CEB Smart City
Renewable Energy (RE) Scheme

OVERVIEW OF THE CEB SMART CITY RE SCHEME

The **CEB Smart City RE Scheme** is an initiative which will enable implementing an important feature of the Smart City Scheme promoted by Government.

The **Smart City Guidelines**, issued by the Economic Development Board, provides that *"… a smart city project should be able to generate its own energy requirements through eco-friendly mechanisms such as solar plant…"*

Under this new RE Scheme, CEB will integrate into the grid Small-Scale Distributed Generation (SSDG) and Medium-Scale Distributed Generation (MSDG) solar photovoltaic (PV) projects set up by Smart Cities, holding either a Certificate or a Letter of Intent for Smart City issued by the Economic Development Board (EDB).

The aim of this Scheme is to interconnect a **total of 15 MW MSDG RE projects from Smart Cities**. 5 MW out of the 15 MW will be kept as a buffer to cater for contingencies. Thereafter, depending on the situation, the 5 MW may be reallocated to the intended or new projects.

Interconnection of the SSDG/MSDG RE projects shall be made strictly in accordance with the applicable Grid Codes (download Grid Codes) and terms & conditions defined for the Scheme.

Note: In the event that the allocated 15 MW capacity is not fully taken up by Smart Cities' RE projects, **the capacity will be reallocated to other RE Schemes**.

Processing of application for grid interconnection of the Smart Cities' RE projects will be made on the basis of ***first-come, first-serve*** principle. The implementation of the Scheme will involve the hereunder two stages:-

Stage 1: Interested Smart Cities shall express their interests for the Scheme and
Stage 2: After the issuing of the letter of invitation by CEB, eligible Smart Cities shall file the application.

To express interest for the Scheme, an authorised representative of each Smart City should fill the **CEB SMART CITY RE SCHEME EOI FORM**. The Form is downloadable from CEB website on the following link : https://ceb.mu .

Subject to the terms and conditions for the Scheme, based on the total cumulated proposed capacities of the intended RE projects, the 15 MW will be apportioned proportionately to the eligible Smart Cities on the basis of the declared/assessed electrical load of the respective electricity contract account(s) recorded in the CEB information system.

Note: Only the declared electrical load of a Smart City's premises, developed after the issue of the Letter of Intent for Smart City by EDB, will be considered.

Thereafter, within a period of one month**,** as from the date of the letter of invitation issued by CEB, the authorised representative of each Smart City should submit full details, including documentation, of the RE project(s) together with the relevant application form.

A no-reply after the given period of one month or a late reply for a prospective project shall be construed as a deferment of the RE project(s) by the concerned Smart City. Accordingly, the MW slot(s) shall be reallocated to other existing or in-waiting projects in the same or other categories (SSDG, MSDG or Others), as deemed appropriate by CEB.

By applying for the Scheme, the Smart City confirms its commitment for the setting up of the RE project in accordance with the terms and conditions set out for the Scheme.

In the following sections, important information on the Scheme is given. Concerned representatives of Smart Cities and the public at large are advised to **read carefully** the provided information.

WHAT IS THE CEB SMART CITY RE SCHEME?

The CEB Smart City RE Scheme is a Scheme launched by CEB especially to enable Smart Cities to participate in electricity generation using solar photovoltaic technologies in line Government Smart City Scheme.

Under the present pilot phase of the Scheme, CEB plans to integrate a total cumulated capacity of **15 MW** of SSDG and MSDG projects, set up by Smart Cities, in the Mauritian grid.

All submitted RE projects, under this Scheme, **will be subject to either a network impact assessment or a network survey,** whichever would be warranted.

The CEB Smart City RE Scheme has been officially opened on 30 September 2019.

MAIN GOALS OF THE CEB SMART CITY RE SCHEME

The CEB Smart City RE Scheme is in line with Government Long Term Energy Strategy. It has as main objective to contribute in achieving the national target of 35% RE in the electricity mix by 2025. This target has been renewed in the recently released Renewable Energy Roadmap 2030.

The Scheme will enable Smart Cities to produce, to the extent possible, their electricity requirements while benefitting the reliability of CEB grid. The grid will provide the required support to mitigate power supply risks associated with solar PV distributed generation.

Through this Scheme, CEB confirms its support to Smart Cities for the setting up of solar PV projects with the common objective of ensuring the sustainable development of the National Power System.

METERING PRINCIPLE UNDERLYING THE SCHEME

The Scheme will operate under the **gross metering method**.

For the purpose of the gross metering method, all the RE projects (SSDG or MSDG) of the Smart Cities shall be equipped with production and import-export meters.

The meters will be provided by CEB and the latter will keep total control – administrative and/or technical controls, whichever would be applicable – of the meters and their associated metering equipment. All related costs for metering shall be borne by the concerned Smart Cities.

The location of the meters and metering equipment within the electrical setup of each concerned RE project will be determined during the mandatory network impact assessment or mandatory network survey, whichever would be warranted. On a case-to-case basis, special consideration will be given to ensure the optimal solution for the metering of the RE project purposely to ensure best commercial practices.

KEY COMMERCIAL TERMS OF THE SCHEME

In accordance with the gross-metering principle, as formulated for this Scheme, all energy produced by the Smart City RE projects (solar PV systems) shall be injected or shall be considered as injected into the grid.

In accordance with the terms and conditions of the Scheme, as from the **commercial operation date (COD)** of a solar PV system, developed under this Scheme, CEB will buy all the energy (kWh) production, as metered by the production meter, after adjusting for technical losses, at the **Tariff (T).**

The **Tariff (T)**, denominated in Mauritian rupees, will be revised every year. It is expected that the **revised T** will be determined and approved by the Utility Regulatory Authority (URA) after it has been filed by CEB. The revised T will be published at the start of each calendar year.

For the current year 2019, T is fixed at MUR 3.50 per kWh. T will be allocated at the time of the signing of the Connection Agreement.

> **Note:** Where electricity tariff(s) lower than the Tariff (T) has/have been allocated to the electricity contract account(s) linked to the intended solar PV project, **the Tariff (T) will be adjusted to the Tariff (T_w)**, which shall be a weighted average of T and the applicable electricity tariff(s) allocated to the account(s). The weights will be the shares of energy imported, under each electricity contract account, and the energy production by the solar PV project.

For each solar PV system, a Connection Agreement shall be agreed before initiating procedure for the procurement of the system. A draft version of the Connection Agreement will be provided for each project following the network impact assessment or network survey, whichever would be warranted.

BENEFITS OF THE SCHEME

The benefits of the Scheme are as follows:-

- Subject to the compulsory network impact assessment or network survey, whichever would be warranted, and apportionment of the 15 MW allocated capacity, concerned Smart Cities will participate in the production of clean electricity.

- The Smart Cities will secure a 20 years revenue stream for each RE project; a worthy financial risk mitigation security for their respective RE projects.

- The Smart Cities solar PV systems will be supported by CEB grid to stabilize the intermittent power generation of the solar PV systems; hence no investment for energy storage system.

- Thus, the Smart Cities will be able to lower their investment costs in the Solar PV projects as an energy storage system (ESS) will not be required. This will enable Smart Cities to minimize their exposure to financial, technological and/or operational risks associated with ESS.

- By developing the RE projects under this Scheme, the Smart Cities will participate in promoting the use of renewable energy; hence, upholding their national and international commitment for sustainable energy development.

- The Smart Cities will have the opportunity to contribute in energy supply security and protection of the environment, while participating in the strengthening and supporting the inclusive development of the National Power System.

KEY TERMS & CONDITIONS OF THE SCHEME

The key terms and conditions of the Scheme are:-

1. After having received an invitation letter, the authorised representative of each Smart City should fill and submit the relevant application form with full details of the intended solar PV project.

2. Upon the submission of the duly filled application form, the Smart City pays the applicable non-refundable processing fee (click to view the applicable processing fee). Payment of the processing fee does not guarantee registration into the Scheme.

3. The Smart City's premises', where the solar PV system will be installed, electrical load is effectively declared to CEB. If required, CEB will perform a site survey to ascertain the accuracy of the declared load. For this purpose, the Smart City would authorize and provide CEB's personnel necessary permission and access to carry out the detailed load survey.

4. As would be warranted, the declared or assessed electrical load of the Smart City premises, linked to an electricity contract account, will be updated in the CEB's information system for billing purposes.

5. The installation of the solar PV system shall be completed within a period of 1 year as from the date of the signing of the Connection Agreement.

6. The solar PV system shall at all times comply with all requirements of the relevant applicable Grid Code (download the Grid Codes) including its subsequent amendments.

   Note: For safety and quality reasons, the concerned Smart City is strongly advised to seek the support of a qualified person in the field of RE technology prior to filling the application form.

7. The Smart City shall provide CEB with web-link access, free of charge, for the downloading of the power output of the SSDG/MSDG facility.

8. Where necessary, as and when required, the Smart City also shall give full free access to CEB for downloading data series directly from the inverter and/or energy management system of the solar PV system. For the on-site and/or off-site data downloading, the Smart City shall provide CEB a free copy of the required operating software and application(s).

9. Following a notice from the CEB, the Smart City shall give full and free access to CEB personnel and/or its associate(s) to the solar PV system.

10. The Smart City shall pay all relevant charges and costs, including the connection fee, for the setting up of the solar PV system.

11. Until properly remedied, a solar PV system not complying with the applicable Grid Code, not satisfying all terms and conditions of this Scheme and other regulatory requirements, will not be considered for the grid interconnection.

12. The Smart City has obtained all necessary authorizations, licenses, permits, etc. prior to the commissioning by CEB of the solar PV system.

13. Where applicable, the total monthly electricity (kWh) consumption of the concerned accounts of/in the Smart City shall be calculated by the formula below.

    C = P + I – E

    Where,

    C is the total monthly electricity (kWh) consumption;
    P is the total energy (kWh) production by the RE facility;
    I is the total energy (kWh) imported from CEB; and
    E is the total energy (kWh) exported to CEB.

    Note: Where an electricity contract account linked to the Smart City solar PV system is in a 3rd party name, prior to the signing of the Connection Agreement, the concerned Smart City shall obtain the written acceptance of the 3rd party for the above formula and for reclassifying the account in a specific CEB Customer Category for the purpose of billing and invoicing of the monthly electricity consumption of the account.

14. Further to the network impact assessment or network survey, whichever would be warranted, the Smart City and any of its associates would have no objection to the

addition of other necessary terms and/or conditions for the grid interconnection of the solar PV system.

15. As notified by CEB, the Smart City shall implement all recommendations of the network impact assessment or network survey, whichever would be applicable, in time.

16. For each solar PV system, the Smart City should submit the Certificate of Compliance confirming compliance to the applicable Grid Code, CEB's network impact assessment's or network survey's recommendations and terms & conditions of the Scheme. The Certificate of Compliance shall be certified by an independent qualified technical officer or an independent registered engineer, whichever would be applicable, after the latter has performed all technical and non-technical verifications.

17. The Smart City shall sign the legally-binding Connection Agreement prior to initiating the procurement of the solar PV system.

SIZING OF SOLAR PV SYSTEMS UNDER THIS SCHEME

Under this Scheme, the final capacity (size) of each solar PV system shall be determined after the network impact assessment or network survey carried out by CEB and the total electrical load declared in the active electricity contract account(s) linked to the intended solar PV system.

Upon request from a Smart City, future electrical load may be considered in the sizing of a solar PV system only if there is remaining capacity (MW) in the Scheme.

Note: Solar PV systems of capacity greater than 2 MW will not be considered under this Scheme.

ELIGIBILITY TO APPLY FOR THE SCHEME

Only Smart Cities holding either a Certificate or a Letter of Intent for Smart City issued by the Economic Development Board (EDB) will be considered for this Scheme.

Smart City not submitting the duly filled CEB SMART CITY RE SCHEME EOI FORM (click to download the EOI FORM) **will not be eligible to apply for the Scheme**. **The deadline for the submission of duly filled and signed EOI Form is 30 November 2019, which may be extended if required.**

A party who is in litigation with CEB, unless the litigation is effectively settled, or already operating an SSDG/MSDG under another Scheme, unless the existing agreement is terminated, will not be considered for this Scheme.

WHERE TO SUBMIT THE EOI FORM?

The duly filled **CEB SMART CITY RE SCHEME EOI FORM** together with all relevant requested documents, enclosed in a properly sealed, clearly labelled envelope, should be addressed to:-

The Strategic & Business Planning Executive
Central Electricity Board
CEB Corporate Office,
Rue du Savoir,
Cyber City, Ebène
Republic of Mauritius

HOW TO APPLY FOR THE SCHEME?

Following the review of the solar PV project, described by the Smart City in the EOI Form, and after CEB has determined the capacity of all the solar PV projects, all eligible Smart City will be invited to fill an application form for each solar PV project.

An authorised representative of each Smart City then should fill and submit the application form **"CEB SMART CITY RE SCHEME APPLICATION FORM"**.

A period of one month will be allowed for the submission of full details of each intended solar PV project together with the relevant application form.

Note: A no-reply after the given period of one month or a late reply for a prospective solar PV project shall be construed as a deferment of the project by the concerned Smart City. Accordingly, the MW slot(s) shall be reallocated to other existing or in-waiting projects in the same or other categories (SSDG, MSDG or Others), as deemed appropriate by CEB.

FOR MORE INFORMATION ON THE SCHEME

Interested Smart City, wishing to benefit from this Scheme, can obtain additional information on the Scheme:-

- On CEB's website http://ceb.mu/ . This is highly recommended to save time and effort.
- By sending an email to querysmartcityscheme@ceb.intnet.mu , or
- By contacting CEB Strategic & Business Planning Unit on telephone numbers 404-2038 or 404-2045.

NOTIFICATION REFERENCE, DATE AND TIME

Upon receipt of the CEB SMART CITY RE SCHEME EOI FORM, a notification with a reference number, date and time will be created in the CEB information system.

Note: Authorized representatives of Smart Cities may call the CEB on 404-2000 requesting for Ext. 2129 to learn of the status of their respective project(s).

IMPORTANT ADVICE

- Given technicalities and financial implications in setting up of renewable energy project, sufficient care should be exerted when soliciting third party's supports. Contracting the services of an experience consultant in the field is strongly recommended.

- The solar PV projects need to be fully compliant with the applicable Grid Codes. To properly design the solar PV system, seek support from knowledgeable qualified people who shall be able to prepare not only the technical part but equally the financial assessment of your investment in the system. Keep regular contacts and work closely with CEB.

- To avoid delays in the implementation of the project, ensure that all documentation together with the application form are submitted to the CEB. Ensure the form is submitted as indicated.

- Securing a Connection Agreement for grid interconnection of the intended solar PV system is mandatory. Make sure it has been agreed and signed prior to the setting up of the system. It is strongly advised that payment(s) for equipment of the solar PV system be initiated only after all agreements, licenses and permits, as applicable, have been properly secured.

- Whenever needed, seek the support services of CEB, who may provide useful guidance.

- The solar PV system is an investment which shall bring benefits. Therefore, it is necessary to ensure its security all over its life. This will enable maximizing the return on the investment. In addition, carrying out regular maintenance of the solar PV system, with the support of a technically qualified person or the supplier of the equipment, will also contribute in maximizing profit.

- Ensure full compliance, at all times, with the applicable Grid Code and its amendments and the Connection Agreement.

- Modification of the setup of the solar PV installation, without prior CEB's authorization, will result in an automatic disconnection of the solar PV facility from CEB's network and the suspension of the Connection Agreement and thereof all CEB's therein obligations.