

E&U 2021 - 3 – Final Determination
Proposed Distributed Generation Resources 3 MW
Capacity Increase



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

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Contents

A. Introduction.....	3
B. Legal Framework	4
C. E&U 2021 – 3 - Consultation	6
D. Comments Received and Office Responses	8
D.1 CUC.....	8
D.2 CREA.....	15
D.3 GREENTECH.....	21
E. Final Determination.....	24

A. Introduction

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 holds the position that it is in the interests of all the stakeholders in the electricity sector to implement an additional capacity of 3 Megawatts (MW) of Distributed Generation (DG) to the Grand Cayman transmission and distribution (T&D) system. This will enable continuance of the offering of existing Customer Owned Renewable Energy (CORE) and Distributed Energy Resource (DER) programmes at least until the battery energy storage system (BESS) project is commissioned. Consumers will contract with CUC as the T&D Administrator for DG system connectivity. Renewable energy (RE) 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 DG programmes that are approved by the Office.
4. This determination paper outlines the Office's final decision in relation to the 3 MW capacity increase to the DG programmes to support consumers and the solar industry. The Office holds the position that its final determination is in line with achieving its primary statutory function to protect the short- and long-term interests of consumers as well as promoting appropriate and effective and fair competition and to promote the objectives of the National Energy Policy (NEP).
5. The Office's final decision is to increase the installed RE 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 final determination addresses the following technical criteria for the implementation of this additional capacity:
 - a. As with previous DER programme allocations, the individual RE system size would be limited to 250 kW AC output rating to improve locational diversity (i.e., reduce cloud impacts).

- b. Customers who seek to participate in the new 3MW quota and thus be allowed to connect to the T&D system can expect that CUC may only be required to allow systems to connect to the T&D system where the customer's installer has a record of proper workmanship and has facilitated for their earlier customers the contracted inverter settings and ride-through criteria agreed to in the DGR Agreement.
 - c. No installations will be approved where a technical barrier exists in the T&D system.
 - d. The previously established system sizes for the CORE systems will remain.
7. In summary, operating the electrical power system and market with increasing penetration of DG has implications across the electricity supply chain. To date, DG participation in Grand Cayman's electricity market has been mostly comprised of the rapid growth of distributed photovoltaics (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 the 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 BESS when commissioned, will assist in the management of the electricity grid and enhance flexibility in meeting the needs of customers and the network. The Office will review the 3 MW quota if 2 MW of this additional capacity is subscribed prior to the commissioning of the 20 MW BESS.

B. Legal Framework

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



10. 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.”
11. 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)...”

12. 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.” Consumer means “a person who is a customer of, and is supplied with electricity by, a T&D licensee”.
13. 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.”
14. 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”. Section 7 requires the Office to (1) “(a) issue the proposed determination in the form of a draft determination” and invite comments and (c) “give due consideration to those comments with a view to determining what administrative determination (if any) should be issued”.

C. E&U 2021 – 3 - Consultation

15. The Office conducted its public consultation “E&U 2021 – 3 – Consultation on the proposed Distributed Generation Resources 3 MW Capacity Increase” from 9 June 2021 to 8 July 2021.
16. In its E&U 2021 -3 – Consultation, the Office proposed that the method in order to meet the RE target of the Cayman Islands’ NEP is via a combination of 140 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 to energy, in addition to using natural gas as a transitional fuel. Currently, there are allocated capacities of 9.5 MW of CORE, 2.5 MW of the DER Programme and 5 MW of utility-scale solar photovoltaic (PV) installations respectively, on the Grand Cayman grid. These PV systems contribute towards the NEP target, promote socio-economic and environmentally sustainable growth, and stimulate the renewable industry in the Cayman Islands.
17. The past several years have seen a great increase in the number of rooftop PV electricity generating 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. 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.
18. 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 on the owner’s side of the electricity meter in the home or business.
 19. Common examples of DER include rooftop solar PV units, battery storage, thermal energy storage, smart meters, and home energy management technologies.
 20. 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.
 21. 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.
 22. Accordingly, the Office has proposed 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.
 23. The independent 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 approximately 80% maximum continuous rating (MCR), with no significant impact to fuel costs (and thus no increase of the fuels cost passed on to consumers). 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 intermittent RE capacity limit without a need for additional investment in infrastructure.
 24. 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 the 29 MW limit. This inefficiency directly translates into increased fuel pass-through surcharges to consumers and potentially an

- increase in noxious exhaust fumes being emitted from the diesel engines being used to generate electricity, which is not in alignment with the NEP.
25. 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.
 26. 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 if there was a significant change in the circumstances.
 27. It appears to the Office that significant changes are in process. Therefore, the Office is proposing that the DG Programmes be increased by 3 MW in the interim. The Office is presently discussing conductance of a new infusion study, and it is hopeful that 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.
 28. In its consultation, the Office asked six (6) questions and received submissions from three respondents as of the consultation closure date.

D. Comments Received and Office Responses

29. In response to its public consultation, the Office received submissions from the Caribbean Utilities Company (“CUC”), the Cayman Renewable Energy Association (“CREA”) and Greentech Solar (“Greentech”). Please see below the submissions and the Office’s responses.

D.1 CUC

- A. 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?
30. “In 2015, CUC’s [IFRECS] Renewable Infusion Study (“Infusion Study”) indicated that up to 29 MW of intermittent renewable energy could be

added to the grid without significant operational difficulties; however, it was also noted that once renewable capacity reached 11.5 MW, fuel efficiency of the diesel engines providing baseload and reserve capacity would be impacted negatively.

31. CUC initially recommended a Renewable Energy capacity limit of 15 MW, which was later varied in discussions with the Electricity Regulatory Authority to 17 MW. At this level the fuel efficiency is impacted, however, only for a few hours per year. As renewable capacity gets closer to the 29 MW limit, the greater the fuel efficiency impact will be, increasing costs to consumers.
32. As OfReg is aware, CUC is also in the process of finalizing agreements with the selected vendor for the 20 MW Battery Energy Storage System (“BESS”) project. This project would allow for intermittent renewable energy capacity to be increased to the 29 MW limit discussed in the infusion study without impacting efficiency. However, given the current market conditions, there is a lithium battery shortage worldwide and this project could take up to 2 years to finalize.
33. In the interim, we agree with increasing the available capacity of the DER Programme by 3 MW.
34. While this additional capacity will likely have some negative impact on fuel efficiency, this impact is likely to be less than the negative impact of not having distributed renewable generation (“DRG”) programmes available for the period of time until the battery storage project is completed. Based on previous applications for DRG, CUC expects there will be a lag for most new, approved applications for allocated capacity to be installed and commissioned from the date of application. This would delay the onset of the negative impact to consumers caused by decreased fuel efficiency and, in CUC’s opinion, thereby be outweighed in this instance by the benefits of continuity of market opportunity in the DRG sector. If the considerations in our further responses are taken into account (e.g., inverter settings requirements), CUC is of the opinion that this additional DRG capacity would not have a negative impact on system reliability.”

Office Response

35. The Office notes CUC’s agreement with increasing the available capacity by 3MW. The Office also notes CUC’s opinion that this additional DRG capacity would not have a negative impact on system reliability. The Office is of the view however that any impacts on system reliability should be closely

monitored should uptake near the 3MW of capacity prior to the BESS coming online.

B. 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?

36. “CUC believes that the additional 3 MW of DRG capacity could be issued if certain considerations are put in place. One of these considerations being that only installers who have verified all of their previous installations would be authorised to apply for capacity on behalf of their customers from the new 3 MW quota.
37. In accordance with the Infusion Study, CUC needs to ensure that all of the existing systems are verified to meet their contracted inverter settings and ride through standards. Failure to meet these standards will negatively impact the system reliability.
38. Over the years, CUC has encountered numerous instances where the performance of Consumer- Owned Renewable Energy (“CORE”) / DER Programme systems during grid disturbance events have indicated that an increasingly larger installed capacity of DRG have inverter ride-through settings that do not comply with the CORE / DER Programme agreements. As a result, CUC was required to undertake notice, firstly to the renewable installers, and subsequently to all CORE / DER Programme customers, of the need to prove and validate existing installation inverter settings as being compliant with the applicable standard to agreement requirements. This validation exercise has also provided the opportunity for a number of customer systems that were not compliant in the installer validation submission to be brought up to standard prior to the submission deadline of July 31, 2021. As noted in the communications issued to the installers and to CORE / DER Programme customers, the correct application of these inverter ride-through settings will increase general system stability in grid disturbance events without negative impacts on reliability or cost to mitigate said impacts (via increased spinning reserve, for example).
39. Given that those existing systems that do not meet required settings are causing actual harm to the costs and reliability outcomes to all consumers, it would be, in CUC’s opinion, inappropriate for those installers who are

responsible for commissioning said systems to access the additional capacity allocation until that their previous work is made compliant.”

Office Response

40. The Office notes CUC’s position and understands the validity of the proposed to ensure compliance with acceptable practices as provided for in the T&D Code and DGR Agreement.
41. The Office recognises the importance of protecting the T&D system as it is critical national infrastructure (CNI). Those installers who cause damage to the T&D system, whether through negligent or unsatisfactory workmanship, may not be made fully accountable. Those installers who have failed to honour contractual obligations to former customers to meet the contracted inverter settings and ride-through criteria also may avoid accountability. As a consequence, the T&D system may suffer and all customers may be negatively impacted. Therefore, it is necessary and reasonable that measures be established to ensure compliance by systems which are connected to the T&D grid. The measures set by CUC must be fair and reasonable to all concerned.

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

42. “CUC is of the view that the additional capacity should be offered at unsubsidised rates. CUC’s customers value a high level of service reliability at the lowest rates possible. CUC does not support its non-participating customers subsidising customer-owned DRG systems when there are ways that both consumers and CUC can have viable systems in a non-subsidised manner. Recent subscription uptake across all rate classes within the DER Programme would indicate there is sufficient market demand to support an unsubsidised rate program for ongoing DRG capacity, which will guard against increasing costs to all consumers for the benefit of only those who are able to access these programmes.
43. Furthermore, the extremely rapid subscription to the CORE Programme (at the lowered rates resulting from the Renewable Energy Capacity Reallocation and Tariff Setting (“RECRTS”) consultation) would indicate that, contrary to previous submissions made in that consultation by some solar installers, there was excess demand by consumers for the lower rates. Given the entirety of the allocation from RECRTS (i.e., 500 kW) was fully subscribed in less than 24 hours, it is CUC’s opinion that the further reduction of CORE rates to an unsubsidised level would not have a

deleterious impact on the ability of solar installers to generate sales for any available programme capacity.”

Office Response

44. The Office notes CUC’s response and will take the needs of all stakeholders into consideration in reviewing and designing rates of future tranches of DRG capacity.

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?

45. “CUC has reviewed the likely impact of the additional capacity increase on system reliability and is of the position that, provided inverter settings are correctly configured, the challenges to system operations presented by the additional intermittent generation can be met without undue issues until such time that the 20 MW BESS is commissioned. As the increased spinning reserve necessary to do so will lead to decreased thermal generation fuel efficiency and increased consumer costs. CUC recommends that allocation be made to unsubsidised DRG programmes, given the noted additional costs as a consequence to the allocation should be considered as part of the true rate associated with the allocation from the perspective of all consumers.
46. If, on the basis of the above, the direct and indirect costs and impacts are minimized, CUC has no further concerns in relation to the proposal to increase DRG programme capacity by 3 MW.
47. Regarding the proposed capacity increase, it is noted § 23 does not state how capacity might be allocated between the CORE and DER Programmes. As stated in our response to Question 3, CUC’s preference is that capacity be allocated to DRG programmes at unsubsidized rates.
48. With consideration to “behind the meter” technologies listed in § 20, CUC believes the billing structure of the DER Programme provides greater opportunity for the implementation of customer-owned “behind the meter” technologies, notably small-scale BESS, which provides additional benefits to the customer-owner, CUC and its entire customer base and the NEP. The additional benefits from onsite battery storage for the customer-owner (e.g., emergency battery backup power, peak demand mitigation to lower the site’s monthly electricity bill and an additional potential revenue stream for demand side management participation) and

the entire customer base are reasons for OfReg to consider a higher DER Programme capacity allocation if increased.

49. While we appreciate the urgency presented by OfReg for customer-owned rooftop solar, it is worth noting the installed capacity of DRG is well ahead of the installed capacity of utility-scale RE in the context of achieving NEP targets in alignment with IRP recommended actions for RE expansion. Exhibit 3 in the IRP references a target in 2021 of 30 MW of utility-scale solar and 15 MW of DRG, a ratio of 2:1 in favor of utility-scale (as would be expected to achieve downward pressure on customer pricing). While it is encouraging that DRG is currently at target, it is discouraging that similar urgency is not apparent for utility-scale RE. CUC would note that it has submitted a proposed solar and storage project to OfReg which would make substantial progress towards the IRP-targeted utility-scale RE capacity. Furthermore, the project proposed incorporates fully competitive tendering subject to OfReg’s scrutiny to ensure cost competitive and locally beneficial outcomes.”

Office Response

50. The Office notes CUC’s response and will take the needs of all stakeholders into consideration in reviewing and designing rates of future tranches of DRG capacity. The Office confirms receipt of CUC’s utility scale solar proposal which was reviewed and not approved in keeping with the obligations to ensure fair anti-competitive solicitation of generation capacity.
51. The Office is fully cognisant of the role utility scale RE will play in lowering the average cost of solar electricity and the proportion of capacity to be allocated to utility scale as well as to distributed scale programmes. The Office is also aware of the urgency to conduct competitive solicitations for utility scale solar and will be guided by the NEP, IRP, the licences, as well as the relevant laws in designing and conducting competitive solicitation for solar and storage resources shortly.

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

52. “CUC is of the opinion the RE capacity should generally not be increased before the conductance of independent economic, environmental, and technical studies. CUC recognises in this instance that there are exigent circumstances and is therefore supportive of this increased capacity consideration; however, CUC does not support creating precedent from this

consultation and would recommend the determination be sufficiently narrowed in such regard.”

Office Response

53. The Office notes CUC’s response and also recognises that there are exigent circumstances favoring the capacity increase without first prudently conducting independent economic, environmental, and technical studies. The Office also notes CUC’s view of not supporting the creation of precedent from this consultation. The Office will be guided by the forthcoming infusion studies and IRP re-iterations in conducting future RE capacity increases.

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

54. “If the approval of the additional 3 MW capacity is granted, CUC would reserve comment in relation to reviewing capacities and quotas upon the Office’s draft determination as to how that capacity is allocated to DRG programmes. CUC recommends in any instance that a review be undertaken if 2 MW has been subscribed before the 20 MW Spinning Reserve Battery project is commissioned. CUC would also be encouraged by a consultation outcome that prioritized promoting the inclusion of other “behind the meter” technologies in this new capacity allocation that further the goals of the NEP and benefit the customer-owner and CUC’s grid – e.g., solar plus storage and solar EV charging.

55. Noting that § 20 lists new DER technologies that provide additional benefits to customer-owners and CUC’s grid while furthering NEP goals and objectives, it is anticipated that some of these new technologies such as small-scale BESS and EV chargers will offer new revenue streams for customer-owners in the near future. For instance, CUC is rolling out a residential pilot project for small-scale BESS which aims to appropriately value and capture the unique set of benefits provided to customer-owners and to CUC as the grid operator through demand side management. Customer-owners will be able to opt into a demand side management programme and be compensated to help CUC regulate frequency and defer network and peak capacity investment to maintain high levels of service reliability while promoting greater renewable energy infusion, at the lowest possible cost to CUC’s customers.”

Office Response

56. The Office notes CUC's response and will monitor and review capacity additions that poses a threat to grid stability/reliability prior to the commissioning of the BESS. The Office also notes CUC's comments on new DER technologies and is open to promoting/supporting innovation in this regard.

D.2 CREA

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?

57. "Yes, the CREA 100% supports the increasing of the DG programmes with 3MWs of capacity. Specifically, this 3MW should be allocated to the CORE program until such time as OfReg fully explores the reality of the DER program uptake and how few members of the customer base can utilize this program economically.
58. The 3MWs of capacity has long been needed since CREA first advised OfReg of this in 2018 proactively, the lack of capacity has significantly damaged the industry, caused financial and job losses and consumer outage. OfReg needs to ensure that there is sufficient capacity for consumers to have choice in energy, as required by law, via the consumer owned renewable energy program until such time as the CUC grid battery comes online and the 12MWs and new consumer distributed generation programs."

Office Response

59. The Office notes Mr. Whittaker's response on behalf of CREA. The Office must however, take the needs of all consumers into consideration in reviewing and designing rates of future tranches of DRG capacity. The Office must also ensure that more choices are available to consumers both equitably and economically.

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?

60. "We do not object to this if those consumers are responsible for doing so under their CORE agreements, noting some older installations cannot meet this requirement. OfReg would be prudent to extend the deadline for compliance on this matter as well given that some customers require physical hardware in order to upgrade these systems to the new HECO

settings and those hardware devices, like much of the global supply chain, are delayed in being able to reach the island.”

Office Response

61. The Office notes CREA’s position, noting it is intended to ensure compliance with acceptable practices as provided for in the T&D Code and DGR Agreement to ensure the reliable, stable and efficient operation of the electrical system.

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

62. “CREA objects to OfReg proposition of “unsubsidized” rates and the rates should be no lower than the existing rates. Firstly, OfReg has no idea what the subsidy actually is since they have never done a value of solar study (VOSS) despite being asked to do so by CREA for more than half a decade now.

63. Thanks to CREA, the OfReg SPAC and the EPC the VOSS is finally being done and the rates should not be lowered under any circumstances until that study is completed. To do so would be yet again grossly irresponsible on OfReg’s part as it has become clear to all (except OfReg and CUC) that OfReg operates from an uninformed position when it comes to setting rates, understanding the true cost of solar installations locally and the appropriate global ROI for consumers who invest in renewable energy.”

Office Response

64. The Office notes CREA’s response. The needs of the entire consumer base must be considered in making informed rate decisions.

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?

65. “No. CREA has already shown OfReg that the economic impacts (Jobs, direct investment, efficient land use and environment, distributed grid benefits, etc.) to the Cayman Islands from consumer renewable energy (rooftop solar) far outweigh the cost of the subsidy. OfReg’s position is that this is unverified data but despite CREA’s willingness to cooperate to verify this data OfReg has refused to do so, choosing instead to just keep relying on the ‘unverified’ claim as an excuse for continuing the false notion that rooftop solar is hurting consumers and the country.

66. There are no known net negative impacts to increasing the CORE capacity to 3MWs and if there is OfReg should provide verifiable proof and data (not opinions) that this is the case. Added CORE capacity will provide net benefits to the Cayman Islands and the VOSS will also prove this to be the case.”

Office Response

67. The Office notes CREA’s response. The Office will rely on the independent and authenticated results of the VOSS which will give consideration to the benefits as well as costs associated with solar PV for rate making purposes, going forward. The comprehensive value of solar study will independently assesses and determine the full value of solar PV to society at large based on a holistic set of costs and benefits, in addition to the impacts to utilities and ratepayers.
68. Over-subsidised CORE rates are unsustainable and are not in consumers’ best interests and OfReg as regulator must balance those interests in its rate design, while promoting the goals of the NEP. The results of the VOSS will be taken into account in reviewing and designing rates of future tranches of DRG capacity. The Office must also ensure that more choices are available to consumers both equitably and economically.

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

69. “Yes, we should add capacity now as there is no grid stability risk and OfReg has a legal responsibility to ensure grid capacity for consumers to adopt renewable energy, (which they have not done for more than 1 year) and thus have been breaking the law, injecting mass uncertainty and instability in the local energy market and violating their own ESR as a result. The fact is a technical study was already done, the 2017 CUC Infusion Study, approved by OfReg, showed that 29MWs was possible to add to the grid without there being a problem with grid stability; counter to the historical public claims of OfReg that anything beyond 17MWs would make the grid unstable. Indeed, OfReg and CUC have stated time and again publicly that 17MWs is the limit for renewable energy on the current grid, beyond which the grid would become unstable. Yet OfReg has never provided any data or analysis to back this claim up despite being asked to do so for several years now including as recently as 2021. The fact that more emissions and more fuel may be burned as a result of meeting that limit until the CUC battery is online is a) the fault of OfReg in not ensuring the grid was upgraded sooner and thus ensuring capacity continues as they are legally required to do and b) there is no analysis OfReg has provided to show what is the incremental cost of running the gensets at increased limits to ensure more capacity and whether doing so still results in net benefit to the country. As such OfReg has a responsibility to ensure that



capacity is available and must do so given there is no risk to grid instability with an additional 3MWs of capacity.”

Office Response

70. The Office notes CREA’s response of not seeing the need to conduct additional studies prior to adding this 3MW of RE capacity. OfReg’s decisions are guided by the relevant sections of the ESR Act and frameworks related to the energy sector. The Office is not in violation of any Laws, has protected, and will continue to protect the interests of consumers in fulfilling the goals of the NEP.

71. The Office places on record that the allocation of distributed generation capacity is on track and ahead of the IRP projections and accomplishments of the NEP goals. Emphasis is also being placed by the Office to accelerate utility scale solar PV penetration towards meeting the NEP Goals.

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

72. “ DER was presented to OfReg and the CI Government recently (June 2021) showing that DER is only economically viable to less than 1% of the Cayman consumer base, even with the recent revisions. Despite the math proving the opposite, OfReg argues that “uptake” is somehow evidence of DER’s success and viability; but just like recent CORE uptake OfReg doesn’t fully grasp what happens in the marketplace, so they believe that rates they set and programs they implement like DER must be successful and proper because there is uptake. What they don’t grasp is that uptake also happens for reasons outside economic viability and has unintended consequences.

73. For example OfReg touts more than 50 DER customers, however a lot of these customers are developers who had no choice (because CORE had no capacity through continued mismanagement of capacity and artificially manipulating demand as a result), so the developer does not care what the rate or ROI is for the consumer, they simply have a legal obligation to add solar to the units they sell and as long as there is a way to meet that obligation they will always take it regardless of rates or terms. The ramifications are then purely a problem for the consumer who bought the unit not the developer who initiated the “uptake” of the capacity.



74. What OfReg is creating here unwittingly is a situation where consumers are going to be stuck with DER solar systems that INCREASE their costs above and beyond what their non-solar/non-DER neighbors pay each month for energy. They will in effect LOSE money by having solar on their homes. The consumer won't realize this until after they move into their homes and start living there.
75. OfReg will then hear the massive public outrage from these consumers as this reality starts to set in and people will yet again rightfully call out OfReg for incompetence in protecting consumers.
76. CREA will point out to the public that DER realities have been explained to OfReg ad-nauseum since 2018, but OfReg continue to public represent this program falsely as viable to Cayman's consumers. There are other adverse realities and ramifications of DER that OfReg simply is not addressing, especially (i.e.- the way OfReg have been manipulating and inflating demand through their stop and start regulatory actions creating extreme scarcity and then relying on their own artificially created demand as evidence of how "oversubscribed" and "over demanded" these programs are – a completely self- serving argument) but this is just one example.
77. DER should get its next allocation when the 12MWs is available and OfReg should continue to reassure the few large commercial customers that want these systems that capacity is coming in 2022 and thus it is safe for them to still make those corporate investment decisions today; particularly for new constructions. However, the 3MW should be allocated to CORE as Cayman's ONLY viable renewable energy program for over 99% of the consumer base; until new programs are added.
78. CORE Commercial – It is imperative that OfReg ensure that there are Feed in Tariff opportunities beyond small residential systems as these can be set down at lower rates than residential, thus with lower potential subsidies, and legally complies with ensuring that all consumers have choice in energy and capacity is ensured for them as well.



79. The vast majority of commercial consumers in Cayman have had no viable choice for renewable energy ever since OfReg cancelled the CORE commercial program years ago. This is also wasting valuable (economically and environmentally) massive rooftops in Cayman by only having CORE limited to small 10KW systems while DER still not being viable to most consumers; which includes most commercial consumers as well.
80. As with DER, OfReg should pre-allocate some of that 12MWs of capacity coming with the adoption of the CUC battery so that businesses can make financial decisions in regard to renewable energy adoption. The fact that these systems take 6-12 months to deploy means that the timing of the capacity is minimal risk of having completed systems not connected for any significant period of time.
81. Unless OfReg is NOT sticking to what they have said publicly time and again about the CUC battery coming online in 2022, the benefits of doing this vastly outweigh the risk and OfReg is in compliance with ensuring all consumers have capacity/access/choice in energy.
82. OfReg's prior comments about this "pre-allocation" not being appropriate makes absolutely no logical sense if the consumer is fully aware of the situation (via their CORE agreement) and still agrees to move forward on that basis.
83. Already in Cayman commercial businesses have moved forward with deploying commercial DER systems on the basis that OfReg provided a letter advising capacity was coming online in 2022 with the CUC battery; the same exact principle we are advocating here but some within OfReg are saying is inappropriate to do for potential CORE customers; which again makes no logical sense when consumers are making fully informed decisions, just as some are now making with DER systems even though no capacity currently exists."

Office Response

The Office notes CREA's response and acknowledges that these points have received the Office's attention under the RECRTS consultation.

OfReg considers and incorporates all stakeholders in its decisions to inform fair rates and DG programmes. The Office will be guided by the forthcoming infusion studies, IRP re-iterations and Value of Solar Study in conducting and designing future RE capacity increases above and beyond this 3MW tranche.

D.3 GREENTECH

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?

84. “GreenTech 100% supports and applauds the increasing of the DG programs with 3MWs of capacity. This capacity should be immediately provided to the residential CORE program. We state again that the DER program will NOT be taken up by 99+% of Cayman’s population – residential or commercial. By providing less capacity to CORE it will only inflate demand artificially and unnecessarily.

85. If providing the full capacity to a residential CORE program is looked at unfavourably then a CORE program for small commercial programs up to 100KW in size should also be seriously considered as this sector of the market has not been served since essentially 2016 – or over five years ago. Maximum 1MW to this program.”

Office Response

86. The Office notes Greentech’s response however, as previously mentioned above, the Office must take the needs of all consumers into consideration in reviewing and designing rates for future tranches of DRG capacity. The Office must also ensure that more choices are available to consumers both equitably and economically. The Office may take Greentech’s suggestions into consideration for capacities above and beyond this 3MW allocation.

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?

87. “We do not object to this if those consumers are responsible for doing so under their CORE agreements, noting some older installations cannot presently meet this requirement. OfReg would be prudent to request an extension to the deadline for compliance on this matter as well given that some customers require new physical hardware in order to upgrade these systems to the new HECO settings and those hardware devices, like much of the global supply chain, are delayed in being able to reach the island.”

Office Response

88. The Office notes Greentech's position. Customers who seek to participate in the new 3MW quota and thus be allowed to connect to the T&D system can expect that CUC may only be required to allow systems to connect to the T&D system where the customer's installer has a record of proper workmanship and has facilitated for their earlier customers the contracted inverter settings and ride-through criteria agreed to in the DGR Agreement.

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

89. "GreenTech rejects this notion of "unsubsidized rates" as no one in this country (and many others) has been able to truly answer this question holistically, intelligently, independently or with impartiality. This economic conundrum is included in two articles and papers below which we implore OfReg to both read and acknowledge.

<https://www.rethinkx.com/energy-lcoe>

<https://www.utilitydive.com/news/analysts-inaccurate-cost-estimates-are-creating-a-trillion-dollar-bubble-i/596648/>

The rates should in no circumstances be lowered. In a recent presentation to government an employee of OfReg during an open conversation stated that Bermuda operates a net metering program. It doesn't – it operates a FIT program – at over 22c. This is stated as when a true independent study is carried out, we fully expect the rates to increase NOT decrease."

Office Response

90. The Office notes Greentech's response. The needs of the entire consumer base must be considered in making informed rate decisions.

91. The Office is aware of Bermuda's change from its subsidised Net Metering arrangement to a FIT programme in 2016.

92. The Office has a statutory obligation to protect the economic interests and well-being of all consumers in keeping tariffs and rate structures as can reasonably be achieved.

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?



93. “Our only concerns are a) the method by which it will be implemented and b) the time it may take to implement based on history. DER simply doesn’t work. We can’t presently do any new construction either.”

Office Response

94. The Office notes Greentech’s response and concerns. The Office will act promptly with CUC in implementing the roll out of this additional 3MW capacity. As previously mentioned above, the Office must take the needs of all consumers into consideration in reviewing and designing rates for future tranches of DRG capacity. The Office must also ensure that more choices are available to consumers both equitably and economically.

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

95. “Yes, - the 2017 CUC Infusion Study, approved by OfReg, showed that 29MWs was possible to add to the grid without there being a problem with grid stability; So, this shouldn’t really be a question in our view as a 3MW increase remains well below this level.”

Office Response

96. The Office notes Greentech’s response of not seeing the need to conduct additional studies prior to this additional 3MWs of RE capacity. OfReg’s decisions are guided by the relevant sections of the ESR Act and frameworks related to the energy sector.

97. While grid stability and reliability remain critical factors which must be monitored and managed, degradation in fuel efficiency with higher additions of solar PV was highlighted in the IFRECS, as capacity additions trend from 17 MW towards the 29MW limit. Inefficient fuel consumption directly translates into increased fuel pass-through surcharges to consumer bills and potentially increase noxious exhaust fumes from the diesel engines, contrary to the goals of the NEP.

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

98. “The DER program was presented to the CI Government recently where OfReg were present showing that DER is only economically viable to less than 1% of the consumer base, even with the recent revisions. And new constructions are effectively not being catered too either. And the program is not bankable. What OfReg also hasn’t grasped as yet is that the very small uptake to date also happens for reasons outside economic viability



- and has unintended consequences which the marketplace is only beginning to find out about unfortunately.
99. DER should get its next allocation when the 12MWs is available and OfReg should continue to reassure the few large commercial customers that want these systems that capacity is coming in 2022 and thus it is safe for them to make those investments, particularly for new constructions, in advance. However, the 3MW should be allocated to CORE as Cayman's ONLY viable renewable energy program for 99% of the consumer base; until new programs are added.
 100. CORE Commercial – It is imperative that OfReg ensure that there are Feed in Tariff opportunities beyond small residential systems - we think that up to 100kW should be Implemented. The DER program is not a bankable program as we have stated several times. This segment of the market has been totally ignored for coming up to five years.
 101. As with DER, OfReg should pre-allocate some of that 12MWs of capacity coming with the adoption of the CUC battery (to commercial CORE) so that businesses can make financial decisions in regard to renewable energy adoption. The fact that these systems take 6-12 months to deploy means that the timing of the capacity is minimal risk of having completed system not connected for any significant period of time. Unless OfReg is not sticking to what they have said publicly about this battery coming online in 2022 the benefits of doing this vastly outweigh the risk - and consistent with the public messaging surrounding both the battery and renewables.”

Office Response

102. The Office notes Greentech's response. The Office may take Greentech's additional suggestions into consideration when conducting and designing future RE capacity increases above and beyond this 3MW tranche.

E. Final Determination

The Office has carefully considered all comments and suggestions in response to the proposed 3MW DGR capacity increase.

103. The Office determines that adding 3MW of capacity to the grid prior to the BESS coming online is essential to the continued promotion of both the CORE and DER programmes and the promotion of stability to both consumers and



the industry. Accordingly, CUC shall make 3MW of DG capacity available to the CORE and DER programmes.

104. The Office further determines, the recently established CORE FIT rates as published in the 2020-21 capacity reallocation Determination of KYD \$0.175/kWh for solar PV systems 5kW and below, and a FIT rate of KYD \$0.15/kWh for systems between 5kW and 10kW, shall apply to the released capacity of 3MW capacity.

The rate mechanisms for the DER programme remain unchanged.

105. Customers who seek to participate in the new 3MW quota and thus be allowed to connect to the T&D system can expect that CUC may only be required to allow systems to connect to the T&D system where the customer's installer has a record of proper workmanship and has facilitated for their earlier customers the contracted inverter settings and ride-through criteria agreed to in the DGR Agreement.

END