

E&U 2021 - 3 - Consultation
Proposed Distributed Generation Resources 3MW
Capacity Increase



**UTILITY REGULATION AND COMPETITION OFFICE
THE CAYMAN ISLANDS**

Launch Date: 9 June 2021

Closing Date for comments: 8 July 2021



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A. Introduction and Objectives

1. The Utility Regulation and Competition Office (the 'Office') is the independent regulator for the electricity, information and communications technology, water, wastewater and fuels sectors in the Cayman Islands. The Office also regulates the use of electromagnetic spectrum and manages the .ky Internet domain.
2. The Office considers that it is in the interests of the electricity sector to implement an additional capacity of 3 Megawatts (MW) of Distributed Generation (DG) to Caymans' transmission and distribution (T&D) system. This will enable continuance of existing Customer-owned Renewable Energy (CORE) and Distributed Energy Resource (DER) programmes until the battery energy storage system (BESS) project is activated. Renewable energy systems providers will therefore be able to continue the sale and installation of these systems to consumers.
3. Energy security is very important for the Cayman Islands, and It is important to ensure that the future development of solar is consistent with the need to provide reliable and affordable electricity. The capacity increase will relate to the distributed generation programmes that are approved by the Office.
4. This consultation paper outlines the Office's proposed determination in relation to the 3 MW capacity increase to the distributed generation programmes to support consumers and the solar industry. The Office holds the position that its proposed determination is of public significance, and has decided to launch a public consultation, especially in light of its primary statutory function to protect the short- and long-term interests of consumers as well as promoting appropriate and effective and fair competition.
5. The main objective of this proposed determination is to increase the installed renewable energy capacity beyond the 17 MW limit which was agreed between the former Electricity Regulatory Authority (the "ERA") and CUC by adding 3 MW of distributed generation to the electricity grid.
6. The proposed determination addresses the following technical criteria for the implementation of this additional capacity:
 - a. As with previous Distributed Energy Resources (DER) programme allocations, individual system size would be limited to 250 kW AC output rating to improve locational diversity (i.e., reduce cloud impacts) and avoid needing a System Impact Study.

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- b. Only installers who have verified that all their previous installations meet their contracted inverter settings and ride-through criteria will be authorised to install new systems in the new 3MW quota.
 - c. No installations will be approved where a technical barrier exists in the T&D system.
 - d. The previously established system sizes for the Customer-Owned Renewable Energy (CORE) systems will remain.
7. In summary, operating the power system and market with increasing penetration of DG has implications across the electricity supply chain. To date, DG participation in Caymans' electricity market has been mostly comprised of the rapid growth of distributed PV (DPV) systems installed on residential and commercial rooftops since 2010. As outlined in the 2017 Infusion Study and Renewable Energy Capacity Study (IFRECS) continued growth in DPV generation will begin to pose technical challenges to managing both distribution network and bulk power system operation. The performance of individual DG devices in the aggregate impacts CUCs' ability to maintain and operate the power system within its technical limits and to withstand contingency events. Expansion of solar could have positive or negative impacts on the operation of the electricity network at the local level which needs to be carefully managed. The Battery Energy Storage System when commissioned will assist in management of the electricity grid and enhance flexibility in meeting the needs of customers and the network. The Office and CUC will review the 3 MW quota if 2 MW of this additional capacity is subscribed prior to the commissioning of the 20MW BESS.
8. The Office strongly encourages respondents to thoroughly read the consultation paper prior to submitting comments, or to answering the consultation questions in the next section, as this summary is not intended to be exhaustive.

B. Legal Framework

9. The Office is guided by its statutory remit in developing the Regulatory Accounting Rules, notably the provisions which follow.
10. Pursuant to section 6(1) of the Utility Regulation and Competition Act (2021 Revision) (the "URC Act"), the Utilities Regulation and Competition Office (the "Office/OfReg") regulates prescribed utility services in the Cayman Islands.

11. **Section 6(1)** of the URC Act provides, inter alia, that the principal functions of the Office in the markets and sectors for which it has responsibility, are:

- a) "...;
- b) to promote appropriate effective and fair competition;
- c) to protect the short- and long-term interests of consumers in relation to utility services and in so doing
 - i. "...;
 - ii. ensure that utility services are satisfactory and efficient and that charges imposed in respect of utility services are reasonable and reflect efficient costs of providing the services;"
- d) to promote innovation and facilitate economic and national development."

12. In addition, specific to the electricity sector, section 9(2) of the Electricity Sector Regulation Act, (2019 Revision) ("ESR Act") states inter alia, that without prejudice to subsection (1), the principal functions of the Office shall include:

- a) "...;
- b) ...;
- c) to monitor and regulate the rate, price, terms and conditions of electricity generated by Generators and supplied to T&D licensees for reward;
- d) ...;
- e) ...;
- f) to solicit additional generation capacity and conduct the generation solicitation process;
- g) ...; – n)...
- o) to monitor and regulate all licensees in a manner that –
 - (i) promotes sustainable competitive practices;
 - (ii) provides an opportunity for a fair and reasonable return to licensees; and
 - (iii) protects the economic interests and well-being of consumers by keeping tariffs and rate structures as low as can reasonably be achieved;
- (p)...
- (q)..."

13. **Section 9(5)(f)** of the ESR Act provides that another principal function of the Office is that it shall have regard to "*whether licensees have promoted or will promote the development and use of renewable or alternative forms of energy by licensees and consumers.*"

14. **Section 9(5)(i)** of the same Act provides that the Office shall have regard to *“the need to permit and promote the use of renewable or alternative forms of energy by consumers so as to reduce the load on any T&D system.”*
15. **Section 6(2)(d)** of the URC Act states that the Office, in performing its functions and exercising its powers under the URC Act or any other legislation, may *“make administrative determinations, decisions, orders and regulations”*.
16. **Section 7(1)** of the URC Act requires the Office, before issuing an administrative determination which in the reasonable opinion of the Office is of public significance, *“... to allow persons with sufficient interest or who are likely to be affected a reasonable opportunity to comment on the draft administrative determination.”*

C. Proposed Determination

17. The method proposed to meet the renewable energy (RE) generation target of Caymans’ National Energy Policy (NEP) is via a combination of 140 megawatts (MW) utility-scale renewables, 70 MW of distributed energy resources, 44 MW of utility-scale wind power, 5 MW of waste-to-energy (WTE) and 1 MW of landfill gas in addition to using natural gas as a transition fuel. Currently there are maximum capacities of 9.5 MW of Customer-Owned Renewable Energy (CORE), 2.5 MW of the DER Programme and 5 MW of utility-scale solar photovoltaic (PV) installations respectively, on the electricity grid. These PV systems contribute towards achieving the NEP target and towards socio-economic and environmentally sustainable growth, and also stimulate the renewable industry in the Cayman Islands.
18. The past several years have seen a great increase in the number of private rooftop PV systems installed on residential and commercial/industrial premises at the cost of the owners. These installations have been given favourable tariffs to incentivise the uptake of these systems. And whilst there is demand for additional capacity to facilitate more growth of these distributed generation systems, the Office is also mindful of the overarching objective to ensure environmentally-friendly, secure, and sustainable supplies of competitively priced energy to all consumers. The sustainable development of the Cayman Islands RE resources is critical for the achievement of this objective.
19. DER is the name given to renewable energy units or systems that are commonly located at houses or businesses to provide them with power.

Another name for DER is “behind the meter” because the electricity is generated or managed ‘behind’ the electricity meter in the home or business.

20. Common examples of DER include rooftop solar PV units, battery storage, thermal energy storage, electric vehicles and chargers, smart meters, and home energy management technologies.
21. The CORE Programme which was piloted in 2009 by CUC and the former ERA was designed to promote and incentivise the adoption of RE. The capacity allocated to this popular Programme has been fully subscribed and there is assiduous demand for more capacity.
22. In January 2018, the Office established the DER Programme with an initial allocation of 3 MW of capacity for customer participation in renewables. The capacity allocated to this programme is also approaching full subscription.
23. Accordingly, the Office is now proposing a means of accommodating the additional demand for capacity emanating from these two programmes whilst simultaneously sustaining the local RE industry and stimulating Caymans’ economy.
24. An independent Infusion Study and Renewable Energy (RE) Capacity Study (IFRECS), which was commissioned by CUC and conducted in 2017, concluded that 15 MW of RE capacity could be added to CUC’s Transmission & Distribution (T&D) system based on its engines’ historical economic dispatch levels of 75% maximum continuous rating (MCR), with no significant impact to fuel costs. The former ERA, after obtaining the opinion and analysis of an independent consultant, accepted the study. Following this, the ERA and CUC agreed to a 17 MW RE capacity limit without a need for additional investment in infrastructure.
25. There is reduced fuel efficiency at this 17 MW capacity for a few hours per year, but this does not significantly impact consumer bills. However, the IFRECS indicates that the fuel efficiency is further reduced as RE capacity approaches a 29 MW limit. This inefficiency directly translates into increased fuel pass-through surcharges to consumers and potentially an increase in noxious emissions from the diesel engines being used to generate electricity.
26. While the primary objective of the proposed 3 MW DG capacity increase is to provide continuity of the previously established RE programmes that allow customers to generate their own RE and receive a fair and efficient price for doing so, there are other energy policy objectives such as: achievement of the aspirational goal of the 2015 Paris Climate Change Agreement of 4.8 tCO₂e of



GHG emissions per capita by 2030, that must be met, while simultaneously delivering value for money for the consumer.

27. In proposing this capacity increase, the Office is mindful that the IFRECS recommended the conductance of further economic, environmental, and technological studies to assess and determine the full cost burden on the Licensee and all electricity customers.

28. Therefore, the Office is proposing that the DG Programmes be increased by 3 MW in the interim. The Office is presently considering the conductance of a new infusion study, and is hopeful that the study can commence in the 4th quarter of this calendar year. The Office intends to conduct an economic and environmental impact study in the following year.

D. Consultation Questions

29. Interested parties are invited to comment on the Proposed Distributed Generation Resources 3 MW Capacity Increase for the electricity sector.

30. In particular, the Office welcomes responses in relation to the questions outlined below:

Question 1: The DG 3 MW capacity increase. Do the respondents agree with increasing the DG programmes capacity by this amount? If not, what alternative would you propose and why?

Question 2: Do you have any comments on the limitation to only installers who have verified their previous contracted inverter settings and ride-through criteria?

Question 3: Do respondents agree with the proposal to offer this additional capacity at existing rates or at unsubsidised rates?

Question 4: Do you have any concerns about the direct and any other indirect or unintended impacts (beneficially or otherwise) of this proposed capacity increase?

Question 5: Should the T&D system RE capacity be increased before the conductance of independent economic, environmental, and technical studies?

Question 6: Are there any other matters that the person or group submitting would like to raise for the Office's consideration?



E. How to Respond to This Consultation

31. This consultation is conducted in accordance with the Consultation Procedure Guidelines determined by the Office and found on the Offices website.¹
32. The Office considers that because the Proposed Distributed Generation 3 MW Capacity Increase is published as part of this consultation, this consultation will be conducted as a single-phase consultation over a period of thirty (30) days. Where, upon review of the responses to the consultation, it becomes clear that a second phase of consultation is required, a further notice will be issued accordingly. As noted above, section 7(1) of the URC Act states that prior to issuing an administrative determination of public significance, the Office shall “issue the proposed determination in the form of a draft administrative determination.” The Office considers that Part C of this Consultation Paper outlines the Office’s proposed determination for that purpose.
33. All submissions on this consultation should be made in writing and must be received by the Office by 5 p.m. on 8 July 2021 at the latest.
34. The Office will post any comments received within the stated deadline on its website by 5 p.m. on 23 July 2021.
35. Submissions may be filed as follows:

By e-mail to:
consultations@ofreg.ky

Or by post to:
Utility Regulation and Competition Office
P.O. Box 10189
Grand Cayman KY1- 1102
CAYMAN ISLANDS

Or by courier to:
Utility Regulation and Competition Office
3rd Floor, Alissta Towers
85 North Sound Rd.
Grand Cayman
CAYMAN ISLANDS

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<http://www.ofreg.ky/upimages/commonfiles/1507893545OF20171DeterminationandConsultationProcedureGuidelines.pdf>

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36. If a respondent chooses to file any information in confidence with OfReg, it should, at the time of making its filing, also file redacted versions for the public record along with the reasons for each confidentiality claim and the other requirements for confidentiality claims as specified in section 107 of the URC Act.
 37. If a respondent chooses to apply to the Office for an extension of the time to file comments or reply comment, it must do so no less than four (4) days before the day of the existing deadline, include a complete and detailed justification for the request, and copy all other respondents (if known) at the same time as it applies to the Office. The other respondents (if applicable) may comment on the application for an extension within two (2) days of submission of the application, copying all other respondents at the same time. The Office reserves the right not to accept applications for extensions that do not satisfy these requirements. However, at no time will the Office accept an application for an extension submitted after the deadline in question has passed.
 38. The Office expects to issue a Final Determination regarding the Proposed Distributed Generation 3 MW Capacity Increase before the end of the third (3rd) quarter, 2021.