

CEB AGRIVOLTAICS (CAV) SCHEME

INFORMATION LEAFLET

INTRODUCTION

The strategy to increase the share of renewable energy through agrivoltaics, also referred to as agrisolar or agrophotovoltaics, is gaining acceptance globally. Essentially, agrivoltaics involve the dual use of land for agricultural activities and the production of renewable energy.

In Mauritius, in the last national Budget Speech 2023-2024 (*ref: Para 186 (a)*), it has been stipulated that “... *the CEB will introduce renewable energy schemes for hotels, commercial centres, shopping malls and the **agricultural sector.***”

Pursuant to the aforementioned Budget measure, following consultations with key stakeholders (Ministry of Agro Industry and Food Security – MAIFS, Business Mauritius – BM, Small Farmers Welfare Fund – SFWF, Food and Agricultural Research and Extension Institute – FAREI), and based on useful insights from other entities (Ministry of Energy and Public Utilities – MEPU, Mauritius Renewable Energy Agency – MARENA, Mauritius Chamber of Agriculture and International Solar Alliance), the CEB has developed an agrivoltaics scheme.

The scheme is named “**CEB AGRIVOLTAICS SCHEME.**”

The primary aim of the **CEB AGRIVOLTAICS (CAV) SCHEME** is to broaden the scope for the country’s transition towards green energy while leveraging land use for national food security.

In the initial and current phase of the Scheme, the CEB will consider applications for renewable energy (RE) projects (**solar source only**) from potential project developers, both in Mauritius and Rodrigues.

A total cumulated capacity of **twenty (20) megawatts (MW)** of grid access has been allocated for the current phase of the Scheme in Mauritius. Pending the outcomes of the *Rodrigues Ile Verte* study, **one megawatt (1.0 MW)** of grid access capacity has been allocated for Rodrigues.

In any case, the maximum combined capacity of a RE project under the Scheme should be below 500 kWac.

The 20 MW capacities for Mauritius are divided into 2 MW, 9 MW and 9 MW for breeders, existing planters and new young planters respectively. The allocated capacities may be reallocated in case of insufficient uptakes.

An eligible project developer may apply for the Scheme or choose to join a duly registered cooperative entity to represent his or her interest in the setting up of one or more joint RE facilities under the Scheme. The cumulative capacities (MW) of the RE

facilities established under the Scheme should not exceed the total allocated capacities.

The testing and commissioning of the grid connection of the RE facilities will be conducted sequentially, based on the state-of-readiness of the RE facilities. RE facilities that cannot be tested and commissioned in the current phase will be rolled over to next phases of the Scheme.

The opening of future phases will depend on the grid's absorption capacity and the condition of the network. **In line with the principle of rolling-over, eligible project developers can submit applications for the Scheme over the years until a notice of closure of application is issued.**

The CEB AGRIVOLTAIC (CAV) SCHEME is officially launched on 22 July 2024.

In the subsequent sections, we provide essential details about the Scheme. We advise eligible project developers and the general public to thoroughly read the information presented below.

MAIN GOALS OF THE CAV SCHEME

Mauritius, blessed with abundant solar energy, faces unique challenges as a Small Island Developing State (SIDS) with limited land, which is in high demand for various and competing developmental activities.

Given this inherent constraint, it is imperative to devise strategies that leverage available and emerging technologies to optimise the use of the scarce land resources. This Scheme is specifically designed to enable dual land use, thereby promoting national energy security and food security.

In addition to these two key sustainable goals, the Scheme offers project developers, who are or will be engaged in agricultural activities, an additional revenue stream through the sale of electricity generated from renewable energy facilities to the CEB.

The Scheme also presents an opportunity to initiate the decarbonisation of the Agricultural Sector, which is a significant global contributor to global warming at the international level. It aligns with the Government's strategy to reduce carbon emissions, as pledged in the country's Nationally Determined Contribution (NDC), moving towards the national target of achieving 60% shares of RE in the electricity mix by 2030.

As an innovative approach, the Scheme aims to establish a synergy that could enhance agricultural productivity while simultaneously boosting renewable energy generation.

The Scheme also offers project developers the option to collaborate by forming cooperatives, enabling them to benefit from economies of scale in financing, developing, operating, and maintaining the renewable energy facilities.

WHAT IS THE CAV SCHEME?

The **CAV Scheme** offers farmers (planters & breeders) and other related entities the opportunity to invest in renewable energy power generation (using only solar energy) for sale

to the CEB within their agricultural activities. The aim is to promote national food security. **An eligible project developer must provide official proof of registration or recognition from a reputable local authority.**

Agrivoltaics, which combines agricultural activities with solar photovoltaic electricity generation, presents an innovative solution to address climate change challenges. This approach aligns with the net-zero and nature positive sustainable development concepts. It supports land preservation - a scarce resource for SIDS - for food production while enabling the potential for renewable energy generation from solar energy.

Considering the underlying dual national objectives (food security and energy security) of the CAV Scheme, **the CEB will exceptionally provide a premium of 19% on the blanket rate of energy export tariff, applicable to other existing CEB RE Schemes, to remunerate investment in renewable energy projects developed under the CAV Scheme. The rate will be Rs 5.00 per kWh instead of Rs 4.20.**

In addition, the CEB will provide other technical and non-technical assistance as part of a package incentives to project developers under the CAV Scheme. **Project developers may also receive support from other entities such as the Small Farmers Welfare Fund, FAREI, and Development Bank of Mauritius (DBM) Ltd.** They may also approach organisations to lease land to develop their projects.

Interested project developers may also seek support from agencies such as the International Solar Alliance (ISA) through relevant Government authorities. For instance, ISA may provide Viability Gap Funding support.

Under the current phase of the Scheme, the CEB plans to integrate a total cumulative capacity of 20 MW from small-scale distributed generation and medium-scale distributed generation (SSDG and MSDG¹) renewable energy facilities, using solely solar sources, into the Mauritius grid and 1.0 MW into the Rodrigues grid.

The 20 MW capacity for Mauritius is divided into 2 MW, 9 MW and 9 MW for breeders, existing planters and new young (below 35 years of age) planters respectively. The allocated capacities may be reallocated in case of insufficient uptakes from the target groups.

¹ SSDG is Small-Scale Distributed Generation of capacity not exceeding 50 kW; MSDG is Medium-Scale Distributed Generation of capacity ranging from 50 kW to 2 MW.

Every proposed RE facility in the agrivoltaics project, to be set up under this Scheme, will be subject to either a network impact assessment or a network survey, as warranted. Subsequently, the qualified project developer, or the cooperative entity representing the interests of a group of qualified project developers, will be required to **implement all the recommendations of the assessment/survey prior to or during the setting up the RE facility.**

KEY FEATURES OF THE CAV SCHEME

The key features of the CAV Scheme are as follows: -

1. Each eligible project developer will be required to submit a duly filled-in application form for the setting up of an agrivoltaics project which shall include a solar renewable energy system of capacity **below 500 kWac**.
2. Under the present phase of the Scheme, the following are provided as part of a comprehensive incentives package: -

- a. Exceptionally, under this Scheme, a premium tariff rate of **MUR 5.00 for each unit (kWh)** of electricity exported to the grid will be provided by the CEB.
- b. Free metering equipment for metering the electricity exported by the RE facility to the CEB grid will be provided.

Note: Project developers are advised to enquire about a concessional loan from banks such as the Development Bank of Mauritius Ltd (DBM) to finance their agrivoltaics projects. Likewise, farmers can explore for possible support from the Small Farmers Welfare Fund.

3. Project developers are free to engage in agricultural activities of their choice with the aim of contributing to national food security. They are strongly advised to seek information and knowledge about agricultural activities² that will provide higher yield for their agrivoltaics projects from public and private entities involved in the Agriculture Sector. **Information on typical crops for agrivoltaics can be obtained from the report on Mauritius Agrivoltaics Study; the report is available for download from <https://sunref.businessmauritius.org/reports/> .**
4. A project developer can opt to join or form part of a cooperative entity that will represent his or her interest in setting up RE systems. The cooperative entity, duly registered, should be officially delegated to represent the project developer. **Submission of an official letter, duly signed by all involved parties, confirming the delegation to the cooperative entity together with the consent of the project developer(s) is mandatory.**
5. The Scheme will operate under the gross metering principle, whereby all energy production, after adjusting for energy losses, & etc., is exported to the CEB grid.
6. For technical, administrative, and accounting purposes, the agrivoltaics project shall be identified by a unique electricity contract account number assigned by the CEB. **For this purpose, the project developer is required to make an official request at a CEB Customer Services Centre for a dedicated electricity connection and metering equipment.**

² Both Public and Private organizations such as Small Farmers Welfare Fund, FAREI and Business Mauritius may provide useful information on agricultural activities in the agrivoltaics field.

7. The testing and commissioning for the grid connection of the RE projects will be conducted in sequential order based on the state of readiness of the RE projects. In line with the rolling-over principle, project developers eligible for the Scheme can submit their applications throughout the year.

ALLOWABLE SIZE OF RE FACILITY FOR THE AGRIVOLTAICS PROJECT

Under this Scheme, an eligible project developer will be allowed to install a renewable energy (RE) facility with a capacity **below 500 kWac per site**.

The final capacity (size) of each RE facility will be determined after the CEB has conducted the network impact assessment (NIA) and/or network survey (NS). Upon the completion of the NIA and/or NS, the eligible project developer will have to implement all the recommendations made by the CEB within the specified deadline(s).

METERING REQUIREMENTS UNDER THE CAV SCHEME

For metering purposes, all RE facilities to be developed under this Scheme shall be equipped with production and import-export meters. The meters will be provided by the CEB, who will maintain total administrative and technical control over the meters and their associated metering equipment. Costs for replacement of meters and metering equipment shall be borne by the project developers.

The location of the meters and metering equipment within the electrical setup of each RE facility will be determined during the mandatory network impact assessment or network survey, whichever is warranted.

On a case-to-case basis, special consideration will be given to ensure the optimal solution for the metering of the RE facility, specifically to uphold best commercial practices and billing requirements.

KEY TERMS & CONDITIONS OF THE CAV SCHEME

The key terms and conditions of the CAV Scheme are: -

1. Every eligible project developer, willing to participate in the CAV Scheme, should fill and submit the relevant application form, together with full details of the intended renewable energy facility of the agrivoltaics project.
2. Upon submission of the duly completed application form, the project developer should pay the applicable non-refundable processing fee (click to view the applicable processing fee) to enable processing of the application. Payment of the processing fee does not guarantee registration in the Scheme.
3. By applying for the Scheme, the project developer automatically grants CEB's personnel and its associates unrestricted access for site inspections of the agrivoltaics premises, including the RE facility.
4. The project developer should declare the full electrical load on the agrivoltaics premises.
5. Except for uncontrollable/unforeseen events, the project developer commits to completing the construction of the RE facility within a period of 12 months as from the date of signing of the Connection Agreement (CA). The deadline may be extended subject to submission of reasonable justification supported by documentary evidence.

6. The project developer must provide a Letter of Commitment (LOC) as evidence of the RE project's implementation within one month after the CEB has issued the Letter of Intent (LOI).
7. The RE facility of the agrivoltaics project shall, at all times, comply with all requirements of the relevant applicable Grid Code (download the Grid Codes), including any subsequent amendments.

Note: For safety and quality reasons, the project developer is strongly advised to seek the expertise of a qualified professional in the field of RE technology prior to filling and submitting the application.

8. The project developer (or its designated representative) shall provide the CEB with free web-link access for downloading the power output of the RE facility.
9. Where necessary, the project developer (or its designated representative) shall provide unrestricted access to the CEB for downloading data series directly from the inverter and/or energy management system of the RE facility. This includes providing a free copy of the required operating software and applications for on-site and/or off-site data downloading.
10. Upon receiving a notice from the CEB, the project developer (or its designated representative) shall give full and free access to CEB personnel and/or its associate(s) to the RE facility.
11. The project developer (or its designated representative) shall pay all relevant charges and costs, including the connection fee, as applicable, for the grid connection of the RE facility of the agrivoltaics project.
12. A RE facility that does not comply with the applicable Grid Code or does not meet all terms and conditions of this Scheme and other regulatory requirements will not be considered for grid interconnection until compliance is achieved. The RE facility will be disconnected from the grid and no remuneration shall be provided.
13. The project developer (or its designated representative) must obtain all necessary authorisations, licenses, permits, etc., prior to the commissioning of the RE facility by the CEB.
14. All prerequisites (requirements, omissions, etc.), outlined in the Condition Precedent of the Connection Agreement, shall be met prior to the commissioning of the RE facility.
15. Throughout the duration of the Connection Agreement, the project developer must provide timely evidence, as and when requested, regarding the status of the agricultural activity of the agrivoltaics project. Termination of the agricultural activity will negatively impact the remuneration for the energy exported from the RE facility.
16. In the event that the agricultural activity in the agrivoltaics project is ceased during the validity period of the agreed Connection Agreement, **the premium tariff for energy export shall be reduced to 50%**. The project owner/developer should inform the CEB of the cessation of the agricultural activity promptly to avoid cancellation of the signed Connection Agreement.

17. For a joint RE facility, the cooperative entity should confirm the shares composition of all the project developers, and their respective consents should be officially documented and submitted. In the event of the cessation of agricultural activity by one project owner/developer, the energy export tariff of the relevant shares of the RE project shall be adjusted downward as deemed necessary and appropriate. The cooperative entity should promptly inform the CEB of any cessation of agricultural activity by a project developer to avoid cancellation of the signed Connection Agreement.
18. Following the network impact assessment or network survey, whichever is warranted, the project developer and associates must agree to any new terms and conditions for the grid connection of the RE facility.
19. The project developer (or the designated representative) shall implement all recommendations from the network impact assessment or network survey, whichever is applicable, within the specified timelines as notified by the CEB.
20. The project developer (or the designated representative) must submit a Certificate of Compliance confirming the RE facility's compliance to the applicable Grid Code, the network impact assessment or network survey recommendations, and the terms and conditions of the Scheme. The Certificate of Compliance shall be certified by an independent qualified technical officer or a registered engineer, whichever is applicable, after the conduct of all technical and non-technical verifications.
21. The project developer (or the designated representative) shall sign the legally binding Connection Agreement for the RE facility.
22. By submitting an application form for the Scheme, the project developer and his representatives give unconditional authorisation to the CEB or its associates, suppliers, contractors, etc., to share the information provided therein. They also agree to be contacted by any of these parties for administrative or non-administrative matters related to the setting up of the agrivoltaics project, including the RE facility.
23. The criteria, amongst others, indicated in the table below will be applied for the selection of projects.

Category	Breeders	Existing Planters	New Young Planters
Allocated capacity	2 MW	9 MW	9 MW
Selection criteria	<ul style="list-style-type: none"> • Registered or recognised by a public authority • Site for agrivoltaic project confirmed 	<ul style="list-style-type: none"> • Registered or recognised by a public authority • Site for agrivoltaic project confirmed • Priority for agrivoltaic project on abandoned lands 	<ul style="list-style-type: none"> • Registered or recognised by a public authority • Age below 35 years; priority for younger applicants • Site for agrivoltaic project confirmed • Priority for agrivoltaic project on abandoned lands

Projects received in excess of the allocated capacity for each category will be placed in a waiting list. In case of low uptake, CEB will reallocate the capacity earmarked for the category to the other categories as would be deemed more

appropriate.

24. Other terms and conditions shall be specified in the relevant Connection Agreement. The key features of the Scheme are inherent part of the Agreement. Non-compliance with the Agreement will entail automatic rejection of the RE project under the Scheme.

APPLYING FOR THE CAV SCHEME AND SIGNING THE CONNECTION AGREEMENT

The process for applying and signing the relevant Connection Agreement in respect of the CAV Scheme is as follows:

1. Eligible project developers wishing to participate in the Scheme should download the relevant Application Form (click to download the Application Form) from the CEB website and fill-in the required information.
2. The duly filled-in Application Form, along with all required documents for the proposed renewable energy projects, should be submitted to a CEB Customer Services Centre starting from **29 July 2024**.
3. Once a project is accepted under the Scheme, the CEB will issue a **Letter of Intent (LOI)** to the concerned qualified project developer.
4. Except for uncontrollable or unforeseen events/situations, the **LOI will remain valid for a period of two months**, during which the project developer must submit the duly filled-in and signed Connection Agreement to the CEB. The standard Connection Agreement will be available for download on the CEB website in due course.
5. Except for uncontrollable or unforeseen events/situations, from the date the relevant Connection Agreement is signed, the project developer shall start the commercial operation of the agrivoltaics activity, which include the RE facility, **within a period of 12 months**; failing which, relevant provisions of the Connection Agreement shall be enforced.

ELIGIBILITY TO APPLY FOR THE CAV SCHEME

The Scheme is opened to all existing and potential project developers in the Agricultural Sector. The potential project developers include breeders, planters, etc. engaged in or planning to undertake agricultural activities with the objective of contributing towards national food security. **They should provide evidence of registration or recognition received from a local public authority.**

The project of a party, who is in litigation with the CEB, will be kept in abeyance until the litigation is effectively settled.

Applications from eligible project developers holding an Agreement under another CEB RE Scheme with the same electricity Contract Account Number will not be considered.

NOTE

- The CEB will start accepting applications as from **29 July 2024. Applications received before this date will not be considered.**
- The applicable processing fee is payable upon submission of the Application Form (click to view the applicable processing fee).
- Processing of the application will start only **after payment of the applicable processing fee.**

BENEFITS OF THE CAV SCHEME

Amongst other benefits, the Scheme offers the following: -

1. Subject to a compulsory network impact assessment (NIA) or network survey (NS), as warranted, interested eligible project developers will participate in the production of clean electricity while engaging in agricultural activities.
2. A project developer can opt to join and become part of a cooperative entity, which will be responsible to promoting his or her interest and undertaking the commercial operation of the RE facility. Under this business model, the project developer can benefit from economies-of-scale in financing, procurement, operation, etc., of the RE project.
3. The project developer will generate revenue from the sale of electricity to the CEB, in addition to revenue generated from the agricultural activity, all on a single plot of land, for a period of 20 years.
4. The RE facilities of the agrivoltaics projects will be supported by the CEB grid to stabilize intermittent power generation; no investment in an energy storage system will be required until further notice.
5. By participating in this Scheme, the project developers will increase the production of renewable energy, thus upholding the country's international commitments to sustainable development.
6. Project developers will contribute to national energy supply security, food security, and environmental, while supporting the development and strengthening of the national Power System.

IMPORTANT ADVICE

- Pursuant to the prevailing Electricity Act and ensuing regulations, every person (individual or entity) is legally required to register with the Utility Regulatory Authority (URA) and thereafter apply for a relevant electricity generation licence when engaging in electricity generation. For more information on this legal obligation, contact the URA. Information in this regard is available at <https://uramauritius.mu/> .
- Given the technicalities and financial implications in the setting up of a renewable energy project, sufficient care should be exerted when soliciting third party support. Contracting the services of an experienced consultant in the field is strongly recommended.

- The RE facility of the agrivoltaics project must be fully compliant with the applicable Grid Code. To properly design the RE facility, seek support from knowledgeable qualified people who can prepare not only the technical part but also undertake the financial assessment of your investment in the RE facility. Maintain regular contact and work closely with the CEB.
- To avoid delays in the implementation of the project, ensure that all documentation, along with the application form, are submitted to the CEB. Ensure that the submission is made as instructed.
- Securing a Connection Agreement for the grid interconnection of the intended RE facility is mandatory. Make sure that it is agreed and signed prior to the setting up of the facility. It is strongly advised that payments for equipment for the RE facility are initiated only after all agreements, licences, and permits, as applicable, have been properly secured.
- Whenever needed, seek the support services of the CEB for useful guidance.
- The RE facility is an investment that will yield benefits. Therefore, it is essential to secure its operation throughout its lifespan to maximise the return on investment. Furthermore, regular maintenance of the facility by a technically qualified person, or directly by the equipment supplier, will also help maximise gains.
- Ensure full compliance at all times with the applicable Grid Code, the Grid Code's ensuing amendments, and the Connection Agreement.
- Modifying the configuration of the RE facility without prior CEB authorisation will result in an automatic disconnection from the CEB network and suspension of the Connection Agreement, thereby terminating all of CEB's obligations under this Agreement.
- **Locate and develop the agrivoltaics facility as close as possible the CEB network (low-voltage or medium-voltage) to avoid higher grid connection costs.** In some cases, an extension of the CEB network, at the project developer's cost, may be required to interconnect the agrivoltaics facility.