reviews the application posted on APS.
- Signing of the decision on CNC
- The CNC is issued to the RE developer. It is also recorded in the APS.

DENR Environmental Certificate

Sub-step Details

Required Documents

Incurred Fee

EIS System

A | General Requirements

- Filled out application form
- Proof of compatibility with existing Land Use Plan (*if necessary*)
- Proof of ownership or authority over the project site
- Accountability statements of the proponent and Environment Impact Statement (EIS) preparers
- Photographs or plate of the project site, impact areas and affected areas and communities
- Duly accomplished Project Environmental Monitoring System and Audit Prioritization Scheme (PEMAPS) Questionnaire
- Copy of previous Environmental Compliance Certificate (ECC) (*if any*)
- Latest Self-Monitoring Report

DENR Environmental Certificate

Sub-step Details

Required Documents

Incurred Fee

EIS System

*For Environmental Compliance Certificate (ECC)***A | Application Fee (ECC)**

▪ Environmental critical area (ECA)	PHP 6,000 (USD 140)
▪ Non-environmental critical area	PHP 3,000 (USD 70)

*For Certificate of Non-Coverage (CNC)***A | Application Fee (CNC)**

▪ Application fee	PHP 600 (USD 14)
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Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

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DENR Environmental Compliance Certificate

Sub-step Details

Required Documents

Incurred Fee

EIS System

There are four categories of projects according to the Environmental Impact Statement (EIS) System

Category A	Environmentally Critical Project (ECP) with significant potential to cause negative environmental impact	Environmental Compliance Certificate (ECC) is required
Category B	Projects that are not categorized as ECPs, but which may cause negative environmental impacts because they are located in Environmentally Critical Areas (ECA)	ECC is required <ul style="list-style-type: none"> ▪ For RE project with more than 100 MW, EIS is required. ▪ For RE project with more 5 MW but less than 100 MW, Initial Environmental Examination (IEE) is required.
Category C	Projects intended to directly enhance environmental quality or address existing environmental problems not falling under Category A or B	Project Description is required
Category D	Projects unlikely to cause adverse environmental impacts.	Certificate of Non-Coverage (CNC) is required <ul style="list-style-type: none"> ▪ For RE project with less than 5 MW installed capacity is considered as Category D, only CNC is required

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DENR Permit to Operate

Sub-step Details

Required Documents

Incurred Fee

Permit to Operate is a certificate issued by the Environment Management Bureau (EMB) under the Department of Environment and Natural Resources (DENR) to allow an RE developer to operate the facility in compliance with air pollution and hazardous waste standards.

Although a PV project is not classified as an emission source, the authorities still request the RE developer to apply for a permit to operate. The applied procedures and required documents are much less stringent.

Applied Procedures are as follows:

- RE developer submits and application and supporting documents
- EMB screens the documents
- RE developer pays the fees
- The documents are reviewed at length by various EMB units
- Endorsement to the DENR Secretary
- Signing and release of the Permit to Operate

Related Authorities

Central government	<ul style="list-style-type: none">▪ Department of Environment & Natural Resources (DENR)▪ Environmental Management Bureau under the DENR (EMB)
Local government	(none)

DENR Permit to Operate

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Duly accomplished application form
- Engineering report
- Plans and specifications of the installation and its control facilities
- Vicinity map

DENR Permit to Operate

- Sub-step Details
- Required Documents
- Incurred Fee**

A | Registration Fee

▪ Registration fee for a permit to operate	PHP 600 (USD 14)
--	---------------------

Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

LGU Resolution of Support from Host Barangays

Sub-step Details

Required Documents

The Local Government Code of 1991 (Republic Act 7160) gives the authority to local officials to plan the development in their respective area. As part of the project acceptance by its host community, an RE Developer must seek a resolution of support from the local populace.

This sub-step is a procedure at the local government level. Therefore, it will be different from one barangay to another. Usually the procedures are as follows:

- The RE developer submits a request for resolution of support from respective barangay
- The respective barangay inform the RE developer on a list of required documents
- The RE developer conducts a preliminary meeting with the local officers
- A public consultation on the project is planned and announced
- The public consultation is conducted. Sometimes, more than one public consultation is required
- The barangay as a whole or only the barangay council votes on the resolution.
- The barangay issue the resolution of support and certificate of public consultation.

If the project site encompasses more than one barangay, the RE developer shall seek a resolution of support from all concerned barangays.

Related Authorities

Central government	(none)
Local government	<ul style="list-style-type: none"> ▪ Barangay level officials

LGU: Local Government Unit

LGU Resolution of Support from Host Barangays

Sub-step Details

Required Documents

A | General Requirements

- Letter of request for a barangay’s resolution of support
- Project profile
- Business documents

Note: The exact list of required documents is different from barangay-to-barangay. The RE developer should inquire the respective barangay for the list of required documents.

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LGU Resolution of Support from Host Municipality

Sub-step Details

Required Documents

Similar to [Sub-step ADM-5](#), This is a procedure on the local government level. Therefore, it will be different from one municipality to another. Usually the procedures are as follows:

- RE developer submits a request for a Resolution of Support from Municipality
- The municipality provides the list of required documents to the RE developer
- Preliminary meeting is held with local officials
- Planning and announcement of a public consultation regarding the solar PV project
- The public consultation is conducted.
- The Municipality as a whole or only the Town Council (*Sanguniang Bayan*) votes on the resolution
- Municipality issues a Resolution of Support and a Certificate of Public Consultation, confirming that the public consultation has been properly conducted

In case the solar PV project site encompasses more than one municipality, the RE developer shall obtain Resolutions of Support from all concerned municipalities.

Some RE developers obtain a Resolution of Support from the host province as well. This is not explicitly required in implementing the rules and regulations (IRR), but sometimes it is conducted just to be on the safe side.

Related Authorities

Central government	(none)
Local government	<ul style="list-style-type: none"> ▪ Municipality level officials

LGU Resolution of Support from Host Municipality

Sub-step Details

Required Documents

A | General Requirements

- Letter of request for a municipality’s resolution of support
- Project profile
- Business documents

Note: The exact list of required documents is different from municipality-to-municipality. The RE developer should inquire the respective municipality for the list of required documents..

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DOE Confirmation of Commerciality

[Sub-step Details](#)[Required Documents](#)

Confirmation of Commerciality (COC) is a document issued by the Department of Energy (DOE) to announce that a project has successfully completed the pre-development stage. The RE Service Contract (RESC) for the pre-development stage is then converted into an RESC for the development stage.

The procedures are as follows

- The RE developer submits a letter of Declaration of Commerciality to the DOE along with supporting documents
- REMB evaluates the submitted documents
- A RESC for the development stage is drafted
- The RE developer and DOE negotiate terms and conditions of the RESC
- The RE developer pays the fees
- A review committee (under DOE) proposes the RESC to the DOE's management team
- The RE developer submits proof of payment
- If the RESC is approved by the DOE's management team, the RE developer and the DOE sign the RESC for the development phase
- The COC is issued by the DOE

Related Authorities

Central government	<ul style="list-style-type: none">▪ Department of Energy (DOE)▪ Renewable Energy Management Bureau (REMB) under DOE
Local government	(none)

DOE Confirmation of Commerciality

[Sub-step Details](#)[Required Documents](#)

For a solar PV project under the FIT Scheme

The RE developer must also submit notarised proof and/or declaration that the project is not bound under any contract to supply generated energy to a distribution utility (DU) or bulk consumer in accordance with Section 1.4 of the feed-in tariff rules ([ERC Resolution No. 16, Series of 2010](#))

DOE Confirmation of Commerciality

Sub-step Details

Required Documents

A | General Requirements

- Letter of declaration of commerciality stating that the RE project is commercially feasible and viable
 - Feasibility study (F/S) or detailed engineering design
Note: Refer to [Sub-step SSL-3](#)
 - Resolution of Support from host barangay and host municipality, including proof that public consultation has been conducted
Note: Refer to [Sub-step ADM-5](#) and [Sub-step ADM-6](#)
 - Permits from the Department of Environment and Natural Resources (DENR) Permits – They include:
 - Environmental Impact Assessment (EIA) report;
 - Environmental Compliance Certificate (ECC) *or* Certificate of Non-Coverage (CNC)
 - Forest Land Use Agreement (FLAg) *(for projects in the forest)*
 - Special Land Use Agreement (SLUP) *(for areas in the public domain)*
 - Documents from the National Transmission Corporation (TRANSCO) – They include:
 - Grid impact study
 - Interconnection agreement (if applicable)
 - Electricity sales agreement
 - Other clearances from concerned agencies
(If applicable, e.g., Maritime Industry Authority, Bureau of Fisheries and Aquatic Resources, Philippine Coast Guard, etc.)
 - Proof of the financial closing
Note: Refer to [Sub-step FIN-2](#)
 - Final area for development
Note: Information must be provided as geographical coordinates according to the Philippine reference System of 1992 (PRS92)
 - Proof of payment of application / processing fees
 - Draft RE Service Contract (RESC) for the development phase
- Additional document: In case the RE project is developed on private land*
- Any form of legal documents showing the consent of the landowner

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LGU Building Permit

[Sub-step Details](#)[Required Documents](#)

The RE developer must obtain a building permit from the respective local government unit (LGU). The exact procedures vary depending on the local regulations of the LGU. Typically, the procedures are as follows:

- The RE developer submits a completed application form and all necessary documents to the building official at the respective LGU
- The building official reviews completeness of the documents
- The document is reviewed and evaluated at length
- The RE applicant pays the necessary fees
- The building official issues a building permit

Related Authorities

Central government	(none)
Local government	<ul style="list-style-type: none">▪ Building official in the respective local government unit (LGU)

LGU Building Permit

Sub-step Details

Required Documents

A | General Requirements

- Duly completed the application form
- Locational clearance certificate from the City Planning and Development Office (CPDO) – This must include the following CPDO-initialed photocopied attachments:
 - Transfer certificate of title
 - Real estate tax receipt and bill (*current year*)
 - Lease contract or award notice (*if applicable*)
 - Deed of sale
 - Memorandum of agreement or joint venture agreement
 - Barangay clearance
- The following engineering documents:
 - Location plan
 - Architectural plans
 - Sanitary/plumbing plans
 - Electrical plans
 - Mechanical plans
 - Fire protection plans
 - Geotechnical plans
 - Structural computation
 - Project specifications
 - Bill of materials
 - Estimated cost

Note: All documents must be signed by appropriate professional

Note: List of required documents required will vary from one LGU to another
LGU: Local government unit

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LGU Wiring Permit

Sub-step Details

Required Documents

The RE developer shall apply for a wiring permit from the Office of the Building Official (OBO) of the respective Local Government Unit (LGU). The permit allows the RE developer to perform installation of electrical equipment/devices in the power plant.

This is a procedure at the local government level and varies from one LGU to another. Typically, the procedures are as follows:

- The RE developer submits a completed application form along with necessary documents to the Office of the Building Official (OBO)
- The receiving officer checks the thoroughness of the documents and assesses the fees
- The RE developer pays the fees
- OBO reviews and evaluates the documents
- OBO processes and approves a wiring permit. The permit is released to the RE developer, allowing the installation of electrical equipment to be commenced.

The final inspection by the LGU's field engineer will be done after substantial installation has taken place. A Certificate of Electrical Inspection (CFEI) will be issued after the inspection ([Sub-step GCC-1](#))

Related Authorities

Central government	(none)
Local government	<ul style="list-style-type: none">▪ Office of the Building Official (OBO) in the respective local government unit (LGU)

LGU Wiring Permit

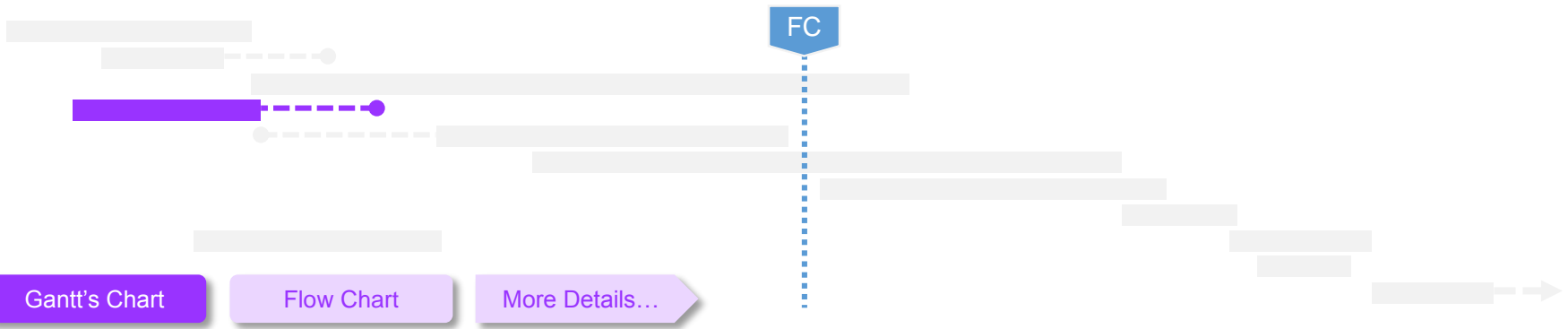
Sub-step Details

Required Documents

A | General Requirements

- Completed application form
- Duly completed application of wiring permit
Note: "DPWH Form 90-001C"
- Electrical plan
Note: This document must be duly-signed by a Professional Electrical Engineer
- Other documents *(if requested by the authority)*

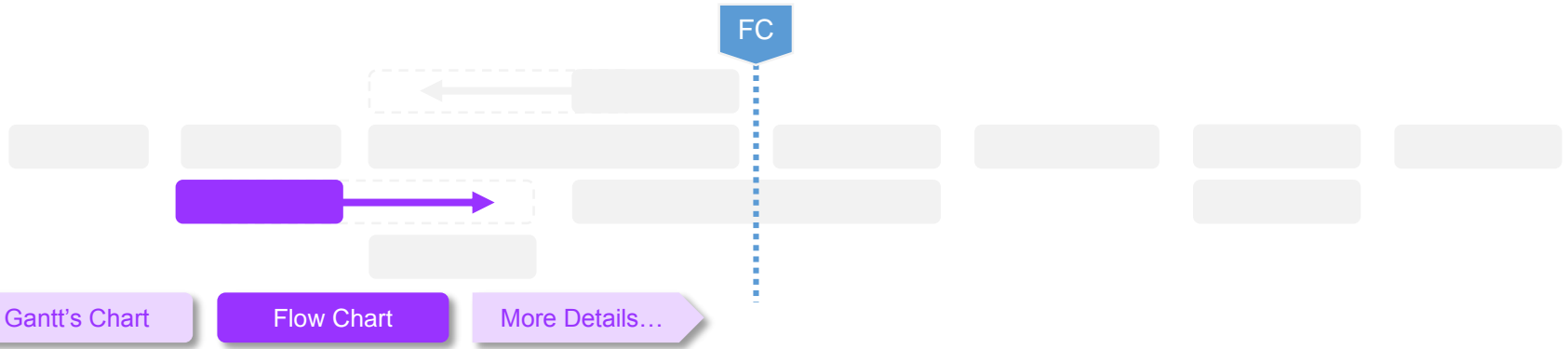




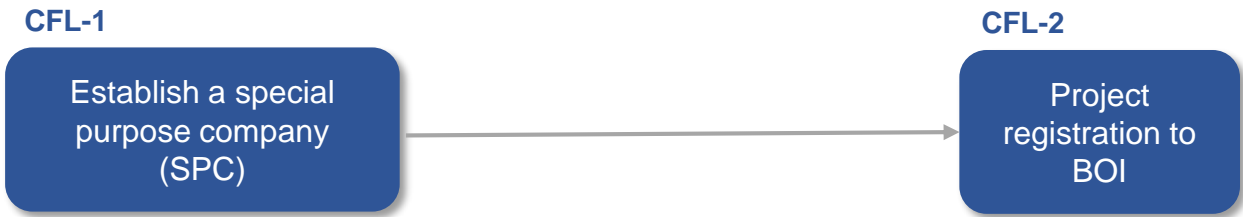
CFL | Corporate Fiscal / Legal

CFL-1		Establish a special purpose company (SPC)
	Project registration to BOI	CFL-2

BOI: Board of Investment



CFL | Corporate Fiscal / Legal



BOI: Board of Investment

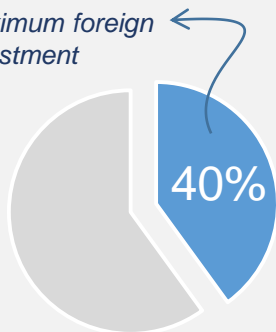
Step Description

For a large solar PV project, a special purpose company (SPC) is usually established to carry out the project development. A SPC can partially separate risks associated with an RE project from individual or mother companies. Establishment of a company in the Philippines involves many procedures and requires various types of approval. This guideline does not cover all procedures necessary for a company's establishment. This is not a focus of the guideline and more detailed sources of information can be found from various documents.

Ideally, an SPC should be established from the outset before an RE Service Contract (RESC) Application ([Sub-step SPM-1](#)). This will allow an RESC to be granted directly to the established SPC, meaning this step can be done partly in parallel with the Site Selection ([SSL](#)) step. However, many uncertainties during the early phase of project development may make it impractical to establish an SPC initially. In such a case, the RE developer, through his/her partner (Filipino nationality), may apply for an RESC as an individual first. An SPC can then be established later on when the project's viability is ensured. The name of an RESC holder can be changed later as long as the Department of Energy (DOE) is informed.

How much foreigner can invest in RE project?

Maximum foreign investment



The Philippine constitution limits foreign investment at a maximum of 40% for exploration, development, and utilisation of natural resources as well as operation and management of public utilities. Therefore, a foreign RE developer must enter into a partnership with a local Filipino entity. Full foreign participation is allowed in cases where a financial or technical assistance and agreement is made with the President of the Philippines. The government also holds at least a 1% share in an RE project by laws.

Step Description

The Renewable Energy (RE) Act of 2008 (Republic Act 9513) provides several fiscal incentives for an RE developer, e.g., income tax holiday, duty-free importation of RE machinery, equipment, tax credit, etc. To avail these incentives, an RE developer must register the RE project with the Board of Investment (BOI) under the Department of Trade and Industries (DTI). This BOI certificate ([Sub-step CFL-2](#)), along with other supporting documents, is required when filing for the tax incentives from other government agencies such as the Bureau of Internal Revenue (for national taxes) and the Bureau of Customs (for import duties).

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Related Regulations

Regulation No.	Name
Executive Order No. 226 (1987)	Omnibus Investment Code of 1987

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Related Documents

Document Name	Description
DOE Energy Investors' Guidebook	A guidebook published by the Department of Energy (DOE)

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Long processing time for permits / licenses

Some permits / licenses may be subject to very long review periods by the authorities. Due to the high number of applicants, some relevant authorities do not have sufficient manpower to review and handle the applications in a timely manner. Delay in issuance of a permit/license can cause a delay in the RE project development.

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Establish a Special Purpose Company (SPC)

Sub-step Details

Philippine-based corporations are established under the Corporation Code. The Philippine government agency that registers and regulates these corporations is the Securities and Exchange Commission (SEC). To establish a corporation you will need to have (1) at least five incorporators who own at least one share of the corporation; (2) register with the SEC; and (3) possess a minimum paid-up capital of PHP 5,000 (~ USD 114). Foreign companies intending to conduct business in the Philippines must maintain the “60/40 rule”, meaning 60% of the stock of the corporation must be owned by Filipino nationals, and only up to 40% of the stocks can be owned by foreigners. It is also required that at least five of the incorporators be Filipino citizens. The major steps in setting-up a corporation in the Philippines is as follows:

- The RE developer obtains a bank certificate of deposit of the paid-in capital for the corporation at any Philippine bank. There is a fee for issuing a bank certificate. The amount will depend on the bank.
- The RE developer chooses at least three options for the company name then verifies their availability using the SEC’s online verification system. The preferred name shall be reserved to assure its availability by paying a certain amount per one month of official reservation. Within the said period, the company must file the application for incorporation; otherwise, the reservation must be renewed or extended by paying another monthly fee. Failure to do so will prevent the company from using the reserved name during the official filing of the application

Related Authorities

Central government	<ul style="list-style-type: none">▪ Securities Exchange Commission (SEC)▪ etc.
Local government	<ul style="list-style-type: none">▪ Relevant departments in the local government

Note: This guideline does not cover all procedures necessary for company establishment. This is not the focus of this guideline..

Recommended source of information:
<http://investphilippines.gov.ph/>

Establish a Special Purpose Company (SPC)

Sub-step Details

- The RE developer prepares the required documents for filing an application for incorporation. They are, for example, reserved company name verification slip, articles of incorporation and by-laws, treasurer's affidavit, bank certificate of deposit, authority to verify the bank account used for the bank certificate of deposit, incorporator's tax identification number (TIN), affidavit of incorporator or director undertaking to change corporate name, list of officers and stockholders and other documents that can support the application.
- The RE developer submits all required documents and then pays the filing fee at the Securities and Exchange Commission (SEC) office. The schedule of fees varies depending on the processes and documents (i.e. filing fees for the articles of incorporation, issuance fees, by-laws fee, stock and transfer book registration fee and membership book registration fee)

All documents submitted shall undergo a pre-processing evaluation prior to the actual filing. The SEC will then issue a pre-generated TIN once the company's application for registration of incorporation is approved. Starting a business in the Philippines can be challenging, thus it is recommended that the RE developer seek an experienced legal advisor to assist in the implementation of this sub-step.

BOI Project Registration

Sub-step Details

Required Documents

Incurred Fee

The RE developer shall register the project with the Philippines Board of Investments (BOI) to avail the incentives introduced by the Renewable Energy Act of 2008 (Republic Act 9513). Typical applied procedures are as follows:

- The RE developer submits two sets of applications. The applications consist of a duly completed application form signed by authorised officer and notarised, project report, and other supporting documents
- The Project Evaluation and Registration Department (PERD), under the BOI, evaluates the project. A notice of filling out the application is then issued. The BOI refers the application to the Department of Energy (DOE). A project site visit may be conducted if necessary
- The project evaluation report, prepared by PERD, is submitted to the BOI's Management Committee for review;
- The BOI's Board of Governors makes a decision and issues an action on the application
- In case the RE developer requests a waiver of the pre-registration requirements, PERD will evaluate the request and propose to the BOI's Management Committee
- In case there is no waiver of pre-registration requirements, the RE developer is to comply with pre-registration requirements and pay the required fees
- PERD issues a Certificate of Registration (CR) to the RE developer

Related Authorities

Central government	<ul style="list-style-type: none"> ▪ The Philippines Board of Investment (BOI) ▪ Project Evaluation and Registration Department (PERD)
Local government	(none)

Note: The guideline on the BOI registration is also available on the BOI's website (www.boi.gov.ph)

BOI Project Registration

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Copy of RE applicant business registration documents
- Copy of enterprise board's resolution authorising its officer to transact, execute and sign on behalf of the enterprise
- Proof of assured market, e.g., supply contract
- Financial capacity of principal stockholders
- Audited financial report and income tax return
Note: This must cover the last three years or the period that the enterprise has been in operation if less than three years
- Official filling of application
Note: The application shall be submitted in two sets
- Duly completed application form (BOI form no. 501)
Note: The application form must be signed by authorized officer and notarized
- Project report
- Other supporting documents as required

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BOI Project Registration

Sub-step Details

Required Documents

Incurred Fee

A | Filing / Application Fees

- Filing / Application fee depends on the project classification and the project cost

Classification	Project Cost ²	Incurred Fee
<ul style="list-style-type: none"> Micro³ 	Up to PHP 3 million <i>(up to USD 68,400)</i>	PHP 1,500 <i>(USD 35)</i>
	PHP 3 million – 4 million <i>(USD 68,400 – 91,200)</i>	PHP 1,500 <i>(USD 35)</i>
<ul style="list-style-type: none"> Small³ 	PHP 4 million – 15 million <i>(USD 91,200 – 342,000)</i>	PHP 3,000 <i>(USD 70)</i>
	PHP 15 million – 20 million <i>(USD 342,000 – 456,000)</i>	PHP 3,000 <i>(USD 70)</i>
	PHP 20 million – 50 million <i>(USD 456,000 – 1,140,000)</i>	PHP 4,500 <i>(USD 105)</i>
<ul style="list-style-type: none"> Medium 	PHP 50 million – 100 million <i>(USD 1,140,000 – 1,140,000)</i>	PHP 6,000 <i>(USD 140)</i>
	Above PHP 100 million <i>(above USD 2,280,000)</i>	PHP 6,000 <i>(USD 140)</i>

B | Registration Fee

Registration fee depends on the project cost	1/10 of 1% of the project cost
Minimum registration fee	PHP 3,000 <i>(USD 70)</i>
Maximum registration fee	PHP 15,000 <i>(USD 350)</i>

B | Fee for Legal Research Fund (LRF)

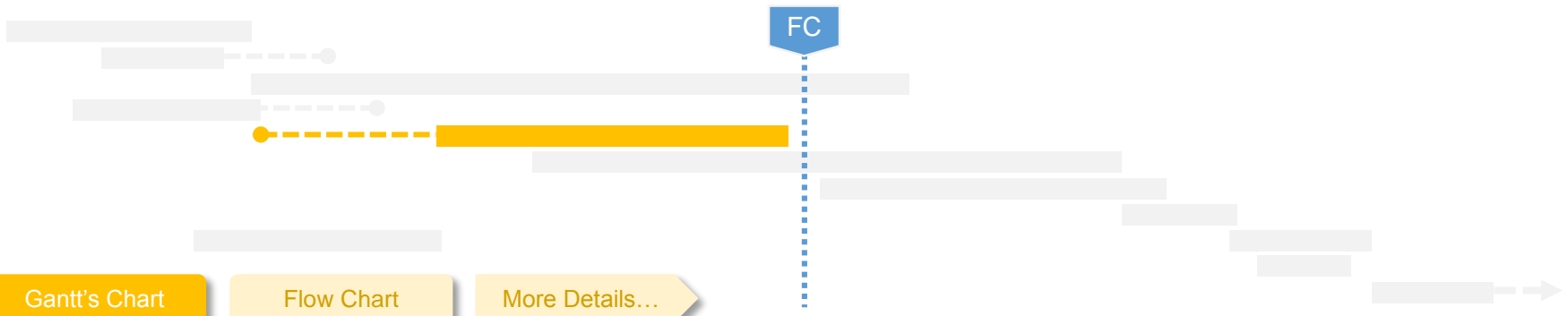
Fee for Legal Research Fund depends on incurred filing / application fee (See Fee-A)	1% of Fee-A
Minimum registration fee	PHP 20 <i>(US 46 cents)</i>

Note 1: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

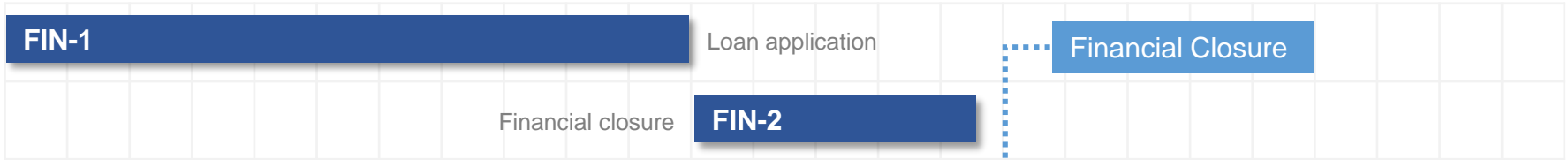
Note 2: Project cost includes loan but excludes land cost

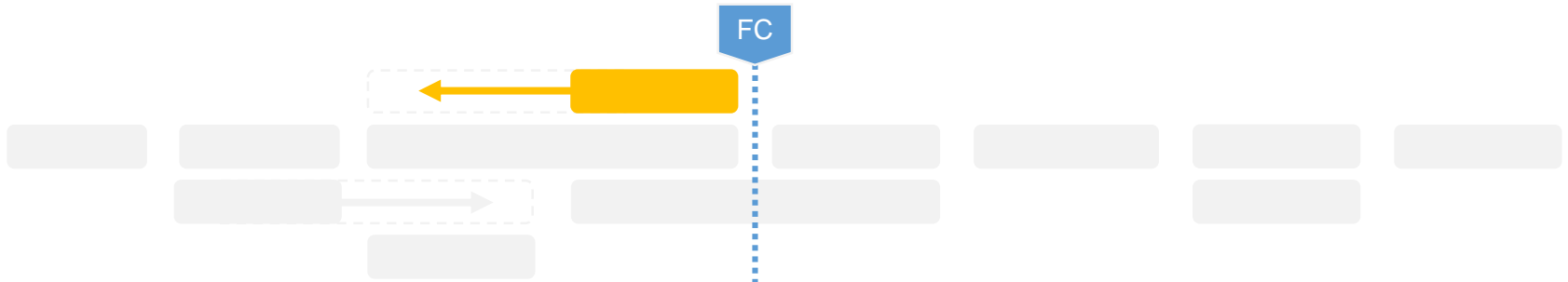
Note 3: Micro and Small Enterprises (MSE) that satisfy the MSE definition of Republic Act No. 9501 and project cost are entitled to smaller fees. The MSE fees can be found from the BOI's website (www.boi.gov.ph)





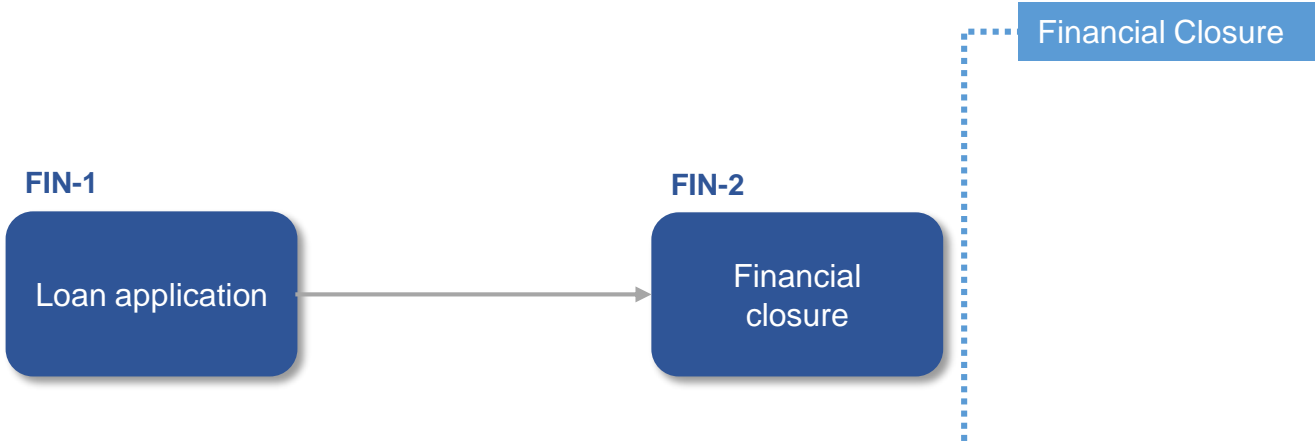
FIN | Financing





Gantt's Chart Flow Chart More Details...

FIN | Financing



Step Description

This step involves securing a loan from a bank. Authorities or government institutions have little or no intervention during this step. It is the RE developer's responsibility to source its project funds either from a bank loan, investor's equity or from internal funds. Many banks in the Philippines have already established a special lending facility for RE projects. They have invested significantly in capacity-building on evaluating and performing due diligence on RE projects, covering not only the financial aspect but also the technical aspect. Nevertheless, most bank loans in the Philippines have been granted mostly to hydro projects. As of 2014, there is no bank loan for a large SPV project that has been approved. RE financing is still relatively new for the Philippines. The contents in this step are general and based on the international practices. They are recommendations by their nature.

Different banks apply different procedures and request different documents from RE developers. The RE developer applies first for a loan ([Sub-step FIN-1](#)). When the loan is approved, the RE developer must submit several documents to the bank (e.g. power purchase agreement (PPA), performance bonds, assignment of deeds / collaterals, escrow account, other securities, etc.) When all document submissions are completed, financial closure is reached ([Sub-step FIN-2](#)). The loan is then released to the RE developer's account. Only after the financial closure is reached can procurement of equipment and physical construction commence.

The Financing (**FIN**) step starts when an RE developer received its RE Service Contract (RESC) for pre-development phase. Exploratory talks can be done with banks at any time providing that RE developer have sufficient supporting documents at hand. Most banks require several permits / certificates issued by government agencies. This step is to be done after the Corporate Fiscal / Legal (**CFL**) Step and in parallel to the Administrative Authorization (**ADM**) step.

In the Philippines, securing funds for an RE project under a FIT Scheme is very difficult. One of the important documents that must be obtained is a Certificate of Endorsement (COE) for FIT eligibility. The Department of Energy (DOE) can issue this certificate to an RE developer only after construction of the plant is 80% complete. Unfortunately, this means that no financial institution is willing to invest as the project may not receive the FIT in the end after the installation target is reached and the COE can no longer be issued. Currently, most investors in large solar PV projects are big companies with enough funds to financing their project.

... Gantt's / Flow Chart

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Related Regulations

Regulation No.	Name
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No regulations governs this step (as of October 2014)

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Related Documents

Document Name	Description
DOE Energy Investors' Guidebook	A guidebook published by the Department of Energy (DOE)
Official Bank's Website	Websites of banks in the Philippines usually contain information on how to obtain a loan. Example of a bank that provides a loan for an RE project includes but is not limited to: <ul style="list-style-type: none">▪ Bank of the Philippine Islands: www.bpiexpressonline.com▪ Development Bank of the Philippines: www.devbnkphl.com▪ Land Bank of the Philippines: www.landbank.com▪ Allied Banking Corporation: www.alliedbank.com.ph▪ etc.

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Unwillingness of bank to invest

(especially for a project under FIT Scheme)

In the Philippines, securing funds for an RE project under the feed-in tariff (FIT) Scheme is very difficult. FIT eligibility is only granted after 80% of the plant has been built. Thus, no financial institution is willing to invest as the project may not receive the FIT at the end after the installation target has been reached.

Long processing time for permits / licenses

Some permits / licenses may be subject to a very long review period by the authority. Due to the high number of applicants, some relevant authorities do not have the sufficient manpower to review and handle the applications in a timely manner. Delay in issuance of permit/license can cause a delay in the RE project's development.

High collaterals

Banks usually require collaterals from RE developers to secure its investment. Without sufficient collateral to satisfy the bank, the possibility of getting a loan is low.

Loan Application

Sub-step Details

Required Documents

The RE developer shall secure a loan from banks to carry out PV project development. Typical procedures in getting bank loans in the Philippines are as follows:

- The RE developer submits an application letter to a bank
- An acceptance of application is given to the RE developer
- The RE developer submits required documents to the bank
- The bank reviews the completeness of the submitted documents
- The bank processes, evaluates and analyses a loan
- The bank review panel approves (or disapproves) the loan
- The bank informs the RE developer about the approval of loan

Requirements, procedures, and incurred fees are different depending on the bank. Several banks have special loan facilities for RE projects, for example, Bank of the Philippine Islands (www.bpiexpressonline.com), Development Bank of the Philippines (www.devbnkphl.com), Land Bank of the Philippines (www.landbank.com), and Allied Banking Corporation (www.alliedbank.com.ph), etc.

Loan Application

Sub-step Details

Required Documents

A | General Requirements

- Application letter
- Duly completed loan application form
- Project summary report
- Feasibility study (F/S)
Note: Refer to [Sub-step SSL-3](#)
- Document pertaining to the collateral
- Work plan
- Photographs of project sites and collateral *(if applicable)*
- RE Service Contract for pre-development stage
Note: Refer to [Sub-step SPM-1](#)
- Certificate from the National Commission on Indigenous People (NCIP)
Note: Refer to [Sub-step ADM-1](#)
- The Local Government Unit (LGU) certificate of support from the host barangay(s) and municipality(ies)
Note: Refer to [Sub-step ADM-5](#) and [Sub-step ADM-6](#)
- The Department of Agrarian Reform (DAR) Order of Conversion *(if applicable)*
Note: Refer to [Sub-step ADM-2](#)

Note: The list of documents provided above is only typical requirements for RE project. Additional documents may be requested from the bank.

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Loan Application

[Sub-step Details](#)
[Required Documents](#)

A | General Requirements (cont.)

Additional documents: In case the RE developer is a corporation(s)

- Corporate documents
- List of officers and directors
Note: The list must be certified by the Corporate Secretary
- Bio-data of the officers and directors
- Alien registration certificate of foreign officers *(if applicable)*
- Statement of asset & liabilities of the officers
- Board resolution regarding the decision to obtain the loan
Note: This resolution must indicate amount of the loan. It must be signed on behalf of the company.
- Financial statement of the last three years
Note: This must be filed by the Bureau of Internal Revenue (BIR)
- Latest interim financial statement

Additional documents: In case the RE developer has sole proprietorship

- Certificate of Registration with Department of Trade & Industry (DTI)
- Bio-data of applicant
- Permit from mayor
- Income tax return
Note: This must covers the last three years
- Financial statement of the last three years
Note: This must be filed by the BIR
- Latest interim financial statement
- Statement of assets and liabilities.

Note: The list of documents provided above is only typical requirements for RE project. Additional documents may be requested from the bank.

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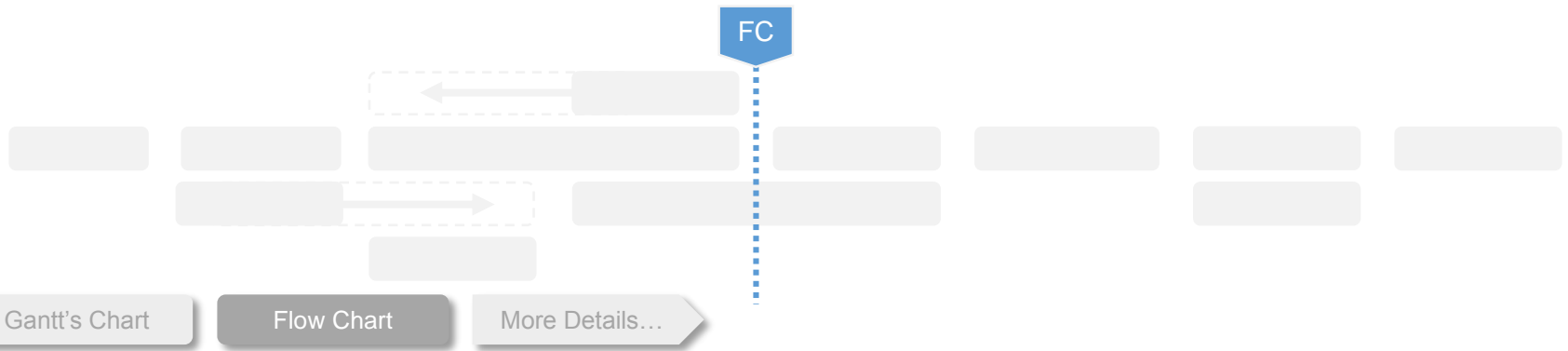
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Financial Closure

Sub-step Details

Financial closure is an important milestone in RE project development. It is when all conditions in a loan agreement have been satisfied (or waived). All documents have been signed and a draw-down of the loan can take place.

After a loan is approved ([Sub-step FIN-1](#)), the RE developer must submit several documents before the bank releases the loan. The document requirements may vary depending on the bank's policy and procedure and on the conditions in the loan agreement. Typically, the required documents can include: statements of financial strength, personal statements of non-objection and anti-corruptive of the management and director, a power purchase agreement (PPA), a Certificate of Compliance (CoC) issued by Energy Regulatory Commission (ERC), performance bonds, assignment of deeds / collaterals, an escrow account, other securities, etc. As all documents have been submitted, the loan agreement will be signed by the RE developer and counter signed by the bank. All the conditions in the loan agreement will become legally binding at this point. The bank will then transfer the loan capital to the account(s) of the RE developer. The payments to contractors and suppliers can then be done, allowing equipment procurement and construction of the power plant and installation to commence.



PCN | Procurement and Construction



PCN | Procurement and Construction

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Step Description

In the Procurement and Construction (PCN) step, a solar PV power plant is being built. It is a very important step in the solar PV project development due to the extensive cash flow and required manpower.

First, all equipment and devices must be procured from a reliable supplier ([Sub-step PCN-1](#)). All equipment / devices must have technical specifications according to the feasibility study (F/S) and engineering design previously performed. They must also meet all requirements set by local standards and/or international standards. This is to ensure the functionality and performance of the power plant in the long-term. The procurement can be the responsibility of the RE developer or under the domain of an engineering, procurement, and construction (EPC) contractor.

Second, the power plant must be physically constructed and all equipment / devices installed ([Sub-step PCN-2](#)). This part is the responsibility of an EPC contractor but must be steered closely by the RE developer. This can commence only after a building permit ([Sub-step ADM-8](#)), and a electrical permit ([Sub-step ADM-9](#)) are obtained from the respective local government unit (LGU).

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Related Documents

Document Name	Description
Utility Scale Solar Power Plants: A Guide for Developers and Investors	A publication of the International Finance Corporation (IFC) in 2012. It serves as a best practice manual for the development of large scale solar PV power plants, focusing mainly on ground-mounted systems. Although the document was made specifically for India, some content can be applied for all solar PV projects.
EMPower Utility Toolkit	<p>A toolkit developed by EMPower, a program designed to reduce the cost of electricity generated by solar PV and concentrated solar power (CSP). It is funded by the Federal Ministry for Economic Cooperation and Development, the Global Environment Facility (GEF), and the United Nations Environmental Program (UNEP). It is executed by KfW. The toolkit consists of handbooks, interactive excel tools, and simulation software for technical and financial assessment.</p> <p>Link: http://empower-ph2.com/EMPowerToolkit</p> <p><i>Note: Tool IV is a procurement guide for PV plant</i></p>

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No challenges identify for this step (as of October 2014)

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Equipment Procurement

[Sub-step Details](#)[Reference Standards](#)

Depending on the type of construction / installation contract, the procurement of equipment for a solar PV project can be done either by the RE developer or his / her Engineering, Procurement, and Construction (EPC) contractor. In general, major components for a solar PV project that must be procured include, among others: PV modules, inverter, battery, AC/DC cables, mounting structures, etc.

Imports of RE-related equipment can be exempted from all import duties, provided that some conditions / criteria have been met. Crystalline silicon PV can be purchased from local manufacturers, if required.

The RE developer shall procure equipment which is certified according to the international standards. A list of relevant standards for PV project-related equipment is available for reference.

AC: Alternating Current, DC: Direct Current

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Equipment Procurement

Sub-step Details

Reference Standards

Standard No.	Description
IEC 61215 (2005)	Crystalline silicon terrestrial PV modules – Design qualification and type approval
IEC 61646	Thin-film terrestrial PV modules – Design qualification and type approval
IEC 61730	PV module safety qualification
IEC 61701 (2011) 2 nd Edition	Salt mist corrosion testing of PV module <i>Note This standard should be considered for a solar PV project located in coastal area.</i>
IEC 61683 (1999)	PV system – Power conditioners – Procedure for measuring efficiency

Note

The list above is only indicative one. It is adapted from the "Utility Scale Solar Power Plants: A Guide for Developers and Investors" published by International Finance Corporation (IFC)

Caution

Please note some requirement set by the international standards may not be sufficient for the equipment used in some location due to harsh environmental condition in that area e.g. heavy rainfall, high wind speed, very corrosive environment etc. RE developer must not perceive the compliance of equipment to the international standards as a mere perfect insurance or guarantee on the system performance and durability

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Construction and Installation

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Sub-step Details

Several approaches to managing the construction of a solar PV power plant depend on the in-house capacity and expertise of the RE developer. The RE developer may split the engineering, procurement, construction, and installation of the power plant into smaller parts, involving many contractors and suppliers. In such a case, the interface between different parties is very crucial and must be closely managed. Risk and cost management must also be taken care by the RE developer.

Alternatively, the RE developer may place a turnkey contract with an EPC contractor. This can shift some risks away from the RE developer's side, and less management effort will be required. The RE developer who is still new to the market should use a turnkey contract approach.

Regardless of the contract arrangement, to ensure good workmanship and good quality of the power plant construction / installation, the RE developer must request some form of warranty from equipment suppliers and/or EPC contractor. There are many types of warranties available for selection, e.g., defect warranty, module capacity warranty, performance ratio warranty, etc. The duration of the warranty period must also be carefully chosen and agreed.

During the physical construction, the developer must supervise the planning and scheduling of the entire project. Certain milestones shall be defined, allowing payments to be attached to them. Site visits must also be performed from time-to-time.

Note: This guideline does not provide comprehensive and details content on how to design, engineer, and construct a solar PV power plant. There are already many guidebooks / textbooks on how to construct solar PV power plant effectively and efficiently. A good example is "Utility Scale Solar Power Plants: A Guide for Developers and Investors" published by International Finance Corporation (IFC). It can be downloaded from the IFC website:

http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_handbook_solarpowerplants.

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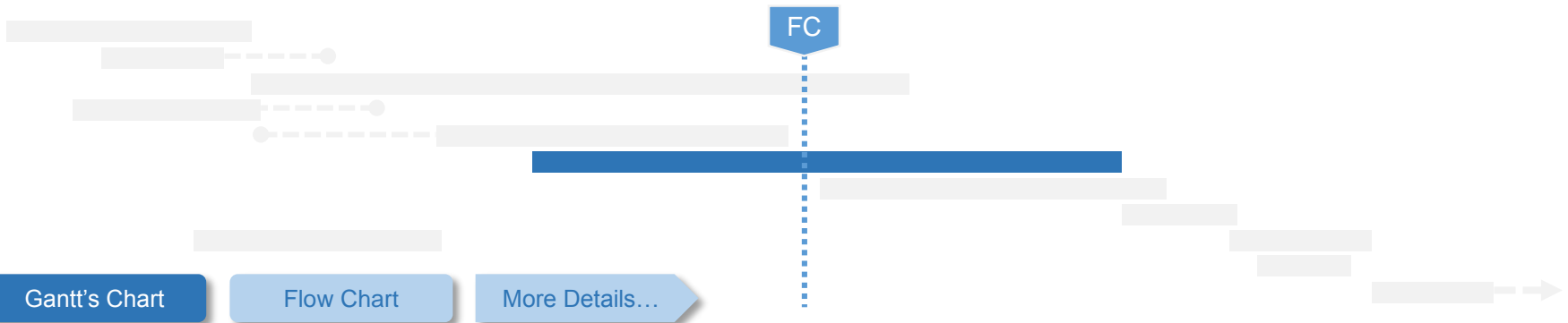
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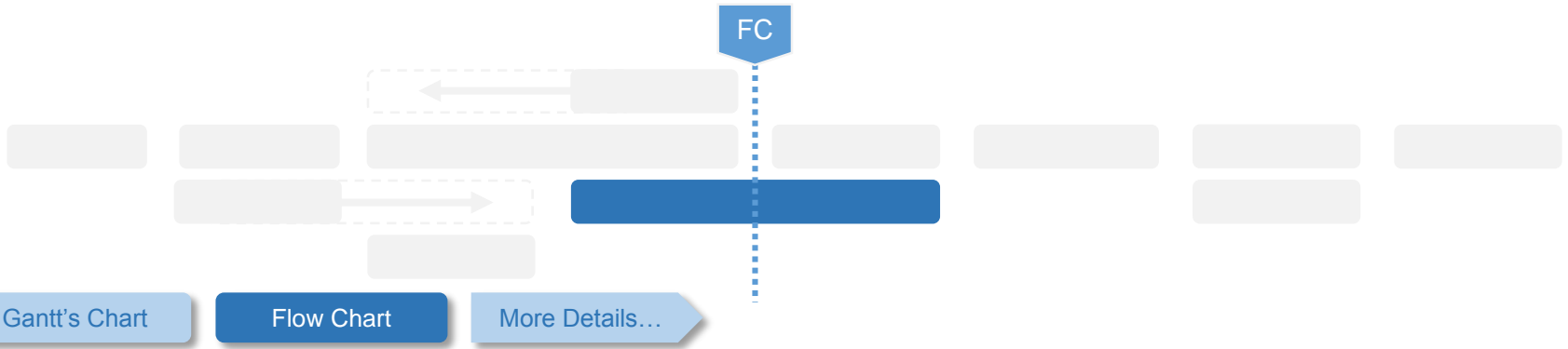
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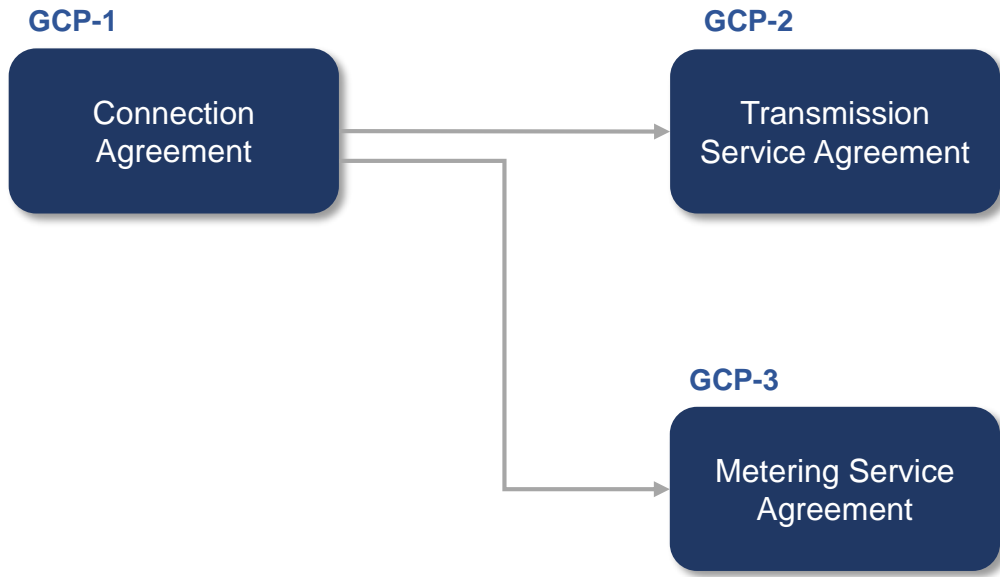


GCP | Grid Connection Permit

GCP-1										Connection Agreement																			
										Transmission Service Agreement										GCP-2									
										Metering Service Agreement										GCP-3									



GCP | Grid Connection Permit



Step Description

"Grid connection" in the Philippines' context means the connection of a system to the main transmission network operated and maintained by the National Grid Corporation of the Philippines (NGCP). This also includes a connection to a distribution network that is connected to NGCP's transmission network. The transmission and distribution networks on some smaller islands that are not operated by NGCP are defined as off-grid systems which are not within the scope of this guideline. The Grid Connection Permit (GCP) step is applicable to a grid-connected solar PV power plant only.

The RE developer must obtain approval, allowing the power plant to be connected to the grid. First, a connection agreement must be secured ([Sub-step GCP-1](#)). It allows the RE developer to connect the power plant to the power grid from relevant authorities. In case the power plant is to be connected to the distribution network, the RE developer must seek approval from the respective distribution utility (DU) in the area. In case the power plant is to be directly connected to the national transmission grid, the RE developer shall secure a connection agreement with NGCP. After a connection permit is obtained, a service agreement must be applied for. Two agreements make up the service agreement: (1) a transmission service agreement ([Sub-step GCP-2](#)) and (2) a metering service agreement ([Sub-step GCP-3](#)). In the Philippines, NGCP is mandated to provide revenue meters to all RE installations (even for a small scale RE power plant embedded to load customers). A metering agreement therefore must be signed between the RE developer and NGCP.

Related Regulations

Regulation No.	Name
Republic Act No. 9136 (2001)	Electric Power Industry Reform Act (EPIRA) of 2001 <i>Full title: An act ordaining reforms in the electric power industry, amending for the purpose of certain laws and for other purposes</i>
ERC Case No. 2006-015RC	Open Access Transmission Service (OATS) Rules
ERC Case No. 2002-253	National Grid Corporation of the Philippines (NGCP)'s Open Access Procedure
ERC Resolution No. 14 (2007)	The Philippines Grid Code <i>Note: Specifically in the section of terms and conditions for the provision of Open Access Transmission Service</i>

Related Documents

Document Name	Description
Transmission Development Plan 2012 Volume II Part 2	This ten-year plan is a National Grid Corporation of the Philippines (NGCP)'s roadmap for transmission development required to meet demand growth, support incoming generation facilities and sustain its transmission business operations while ensuring compliance with the technical and regulatory framework of the electric industry.

... Gantt's / Flow Chart

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Identified Challenges

Challenges

**Disagreement on
technical requirements /
specifications**

Details

Although most technical requirements and specifications have been defined in regulations or codes, some are open to differing judgments. Disputes may arise between the RE developer and the National Grid Corporation of the Philippines (NGCP) and delay the project.

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Connection Agreement

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)

A connection agreement is an agreement between a grid user (in this case, the RE developer) and the grid owner or distributor. It specifies the terms and conditions pertaining to the connection of the RE developer's system / equipment to a new connection point in the grid (or distribution system).

This agreement serves as consent of the National Grid Corporation of the Philippines (NGCP) or distribution utility (DU), allowing the RE developer to connect the power plant to the national grid system.

Applied Procedures:

- The RE developer submits an application. The following requirements stated in the documents must be adhered to:
 - The Open Access Transmission Service (OATS) rules B13
 - The Philippines Grid Code / The Philippines Distribution Code
 - The NGCP Open Access Procedure
- NGCP reviews and evaluates the application
- In case the application meets the NGCP's or DU's standards, the RE developer will be notified to pay a fee for a grid impact study. Alternatively, the RE developer can contract a technical consultant to conduct a grid impact study. In the latter case, the RE developer must pay a review fee to the NGCP / DU

...

Related Authorities

Central level

- National Grid Corporation of the Philippines (NGCP)

Local level

- Respective distribution utility (DU)

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Connection Agreement

Sub-step Details

Required Documents

Incurred Fee

- A grid impact study will be conducted to ensure the adequacy and capability of the grid (as per OATS Rules B14)
- In case the impact study yields favorable results, a facilities study will be conducted to determine the requirements needed to connect to the transmission provider facilities (as per OATS Rules B15)
- In case the facilities study yields favorable results, a connection agreement will be drafted by the National Grid Corporation of the Philippines (NGCP) / the distribution utility (DU)
- The RE developer reviews the draft connection agreement
- The RE developer and NGCP / DU sign the connection agreement

OATS: Open Access Transmission Service

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Connection Agreement

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Letter of intent from the RE developer
- Clearance from the Department of Energy (DOE)
- Plant description and other technical data
- Connection scheme
- Target completion date of the power plant construction
- Registration to Bureau of Internal Revenue (BIR) / Securities and Exchange Commission (SEC)
- Feasibility study (F/S)
Note: Refer to [Sub-step SSL-3](#)
- Signed offer of service
- Grid impact study
Note: the National Grid Corporation of the Philippines (NGCP) / the distribution utility (DU) will determine whether the grid impact study is required

- Facilities study

Note: A facilities study is an engineering study conducted by the Transmission Provider or Transmission Customer (in this case, the RE developer) to determine the modification to the Transmission Provider's facilities, or the new facilities required by the Transmission Customer, including the cost and scheduled completion date for such modifications or new facilities, required to provide services under these OATS Rules.

- Transmission / distribution service application form

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Connection Agreement

[Sub-step Details](#)
[Required Documents](#)
[Incurred Fee](#)

In case the grid impact study is to be performed by the National Grid Corporation of the Philippines (NGCP)

A | Grid impact study fee

- | | |
|---|--------------------------------------|
| <ul style="list-style-type: none"> Fee for conducting a grid impact study for a power plant with a capacity of up to 50 MW | PHP 600,000
<i>(USD 13,680)</i> |
| <ul style="list-style-type: none"> Fee for conducting a grid impact study for a power plant with a capacity of more than 50 MW | PHP 1 million
<i>(USD 22,800)</i> |

In case the grid impact study is to be performed by a third party

A | Charge for NGCP's review

- | | |
|---|-----------------------------------|
| <ul style="list-style-type: none"> For a review of a grid impact study performed on a power plant of up to 50 MW | PHP 150,000
<i>(USD 3,420)</i> |
| <ul style="list-style-type: none"> For a review of a grid impact study performed on a power plant of more than 50 MW | PHP 200,000
<i>(USD 4,560)</i> |

Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

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Transmission Service Agreement

Sub-step Details

Required Documents

Incurred Fee

The National Grid Corporation of the Philippines (NGCP) Transmission Service Agreement allows the grid customer (in this case, the RE developer) to use the national power grid in the transmission of electricity.

The applied procedures are as follows:

- Upon the signing of the Connection Agreement with the NGCP / distribution utility (DU) ([Sub-step GCP-1](#)), the RE developer may submit all of the documents for the transmission service application
- NGCP reviews the documents and assess the technical design
- The RE developer can construct the facilities at the connection point approved by NGCP per OATS Rules 18.3
- Once construction of the facility is completed, NGCP will conduct Pre-energization activities together with the grid customer
- NGCP can now start processing the Transmission Service Agreement
- If satisfied with the pre-energization evaluation of the interconnection facilities, NGCP will issue a readiness to connect
- The grid customer shall submit all documents prior to the interconnection test

...

Related Authorities

Central government	<ul style="list-style-type: none"> ▪ National Grid Corporation of the Philippines (NGCP)
Local government	(none)



Transmission Service Agreement

Sub-step Details

Required Documents

Incurred Fee

...

- After satisfying the provisional connection requirements, the RE developer shall conduct on-line testing witness by the National Grid Corporation of the Philippines (NGCP)
- Final connection validation shall be conducted by NGCP
- Signing of the Transmission Service Agreement (TSA)



Transmission Service Agreement

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Letter of application for transmission service
 - Load approval from the Energy Regulatory Commission (ERC)
 - Connection agreement
Note: Refer to [Sub-step GCP-1](#)
 - Issuance of certificate of technical requirements
 - District Office Clearance
 - Metering Services Group (MSG) Clearance
 - Maintenance and Testing Division (MTD) Clearance
 - System Operator (SO) Clearance *(if applicable)*
 - Draft transmission service agreement (TSA)
 - Issuance of approval to connect
Note: Refer to [Sub-step GCP-1](#)
 - Energisation of customer's facilities
 - Payment of security deposit
- Relevant data / information as follows:
 - Open Access Transmission Service (OATS) services
 - Standard planning data
 - Detailed planning data
 - Electrical drawings
 - Connection point drawings
 - Asset boundary
 - Protection arrangement and settings
 - Metering requirements
 - Provisional maintenance schedule
 - Testing and commissioning (new delivery point)
 - Load shedding
 - Contingency actions
 - Critical events list
 - Statement of readiness to connect (new delivery point)

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Transmission Service Agreement

Sub-step Details

Required Documents

Incurred Fee

For generation customers of regulated transmission services

A | Power delivery service charge

- Method for calculating the service charge is outlined in Annex I of Module F of the OATS rules

B | System operator charge

- Method for calculating the service charge is outlined in Annex II of Module F of the OATS rules

C | Metering service provider charge

- Method for calculating the service charge is outlined in Annex III of Module F of the OATS rules

For generation customers of excluded / other services

A | Connection charge

- Method for calculating the service charge is outlined in Annex IV of Module F of the OATS rules

B | Residual sub-transmission charge

- Method for calculating the service charge is outlined in Annex IV of Module F of the OATS rules

C | Fee for technical services (e.g. system impact study)

- Method for calculating the service charge is outlined in Annex V of Module F of the OATS rules

D | Ancillary service charge

- Method for calculating the service charge is outlined in Annex VI of Module F of the OATS rules

OATS: Open Access Transmission Service

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Transmission Service Agreement

Sub-step Details

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Incurred Fee

For embedded generators of regulated transmission services

A | System operator charge

- Method for calculating the service charge is outlined in Annex II of Module F of the OATS rules

B | Fee for technical services (e.g. system impact study)

- Method for calculating the service charge is outlined in Annex V of Module F of the OATS rules

C | Ancillary service charge

- Method for calculating the service charge is outlined in Annex VI of Module F of the OATS rules

OATS: Open Access Transmission Service

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Metering Service Agreement

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)

The National Grid Corporation of the Philippines (NGCP) is mandated to provide revenue meters to all RE installations, even for small RE generating facilities embedded to load customers. The metering assets provided to embedded generators shall be limited to the meters only. Thus, a metering agreement has to be signed between an RE generator and the NGCP.

The applicable procedures are the same with the application procedure for the NGCP's Transmission Service Agreement ([Sub-sep GCP-2](#)). However, only a new document – the Metering Service Agreement – will be signed

Related Authorities

Central government	<ul style="list-style-type: none">National Grid Corporation of the Philippines (NGCP)
Local government	(none)

Metering Service Agreement

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- The same documents that are submitted for the “Transmission Service Agreement” are used for the metering service agreement (See [Sub-step GCP-2](#))

Metering Service Agreement

Sub-step Details

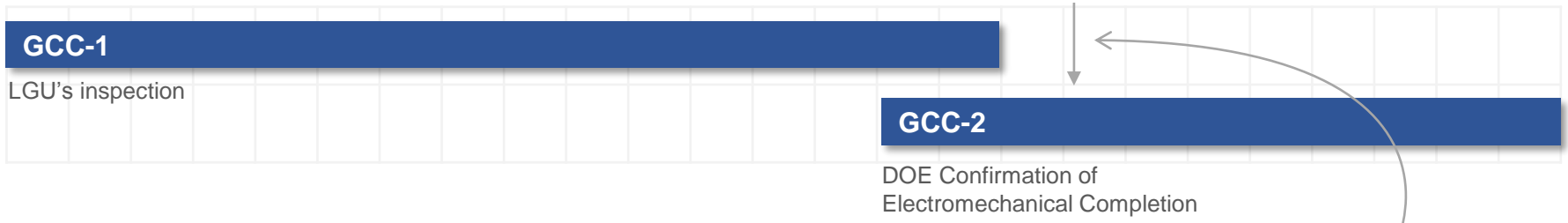
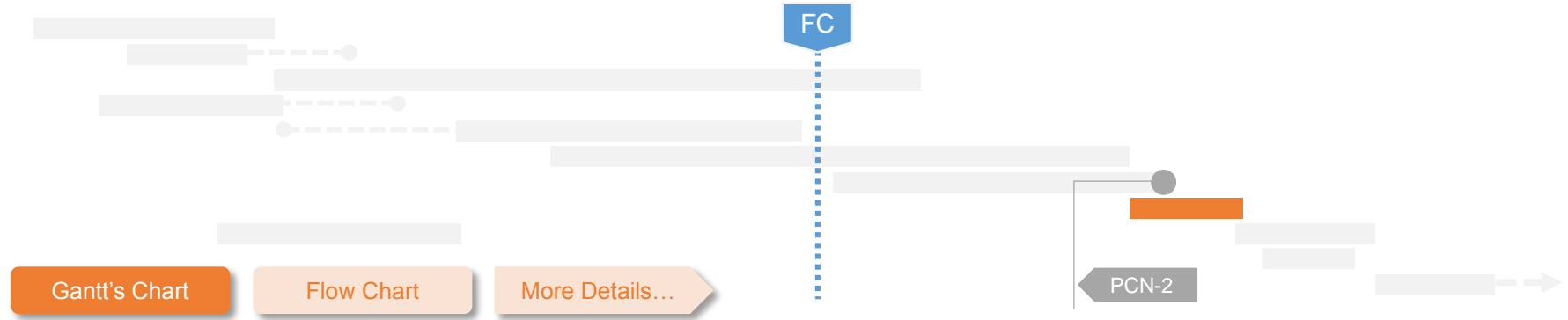
Required Documents

Incurred Fee

A | Metering service provider charge

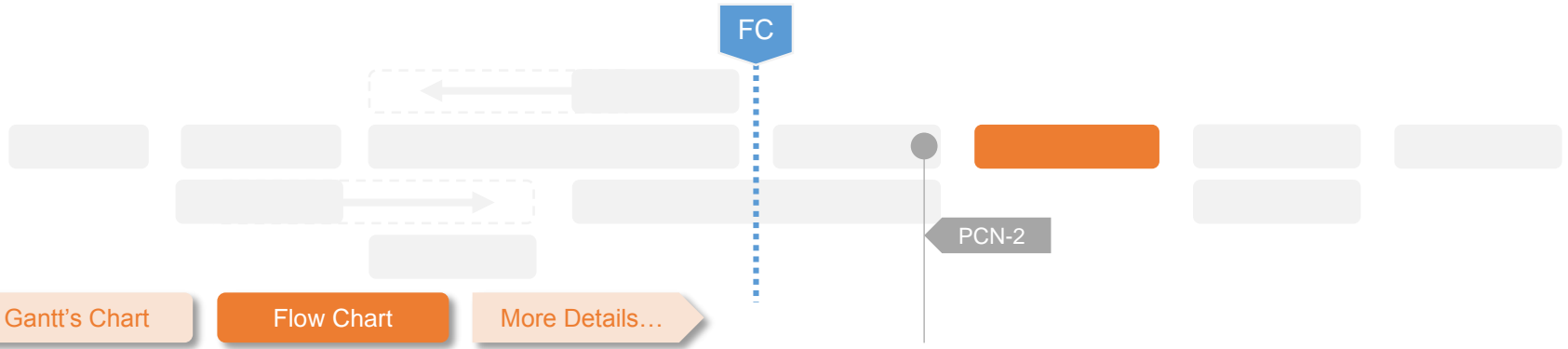
- Method for calculating the service charge is outlined in Annex III of Module F of the Open Access Transmission Service (OATS) rules

GCC | Grid Connection and Commissioning

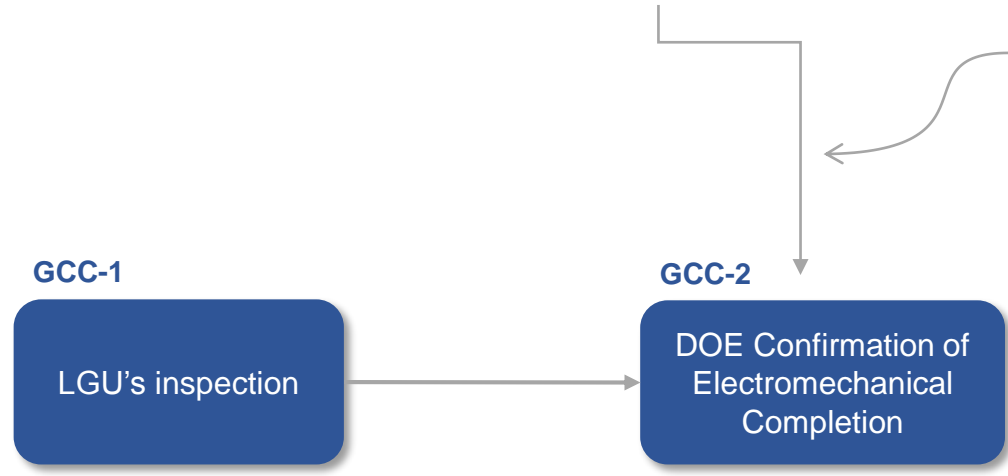


MANDATORY
A Confirmation of Electromechanical Completion from Department of Energy (DOE) ([Sub-step GCC-2](#)) can be applied for when the progress of solar PV power plant construction has reached 80% completion ([Sub-step PCN-2](#))

DOE: Department of Energy; LGU: Local Government Unit



GCC | Grid Connection and Commissioning



MANDATORY
 A Confirmation of Electromechanical Completion from Department of Energy (DOE) ([Sub-step GCC-2](#)) can be applied for when the progress of solar PV power plant construction has reached 80% completion ([Sub-step PCN-2](#))

DOE: Department of Energy; LGU: Local Government Unit

GCC | Grid Connection and Commissioning

... Gantt's / Flow Chart

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Step Description

There are two inspections to be done. First, the respective local government unit (LGU) must inspect the plant ([Sub-step GCC-1](#)). This is a follow-up to the wiring permit granted earlier in the LGU Electricity Permit ([Sub-step ADM-9](#)). While the wiring permit allows the RE developer to install electrical equipment / devices, a Certificate of Electrical Inspection (CFEI) must be obtained before the power plant can commence operation.

The Department of Energy (DOE) also has an obligation to inspect the plant as well and grant a Confirmation of Electromechanical Completion ([Sub-step GCC-2](#)). The DOE must confirm that all facilities at the power plant have already been installed, but the power plant itself has not yet been connected to the power network. It is a certificate that allows commissioning of the power plant. The RE developer can apply for the DOE's confirmation of Electromechanical Completion after 80% of the power plant construction has been completed.

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Related Regulations

Regulation No.	Name
Republic Act No. 9513 (2008)	Renewable Energy Act of 2008 <i>Full title: "An act promoting the development, utilization, and commercialization of renewable energy resources and for other purposes"</i> <i>Note: The relevancy of this act during the Grid Connection and Commissioning (GCC) step is outlined in Section 7.</i>
Department Circular (DOE) No. 2009-07-0011	Implementing Rules and Regulations (IRR) of Republic Act no. 9513

... Gantt's / Flow Chart

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Related Documents

Document Name	Description
Official website of DOE	The official website of Department of Energy (DOE) can be accessed at: www.doe.gov.ph

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Details

Delays in the site inspection

Due to the high workload and limited number of staff, the Department of Energy (DOE)'s personnel may be not available to carry out the facility inspection. This can cause a delay in securing other certificates and permits, e.g., a DOE Certificate of Endorsement for FIT Eligibility, the Energy Regulatory Commission's (ERC) Certificate of Compliance (COC), etc.

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LGU's Certificate of Final Electrical Inspection

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Sub-step Details

The respective local government unit (LGU) conducts an electrical safety inspection, testing, and verification of the electrical wiring ([Sub-step ADM-9](#)) before the installation of electric meters by the electric power service provider to ensure their conformance to the provisions of the Philippine Electrical Code and before the issuance of a Certificate of Final Electrical Inspection (CFEI).

After substantial installation of electrical equipment in the power plant has been completed, the RE developer must arrange for an inspection to be conducted by the LGU's field engineer. A physical inspection shall be done on the electrical installations, connections, switches, etc.

If the inspection / verification results do not meet the electrical standards, the LGU shall inform the RE developer about the defects/deficiencies and the recommendations to be undertaken.

When the inspection yields satisfying results, a CEFI is issued to the RE developer.

Related Authorities

Central government	(none)
Local government	<ul style="list-style-type: none">Office of the Building Official (OBO) in the respective local government unit (LGU)

DOE Confirmation of Electromechanical Completion

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)

A Confirmation of Electromechanical Completion is issued by the Department of Energy (DOE), stating that the power plant (including all substations and other facilities for grids or distribution system connections) is already in place but not yet connected. In other words, it certifies that the RE project is ready for commissioning.

The procedures are as follows:

- The RE Developer informs the DOE that it has reached its electromechanical completion
- The DOE, within 15 working days, conducts a site visit to inspect the RE project, including its interconnection facility. The plant must have reached at least 80% completion based on its approved work plan
- The DOE shall then issue a confirmation or denial within 15 working days

Related Authorities

Central government	<ul style="list-style-type: none">▪ Department of Energy (DOE) - Renewable Energy Management Bureau (REMB)
Local government	(none)

DOE Confirmation of Electromechanical Completion

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- A letter of the RE Developer informing the DOE that it has reached the electromechanical completion

DOE Confirmation of Electromechanical Completion

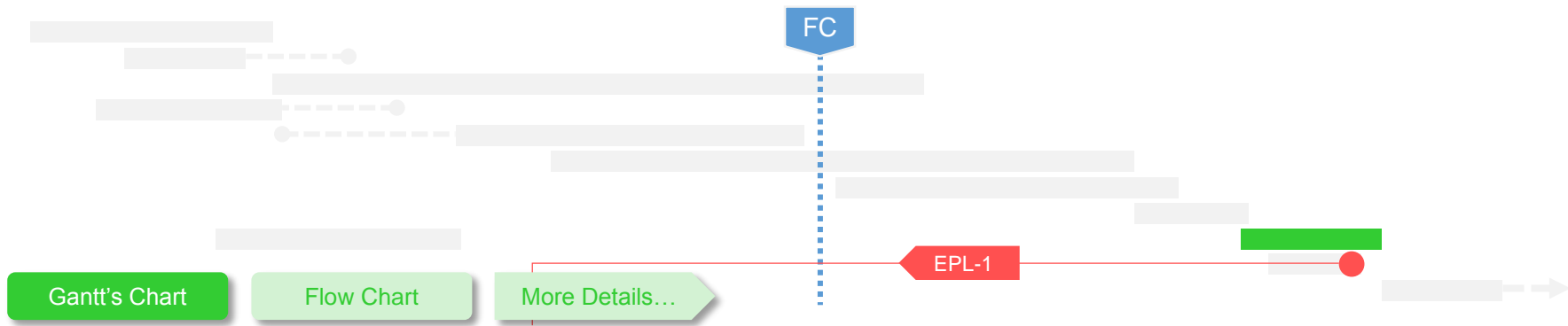
Sub-step Details

Required Documents

Incurred Fee

A | Actual cost of inspection

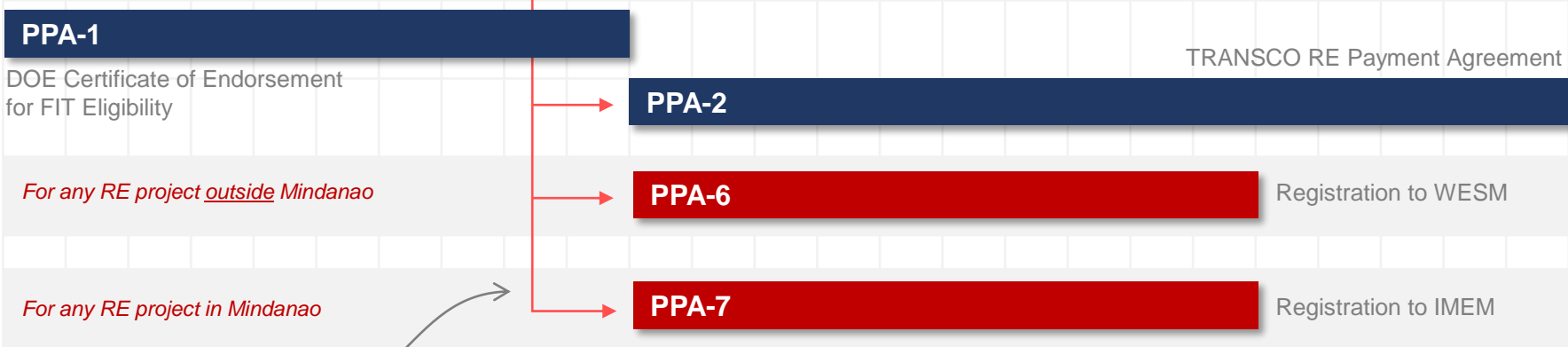
- The actual cost for the inspection conducted by the DOE team shall be fully covered by the RE developer.



PPA | Power Purchase Agreement

For a solar PV project under the FIT Scheme

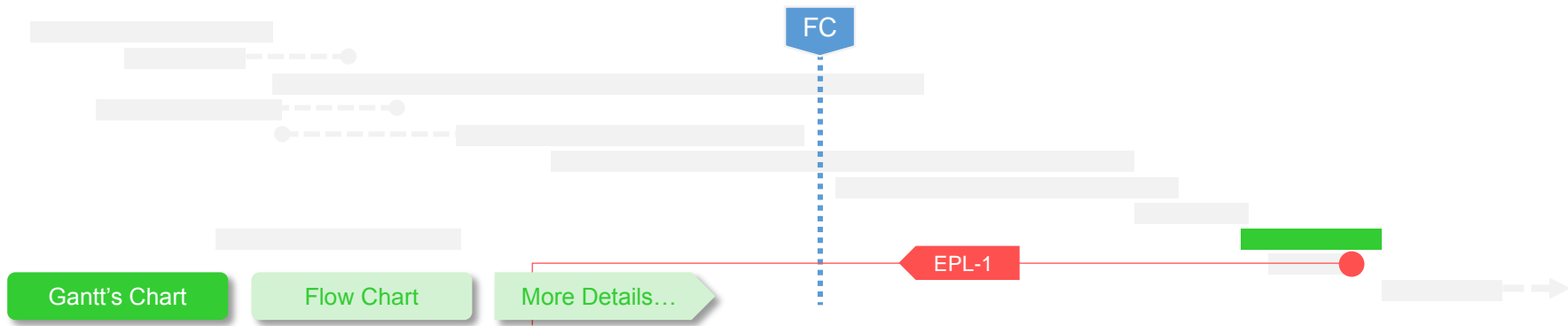
- FIT Scheme
- PSA Scheme
- B2B Scheme



MANDATORY

A Certificate of Compliance (COC) shall be obtained from the Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)) before the RE developer applies for a TRANSCO RE Payment Agreement ([Sub-step PPA-2](#)) and registers the RE project to WESM or IMEM ([Sub-step PPA-6](#) and [Sub-step PPA-7](#), respectively)

DOE: Department of Energy; ERC: Energy Regulatory Commission; FIT: Feed-in Tariff; IMEM: Interim Mindanao Electricity Market; TRANSCO: National Transmission Corporation; WESM: Wholesale Electricity Spot Market



PPA | Power Purchase Agreement

For a solar PV project under the PSA Scheme

- FIT Scheme
- PSA Scheme**
- B2B Scheme



For any RE project outside Mindanao

For any RE project in Mindanao

MANDATORY

A Certificate of Compliance (COC) shall be obtained from Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)) before RE developer applies for TRANSCO RE Payment Agreement ([Sub-step PPA-4](#)) and register the RE project to WESM or IMEM ([Sub-step PPA-6](#) and [Sub-step PPA-7](#), respectively)

DOE: Department of Energy; ERC: Energy Regulatory Commission; IMEM: Interim Mindanao Electricity Market; PSA: Power Supply Agreement; TRANSCO: National Transmission Corporation; WESM: Wholesale Electricity Spot Market

FC

EPL-1

Gantt's Chart | Flow Chart | More Details...

PPA | Power Purchase Agreement

For a solar PV project under the B2B Scheme

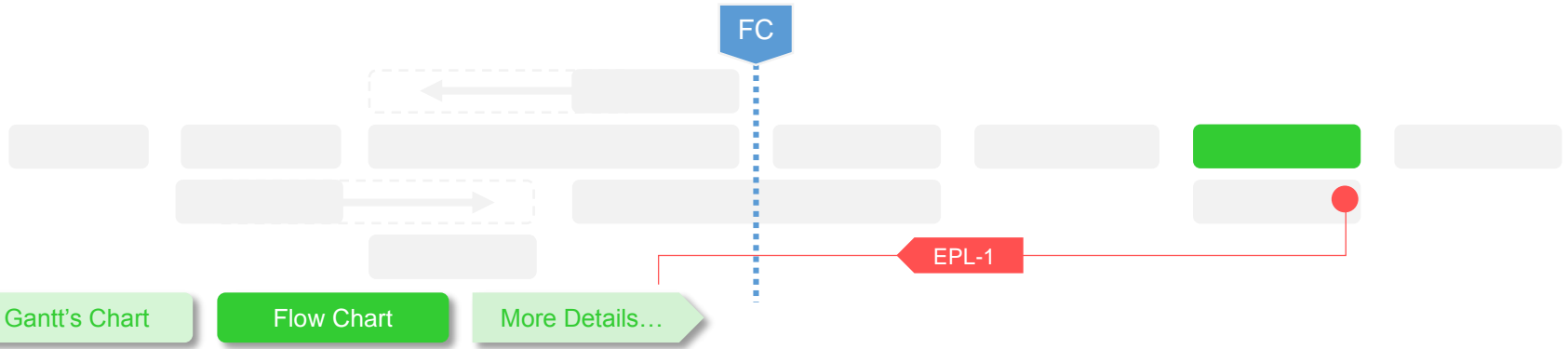
PPA-5											
PSA with bulk consumer											

PPA | Power Purchase Agreement

FIT Scheme											
PSA Scheme											
B2B Scheme											
For any RE project <u>outside</u> Mindanao											
PPA-6						Registration to WESM					
For any RE project <u>in</u> Mindanao											
PPA-7						Registration to IMEM					

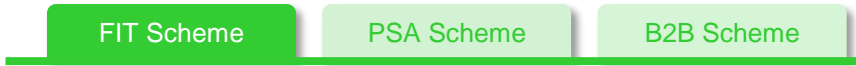
MANDATORY
 A Certificate of Compliance (COC) shall be obtained from Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)) before RE developer register the RE project to WESM or IMEM ([Sub-step PPA-6](#) and [Sub-step PPA-7](#), respectively)

DOE: Department of Energy; ERC: Energy Regulatory Commission; IMEM: Interim Mindanao Electricity Market; PSA: Power Supply Agreement; TRANSCO: National Transmission Corporation; WESM: Wholesale Electricity Spot Market



PPA | Power Purchase Agreement

For a solar PV project under the FIT Scheme



PPA-1

DOE Certificate of Endorsement for FIT Eligibility

PPA-2

TRANSCO RE Payment Agreement

PPA-6

Registration to WESM

PPA-7

Registration to IMEM

For a RE project outside Mindanao

For a RE project in Mindanao

MANDATORY

A Certificate of Compliance (COC) shall be obtained from Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)) before RE developer applies for TRANSCO RE Payment Agreement ([Sub-step PPA-2](#)) and register the RE project to WESM or IMEM ([Sub-step PPA-6](#) and [Sub-step PPA-7](#), respectively)

DOE: Department of Energy; ERC: Energy Regulatory Commission; FIT: Feed-in Tariff; IMEM: Interim Mindanao Electricity Market; TRANSCO: National Transmission Corporation; WESM: Wholesale Electricity Spot Market

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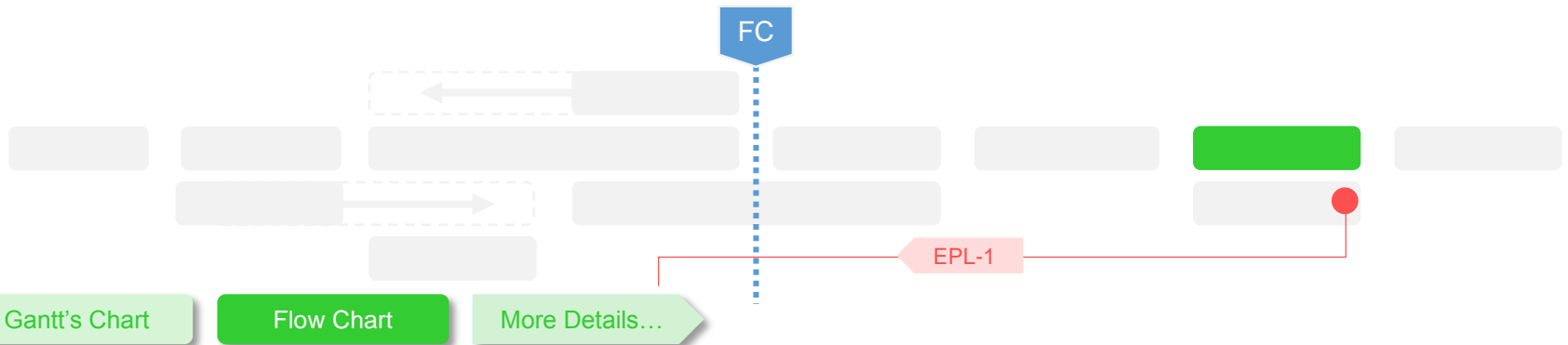
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PPA | Power Purchase Agreement

For a solar PV project under the PSA Scheme

PPA-3

DU Power Supply Agreement

FIT Scheme

PSA Scheme

B2B Scheme

PPA-4

PSA Approval

PPA-6

Registration to WESM

For a RE project outside Mindanao

PPA-7

Registration to IMEM

For a RE project in Mindanao

MANDATORY

A Certificate of Compliance (COC) shall be obtained from Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)) before RE developer applies for TRANSCO RE Payment Agreement ([Sub-step PPA-4](#)) and register the RE project to WESM or IMEM ([Sub-step PPA-6](#) and [Sub-step PPA-7](#), respectively)

DOE: Department of Energy; ERC: Energy Regulatory Commission; IMEM: Interim Mindanao Electricity Market; PSA: Power Supply Agreement; TRANSCO: National Transmission Corporation; WESM: Wholesale Electricity Spot Market

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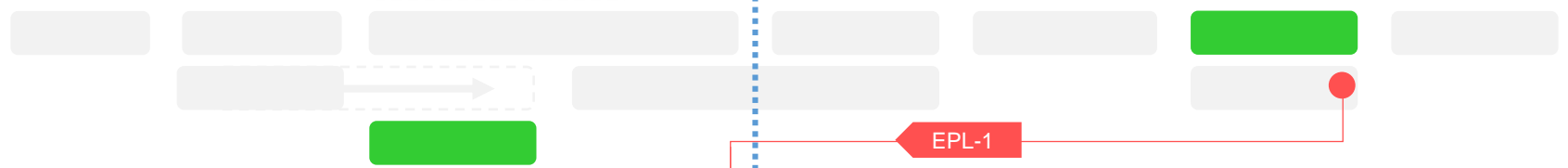
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Gantt's Chart

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PPA | Power Purchase Agreement

For a solar PV project under the FIT Scheme

PPA | Power Purchase Agreement

FIT Scheme

PSA Scheme

B2B Scheme

PPA-5

Power sale agreement with bulk consumer

PPA-6

Registration to WESM

For a RE project outside Mindanao

PPA-7

Registration to IMEM

For a RE project in Mindanao

MANDATORY

A Certificate of Compliance (COC) shall be obtained from Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)) before RE developer register the RE project to WESM or IMEM ([Sub-step PPA-6](#) and [Sub-step PPA-7](#), respectively)

DOE: Department of Energy; ERC: Energy Regulatory Commission; IMEM: Interim Mindanao Electricity Market; PSA: Power Supply Agreement; TRANSCO: National Transmission Corporation; WESM: Wholesale Electricity Spot Market

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PPA | Power Purchase Agreement

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Step Description

There are several types of legal agreements concerning the payment of electricity supplied by an RE power plant. This depends on the project scheme.

FIT Scheme	A RE Payment Agreement (REPA) with the National Transmission Corporation (TRANSCO)
PSA Scheme	A power supply agreement (PSA) with the respective distribution utility (DU). The PSA must be approved by the Energy Regulatory Commission (ERC).
B2B Scheme	An agreement between RE Developer and its consumer / client. The price can be set without any intervention from any governmental institution.

Regardless of the type of scheme applied, all RE projects in the Philippines must be registered to either the Wholesale Electricity Spot Market (WESM) or the Interim Mindanao Electricity Market (IMEM), depending on its location. The WESM is a market where trading of electricity in the Philippines is made. It establishes basic rules, requirements and procedures which govern the operation of the Philippines' electricity market. However, the WESM is not operational in Mindanao. The IMEM has recently been established for the trading of electricity specifically in Mindanao. For a solar PV project located in Mindanao, the RE developer must register the power plant with the IMEM ([Sub-step PPA-7](#)). For a power plant located outside Mindanao, it must be registered with the WESM ([Sub-step PPA-6](#))

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Step Description

▪ For a project under the FIT Scheme

The RE developer must first obtain a Certificate of Endorsement (COE) for FIT eligibility from the Department of Energy (DOE) ([Sub-step PPA-1](#)). As the National Transmission Corporation (TRANSCO) is responsible for feed-in tariff (FIT) settlement in the Philippines, the RE developer must then conclude an RE Payment Agreement (REPA) with TRANSCO ([Sub-step PPA-2](#)). The REPA forms the basis for the receipt of payments from TRANSCO under the FIT scheme.

As of 2014, the FIT administration system has not yet been fully operational and detailed procedures still have yet to be published. The content in this chapter for a project under the FIT Scheme is based on the draft regulation (unofficial).

▪ For a project under the PSA Scheme

A power supply agreement (PSA) is a legally binding contract between the RE developer and the respective distribution utility (DU). Following the conclusion of a PSA between the RE developer and the DU ([Sub-step PPA-3](#)), both parties shall file a joint application to the ERC for its approval on the PSA ([Sub-step PPA-4](#)). The ERC shall determine a reasonable generation cost that the DU can recover from its captive market as part of its retail rate and determine / approve a reasonable generation cost under the PSA. Without such an approval, the PSA is not valid.

▪ For a project under the B2B Scheme

A PSA between the RE Developer and its client (so-called **bulk consumer**) is a direct business agreement between two parties without any intervention from the government ([Sub-step PPA-5](#)). There is no restriction on the electricity tariff agreed between the RE developer and the bulk consumer. In case the RE developer needs to utilise the NGCP's transmission lines and/or the DU's distribution lines to deliver its power to its client/s, then the developer shall also obtain the NGCP/DU service agreements mentioned in the Grid Connection Permit ([GCP](#)) step.

PPA | Power Purchase Agreement

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Documents

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Related Regulations

Regulation No.	Name
Republic Act No. 9513 (2008)	Renewable Energy Act of 2008 <i>Full title: "An act promoting the development, utilization, and commercialization of renewable energy resources and for other purposes"</i>
Department Circular (DOE) No. 2009-07-0011	Implementing Rules and Regulations (IRR) of Republic Act no. 9513
Department Circular (DOE) No. 2013-05-0009	Guidelines for the selection process of renewable energy projects under feed-in tariff system and the award of certificate for feed-in tariff eligibility
ERC Resolution No. 15 (2012)	Resolution adopting the position of the Commission on the issued paper published on 2 April 2012 and the corresponding amendments to the feed-in tariff rules <i>Note: This resolution define the role of the National Transmission Corporation (TRANSCO) in the implementation of FIT Scheme in the Philippines.</i>
ERC Resolution No. 10 (2012)	Resolution approving the feed-in tariff rates

DOE: Department of Energy; ERC: Energy Regulatory Commission

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PPA | Power Purchase Agreement

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Related Documents

Document Name	Description
Official website of DOE	The official website of the Department of Energy (DOE) can be accessed at: www.doe.gov.ph
ERC Draft Resolution on PSA	(DRAFT) Rules governing the execution, review, and evaluation of power supply agreements entered into by distribution utilities for the supply of electricity to their captive market

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Details

FIT Allocation System

(For a project under the FIT Scheme)

At the time of publication (October 2014), the feed-in tariff allocation (FIT-All) system is still under development and has not yet fully established. TRANSCO still has to define role as FIT administration. As a result, it is not exactly clear yet on applied procedures, timeframe, roles of authorities, etc.

Recommendation: The system is under development and should be set in the near future. During this interim period, RE developer shall directly consult TRANSCO regarding the exact procedure and framework.

FIT Installation target

(For a project under the FIT Scheme)

A Certificate of Endorsement (COE) for FIT eligibility must be obtained for a solar PV project under the FIT Scheme. The COE can be obtained only after the construction of a power plant has finished. The COEs will be granted to RE developers on a first-come-first-serve basis. When the amount of issued COEs reaches the installation target, no more COEs can be issued by the Department of Energy (DOE). This poses a high risk to RE developer who built a solar power plant for the FIT Scheme but later found out that a COE cannot be obtained because the installation target has been reached.

Strict document requirements

An RE developer may be unable to satisfy the assessment made by the various units of the Philippines Electricity Market Corporation (PEMC). Like any trading house, documentation requirements by PEMC are very strict. They must be precisely prepared and submitted.

Recommendation: An RE developer must pay careful attention when submitting the documents to PEMC.

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DOE Certificate of Endorsement for FIT Eligibility

Sub-step Details

Required Documents

Incurred Fee

This sub-step is for a solar PV project under the FIT Scheme

When the Department of Energy (DOE) determines that an RE power plant is ready to enter into the feed-in tariff (FIT) system, it will issue a Certificate of Endorsement (COE) for FIT eligibility to the RE developer.

This sub-step takes place after the DOE confirms the electromechanical completion of the RE project ([Sub-step GCC-2](#)). Within five days after the issuance of the electromechanical completion, the DOE shall determine the eligibility of the project under the FIT system to the Energy Regulatory Commission (ERC) for processing the Certificate of Compliance (CoC) ([Sub-step EPL-1](#)). At this point in time, all interconnection facilities shall be fully in place.

Typically, the procedures are as follows:

- The RE developer informs the DOE on the date of successful commissioning of the power plant after receiving confirmation of electromechanical completion ([Sub-step GCC-2](#))
- The DOE confirms the date
- In the event the DOE validates the Successful Commissioning, the DOE shall, within 15 working days from the date thereof, issue a COE for FIT Eligibility to the ERC on a first-come-first-serve basis. The DOE cannot issue a COE until the installation cap (quota) has been fully subscribed

Related Authorities

Central government	<ul style="list-style-type: none"> ▪ Department of Energy (DOE) Renewable Energy Management Bureau (REMB)
Local government	(none)

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DOE Certificate of Endorsement for FIT Eligibility

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Letter from RE developer to inform the Department of Energy (DOE) on the date of successful commissioning of the RE plant

DOE Certificate of Endorsement for FIT Eligibility

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Sub-step Details

Required Documents

Incurred Fee

A | Processing Fee

▪ The processing fee is calculated per MW of installed capacity	PHP 100 / MW (USD 2.3 / MW)
▪ Minimum fee	PHP 10,000 (USD 230)

Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

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TRANSCO RE Payment Agreement

[Sub-step Details](#)
[Required Documents](#)

This sub-step is for a solar PV project under the FIT Scheme

The National Transmission Corporation (TRANSCO) is in charge of the FIT settlement. Its duties in relation to the implementation of the FIT system include:

- Collecting information for all RE injections in any distribution or transmission network across the Philippines, including FIT eligible RE plants that are embedded in the distribution networks
- Auditing the metering
- Calculating the payments for each FIT eligible RE power plant based on the applicable FIT and actual injections
- Filing the application for the setting of the feed-in tariff allowance (FIT-All) before the Energy Regulatory Commission (ERC)
- Entering into a RE Payment Agreement (REPA) with FIT Eligible RE Developers

The REPA forms the basis for the participation of an RE project in the FIT system, in particular for the receipt of payments from TRANSCO under the FIT scheme. The document is still in a drafting period. At the time when this guidebook was published (October 2014), the FIT allocation system had not yet been established and fully implemented. The role of TRANSCO in the process is still under discussion.

Related Authorities

Central government	<ul style="list-style-type: none"> ▪ National Transmission Corporation (TRANSCO)
Local government	(none)

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TRANSCO RE Payment Agreement

Sub-step Details

Required Documents

A | General Requirements

- Certificate of compliance issued by the Energy Regulatory Commission (ERC)

Note: Refer to [sub-step EPL-1](#)

DU Power Supply Agreement

[Sub-step Details](#)[Required Documents](#)

This sub-step is for a solar PV project under the PSA Scheme

The RE developer must discuss and agree with the relevant distribution utility (DU) on power supply agreement (PSA). The regulatory framework for the PSA is still being drafted and discussed by the Energy Regulatory Commission (ERC).

A competitive selection process (call for tenders) is normally used. The RE developer shall prepare a proposal in response to the terms of reference (TOR) issued by the DU. Usually, the RE developer can find the following information in the TOR:

- Required / contracted capacity [MW] and/or energy volumes [MWh or GWh]
- Source of power generation
- Contract period
- Fee structure unbundled to capacity fees, variable and fixed operating and maintenance (O&M) fee, fuel fee and others, including the derivation of each component
- Formula of adjustment for the base fee (if any)
- Form of payment (PHP or other foreign currency)
- Penalties (if applicable)

Related Authorities

Central government	(none)
Local government	<ul style="list-style-type: none">▪ Distribution utility (DU)

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DU Power Supply Agreement

Sub-step Details

Required Documents

If applicable, details regarding any transmission projects or grid connection projects necessary to complement the proposed generation capacity, including identification of the parties that will develop and/or own such facilities, any costs related to such projects and specification of the parties responsible for recovery of any cost related to such projects.

DU Power Supply Agreement

Sub-step Details

Required Documents

The exact required documents will be stated in the call for tenders issued by the distribution utility (DU).

Approval of PSA

[Sub-step Details](#)[Required Documents](#)

This sub-step is for a solar PV project under the PSA Scheme

While the RE developer can directly agree on a power supply agreement (PSA) with the relevant distribution utility, approval from the Energy Regulatory Commission (ERC) is required. Without such approval, the PSA is not valid.

Within 30 days after the PSA has been agreed, the RE developer and the power utilities must file a joint application to the ERC for its PSA approval and for the determination of the reasonable generation costs that the distribution utility (DU) can recover from its captive market as part of its retail rate.

The ERC shall determine the reasonable generation cost under the PSA, taking into account the following fees, if applicable: capital recovery fee (CRF), operation and maintenance (O&M) fee, and fuel fee.

Related Authorities

Central government	<ul style="list-style-type: none">The Energy Regulatory Commission (ERC)
Local government	(none)

ERC Approval for PSA

Sub-step Details

Required Documents

A | General Requirements

- The duly signed power supply agreement (PSA)
Note: Refer to [Sub-step PPA-3](#)
- All details on the procurement process used by the distribution utility (DU) leading to the selection of the RE developer shall contain the following information:
 - Terms of reference (TOR) (*the DU to the RE developer*)
 - PSA proposal (*the RE developer to the DU*)
- Sworn certification that a public bidding was conducted
- Executive summary
- Sources of funding or financial plans shall contain the following information:
 - Debt/equity ratio;
 - Project/asset cost and the economic life;
 - Computed return on investment (ROI) and weighted average cost of capital (WACC) with justification;
 - Bank's certification on long-term loan indicating amortisation, schedule of loan payments (principal and interest), interest rate, and credit term (period and applicable penalties)
- Certificate of registration from the Philippine Board of Investment (BOI)
Note: Refer to [Sub-step CFL-2](#)
- Purchased power rate – This must include the following details:
 - Breakdown of the base prices of operation and maintenance, capacity fee, fixed operation fee, and energy fee
 - Sample Computation of power rates with supporting documents on the proposed fees and list of assumptions taken
 - Statement of its impact on the overall rates of the DU once the contract is approved.
 - Basis/rationale of indexation and level of indexation (*if applicable*)
- Cash flow specifying the following details:
 - Initial costs.
 - Breakdown of operating and maintenance expenses.
 - Minimum Energy Off-take (MEOT) (*if applicable*)
- All cost analyses related to the generation in support of the proposed pricing provisions of the contract

ERC Approval for PSA

Sub-step Details

Required Documents

A | General Requirements (cont.)

- Articles of Incorporation/Partnership (for Corporation/Partnership) of the RE developer's company with a certificate of registration from the Securities and Exchange Commission (SEC)
- Latest General Information Sheet (GIS) of the RE developer's company
Note: This information sheet must be in the SEC's form
- Latest and complete set of audited financial statements of the RE developer's company – The following information must be included:
 - Balance sheet
 - Income statement
 - Statement of cash flows
 - Auditor's opinion *(if available)*
 - Statement of manager's responsibility on the company's financial statements *(if available)*
- Other documents to prove the entitlement to any tax incentives and exemptions
- Certificate of compliance (CoC) from the Energy Regulatory Commission (ERC)
Note: Refer to [Sub-step EPL-1](#)
- Technical characteristics of the power plant – At minimum, the following information shall be included:
 - Technology
 - Installed capacity and dependable capacity *[MW or kW]*
 - Capacity factor
 - Mode of operation (i.e. base, peak, Intermediate-peak)
- Details of any transmission projects or grid connection projects necessary to complement the RE project – The following details shall be included *(if applicable)*:
 - Identification of the parties that will develop and/or own such facilities
 - Any costs related to such projects
 - Party that is responsible for recovery of any costs related to such projects
- Certification on the consistencies and inconsistencies between the proposed generation capacity and the Philippine Development Plan (PDP) issued by the Department of Energy (DOE).
Note: Any inconsistencies shall be supported by relevant analysis, i.e. forecasts and assessments of available generation capacity and technology mix, etc.

ERC Approval for PSA

Sub-step Details

Required Documents

A | General Requirements (cont.)

- Details regarding the load forecast projections in accordance with the latest Distribution Development Plan of the distribution utility (DU) and the variability of the projections over the proposed contractual period
- An estimation of the potential for a reduction in load supplied by the DU due to retail competition.
- Other information the Energy Regulatory Commission (ERC) may require

Power sale agreement with bulk consumer

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[Sub-step Details](#)

This sub-step is for a solar PV project under the B2B Scheme

Under the B2B Scheme, the RE developer will sign a power supply agreement directly with the bulk consumer. A PSA between the RE Developer and client is a direct business agreement between two parties (Business-to-business) without any intervention from the government. There is no restriction on the electricity tariff agreed between the RE developer and bulk consumer.

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Registration to WESM

Sub-step Details

Required Documents

Incurred Fee

This sub-step is to be performed only for an RE project located outside Mindanao

The Wholesale Electricity Spot Market (WESM) is a market where trading of electricity in the Philippines is made. However, WESM operations do not cover the area of Mindanao. Rather, the Interim Mindanao Electricity Market (IMEM) operates in that area (refer to [Sub-step PPA-6](#)).

WESM establishes the basic rules, requirements and procedures that govern the operation of the Philippine electricity market. There are five registration categories, and each has different document requirements and procedures.

Related Authorities

Central government	<ul style="list-style-type: none"> The Philippines Electricity Market Corporation (PEMC)
Local government	(none)

1	Registration as a generation company <i>This is the required category for a solar PV project</i>	Direct WESM member and trading participant
2	Registration as a distribution utility and network service provider	Direct WESM member and trading participant
3		Indirect WESM member and trading participant
4	Registration as an industrial customer and bulk-user	Direct WESM member
5		Indirect WESM member

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Registration to WESM

[Sub-step Details](#)[Required Documents](#)[Incurred Fee](#)

Procedures regarding registration as generation companies to the Wholesale Electricity Spot Market (WESM), in order to become a direct WESM member and trading participant, are as follows:

- All applications shall be made using the forms provided by the Philippine Electricity Market Corporation (PEMC) and must satisfy all requirements as requested. Completed application forms and supporting documents must be submitted to the Institutional Relations - Participant Support (IR-PS) under the Corporate Planning and Communications Department of PEMC
- The IR-PS staff determines whether the application complies with the requirements and will inform the RE developer of anything lacking that must be provided. An initial assessment notice in the form of an e-mail will also be given to the RE developer.
- Upon submission of complete requirements, the RE developer will undergo an assessment by several PEMC departments and the level of participation will be determined. Additional information / documents may be required during the assessment.
- The RE developer shall register with the PEMC before participating in WESM. In case all the requirements have been met, the PEMC will approve the application within 15 working days from the date of complete document submission. An approval letter indicating the level of participation, along with the notarised market participation agreement and WESM registration information sheet, shall be issued upon approval.
- The Philippine Electricity Market Corporation (PEMC) issues a billing statement for the WESM registration fee.
- The RE developer pays the non-refundable WESM registration fee.
- When the proof of payment is presented, a digital certificate will be provided and the RE developer can attend WESM training.

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Registration to WESM

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Depending on the type of Energy Regulatory Commission (ERC)'s Certificate of Compliance (CoC) submitted, levels of the RE developer's participation in Wholesale Electricity Spot Market (WESM) may vary:

- If only an ERC's provisional Certificate of Compliance (CoC) is submitted by the RE developer, participation in WESM will be limited to settlement of spot market transactions due to ongoing testing and commissioning of the registered facility.
- When the final CoC is submitted, the RE developer shall formally notify the Philippine Electricity Market Corporation (PEMC) and National Grid Corporation of the Philippines (NGCP) on the date and interval of commercial operation in WESM. Notification shall be made at least ten working days before the intended start date. PEMC will send a formal letter to the RE developer confirming the start date of commercial operations.

Registration to WESM

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Application form
Note: Two original copies and one soft copy are required
- Market participation agreement for direct Wholesale Electricity Spot Market (WESM) members
Note: Five original copies are required
- Settlement information sheet
Note: One original copy is required. It must be notarized.
- Completed digital certificate service request form
- Corporate documents and authorisation
- Certificate of compliance (CoC) issued by the Energy Regulatory Commission (ERC)
Note: Refer to [Sub-step EPL-1](#)
- ERC Certification of maximum stable load, minimum stable load, ramp rates and test results
- Metering installation registration form (MIRF) and supporting documents from the National Grid Corporation of the Philippines (NGCP)
- Transmission service agreement with NGCP
Note: Refer to [Sub-step GCP-2](#)
- Metering services agreement with NGCP
Note: Refer to [Sub-step GCP-3](#)
- Completed WESM training enrollment form

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Registration to WESM

Sub-step Details

Required Documents

Incurred Fee

A | Registration fee

- The processing fee is calculated per MW of installed capacity

PHP 50,000
(USD 1,140)
excluding 12% tax

Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

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Registration to IMEM

[Sub-step Details](#)
[Required Documents](#)

This sub-step is to be performed only for an RE project located in Mindanao

The scope of operation of the Wholesale Electricity Spot Market (WESM) does not include Mindanao. The Interim Mindanao Electricity Market (IMEM) has recently been established for the trading of electricity exclusively in Mindanao. For a solar PV project on Mindanao Island, the RE developer shall register with the IMEM.

The following are the registration procedures as a grid-connected and embedded generation company:

- All applications shall be made using the forms provided by the Philippine Electricity Market Corporation (PEMC) and must satisfy all requirements as necessary. Completed application forms and supporting documents must be submitted to the Institutional Relations - Participant Support (IR-PS) under the Corporate Planning and Communications Department of PEMC
- The IR-PS staff determines whether the application meets the requirements and informs the RE developer of anything lacking that must be provided. An initial assessment notice in the form of an e-mail will also be sent to the RE developer.

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Related Authorities

Central government	<ul style="list-style-type: none"> ▪ The Philippines Electricity Market Corporation (PEMC)
Local government	(none)

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Registration to IMEM

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- Upon submission of all required documents, the RE developer will undergo an assessment by several departments of the Philippine Electricity Market Corporation (PEMC) and the level of participation will be determined. Additional information / documents may be required during the assessment.
- In case all the requirements have been met, PEMC will approve the application within 15 working days from the date of complete document submission. An approval letter indicating the level of participation, the notarised Interim Mindanao Electricity Market (IMEM) participation agreement, and IMEM registration information sheet are issued upon approval.
- The Mandatory Participant shall also send its personnel to attend the IMEM Training.

There is no fee incurred for registration with IMEM.

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Registration to IMEM

Sub-step Details

Required Documents

A | General Requirements

- Membership form
Note: Two original copies and one soft copy are required
- Interim Mindanao Electricity Market (IMEM) participation agreement
Note: three original copies are required
- Settlement information sheet
Note: One original copy is required. It must be notarized.
- Corporate documents and authorisation
- Certificate of compliance (COC) issued by the Energy Regulatory Commission (ERC)
Note: Refer to [Sub-step EPL-1](#)
- Metering installation registration form (MIRF) and supporting documents from the National Grid Corporation of the Philippines (NGCP)
- Transmission service agreement with NGCP
Note: Refer to [Sub-step GCP-2](#)
- Metering services agreement with NGCP
Note: Refer to [Sub-step GCP-3](#)
- Completed IMEM training enrollment form

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A Gantt chart at the top of the page shows various project milestones as horizontal bars. A vertical dashed blue line labeled 'FC' is positioned at the end of the first bar. Below it, three dashed green boxes labeled 'PPA-1', 'PPA-3', and 'PPA-5' are connected by a green line. A green dot is on the line between PPA-5 and the next bar. Below the Gantt chart are three buttons: 'Gantt's Chart' (red), 'Flow Chart' (pink), and 'More Details...' (pink arrow).

EPL | Electricity Production License



A Gantt chart showing a single blue bar labeled 'EPL-1' starting from the left. A green arrow points to the start of the bar. A curved arrow points from the text below to the start of the bar.

EPL-1

ERC Certificate of Compliance (CoC)

CONDITIONAL

Before the RE developer can apply for a Certificate of Compliance (CoC) from the Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)):

- For a project under the FIT Scheme, a Certificate of Endorsement for FIT Eligibility is required from the Department of Energy (DOE) ([Sub-step PPA-1](#))
- For a project under the PSA Scheme, a power supply agreement with the relevant distribution utility (DU) is required ([Sub-step PPA-3](#))
- For a project under the the B2B Scheme, a power supply agreement with the bulk consumer / client is required ([Sub-step PPA-5](#))

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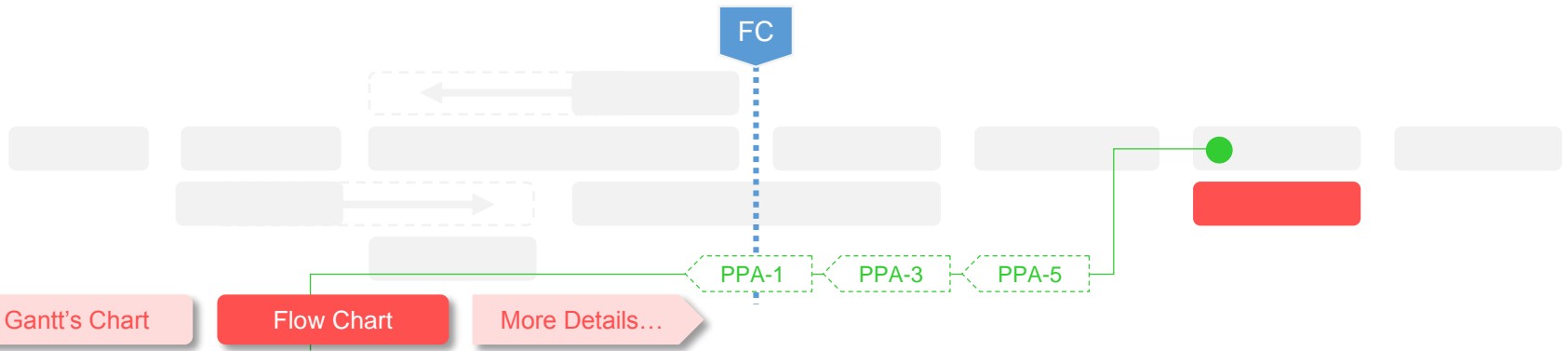
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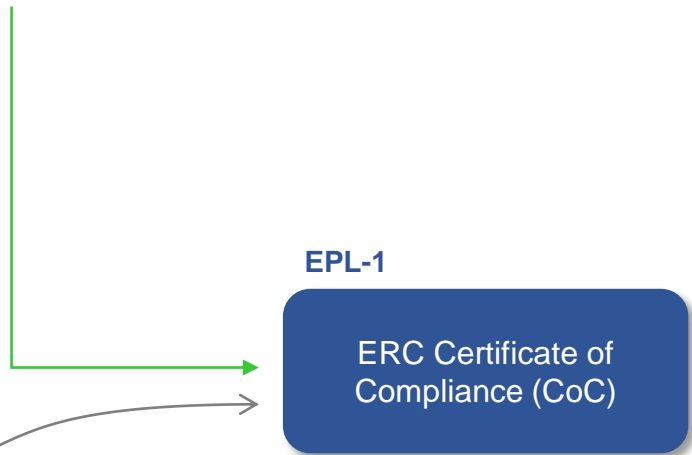


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EPL | Electricity Production License



CONDITIONAL

Before the RE developer can apply for a Certificate of Compliance (CoC) from the Energy Regulatory Commission (ERC) ([Sub-step EPL-1](#)):

- For a project under the FIT Scheme, a Certificate of Endorsement for FIT Eligibility is required from the Department of Energy (DOE) ([Sub-step PPA-1](#))
- For a project under the PSA Scheme, a power supply agreement with the relevant distribution utility (DU) is required ([Sub-step PPA-3](#))
- For a project under the the B2B Scheme, a power supply agreement with the bulk consumer / client is required ([Sub-step PPA-5](#))

Step Description

The RE developer must obtain a Certificate of Compliance (CoC) from the Energy Regulatory Commission (ERC) in order to generate electricity in the Philippines. It certifies that the RE developer complies with the obligations, cross-ownership and market restrictions. Without a CoC, the RE developer will not be allowed to generate electricity in the Philippines.

For projects under a different business model, a CoC is required at a different point of time. A CoC application is linked closely to the sub-steps in the Power Purchase Agreement (PPA) step.

▪ For a project under FIT Scheme

This step must be done in parallel with the Power Purchase Agreement (PPA) step. A Certificate of Endorsement (COE) for FIT eligibility ([Sub-step PPA-1](#)) must be obtained from the Department of Energy (DOE) before applying for a CoC. The CoC itself is required in an application for TRANSCO RE Payment Agreement ([Sub-step PPA-2](#)), registration to the Wholesale Electricity Spot Market (WESM) ([Sub-step PPA-6](#)), and registration to the Interim Mindanao Electricity Market (IMEM) ([Sub-step PPA-7](#))

▪ For a project under PSA Scheme

The RE developer must obtain a CoC before applying for PSA approval from the ERC ([Sub-step PPA-4](#)) and before registering to WESM ([Sub-step PPA-6](#)) or IMEM ([Sub-step PPA-7](#)).

▪ For a project under B2B Scheme

The CoC must be obtained before registration for WESM or IMEM can take place ([Sub-step PPA-5](#) and [Sub-step PPA-6](#), respectively)

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Related Regulations

Regulation No.	Name
Republic Act No. 9136 (2001)	Electric Power Industry Reform Act (EPIRA) of 2001 <i>Full title: An act ordaining reforms in the electric power industry, amending for the purpose of certain laws and for other purposes</i> <i>Note: The relevance of this act to the Electricity Production License (EPL) step is in section 6</i>
-	Guidelines for the issuance of Certificate of Compliance for Generation Companies/Facilities. <i>Note: This guideline is issued by Energy Regulatory Commission (ERC)</i>
ERC Resolution No. 14, Series of 2007	The Philippines Grid Code <i>Note: Specifically in the section of terms and conditions for the provision of Open Access Transmission Service</i>
ERC Resolution No. 115, Series of 2001	The Philippines Distribution Code
-	The Wholesale Electricity Spot Market (WESM) Rules

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Related Documents

Document Name	Description
Official website of ERC	The official website of the Energy Regulatory Commission (ERC) can be accessed at www.erc.gov.ph

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Risk of CoC rejection

The Certificate of Compliance (CoC) is a very important document that must be obtained. Failure to secure this document means that the already built power plant cannot be operated.

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ERC Certificate of Compliance (CoC)

Sub-step Details

Required Documents

Incurred Fee

A Certificate of Compliance (CoC) is issued by the Energy Regulatory Commission (ERC) to a Generation Company (RE developer) that conforms with the obligations, cross-ownership and market restrictions stipulated in the prevailing rules and regulations (IRR) of Republic Act 9136. No person may engage in the generation of electricity as a generation company unless such person has secured a CoC from the ERC to operate facilities used in the generation of electricity. The CoC has a term of five years.

Applied Procedures are as follows:

- The RE developer secures the application form and checklist of appropriate requirements for the CoC application at the Licensing & Market Monitoring Division (LMMD), or through www.erc.gov.ph
- The RE developer completes the forms and submits them together with the appropriate requirements in the checklist, in two hard copies and one soft copy (diskette or CD), to any LMMD Officer
- The RE developer secures an assessment form in five copies from the LMMD Officer
- The RE developer pays the CoC application fee. The cashier shall give the applicant three copies of the assessment form and an official receipt
- The RE developer proceeds to the LMMD Officer and submits two (2) copies of the assessment form duly signed by the cashier and shows proof of payment, i.e., an official receipt for verification purposes

...

Related Authorities

Central government	<ul style="list-style-type: none"> ▪ Energy Regulatory Commission (ERC)
Local government	(none)

ERC Certificate of Compliance (CoC)

Sub-step Details

Required Documents

Incurred Fee

- The process for submitting an application can be done within a day. The Energy Regulatory Commission (ERC) reviews and evaluates the submitted documents and data to determine compliance to standards (i.e., financial, technical and environmental). If complete, the ERC will issue a decision within 30-60 days
- ERC conducts plant inspection if needed
- Field/review team to submit recommendation(s) to the commission
- Commission to review and approve / deny the application
- If approved, the ERC shall issue a Certificate of Compliance (CoC) to the RE developer

TOC



Overall

Step



Overall

Step

ERC Certificate of Compliance (CoC)

Sub-step Details

Required Documents

Incurred Fee

A | General Requirements

- Company Profile
- Three-year Operational History *(if applicable)*
Note: Certificate of Compliance (CoC) form no. 3
- Power Purchase Agreements (PSA)
- Power Supply Contracts
- Memorandum of agreement on the establishment of trust accounts by the generation company and/or the RE developer and Department of Energy (DOE) on benefits to host communities
Note: This is required under Rule 29 of the Implementing Rules and Regulations (IRR)
- Environmental Compliance Certificate (ECC) duly approved by the Department of Environment and Natural Resources
Note: Refer to [Sub-step ADM-3](#)
- Endorsement from the Department of Energy (DOE)
Note indicating that the power plant is consistent with the Power Development Program (PDP)

B | Technical Qualification

- Sworn statement that each of the Facilities complies with and will continue to comply with the Philippine Grid and Distribution Code (PGDC) for the duration of the CoC
- Sworn Statement that the company and its generating facilities comply with and will continue to comply with the Wholesale Electricity Spot Market (WESM) Rules for the duration of the CoC *(if applicable)*
- Management contracts in force *(if applicable)*
- General plant description
- Location map
- Connection agreement between the grid owner (TRANSCO) and the generation facility or Interconnection plans / details with the high voltage backbone transmission system/grid or distribution System (for embedded generators) and or transmission / distribution use of system agreement (if available)

Note: Additional documents may be requested by Energy Regulatory Commission (ERC)

TOC



Overall

Step



Overall

Step

ERC Certificate of Compliance (CoC)

Sub-step Details

Required Documents

Incurred Fee

B | Technical Requirements (cont.)

- Electrical / mechanical plans and diagrams
- Plant specifications including plant efficiency and heat rate
- Technical description of the load to be served (for those in isolated areas and those serving dedicated loads)
- Safety rules / guidelines
- Wholesale Electricity Spot Market (WESM) or Interim Mindanao Electricity Market (IMEM) membership
Note: Refer to [Sub-step PPA-6](#) or [Sub-step PPA-7](#), respectively
- Details of its communication and SCADA requirements (*if applicable*)

C | Financial

- Audited financial statements for the two most recent 12-month periods (*if available*)
- Schedule of liabilities, to include the following information: name of creditor, type of credit, credit terms
- Five-year financial plan
- Documentation on financial track record of the generation company and of its principal stockholder (*if available*)

Note: Additional documents may be requested by Energy Regulatory Commission (ERC)

TOC



Overall

Step



Overall

Step

ERC Certificate of Compliance (CoC)

Sub-step Details

Required Documents

Incurred Fee

D | Ownership and Control

- Updated listing of shareholders and corresponding equity shares
- Complete list of its board of directors and senior officials down to the level of Plant Managers
- Types of long-term debt and equity instrument, including amount and proportion to total capitalisation
- Sworn Statement that the company complies with and will continue to comply with the provisions on cross ownership and market share restrictions under Republic Act No. 9136, its Implementing Rules and Regulations, and the Guidelines for Issuance of Certificates of Compliance for Generation Companies/Facilities for the duration of the CoC
- Comprehensive and complete listing of Affiliates and Related Groups, including ownership and management structure
- Philippine Stock Exchange (PSE) certificate *(if applicable)*

For Incorporation/Partnership

- Articles of incorporation / partnership with a certificate of registration

For Single Proprietorship

- Business name registration certificate

Note: Additional documents may be requested by Energy Regulatory Commission (ERC)

TOC



Overall

Step



Overall

Step

ERC Certificate of Compliance (CoC)

Sub-step Details

Required Documents

Incurred Fee

A | Processing Fee

- Exclusively of actual cost of plant inspection

PHP 10,000
(USD 230)

Note: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

TOC



Overall

Step



Overall

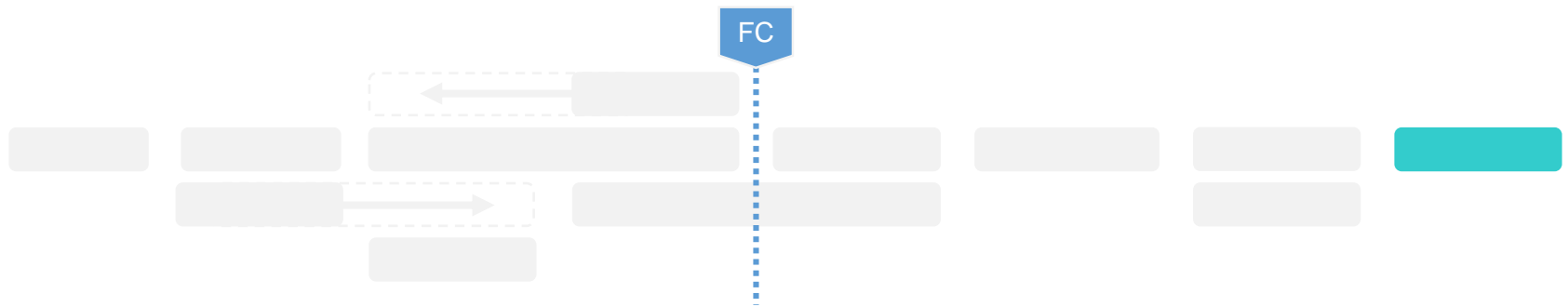
Step



OPM | Operation and Maintenance

After a solar PV project has been registered to the Wholesale Electricity Spot Market (WESM) or Interim Mindanao Electricity Market (IMEM) ([Sub-step PPA-5](#) and [Sub-step PPA-6](#), respectively), the RE developer can start the commercial operation of the power plant. A solar PV project is typically designed for a span of around 25 years (although some components need early replacement, e.g. battery bank). To ensure long life of the plant, proper operation and maintenance must be performed. Capacity building activities must be included as well to ensure that all operators have been adequately trained and are capable of running the power plant.

In the Philippines, the concept of a large solar PV power plant is still new. Experiences and lesson learned from the field have not yet been collected and fully understood. As a result, the Operation and Maintenance (OPM) step will not be covered in detail for the first edition of the guideline. As more data and experiences are collected and learned in the future, they will be included in subsequent editions of the guideline.



OPM | Operation and Maintenance

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List of Abbreviations

Unless stated otherwise, the following abbreviations shall be used throughout this guidebook:



ACE	ASEAN Centre for Energy	DIS	Distribution Impact Study
ADSDPP	Ancestral Domain Sustainable Development and Protection Plan	DMC	Distribution Management Committee
AMS	ASEAN Member State	DOE	Department of Energy (<i>The Philippines</i>)
ASEAN	Association of South East Asia Nations	DSOAR	Distribution Services and Open Access Rules
ASEAN-RESP	Renewable Energy Support Programme for ASEAN	DTI	Department of Trade & Industry
B2B	Business-to-business	DU	Distribution UtilityE-Guidebook Electronic version of the guideline
BIR	Bureau of Internal Revenue	ECA	Environmentally Critical Area
BMUB	German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (<i>In German: Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit</i>)	ECC	Environmental Compliance Certificate (<i>issued by DENR</i>)
BOI	The Philippines Board of Investments	EIA	Environmental Impact Assessment
CAPEX	Capital expenditures	EIS	Environmental Impact Statement
CBRED	Capacity Building to Remove Barriers to Renewable Energy Development	ECP	Environmentally Critical Project
CCC	Climate Change Commission	EMB	Environmental Management Bureau
CENRO	Certificate from Community Environment and Natural Resource Office (<i>under DENR</i>)	EPIRA	Electricity Power Industry Reform Act
CEFI	Certificate of Electrical Inspection	ERC	Energy Regulatory Commission (<i>The Philippines</i>)
CNC	Certificate of Non-coverage (<i>issued by DENR</i>)	F/S	Feasibility study
CNO	Certificate of Non-overlap (<i>issued by NCIP</i>)	FBI	Field-based Investigation
CoC	Certificate of Compliance (<i>issued by ERC</i>)	FIT	Feed-in tariff
COC	Confirmation of Commerciality (<i>issued by DOE</i>)	FIT-All	Feed-in tariff allowance
COE	Certificate of Endorsement	FLAg	Forest Land Use Agreement
CP	Certificate Precondition (<i>issued by the NCIP</i>)	FMB	National Forest Management Bureau
CPDO	City Planning and Development Office	FPIC	Free and Prior Informed Consent
CSP	Competitive Selection Process	GDP	Gross Domestic Product
DAR	Department of Agrarian Reform	GIS	General information sheet (<i>of SEC</i>)
DAS	Distribution Assets Study	GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
DC	Department Circular	GMC	Grid Management Committee
DENR	Department of Environment and Natural Resources	GSIS	Government Service Insurance System
		HLRUB	Housing and Land Use Regulatory Board
		ICC	Indigenous Cultural Community
		IMEM	Interim Mindanao Electricity Market



List of Abbreviations

Unless stated otherwise, the following abbreviations shall be used throughout this guidebook:

IP	Indigenous People	PCA	Philippine Coconut Authority
IRR	Implementing Rules and Regulations	PEMAP	Project Environmental Monitoring System and Audit Prioritization Scheme
LAO	Legal Affairs Office	PEMC	Philippines Electricity Market Corporation
LBP	Land Bank of the Philippines	PERD	Project Evaluation & Registration Department <i>(under BOI)</i>
LGU	Local Government Unit	PSA	Power Supply Agreement
LLDA	Laguna Lake Development Authority	PSE	Philippines Stock Exchange
LMMD	Licensing & Market Monitoring Division	PV	Photovoltaic <i>(this term is similar to SPV)</i>
LUC	Land use conversion	R.A'	Republic Act
MARO	Municipal Agrarian Reform Office	RCOA	Retail Competition and Open Access
MEOT	Minimum energy off-take	RE	Renewable Energy
MIRF	Metering Installation Registration Form	REMB	Renewable Energy Management Bureau
MOA	Memorandum of Agreement	REPA	Renewable Energy Payment Agreement
MSG	Metering Service Group	RESC	Renewable Energy Service Contract
MTD	Maintenance and Testing Division	RRT	Regional Review Team
NIA	National Irrigation Administration	SCADA	Supervisory Control and Data Acquisition
NM	Net-metering	SEC	Securities Exchange Commission
NCIP	National Commission on Indigenous People	SESC	Solar Energy Service Contract
NGCP	National Grid Corporation of the Philippines	SLUP	Special Land Use Agreement
NIPAS	National Integrated Protected Area System	SO	System Operator
NPC	National Power Corporation	SPA	Special Power of Attorney
NPP	New Power Producer	SPC	Special Purpose Company
NREB	National Renewable Energy Board	SPUG	Small Power Utilities Group
NREL	National Renewable Energy Laboratory <i>(in U.S.)</i>	SPV	Solar Photovoltaic <i>(Note: This term is used in the original publication, "SPV Guidebook". However, due to its tendency to be confused with other term e.g. special purpose vehicle, the ASEAN RE Guidelines will avoid using of this term. It will be replaced by the "solar PV" term.)</i>
NREP	National Renewable Energy Plan / Program		
O&M	Operation & Maintenance		
OATS	Open Access Transmission Service		
OBO	Office of Building Official		
OCT	Original Certificate of (land) Title		
PAGASA	Philippines Atmospheric, Geophysical, and Astronomical Services Administration		
PARO	Provincial Agrarian Reform Officer		

List of Abbreviations

Unless stated otherwise, the following abbreviations shall be used throughout this guidebook:

SRA	Sugar Regulatory Authority	PHP	Philippines Peso
SupportCCC	Support to the Climate Change Commission in the Implementation of the National Framework Strategy on Climate Change Project	USD	US Dollar
		V	Volt
TCT	Transfer Certificate of (land) Title	kV	Kilovolt
TIN	Tax identification number	W	Watt
TRANSCO	National Transmission Corporation	kW	Kilowatt
TSA	Transmission Service Agreement	MW	Megawatt
WESM	Wholesale Electricity Spot Market	GW	Gigawatt
VAT	Value added tax	GWh	Gigawatt-hour

How to use the Guideline?

Guideline Structure



“Two levels of details”

Overview Layer

From the overview layer, readers can see the entire procedure in project development (from site selection until operation and maintenance). It gives a big picture on how biomass/biogas project development in Indonesia has to be done. Only predefined steps are shown in this layer in different color codes (e.g. site selection, administrative authorization etc.). These steps are standardised for every guideline.

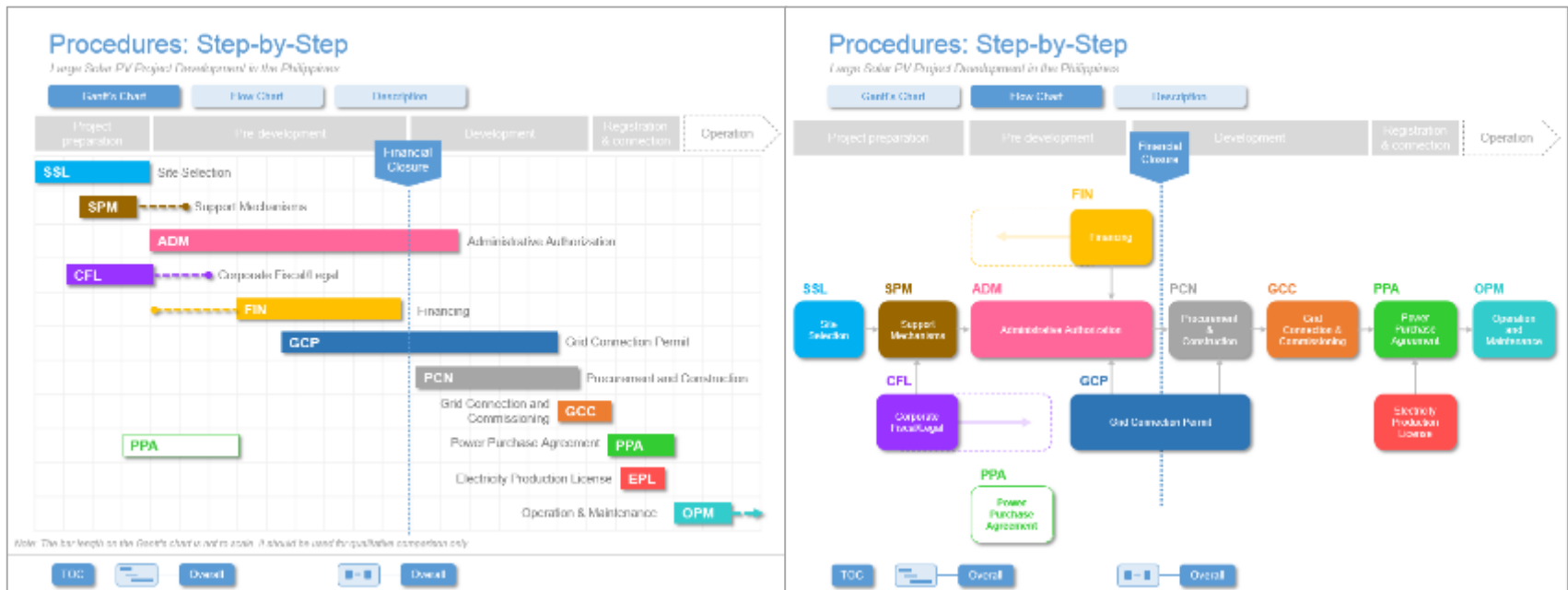
Detailed Layer

The detailed layer provides more details for each step shown in the overview layer. This allows for more flexibility in providing more details to readers on specific phase of project development.

How to use the Guideline?

Guideline Structure

“Two ways to illustrate the procedural flow”



Gantt's Chart View

The Gantt's chart is a typical planning tool for project developer. It can show sequences of steps / sub-steps.

Flow Chart View

The flow chart is a simplified version to illustrate the procedural flow. It can better show the relation between steps / sub-steps.

How to use the Guideline?

Page details – Overall Gantt's Chart



A Page title and sub-title

B Section navigation

Click these navigation buttons to jump directly to the respective sub-section. There are three buttons: Gantt's Chart (change to Gantt's chart view); Flow Chart (change to flow chart view), and Description (go to the overall description page). The current page is always highlighted in dark

C Phase of project development

The typical phase of project development

D Financial closure milestone

The financial closure is an important milestone in RE project development. It is clearly marked up on the Gantt's chart and flow chart, allowing comparison about the procedure in different countries.

E Step bar

Click these bars to jump directly to the respective step

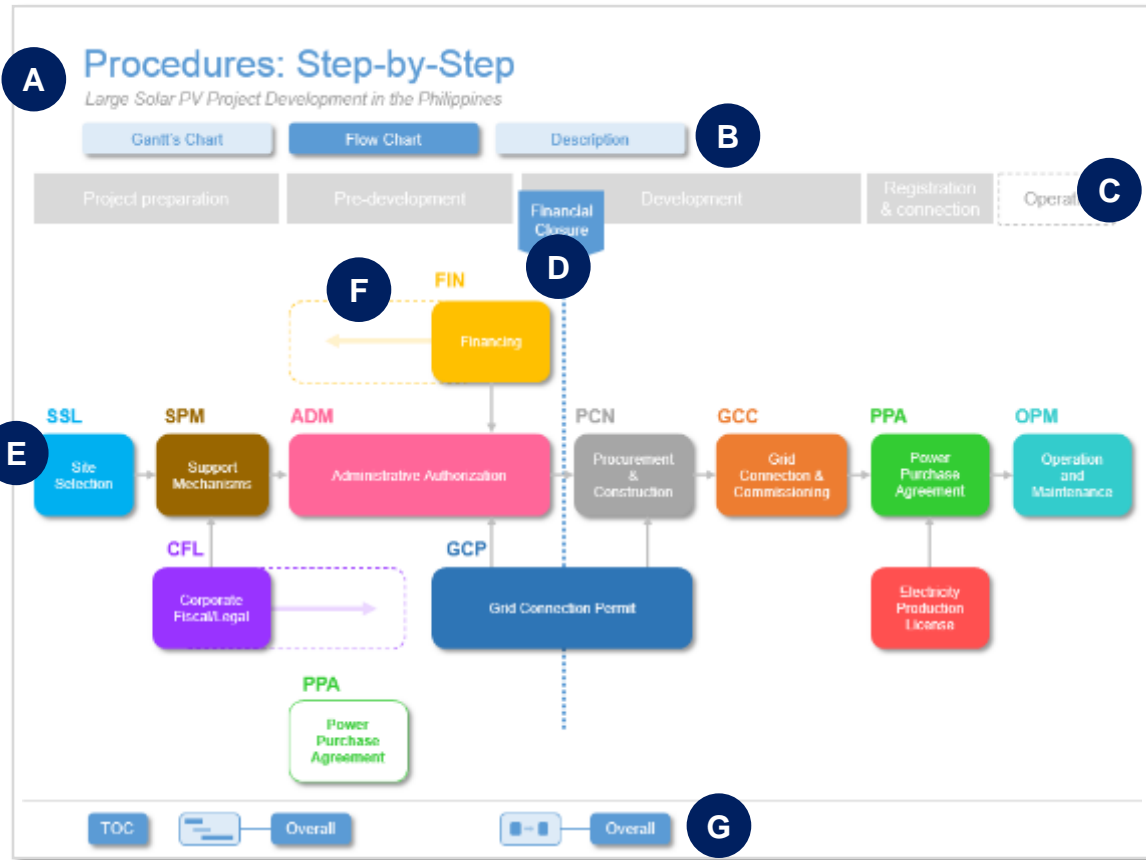
F Flexibility indication

Some step can be done at different time. The dot line represent flexibility of the step.

G Main navigation

How to use the Guideline?

Page details – Overall Gantt's Chart



A Page title and sub-title

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E Step block

Click these blocks to jump directly to the respective step

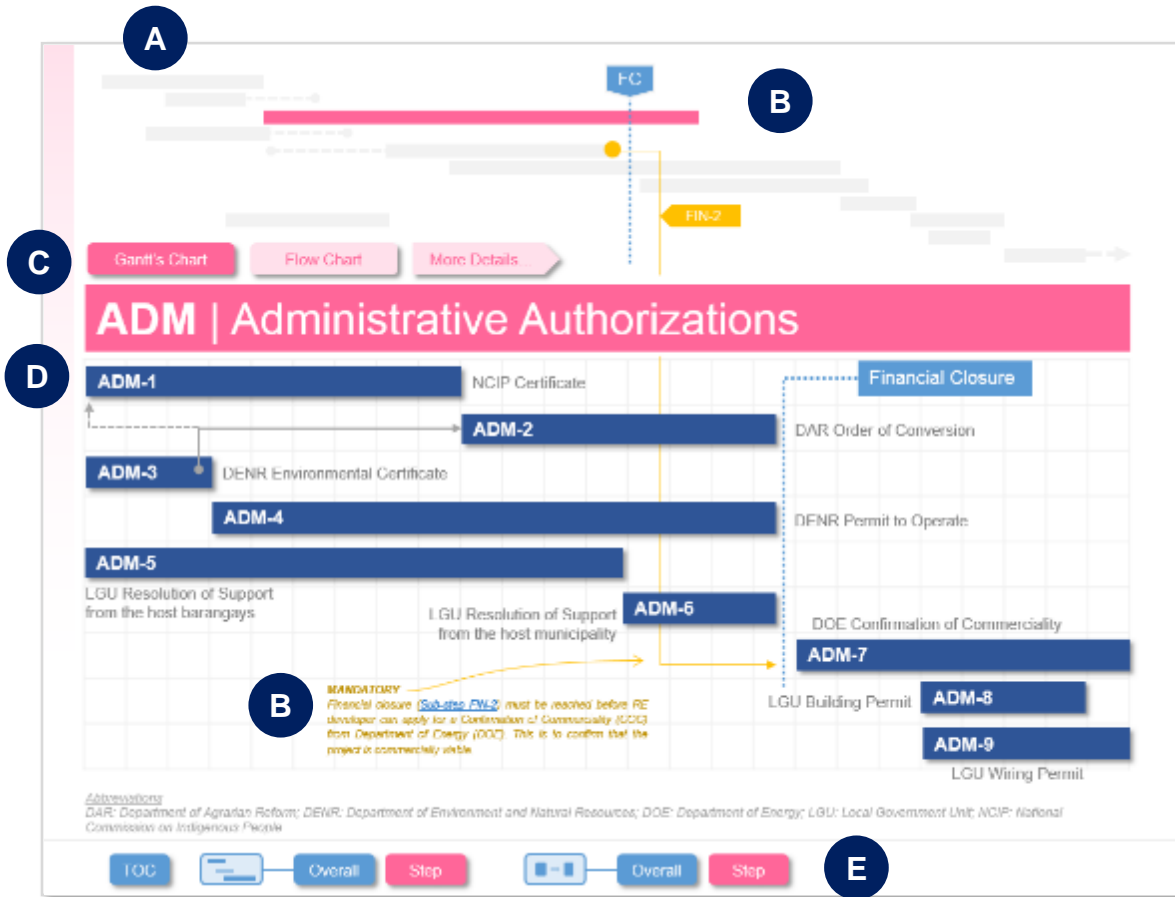
F Flexibility indication

Some step can be done at different time. The dot line represent flexibility of the step.

G Main navigation

How to use the Guideline?

Page details – Step Flow Chart



A Navigation Gantt's chart

The overall Gantt's chart is shown with the current step highlighted. Click on any Gantt's bar to jump to the respective step.

B Relationship to other steps

The relationship of this step to others is shown with a short explanation. There are two types of the relationship: (1) Recommendation – Based on good practice; and (2) Mandatory relationship – By regulations

C Section navigation

Click these navigation buttons to jump directly to the respective sub-section. There are three buttons: Gantt's Chart (change to Gantt's chart view); Flow Chart (change to flow chart view), and More Details (go to the detailed description page). The current page is always highlighted in dark color

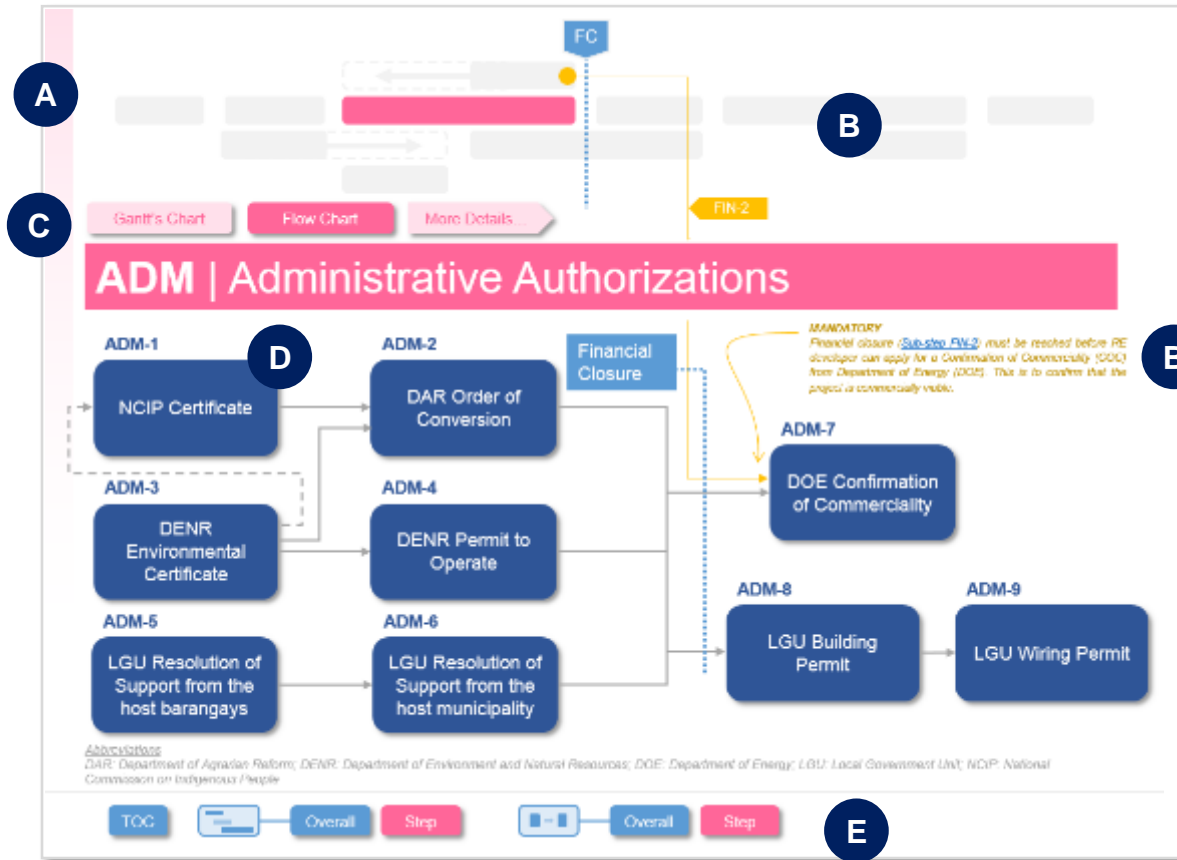
D Sub-step bar

Click these bars to jump directly to the respective sub-step

E Main navigation

How to use the Guideline?

Page details – Step Flow Chart



A Navigation flow chart

The overall Gantt's chart is shown with the current step highlighted. Click on any Gantt's bar to jump to the respective step.

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D Sub-step block

Click these blocks to jump directly to the respective sub-step

E Main navigation

How to use the Guideline?

Page details – Step Flow Chart

ADM | Administrative Authorizations

... Gantt's / How Chart

A Step Description Related Regulations Related Documents Identified Challenges Page 1/10 **B**

Step Description

Scope of this guideline

1. The guideline lists only the most important and crucial licenses in developing a SPV power project. It does not list all necessary documents to establish, operate and maintain a business firm or entity in the Philippines as this is not the main focus of the guideline.
2. In the Philippines, the Local Government Code (Republic Act 7160) defines the standard procedures for acquiring various permits (e.g. business permit, construction permits, etc.) in the local level. Local government unit (LGU) is allowed to set its own procedure on, defines incurred fees, required documents. Therefore, the exact procedures may differ from one place to another. Additional licenses and permits may be required in some cases. The developer must always re-check with the local government if additional fees, licenses or permits are needed.

The **Administrative Authorization (ADM) step** involves obtaining the necessary licenses or permits from various national and local government agencies. These authorizations covers many areas i.e. indigenous people, local community, environment, land use etc.

- **Indigenous people**

National Commission of Indigenous People (NCIP) is mandated to protect rights, cultures and sites of indigenous people (IP) in the Philippines. NCIP shall ensure that RE projects do not cause negative impact to IP. Several types of certificate can be issued by NCIP. They are: (1) a Certificate of Non Overlap (CNO), attesting that the area where the particular plan, program, project or activity will be done does not overlap with, or affect, any ancestral domain, and (2) a Certification Precondition (CP) to the grant of Free and Prior Informed Consent (FPIC) by the concerned Indigenous Cultural Communities (ICCs) or Indigenous Peoples (IPs). RE developer must secure one of them depending on the project location and its characteristic.

C

TOC Overall Step Overall Step

A Section navigation

Click these navigation buttons to jump directly to the respective sub-section. There are four buttons:

Step description – Click to see explanation of the step

Related regulations – Go to the list of relevant laws or regulations

Related documents – Go to the list of reference documents which are not legal documents (e.g. guidebook, study etc.)

Identified challenges – Go to the list of challenges associated to this step

The current page is always highlighted in dark color

B Section page

The current and total page of the section

C Main navigation

How to use the Guideline?

Page details – Step Flow Chart

PPA | Power Purchase Agreement

Approval of PSA

PPA-4

Page 1/4

Sub-step Details | **Required Documents**

This sub-step is for a solar PV project under the PSA Scheme

While RE developer can directly agree on a power supply agreement (PSA) directly with the relevant distribution utility, approval from Energy Regulatory Commission (ERC) is required. Without such approval, the PSA is not valid.

Within 30 days after the PSA has been agreed, the RE developer and the power utilities must file a joint application to ERC for its PSA approval and for the determination of the reasonable generation costs that the distribution utility (DU) can recover from its captive market as part of its retail rate.

The ERC shall determine the reasonable generation cost under the PSA, taking into account the following fees, if applicable: capital recovery fee (CRF), operation and maintenance (O&M) fee, and fuel fee.

Related Authorities

Central government	• The Energy Regulatory Commission (ERC)
Local government	-

TOC | Overall | Step | Overall | Step

A Sub-step identifier

The identifier of sub-step for cross-reference purpose. The number doesn't represent the flow sequence.

B Section navigation

Click these navigation buttons to jump directly to the respective sub-section. In the sub-step level, there is no predefined structure for the sub-section. Each sub-step has different structure. Nevertheless, typical sub-steps consist of three sub-sections::

Sub-step details – Click to see explanation of the sub-step

Required documents– Go to the list of documents that RE developer must prepare and submit to authority

Incurred fee – Click to see information regarding regulated fee for each sub-step

C Section page

The current and total page of the section

D Main navigation

How to use the Guideline?

Main Navigation

Main navigation bar (general)

Normally, three navigation buttons appear at the bottom of each page



Main navigation bar (in step & sub-step level)

On the pages in step or sub-step level, two additional buttons present.



In the Financing (FIN) Step...

In the Corporate Fiscal / Legal (CFL) Step



The colour is different depending on the location of current page. It represent the colour of current step.

A Table of Content (TOC)

Click to go back to the Table of Contents page

B Overall Gantt's Chart

Click to go back to the overall Gantt's Chart

C Overall Flow Chart

Click to go back to the overall Flow Chart

D Step Gantt's Chart

Click to go back to the respective Gantt's Chart of the step. For example, if the current page is a part of Site Selection (SSL) step, this button will lead to the Gantt's chart of SSL step.

E Step Flow Chart

Click to go back to the respective Flow Chart of the step. For example, if the current page is a part of Site Selection (SSL) step, this button will lead to the Gantt's chart of SSL step.



Appendix

Support mechanisms for on-grid RE projects in the Philippines

The support mechanisms for RE development in the Philippines were introduced by the Renewable Energy Act of 2008 (Republic Act 9513) and described in details in the Implementing Rules and Regulations (IRR) of the RE Act (Department Circular no. 2009-05-0008). The RE policy mechanisms for on-grid project which have already been implemented in the Philippines are: feed-in tariff scheme and net-metering scheme.

Feed-in tariff Scheme (FIT Scheme)

Technology	FIT rate	Digression rate	Installation target
Wind	PHP 8.53 / kWh (cent USD 19 / kWh)	0.5% after 2 years from affectivity of FIT	200 MW
Biomass	PHP 6.63 / kWh (cent USD 15 / kWh)	0.5% after 2 years from affectivity of FIT	250 MW
Solar	PHP 9.68 / kWh (cent USD 22 / kWh)	6.0% after 2 years from affectivity of FIT	500 MW (note 3)
Run-of river hydropower	PHP 5.90 / kWh (cent USD 13 / kWh)	0.5% after 2 years from affectivity of FIT	250 MW

Note 1: Indicated fee in USD is only approximate based on the currency conversion of USD 1 = PHP 43.86 (as of May 2014)

Note 2: The installation target was 50 MW. It was then increased by Department of Energy (DOE) to 500 MW.

The feed-in tariff (FIT) scheme obliges part of electricity industry to source electricity from RE generation at a guaranteed fixed price for a given period of time (in any case, 12 years as minimum). The FIT Scheme is introduced in the Philippines by the Renewable Energy Act of 2008 (Republic Act 9513). The feed-in tariff scheme is applied to only on-grid projects. The latest feed-in tariff is set by the ERC Resolution No. 10 Series of 2012. Feed-in tariff rule (The Department of Energy (DOE) Resolution No. 16 Series of 2010). Priority grid access, priority of purchase, transmission, and payment shall also given to RE project under the FIT Scheme.

Appendix

Support mechanisms for on-grid RE projects in the Philippines

There are four types of RE technology that meet the requirements for FIT. They are considered “emerging RE resources”, i.e. wind, biomass power plant, solar, run-of river hydropower, and ocean. The feed-in tariff rate for ocean energy has not yet published. A hybrid RE system (see [note](#)) consisting of any mentioned RE technologies can also apply for FIT.

The feed-in tariff for solar in the Philippines is the highest at PHP 9.68/kWh (USD cent 22/kWh). This rate will be decreased at a rate of 6%.

Net-metering Scheme (NM Scheme)

The net-metering scheme is a consumer-based RE incentive. The electricity generated by an end-use using an on-site RE generation facility and fed into the local distribution network can be used to offset the electricity supplied by the distribution utility (DU) to the end-user. A DU is obliged to enter into a net-metering agreement with any qualified end-users who wish to install an RE system, subject to technical and economic considerations.

More details about the NM Scheme in the Philippines can be found in “Small solar PV project development in the Philippines”.

Note: The definition of “hybrid systems” according to the RE Act of 2008 is any power or generation facility which makes use of two or more types of technologies utilizing both conventional and/or renewable fuel sources with minimum of 10 MW or 10% of the annual energy output provided by the RE component.

TOC



Overall



Overall

Appendix

Support mechanisms for on-grid RE projects in the Philippines

There are also other support mechanisms which have not yet been implemented in the Philippines. They are, for example, Renewable Energy Portfolio Standard (RPS) and Renewable Energy Market (REM)

Renewable Energy Portfolio Standard (RPS)

The RPS is a policy that obliges Philippine electricity industry stakeholders, e.g., power generators, distribution utilities (DU), or suppliers to source or generate part of their electricity from RE resources. The National Renewable Energy Board (NREB) shall define the share in a percentage.

This is detailed in Section 6 of the Renewable Energy Act. It obliges all stakeholders in the Philippine power market to contribute to the growth of the RE industry. NREB shall also determine which sector shall be subjected to RPS per grid basis.

Renewable Energy Market (REM)

The RE Registrar shall be established to issue, keep, and verify RE Certificates. Certificates can be used for compliance with the RPS. The Renewable Energy Market (REM) is a sub-market of the Wholesale Electricity Spot Market (WESM). This is where RE Certificates are traded.



Renewable Energy Guidelines on
**Large Solar Photovoltaic Project
Development in the Philippines**

1st Edition, October 2014



Implemented by:

