

Republic of the Philippines
ENERGY REGULATORY COMMISSION
San Miguel Avenue, Pasig City



IN THE MATTER OF THE APPLICATION FOR AUTHORITY TO DEVELOP, OWN, AND OPERATE ASSETS, INCLUDING DEDICATED POINT-TO-POINT LIMITED TRANSMISSION FACILITIES TO CONNECT THE SACASUN POWER PLANT TO THE TRANSMISSION LINE OF THE NATIONAL GRID CORPORATION OF THE PHILIPPINES (NGCP), WITH PRAYER FOR PROVISIONAL AUTHORITY,

ERC CASE NO. 2015-094 MC

SAN CARLOS SUN POWER, INC. (SACASUN),
Applicant.

X-----X

D O C K E T E D
Date: SEP 06 2017
By: [Signature]

DECISION

Before this Commission for resolution is the Application filed on 23 November 2015 by San Carlos Sun Power, Inc. (SACASUN) for authority to develop, own, and operate assets, including dedicated point-to-point limited transmission facilities to connect the 48.6 megawatt peak (MWp) alternating current (AC) SACASUN solar power plant to the Visayas Grid, with prayer for provisional authority.

FACTS OF THE CASE

SACASUN is a generation company duly organized and existing under and by virtue of the laws of the Republic of the Philippines. It owns and operates the 48.6 MWp AC SACASUN solar power plant located at Barangay Punao, San Carlos City, Negros Occidental.

The instant Application is filed in order to dispatch the capacity to be generated by the SACASUN solar power plant. SACASUN deems it necessary, feasible, and cost-effective to connect the said plant to the Visayas Grid through dedicated point-to-point limited facilities.

SACASUN has been issued compliances by other government agencies, viz.:

1. Certificate of Registration (SESC 2015-05-226) from the Department of Energy (DOE); and
2. Environmental Compliance Certificate (ECC R6-1502-0083-4220) of the Department of Environment and Natural Resources (DENR).

SACASUN filed an application to the DOE for a Certificate of Endorsement as Feed-in-Tariff (FIT) eligible power plant but yet to obtain the same.

SACASUN likewise filed an application for the issuance of a Certificate of Compliance (COC) with the Commission on 23 November 2015 and was issued a Provisional Authority to Operate (PAO) on 13 January 2016.

An Order and a Notice of Public Hearing, both dated 21 January 2016, were issued by the Commission setting the case for determination of compliance with jurisdictional requirements, expository presentation, pre-trial conference, and presentation of evidence on 22 February 2016.

In the same Order, SACASUN was directed to cause the publication of the Notice of Public Hearing, at its own expense, once (1x) in a newspaper of general circulation in the Philippines, with the date of publication to be made not later than ten (10) days before the date of the scheduled initial hearing.

The Office of the Solicitor General (OSG), the Commission on Audit (COA), and the Committees on Energy of both Houses of Congress were furnished with copies of the Order and the Notice of Public Hearing and were requested to have their respective duly authorized representatives present at the initial hearing.

Likewise, the Offices of the Governor of the Province of Negros Occidental and of the Mayor of San Carlos City, Negros Occidental were furnished with copies of the Order and Notice of Public Hearing

for the appropriate posting thereof on their respective bulletin boards.

Pursuant to Section 3, Rule 16 of the 2006 Rules of Practice and Procedure,¹ (2006 RPP) SACASUN filed its *Pre-Trial Brief* dated 16 February 2016 on 17 February 2016.

During the initial hearing, no intervenor or oppositor appeared; neither was there any registered intervention or opposition. At the said hearing, SACASUN presented proofs of its compliance with the Commission's posting and publication requirements, which were duly marked as Exhibits "B," "O," "Q," and "R," inclusive of submarkings. Thereafter, Mr. Reynaldo Pangilinan, SACASUN's Vice President for Project Execution, conducted an expository presentation on its application.

At the termination of the expository presentation, SACASUN presented the same witness, Mr. Pangilinan, to testify in support of the application. In the course of his direct testimony, additional documents were identified and duly marked as exhibits. Thereafter, the Commission propounded clarificatory questions to him and directed the submission of various documents to aid in the evaluation of the Application.

On 1 March 2016, SACASUN filed its *Formal Offer of Evidence with Request for Remark and Compliance* of even date. Additionally, on 9 June 2016, SACASUN filed another *Compliance/Manifestation* dated 6 June 2016.

The Commission issued an Order admitting the exhibits contained in the *Formal Offer of Evidence with Request for Remark and Compliance*² filed by SACASUN, to wit:

¹ Section 3. Pre-Trial Brief. - The Commission may require any one or all of the parties to a proceeding to file at least five (5) days before the date of initial hearing or date set for pre-trial conference a pre-trial brief containing, among others:

(a) a summary of admitted facts and proposed stipulation of facts;

(b) the issues to be tried or resolved;

(c) the documents or exhibits to be presented, stating the purpose thereof and proposed markings therefor; and

(d) the number and names of the witnesses, with their written testimony in affidavit form, if already available, to be attached to the pre-trial brief.

Failure to file the pre-trial brief shall have the same effect as failure to appear at the pre-trial conference.

² Formal Offer of Evidence with Request for Remark and Compliance dated 1 March 2016.

The exhibits contained in the Formal Offer of Evidence of Applicant San Carlos Sun Power, Inc. (SACASUN) have been found to be relevant and material in the evaluation of this case. The proceedings having been terminated, the application of SACASUN is now submitted for resolution.

SO ORDERED.³

DISCUSSION

I. Project Description

SACASUN is developing a solar power plant facility with a capacity of 48.6 MWp AC in Barangay Punao, San Carlos City, Negros Occidental. In order to dispatch its power to the grid, SACASUN will construct a dedicated point-to-point limited line and will connect the same along the San Carlos-Guihulngan 69 kV transmission line.

The point of interconnection will require the construction of two (2) 0.6 km 69 kV lines utilizing 336.4 MCM SP-SC. The solar plant intends to simultaneously inject power toward the Amlan and the San Carlos Substations.

II. Project Rationale

The subject facilities are necessary for the power plant to deliver its generated power to the Visayas Grid.

III. Project Cost

The total estimated cost of the proposed project is **Php84,373,042.00** covering all the facilities to be constructed by SACASUN, including the cost of assets that are not dedicated point-to-point limited facilities.

It is worthy to note that the estimated cost is only for the purpose of computing the applicable permit fee (*based on the total project cost evaluated disregarding the functions and classification of each facility*) and not for rate making purposes considering that this is not the actual cost or the Optimized Depreciated Replacement Cost (ODRC).

³ Order dated 22 November 2016.

It should also be emphasized that the aforementioned amount is not necessarily the fair market value that should be used when the subject assets are transferred to National Grid Corporation of the Philippines (NGCP)/National Transmission Corporation (TransCo).

Although the applicant filed for FIT eligibility to the DOE, the application is yet to be approved. Thus, in the event that the same becomes FIT eligible, the cost of the dedicated point-to-point limited facility that is included in the approved FIT Rate shall be considered once the asset is transferred to NGCP/TransCo:

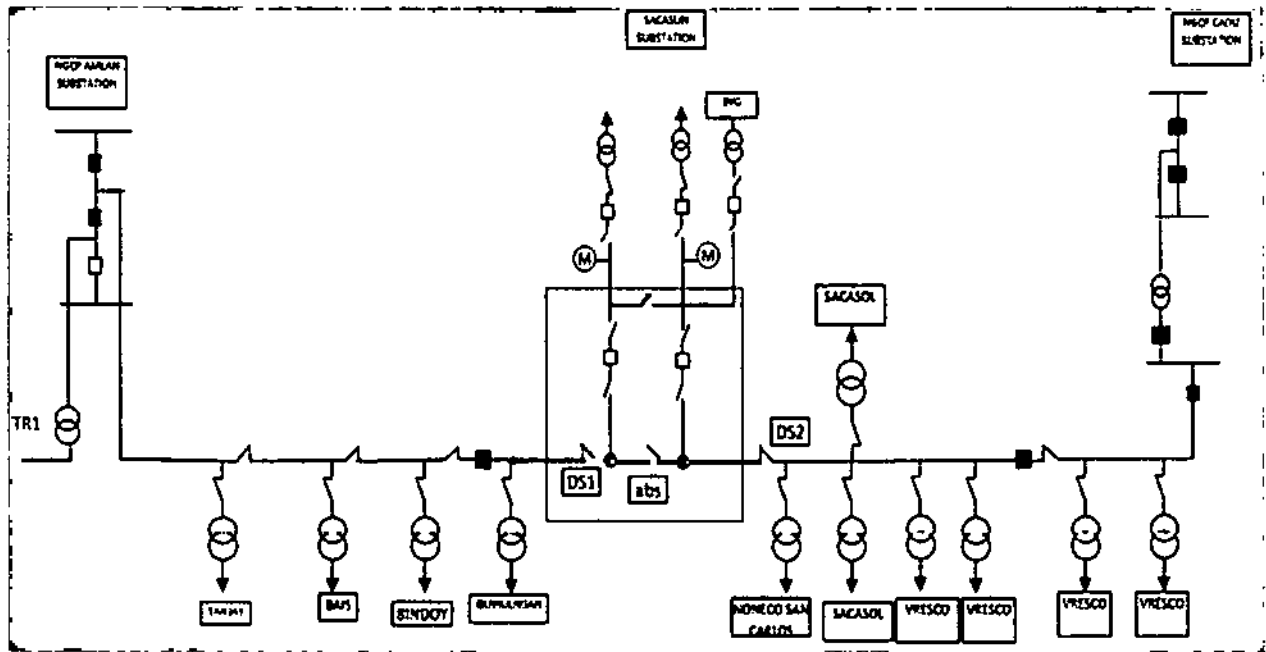
- If the fair market value (subject to optimization) is higher than the facility's cost incorporated in the determination of the FIT, NGCP/TransCo shall pay the difference between the said cost and the fair market value.
- If the fair market value (subject to optimization) is lower than the facility's cost incorporated in the determination of the FIT, the asset shall be treated as Contribution in Aid of Construction (CIAC). NGCP shall maintain a separate account of these amounts and the assets should not appear in the rate base or in its asset appraisal.

IV. Result of the System Impact Study (SIS) reviewed by NGCP

The connection of the solar power plant to the grid was subjected to a System Impact Study (SIS) conducted by Real Power Consultancy Services. Based on its study, the connection of the plant along the Amlan-Guihulngan 69 kV transmission line is technically feasible. However, transmission reinforcements were found to be necessary. The said SIS was submitted to NGCP for its perusal.

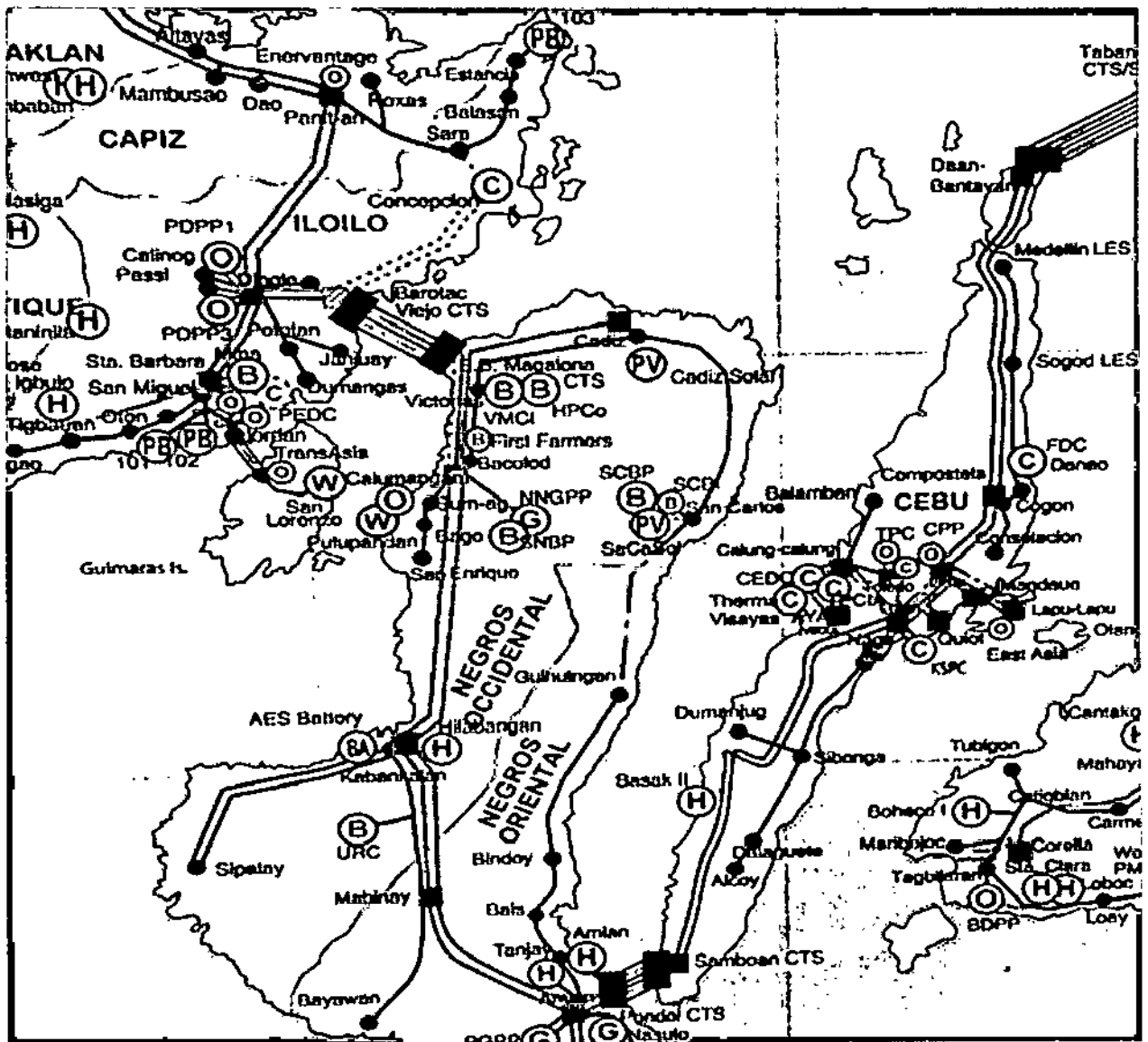
NGCP, in its Review Report, initially evaluated two scenarios: the first scenario was injection toward the Amlan Substation while the second scenario was injection toward the Cadiz Substation. A third scenario, the simultaneous injection toward the Amlan and the Cadiz Substations, was also evaluated during the review, as requested by SACASUN.

In view of the results of NGCP's technical assessment, the recommended connection for SACASUN is shown below:



The recommended connection of NGCP will give SACASUN the flexibility to inject power towards Amlan or Cadiz Substations as well as the simultaneous injection toward both substations subject to dispatch limitation.

NGCP noted in its Review Report that thermal assessment results indicate overloading of the Negros-Cebu 138 kV submarine cables during normal and peak conditions. Further, it was found that the Amlan-Pondol 138 kV transmission line was overloaded during N-1 contingency. To mitigate this, the completion of the Cebu-Negros-Panay (CNP) 230 kV Backbone will be required. Nevertheless, considering that there are massive generation capacity additions in Negros and Panay, a curtailment of power plants was recommended. Such curtailment will affect SACASUN's power plant.



After the conduct of the Review Report, the Facility Study (FS) conducted by SACASUN on its transmission facility was likewise reviewed by NGCP. The FS was approved on 2 March 2016.

V. Need for the Project

The dedicated point-to-point limited facilities will be utilized by the SACASUN solar power plant to connect and deliver its generated power to the Visayas Grid through the San Carlos-Guihulngan 69 kV line. This purpose was stated in the application and was emphasized during the hearings.

VI. Options/Alternatives Considered

Before SACASUN's decision to connect to the San Carlos Guihulngan 69 kV line, it considered other connection schemes. However, NGCP, in its Review Report, confirmed these connection schemes were not ideal. The other options considered were the following:

1. **Injecting toward the Amlan Substation alone** – SACASUN's plant's capacity is 48.6 MWp AC. NGCP confirmed that the maximum allowable dispatch for SACASUN is only 24 MW and 28 MW in years 2016 and 2021, respectively. This connection scheme would not be viable.

Additionally, any outage in the San Carlos-Guihulngan line would result to an outage to SACASUN if this connection scheme was selected.

2. **Injection toward the Cadiz Substation** – Keeping in mind SACASUN's plant capacity of 48.6 MWp AC, injection of power towards the Cadiz Substation alone would not be suitable as the maximum allowable dispatch for SACASUN to avoid overloading of the line towards Cadiz Substation is merely 30 MW.

Likewise, any outage along the Cadiz-San Carlos 69 kV line would result to an outage to SACASUN if this connection scheme was selected.

SACASUN elected to simultaneously inject power toward the Amlan and the Cadiz-San Carlos Substations for the reason that the full 48.6 MWp AC of its plant capacity can be accommodated in this arrangement, wherein 24.3 MW will be injected toward the Amlan Substation and 24.3 MW will be injected toward the Cadiz Substation. Furthermore, this configuration also makes it possible for SACASUN to inject 24.3 MW to the grid in case of a single outage along the San Carlos-Guihulngan-Amlan or Cadiz-San Carlos 69 kV line, making the connection scheme more reliable.

VII. Technical Configuration

SACASUN's 48.6 MWp AC solar power plant will connect to the grid by tapping along the San Carlos-Guihulngan 69 kV transmission line, which is still under construction. When the San Carlos-Guihulngan 69 kV transmission line is completed, SACASUN will tap to the said transmission line using the proposed two point connection scheme, which would then allow the simultaneous power delivery toward the Cadiz and Amlan Substations.

SACASUN also considered connecting to the San Carlos Switching Station temporarily, following the curtailment recommendation of NGCP, for it to dispatch its generated power on time for its scheduled commissioning date.

The SACASUN solar power plant, having a capacity of 48.6 MWp AC, is classified as a large generator and should comply with Section 4.4.1 of the Philippine Grid Code (PGC), to wit:

4.4.1. Requirements Relating to the Connection Point

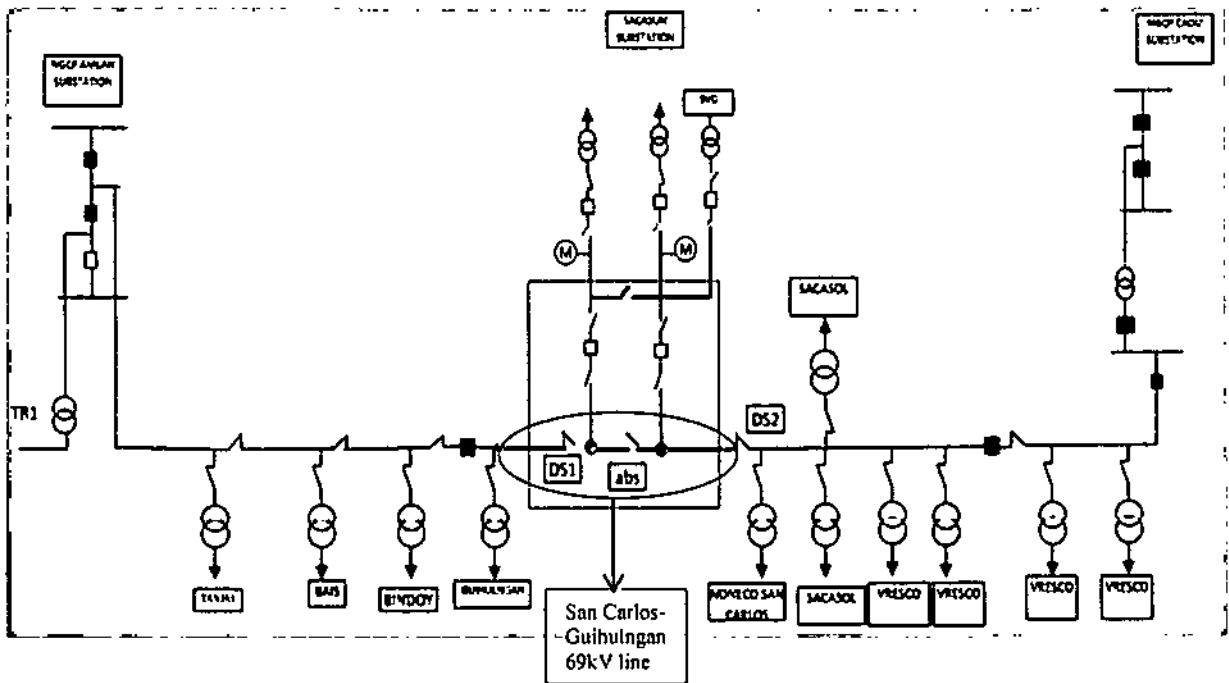
4.4.1.1. The Generator's Equipment shall be connected to the Grid at the voltage level(s) agreed to by the Grid Owner and the Generator based on Grid Impact Studies.

4.4.1.2. The Connection Point shall be controlled by a circuit breaker that is capable of interrupting the maximum short circuit current at the point of connection.

4.4.1.3. Disconnect switches shall also be provided and arranged to isolate the circuit breaker for maintenance purposes.

In order to conform to the requirements of NGCP and comply with the provisions of the PGC and other applicable laws for large generators, the Facility Study was conducted. Moreover, the details of the connection scheme and the specifications of the equipment to be used were established through the same study.

The single line diagram below illustrates SACASUN's compliance with the provisions of the PGC and with the NGCP requirements:



The San Carlos-Guihulngan 69 kV transmission line is to be constructed by NGCP.

The SACASUN solar power plant will be connected to the grid through tap connection for both of its two lines. This will require the construction of two (2) 0.6 km 69 kV lines, utilizing one (1) 336.4 MCM SP-SC, six (6) pole structures, the associated protection and communication equipment, and the 69 kV switchyard.

The SACASUN Substation is equipped with circuit breakers, disconnect switches, current transformers, voltage transformers, a surge arrester, and remote terminal unit (RTU) which are all compliant with NGCP requirements.

In the SIS Review Report, a 10 MVAR capacitor bank was recommended to be installed in the SACASUN Substation. However, instead of a capacitor bank, SACASUN opted to install a Static Voltage Generator (SVG).

The dedicated point-to-point limited facilities will be equipped with an air break switch (ABS) that shall be open during regular operation. However, if it is necessary to close the ABS, only one side or one transformer shall be online to prevent overloading.

The ABS and the other equipment enclosed in the red box in the single line diagram are considered transmission equipment and are to be turned over to NGCP, following ERC Resolution No. 16, Series of 2011, entitled “Resolution Adopting the Amended Rules on the Definition and Boundaries of Connection Assets for Customers of Transmission Provider.” The cost of the said equipment should not be recovered from the consumers and shall be treated as Contribution in Aid of Construction (CIAC). NGCP shall maintain a separate account for CIAC and the assets should not appear in its rate base or in its asset appraisal.

On 22 March 2016, the Commission conducted an ocular inspection of the proposed dedicated point-to-point limited line. The current connection of the SACASUN solar power plant at that time was the interim connection—a single circuit, 336.4 MCM ACSR which was 1.7 km from the San Carlos-Cadiz line. SACASUN constructed a second circuit (double circuit) on a portion of the interim dedicated point-to-point limited facilities, although it was not electrically connected. The current connection remained consistent with the studies reviewed by NGCP.

The second circuit was constructed in anticipation of the possible connection of a biomass plant to the San Carlos-Cadiz Line, the line where SACASUN’s solar power plant is currently connected. If the biomass plant will connect to SACASUN’s existing connection, there would be a need to temporarily disconnect SACASUN’s solar plant. Thus, to avoid future interruption, SACASUN constructed the second circuit. This connection was allowed by NGCP, as confirmed by SACASUN in its Compliance dated 2 May 2016.

In the same ocular inspection, the Commission confirmed that the metering point is located near the connection point, which complies with Section 8.2.3.1 and 8.2.4.1 of the PGC, to wit:

“Section 8.2.3.1. Active Energy and Demand Revenue Metering shall be required at every Connection Point. The Metering Point shall be as close as possible to the Connection Point, otherwise a procedure shall be established to adjust Energy loss between the metering point and the Connection Point.”

“Section 8.2.4.1. Reactive Energy and Demand Revenue Metering shall be required at every Connection Point. The Metering Point shall be as close as possible to the Connection Point, otherwise a procedure shall be

established to adjust Energy loss between the metering point and the Connection Point.”

Likewise, Section 2.9 of the FIT Rules provides that *“the process of settlement includes the determination of the monthly payments to each Eligible Renewable Energy (RE) Plant based on **actual metering** and the applicable FITs.”*

This is further clarified in Section 3.4 of the FIT-All Guidelines, which provides that:

“Each eligible RE Plant shall be paid its corresponding Actual FIT Revenue based on electricity actually exported to the relevant transmission or distribution Grid, as the case may be, measured at the high voltage side of the step-up transformer at the RE Plant (Metering Point) and reflected in its Record of Meter Reading.”

The objective of the said provision is to account the System Loss (SL) from the power plant up to the injection point to the grid, thus, the Metering Point should be located at the Connection Point. If, for any justifiable reason, it is not possible to do so, the PGC provides that an adjustment procedure shall be established to account for losses.

Considering that the subject facility is less than 0.6 km from the connection point and is thus compliant with the abovementioned rules, SACASUN may operate the subject facility, with constant coordination with NGCP.

Moreover, since the output is split in two, SACASUN installed two (2) revenue meters—one (1) meter for each transformer output—which was approved by NGCP.

VIII. Technical and Financial Capability

SACASUN manifested during the hearing that it shall undertake the operations and maintenance of the dedicated point-to-point limited facilities. Thus, SACASUN presented evidence to prove that it has the technical, financial, and management capabilities to develop, own, and, operate the subject facilities.

The Commission finds SACASUN, a partnership between Aboitiz Renewable Inc. (ARI) and SunEdison Energy Holding (Singapore) Pte. Ltd., to be technically competent as it has extensive experience in power generation, distribution, and retail electricity service through its holding company, Aboitiz Power Corporation.

As to its claim of financial capability to undertake the development and construction of the dedicated point-to-point limited line, the same shall be assessed in its application for a Certificate of Compliance, where the financial qualifications set forth in the "Financial Guidelines for Generation Companies" will be followed.

IX. Prescribed Fees

Permit fee for the authority to construct the subject project is prescribed under Commonwealth Act No. 146, as amended, for the reimbursement of the expenses of the Commission in evaluating the case based on its total project cost. As to the subject case, the project includes facilities that have transmission function and not just dedicated point-to-point limited facility. Since the application was filed solely by SACASUN (including the facilities to be transferred to NGCP), the permit fee should be paid solely by the applicant based on the total cost of the project, computed as follows:

$$\begin{aligned} \text{Permit Fee} &= \frac{\text{Total Project Cost} \times 0.75}{100} \\ &= \frac{84,373,042.00 \times 0.75}{100} \\ \text{Permit Fee} &= \text{PhP632,797.82} \end{aligned}$$

A perusal of the evidence shows that SACASUN's Application for authority to develop and own assets, including dedicated point-to-point limited transmission facilities to connect the 48.6 MWp AC solar power plant to the Visayas Grid, is in accordance with Section 9, paragraph 3 of Republic Act No. 9136, otherwise known as the Electric Power Industry Reform Act of 2001 (EPIRA), relevant issuances of the Commission, and other laws and guidelines. An approval of the instant Application will redound to the benefit of the consumers as it will translate to continuous, quality, reliable, and efficient power supply.

WHEREFORE, the foregoing premises considered, the Application to authorize the San Carlos Sun Power, Inc. (SACASUN) to develop, own, and operate assets, including dedicated point-to-point limited transmission facilities to connect the 48.6 MWp AC solar power plant to the Visayas Grid through the San Carlos-Guihulngan 69 kV line, with prayer for provisional authority, is hereby **APPROVED**, subject to the following conditions:

- a) SACASUN shall operate and maintain the subject dedicated point-to-point limited facility, with constant coordination with the National Grid Corporation of the Philippines (NGCP);
- b) SACASUN shall execute an undertaking that after construction of the switchyard and its associated facilities that have transmission functions, it shall turn over the said assets to NGCP as Contribution in Aid of Construction (CIAC).

NGCP shall maintain a separate account of these assets and the same should not appear in its rate base nor in its asset appraisal;

- c) The subject facilities shall be developed and constructed in accordance with the System Impact Study (SIS) and Facility Study (FS) so as not to result in the degradation of NGCP's transmission system;
- d) The dedicated point-to-point limited facility shall be used solely by the generating facility;
- e) The metering point shall be as close as possible to the connection point, in accordance with the Philippine Grid Code (PGC); and
- f) Ownership of any portion of the dedicated point-to-point limited facility that is used for competitive purposes or for connection of any other user shall be transferred to NGCP/TransCo at a fair market price, subject to optimization.

In determining the fair market price, the cost of the facility as incorporated in the determination of the Feed-in-Tariff (FIT), in the event that the generation company be FIT eligible, should be accounted for; and

All accessories and equipment related to the 69 kV bus bar shall be classified as Transmission Assets.

Relative thereto, SACASUN is hereby directed to pay the permit fee amounting to **PhP632,797.82** computed based on the Commission's "Revised Schedule of Fees and Charges."⁴

SO ORDERED.

Pasig City, 13 December 2016.


(On Leave)
JOSE VICENTE B. SALAZAR
Chairman


ALFREDO J. NON
Commissioner


GLORIA VICTORIA C. YAP-TARUC
Commissioner


JOSEFINA PATRICIA A. MAGPALE-ASIRIT
Commissioner


GERONIMO D. STA. ANA
Commissioner


LS/bet/par/apv
ROS: rmg/lhg/ftd

Copy Furnished:

- Attys. Katrina M. Platon, Ma. Consolacion C. Mercado and Lew Carlo C. Lopez**
Counsels for Applicant
16th Floor NAC Tower, 32nd St. Bonifacio Global
Taguig City
- San Carlos Sun Power, Inc. (SACASUN)**
Aboitiz Corporate Center
Gov. Manuel A. Cuenco Avenue
Kasambagan, Cebu City

⁴ Resolution No. 21, Series of 2007, entitled "A Resolution Approving the Revised Schedule of ERC Fees and Charges."

- 3. Office of the Solicitor General**
134 Amorsolo Street, Legaspi Village
Makati City, Metro Manila
- 4. Commission on Audit**
Commonwealth Avenue
Quezon City, Metro Manila
- 5. Senate Committee on Energy**
GSIS Bldg., Roxas Blvd., Pasay City
Metro Manila
- 6. House Committee on Energy**
Batasan Hills, Quirino City, Metro Manila
- 7. Office of the President-PCCI**
Philippine Chamber of Commerce and Industry (PCCI)
3RD Floor ECC Building
Sen. Gil Puyat Avenue, Makati City
- 8. Office of the City Mayor**
San Carlos City, Negros Occidental
- 9. Office of the Provincial Governor**
Province of Negros Occidental