



# **Guidelines for the Approval of Renewable Energy Self-Generation Projects**

**Small Commercial and Government**

## **STATEMENT OF RESULTS AND FINAL DECISION**

**ES: 03/2020**

**Issue Date: 28 February 2020**

CONTENTS

- 1 Introduction.....1
- 1.1 Background.....1
- 1.2 Responses received to the Consultation .....2
- 1.3 Structure of the Reminder of the Document .....3
- 2 URCA Summary of Responses to Comments Received on the Consultation .....4
- 2.1 General Comments on the Consultation .....4
- 2.1.1 BPL .....4
- 2.1.2 URCA Comments .....5
- 2.1.3 Alternative Power Sources (APS), BESS, Sustainable Energy.....5
- 2.1.4 URCA Comments .....5
- 2.2 Specific Comments .....6
- 2.2.1 BPL .....6
- 2.2.2 URCS’s Comments .....6
- 3 Summary of Responses to Consultation Questions .....7
- 3.1 Question 1: Buy-All, Sell-All Compensation.....7
- 3.2 Question 2: Proposed RESG System Limit ..... 10
- 3.3 Question 3: Shared Ownership..... 11
- 3.4 Question 4: Insurance..... 12
- 3.5 Question 5: Available Insurance Product ..... 13
- 3.6 Question 6: RESG Terms and Conditions..... 14
- 3.7 Question 7: Technical Requirements for RESG ..... 15
- 4 URCA’s Final Decision on Guidelines for the Approval of RESG Projects ..... 17
- 5 Conclusion and Next Steps ..... 24
- Annex I : Application Process and Application Form for RESG Projects..... 25

# **1 INTRODUCTION**

On 26 September 2019, the Utilities Regulation and Competition Authority (URCA) issued a Public Consultation Document (ES 05(B)/2019) in respect of the Guidelines for the Approval of Renewable Energy Self-Generation Projects (RESG) for Small Commercial and Government. This document constitutes URCA's Statement of Results and Final Decision to the Public Consultation. URCA, as the independent regulator for the Electricity Sector (ES) in The Bahamas, issues this Statement of Results and Final Decision pursuant to section 64 of the Electricity Act, 2015 (EA).

URCA, pursuant to Part V of the Electricity Act, 2015 (EA), is empowered to provide guidelines for the approval of Renewable Energy Self-Generation (RESG) projects. In so doing, URCA must have due regard to the Government's National Energy Policy (NEP) and Electricity Sector Policy (ESP) objectives, whilst ensuring that the rules and established processes are consistent with applicable legislation. The legal framework for the EA places upon URCA the responsibility to take such action as it may deem necessary to ensure the availability, security and reliability of Renewable Energy (RE) consistent with the NEP.

Purpose of this Statement of Results and Final Decision

In this Statement of Result and Final Decision, URCA:

- (i) summarizes the written submissions received to the Public Consultation document (ES: 05(B)/2019) on Guidelines for the Approval of Renewable Energy Self-Generation Projects (RESG) for Small Commercial and Government;
- (ii) provides URCA's analysis of the submissions made by key stakeholders; and
- (iii) sets forth URCA's Final Decision.

## **1.1 BACKGROUND**

The Utilities Regulation and Competition Authority (URCA), pursuant to Part V of the Electricity Act, 2015 (EA), is empowered to provide guidelines for the approval of Renewable Energy Self-Generation (RESG) projects. In so doing, URCA must have due regard to the Government's National Energy Policy (NEP) and Electricity Sector Policy (ESP) objectives, whilst ensuring that the rules and established processes are consistent with applicable legislation. The legal framework for the EA places upon URCA the responsibility to take such action as it may deem necessary to ensure the availability, security and reliability of Renewable Energy (RE) consistent with the NEP.

Part V of the EA (sections 25 through 28) contains the provisions through which the legislative framework seeks to promote the installation and use of RE in The Bahamas, and outlines conditions for the liberalization of the Electricity Sector.

Sections 25 and 26 address the introduction of RE by Public Electricity Suppliers (PES) in The Bahamas. Section 25 outlines the need for PESs, in the exercise and performance of their obligation to provide electricity to the public in The Bahamas, to have regard to the NEP and ESP goals of increasing the proportion of RE in the generation mix. Building upon that section 25 requirement, section 26 seeks to ensure that RE systems are considered whenever a PES seeks to procure generation resources, and provides for regulated procedures for procurement of any utility scale renewable electricity generation that PESs seek to introduce into their electricity supply systems.

Section 27 provides for the introduction of RE through projects installed or operated for residential use and connected to the grid, allowing home owners to produce electricity using renewable sources and to sell any excess

electricity produced to the PES. Section 27 allows for a utility run scheme, whereby interested persons apply directly to the PES for approval to install residential RE systems.

Section 28 of the EA completes the structure set out in Part V, by making provision for RESG projects advanced by the Government or small-scale business or commercial enterprises, as follows:

- (1) *URCA shall approve in writing the installation or operation of generating stations using prescribed renewable energy resources where—*
  - (a) *renewable energy self-generation projects are advanced by—*
    - i. *the Government, in any place in The Bahamas, in relation to the supply of energy to premises occupied by a ministry, department, statutory body, agency, local government council, or other entity of Government;*
    - ii. *a small-scale business or commercial enterprise within The Bahamas;*
  - (b) *such stations meet the requirements of, and are operated in accordance with regulatory or other measures issued by URCA; and*
  - (c) *such stations have no adverse impact on the reliability of the electricity supply system.*
- (2) *URCA shall maintain and publish, in accordance with section 43, a list of the names of the entities granted approval under this section together with the corresponding sizes and aggregate kilowatts of the installed generation stations.*

The Small Scale Renewable Generation (SSRG)<sup>1</sup> program established by URCA in 2017 enabled participation by residential and limited small-business customers in RE generation, in furtherance of the provisions of section 27 and partial furtherance of section 28 of the EA. The SSRG Plan is in operation through a Net Billing arrangement between BPL and qualified customer. URCA is now monitoring the progress in terms of capacity uptake and the regulatory guidelines.

Through this document, URCA now sets out the guidelines for the approval and encouragement of RESG projects advanced by the Government, and for the expansion of the RESG projects that may be advanced by small-scale business or commercial enterprises in The Bahamas.

## **1.2 RESPONSES RECEIVED TO THE CONSULTATION**

On 26 September 2019, URCA published its consultation document “Guidelines for the Approval of Renewable Energy Self-Generation Projects (RESG) for Small Commercial and Government” (ES 05(B)/2019) seeking comments from interested parties and the public. The period for submission of written responses and comments to the consultation document was closed on 29 November 2019. During the consultation period, URCA received written responses from:

- The Bahamas Power and Light Company Limited (BPL)
- Alternative Power Sources
- Alternative Power Supply (APS)
- Bahamas Energy Solar Supply Limited (BESS)
- Arawak Port Development

---

<sup>1</sup>[https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD\\_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf](https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf)

- Sustainable Energy Limited

URCA thank the respondents for participation in this public consultation process. URCA has summarised the comments submitted by the respondents in this Statement of Results and issued its Final Position. Interested parties can obtain the full text of the respondents from URCA's website at [www.urcabahamas.bs](http://www.urcabahamas.bs) .

In this document, URCA has sought to provide a summary of the responses considered and discussion of URCA's position on those responses. However, URCA may not have reproduced all matters considered. The lack of response to a comment or any issue raised by a respondent does not signify URCA's agreement in whole or in part with the comment, nor should it be taken to mean that URCA has not considered the comment or that the comment was considered to be unimportant or without merit.

### **1.3 STRUCTURE OF THE REMAINDER OF THE DOCUMENT**

The structure of the remainder of this document is as follows:

- Section 2: Responses to the Preliminary Position;
- Section 3: Responses received to the consultation questions;
- Section 4: Final Decision (Conclusion & Next Steps).
- Annex 1: Application Process and Application Form for Approval of RESG Projects

## **2 URCA’S SUMMARY OF RESPONSES TO COMMENTS RECEIVED ON THE CONSULTATION**

### **2.1 GENERAL COMMENTS ON THE CONSULTATION**

The respondents offered similar but contrasting responses to the consultation document. Due to the similar but contrasting comments, URCA treats with those comments jointly below. In summary, BPL and the other respondents namely, Alternative Power Sources, Sustainable Energy Limited, Arawak Port Development, BESS and APS comments are outlined as follows:

#### **2.1.1 BPL**

In responding to the Consultation Document (ES: 05/2019) BPL submitted that the Company supports URCA’s decision to now establish guidelines applicable to RESG projects. BPL posited that the guidelines proposed in the Consultation Document should be an umbrella guideline that programs developed by Public Electricity Suppliers (PES) should be required to meet or exceed. BPL is of the view that provided that such programs meet the general requirements of the guideline there should be no further requirements for approval of that specific program. As such BPL proposes that the guidelines should be overarching and include existing PES programs rather than exclude them.

BPL posited that in Section 3 of the consultation document on “Regulatory Framework”, URCA quotes extensively from section 6 of the EA, but glosses over its statutory obligations under section 7 of the EA by simply stating that the legislation only requires it to “...issue regulatory processes that are fair, objective, non-discriminatory, transparent, and that seek to implement the NEP and ESP”. BPL asserted that section 7 of the EA obligates URCA, where it is proposing any regulatory measure to take effect in the electricity sector, to go through the full exercise of complying with the section by showing that market forces are being relied on as much as possible to achieve sector policy and electricity supply regime goals and objectives, and that reliance is being placed on regulatory measures where URCA believes that market forces are unlikely to achieve such goals and objectives within a reasonable time-frame; therefore, it has carried out a regulatory impact assessment that takes into consideration the costs and implications of such regulatory measure on affected parties, and concludes the four-part exercise by ensuring that any proposed regulatory measure is efficient and proportionate to its purpose and is introduced in a manner that is fair, transparent and non-discriminatory. BPL has asserted that URCA seems to have adverted to complying with parts of subsections (1) and 2(c) but has omitted any explanation of what it has done to comply with section 7 of the EA in its entirety.

Additionally, and for the purpose of clarity, BPL points out that the reference in Section 3 of the consultation document to section 9 of the EA in the discussion on the regulatory framework in BPL’s view is somewhat misplaced. As the proposed guidelines are for the benefit of other PESs in The Bahamas, the specific reference to BPL’s functions is not necessary in this regard. BPL suggest that as section 28 of the EA under which URCA purports to consult the public is not “BPL Specific” then the Consultation Document should also not be “BPL Specific” and any such references to BPL should be removed. Moreover, and for the purpose of completeness, section 9(1)(g) of the Act provides that such terms and conditions of supply and purchase are to be determined by the Corporation (now a function of BPL) and approved by URCA.

### **2.1.2 URCA COMMENTS**

URCA welcomes BPL support for the establishment of the RESG Guidelines. However, URCA does not agree with BPL's views as it relates to the URCA's remit and purpose of the Guidelines. URCA maintains that pursuant to Part V of the Electricity Act, 2015 (EA), URCA is empowered to provide guidelines for the approval of Renewable Energy Self-Generation (RESG) projects. In so doing, URCA must have due regard to the Government's National Energy Policy (NEP) and Electricity Sector Policy (ESP) objectives, whilst ensuring that the rules and established processes are consistent with applicable legislation. The legal framework for the EA places upon URCA the responsibility to take such action as it may deem necessary to ensure the availability, security, and reliability of Renewable Energy (RE) consistent with the NEP.

The Consultation Document sets out the proposed Guidelines for the approval by URCA of RESG projects advanced by the Government and small-scale business or commercial enterprises, as provided for in section 28 of the EA.

These Guidelines may be amended by URCA as Government policy and the underlying technological environment, and operating conditions change from time to time.

URCA takes note of BPL's comments on URCA's lack of emphasis on section 7(2) of the EA. URCA wishes to draw attention to the fact that there is no obligation under relevant Bahamian law for URCA to quantify the costs and benefits of the proposed guidelines. The section 7(2) of the EA appropriately requires URCA to have "due regard to the costs and implications" of the regulatory measures it proposes to introduce. URCA confirms that it has carefully considered those costs and implications relative to the proposed guidelines. URCA envisions that the objective outcome of these guidelines will provide a measure of market forces, by providing the opportunity for private individual and Government advanced RE initiatives. URCA believes that market forces left to the "invisible hand" of the current electricity market structure will not achieve the main goals and objectives of the sector policy and the electricity supply regime. Hence, URCA believes that the establishment of these guidelines is more efficient and proportionate for the purpose stated. URCA sought to ensure transparency and the consideration of stakeholder concerns via the consultation process.

URCA notes that RESG projects are an integral step towards a more distributed generation approach, which URCA considers has significant benefits for a country with the social, economic and geographic characteristics of The Bahamas.

### **2.1.3 ALTERNATIVE POWER SOURCES (APS), BESS, SUSTAINABLE ENERGY**

APS et al. have submitted the view that there should be a provision for the creation of an Integrated Resource Plan (IRP) that lays out the expected demand for power over the next 10 to 20 years and the sources of the production for that power. APS posited that there is an awareness of the National Energy Policy, but an IRP should be created that details how the National Energy Policy will be achieved. The IRP should be created with input from the utility, private sector energy providers (renewable energy companies), and private individuals.

### **2.1.4 URCA COMMENTS**

Whilst URCA is in general agreement with APS et al. on the scope of an IRP, the purpose and remit of the instant Guidelines, in accordance with the EA section 28, is for the approval of renewable energy self-generation projects advanced by small scale business or commercial enterprise within The Bahamas. The Consultation document ES:05/2019 outlined the propositions of URCA's guidelines for the approval of the RESG projects.

## **2.2 SPECIFIC COMMENTS**

### **2.2.1 BPL**

#### **Renewable Energy Self Generation Guidelines**

BPL is of the view that, as presented in Section 4 of the Consultation Document, RESG is presented as a separate and distinct project or program when it should be considered as an overarching system covering many other programs. Historically speaking, and based on the involvement of its parent company BEC at the time, BPL is aware that at the time of the development of the EA, RESG was the name used to refer to the BPL program. It was never intended to be a program in its own right.

BPL submitted that the proposed definition of RESG presents a concern for BPL. BPL is of the view that this proposed definition of an RESG project would be in direct conflict with any “Buy-All, Sell-All” arrangements because in such an arrangement none of the energy produced is primarily or solely for the use of the system owner. BPL invites URCA, in light of this potential dilemma, to reconsider this aspect of the definition.

Additionally, BPL submitted that in defining Off-Grid RESG, URCA states that Off-Grid RESG can be stand-alone power systems or micro-grids providing a small community with electricity. BPL submits that micro-grids are not considered “off grid” especially if supplying a community. In these cases, they are a small independent grid. If micro-grids are connected to a larger grid but can support the community in the event of an issue on the main grid then they are considered grid-tied. So in either case, URCA categorizing micro-grids as “off grid” is not correct.

### **2.2.2 URCA’S COMMENTS**

URCA disagrees with BPL characterisation of the definition of RESG. URCA maintains that the term RESG will refer to active energy consumers who install RE systems that are designed to generate electricity solely or primarily for their own use. For URCA’s purposes, and to avoid confusion, the term RESG shall be used solely to describe systems approved under these proposed Guidelines in accordance with section 28 of the EA. For the avoidance of doubt, a RESG project shall not include an SSRG installation<sup>2</sup>.

RESG systems may be grid-tied or completely off-grid. URCA concurred with BPL’s definition of micro-grid, but reiterate that Grid-tied RESG is a semi-autonomous electrical generation system which links to the mains to feed capacity and/or energy back to the grid. URCA envisages that grid-tied RESG will allow Government and small-scale business or commercial enterprises to install RE systems to generate energy for their own use, whilst at the same time be connected to the grid to ensure reliable and economical supply of energy to carry on their businesses and day to day activities. All generation exported to BPL’s grid is proposed to be converted into "generation credits" which shall be applied to the accounts of the relevant customer. For the avoidance of doubt the small-scale businesses and commercial enterprises with system capacity less than 100 kW are excluded as these systems are already being addressed under the SSRG<sup>3</sup> framework.

---

<sup>2</sup>[https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD\\_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf](https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf)

<sup>3</sup>[https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD\\_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf](https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf)



### 3 SUMMARY OF RESPONSES TO CONSULTATION QUESTIONS

In this Section, URCA summarises and responds to the comments received from the respondents to the specific questions posed by URCA in the consultation document. URCA notes that the comments from BPL are quite different in content from those of the other respondents. Therefore, URCA will address BPL and the remaining respondents separately.

#### 3.1 QUESTION 1: BUY-ALL, SELL-ALL COMPENSATION

**Do you agree with URCA’s proposal to set a Sell-All feed-in tariff based on the utility’s avoided cost of fuel used for generation? Please provide reasons and explanations for your response.**

##### BPL Comments

BPL notes URCA’s proposal in Section 4.2.4 of the Consultation Document relative to the compensation approach of “Buy-All, Sell-All”. It is BPL’s position that this arrangement should only be for installations of greater than 500KWpAC. At levels lower than 500KWpAC, the associated cost could be a barrier to increased renewable energy adoption. Therefore, BPL proposes that Net Billing would also apply to installations between 100 and 500KW. It is BPL’s view that these systems would also have to meet additional technical requirements beyond those of the SSRG program.

Additionally, BPL argues that the “Buy-All, Sell-All” approach may require the establishment of a sell-all tariff that varies to ensure that as a PESs cost of energy goes down, so do the renewable energy feed in rates. Otherwise, the PES would need to have the option and capability to curtail the take-off of the renewable energy so as to maintain the lowest rate to its customers. Without the establishment of a sell-all tariff, the PES would have to have the option to define rates and its conditions in its interconnection agreement with the customer.

BPL takes issue with URCA’s position that the fuel charge may not adequately compensate an RESG customer for all avoided costs as BPL will likely realize additional savings in its Transmission, Distribution and Supply costs and that it proposes to conduct a review of the avoided cost to determine whether the same is appropriate. BPL is contending that such a review should have been conducted under section 7(2)(b)(ii) of the EA as a preliminary step to issuing the Consultation Document in order that those affected by the proposed Guidelines would be aware of the costs and implications of the regulatory measure.

##### URCA’s Comments

URCA has determine that in order to enhance the ease of installation of RE uptake for the RESG projects it is obliged to take BPL recommendation of a Net Billing arrangement applying to installations between 100 and 500kW. On the issue of combining all the renewable programs as BPL has suggested in its comments, URCA rejects BPL’s suggestion and once again reiterate that the Small Scale Renewable Generation (SSRG)<sup>4</sup> program established by URCA in 2017 enabled participation by residential and limited small-business customers in RE generation, in furtherance of the provisions of section 27 and partial furtherance of section 28 of the EA. The SSRG Plan is in operation through a Net Billing arrangement between BPL and qualified customer. URCA is now monitoring the progress in terms of capacity uptake and the regulatory guidelines.

---

<sup>4</sup>[https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD\\_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf](https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf)

Through this document, URCA now establish guidelines for the approval and encouragement of RESG projects advanced by the Government, and for the expansion of the RESG projects that may be advanced by small-scale business or commercial enterprises in The Bahamas.

As it relates to the issue of the compensation URCA notes the responses and have taken the position that the **Buy-All, Sell-All** arrangement is **provisional** as URCA will conclude its cost based pricing study by end of 2020. This study will inform URCA of the cost reflective price point that will be fair to all stakeholders and enhance the desired renewable penetration.

URCA also reiterates that by the nature of these renewable installations, a **provisional Buy-All, Sell-All** arrangement is determined where two meters are typically employed. In a typical buy-all, sell-all arrangement the normal electric bill does not change. Buy-all, sell-all means that RESG customers will buy all of the power that they use from BPL as usual and all of the power that these RE customer's solar panels or wind turbines produce will be sold back to BPL. The RESG customers will be invoiced with an **avoided cost** credit. This **avoided cost credit** is proposed as the **applicable monthly fuel rate charge per kWh** during the period when the electricity was produced. URCA notes that the applicable monthly fuel rate charge per kWh will vary with the PES cost of fuel; therefore, as the PES' fuel cost goes down, so will the RE feed in rates.

#### BESS Comments

A Buy-All, Sell-All tariff is nothing but a sell-all as the customer is already purchasing power at the retail price. We can leave buying out of equation because what we are talking about is selling power at a variable rate, depending on fuel cost. This is no incentive for investors as their ROI is as unpredictable as buying a number from Island Luck. Solar investments are risk prone and a minimum of security is only provided by a set rate. In essence this is a PPA without a predictable cash flow. In our opinion this is an unattractive proposition and must change.

A better solution would be to unbundle the sector and peg the initial buy rate to the PPA BPL is entering with Shell. This would create a de facto market price for energy that would introduce a competitive price formation based on technological advancement. As it stands renewable energy has reached grid parity and the tendency is confirmed in island jurisdictions with high renewable penetration.

#### APS Comments

APS is positing that they do not agree with URCA's proposal to set a Sell-All Feed in tariff. The proposed approach would be counter-productive to the goal of rapid integration of PV in the Bahamas and any company that knows the PV business would not engage in the process, as it is a WIN-LOSE proposition, where the Utility wins and the PV Integrator loses. The investment vs risk of a 100KW to 1MW PV system is too detrimental for a business to connect to the BPL grid.

APS argues that one cannot encourage rapid PV integration by penalizing those who invest in their own substantial renewable "infrastructure" for the sake of those who take no risk. If fairness is the goal, which is in reality is defined as "those who take capital risks should be treated the same as those who don't", then there is no point in encouraging solar integration. Only dreamers or charitable entities should proceed.

#### Alternative Power Sources

Alternative Power Sources has posited that they do not support the Buy-All, Sell-All concept because to implement this removes the benefit to those who wish to be grid-independent yet retain their grid connection for back-up purposes, unless URCA will propose that an RESG owner can decide to forgo any BPL connection, if he so desires. Further, perhaps URCA is unaware of how systems are designed, they are designed based on the total connected load, which means that they are designed to allow the RESG to self-supply power when the demand load is below the total load with the balance of the load being exported to the utility. What is the benefit derived

by the RESG to export every kWh produced? Why would an RESG owner want to be a producer of power it cannot have access to?

### Sustainable Energy

Sustainable Energy posited that they can understand the reasons behind the RESG guidelines but they do not think it is economically viable or will entice investors, companies or households to install systems.

### ARAWAK Port Development

Under the proposed Buy-All, Sell-All Mechanism, compensation to the RESG project is to be “the applicable monthly fuel charge per kWh during the period when the electricity was produced”. This implies the compensation could change each month and could be less than anticipated at the time the investment decision was made.

### URCA’s Comments

URCA notes the general concerns of the respondents as it relates to how the energy from their RESG system will be treated. URCA is not making the determination that power/energy from the RESG system be physically delivered to the grid, but rather that regardless of the source of the power consumed by the RESG operator (i.e., from the utility or their own RESG system), the operator will purchase the same from the utility at the prevailing rate. While, on the other hand, the utility will purchase all of the power produced by the RESG system at the applicable feed in tariff rate regardless of whether it is consumed directly by the RESG owner, or it is supplied to the grid.

As it relates to the issue of the compensation URCA notes the responses and has taken the position that the **Buy-All, Sell-All** arrangement is **provisional** as URCA will conclude its cost based pricing study by end of 2020. This study will inform URCA of the cost reflective price point that will be fair to all stakeholders and enhance the desired renewable penetration.

URCA reiterates that while section 28 places the approval of off-grid RESG systems entirely within URCA’s jurisdiction, URCA also proposes to permit the installation of grid-tied RESG systems. In proposing approval of grid-tied RESG systems, URCA must also consider and determine the compensation mechanism that will be applied to the electricity which the RESG customer delivers to the grid for use by the PES in its Transmission, Distribution and Supply activities.

Off-grid RESG encompass all RESG advanced by Government and small-scale business or commercial enterprises within The Bahamas. This includes all systems of capacity up to 1000kW. For the avoidance of doubt and for the purpose of these guidelines this includes all small-scale business and commercial enterprises that choose not to be connected to the grid but have system sizes that are less than 100kW.

In designing a RESG compensation mechanism, URCA has to address two important questions<sup>5</sup>:

- what is the value proposition of RESG to the utility and ratepayers, and how does it change over time; and,
- is the average level of RESG compensation greater than, equal to, or less than the value of RESG to the Utility?.

---

<sup>5</sup> Source: NREL: Grid-Connected Distributed Generation: Compensation Mechanism Basics

There are essentially three types of metering & billing arrangements as it relates to renewable energy distributed generation: net energy metering; buy-all, sell-all; and, net billing. URCA considers and believes that Buy-All, Sell-All is the best option for The Bahamas at this time.

URCA also reiterates that by the nature of these renewable installations, a **provisional Buy-All, Sell-All** arrangement is determined where two meters are typically employed. In a typical Buy-All, Sell-All arrangement the normal electric bill does not change. Buy-All, Sell-All means that RESG customers will buy all of the power that they use from BPL as usual and all of the power that these RE customer's solar panels or wind turbines produce will be sold back to BPL. The RESG customers will be invoiced with an **avoided cost credit**. This **avoided cost credit** is proposed as the **applicable monthly fuel rate charge per kWh** during the period when the electricity was produced. URCA notes that the applicable monthly fuel rate charge per kWh will vary with the PES' cost of fuel; therefore, as the PES' fuel cost goes down, so will the RE feed in rates.

### **3.2 QUESTION 2: PROPOSED RESG SYSTEM LIMIT**

**Do you agree with the proposed grid capacity of 10 percent of the gross energy generation or capacity of the relevant PESL on the island? Please provide reasons and explanations for your response.**

#### BPL Comments

BPL is contending that the RESG program with this penetration based on 10% of gross energy generation or capacity proposed by URCA is risky. In the circumstances, BPL suggests 10MW as the initial limit for this (101KW - 1MW) range under this framework. As that limit is approached, detailed studies can be conducted and the situation can be re-evaluated.

BPL argues that the stability issue occurs when the ratio of installed solar capacity is greatest which typically is during the minimum daytime peak periods. A suggested example by BPL is that, while 30MW is approximately 12.5% of the system peak (which is at night), it is 20% or more of the daytime low. This is during this daytime low the scenario in which renewable energy penetration without stabilization technology investments can be problematic.

#### BESS Comments

BESS argued that the internationally accepted threshold for renewable penetration is recognized around 30%, with which intermittency can be picked up by spinning reserves. This is though only a loose estimate as each grid consists of smaller entities, divided by substations and feeders. Whereas the total injection from renewables can be dealt with by rotational generators or batteries, local variation may disturb frequency and voltage without proper automation. It should be noted that individual feeders and/or distribution transformers can be backfed by reverse power flow where there are no loads in the vicinity. This makes planning of renewable capacity on feeders a delicate engineering task that no utility can underestimate

#### APS Comments

Alternative Power Supply recommends that the proposal to limit the PV penetration to 10% of the gross energy generation of the relevant PESL is a good start but the technical limits for PV penetration on a generator grid can be as high as 30%. The percentage should be increased as soon as the penetration approaches 10%.

On Family Islands with smaller PESL generating plants, APS recommends replacing the primary generators with Battery Energy Storage PV Generating Plants and using the generator as a backup battery charging source.

### Alternative Power Sources

Alternative Power Sources posited their disagreement with the 10% of the gross energy generation because the National Energy Plan stipulates 30% by 2030. Alternative Power Sources argued that it should be incumbent on BPL to ensure its systems are capable of receiving power sent via interconnection agreements with RESG and that its assets are at such an efficiency that they can, within a millisecond, amp up to make up and energy shortfall caused by things like cloud cover to avoid brown outs and /or black outs.

### URCA's Comments

URCA accepts that all the arguments posited by the respondents have their merits and collectively mirror URCA own assessment and proposed arguments outlined in the Consultation.

URCA considers that there may also be concerns related to intermittency and variability of RE generation technologies most likely to be implemented in The Bahamas (primarily solar PV generation) particularly because the RE generation introduced may not be consistent with BPL's peak load curve. URCA acknowledges that these matters may present technical challenges for BPL; however, URCA considers that the benefits derived from the integration of RE generation far outweigh any negative concerns. At a high level, perhaps the most significant umbrella benefits are the reduction in the utility's overall operation burden which will result from the implementation of independently operated and maintained distributed capacity, and the positive impact of environmentally friendly generation on climate change issues. At a more granular level, URCA has further reviewed the technical issues and makes the following observations:

- Capacity: At present 10 MW of production is allotted to the SSRG programme in New Providence, which, albeit significantly undersubscribed, represents approximately 4% of BPL's daily maximum demand. URCA considers that at least a further 20 MW can be initially allocated for RE generation by consumers, which would represent a total allotment of 12.5% of BPL's current daily maximum demand if fully subscribed. Research from more mature RE markets with similar characteristics (e.g., Barbados) indicates that this percentage has not posed any system stability issues and can be accommodated within conventional spinning reserve limits. URCA submits that suitable capacity limits can be determined for other networks (i.e., individual Family Island grids) within the utility's territory.

### **3.3 QUESTION 3: SHARED OWNERSHIP**

**Do you agree with the shared ownership participation proposed by URCA? Please provide reasons and explanations for your response.**

#### BPL Comments

BPL has posited that the company does not agree with the proposal in its current form. However, in a somewhat contradictory position BPL supports the introduction of community renewable energy only at a Government of The Bahamas project level because, at this time, it is where many of the complexities associated with this arrangement can be avoided.

Additionally, BPL considers that Section 4.5 of the Consultation Document, on Shared Ownership, should have indicated that shared ownership is subject to the parameters established by the PES so the requirements and details of such a program can be properly defined when it is made available.

### BESS Comments

Shared ownership is known as community solar elsewhere. These models do not limit the number of owners of a micro-grid or jointly owned generator. It should be free for all to install according to local needs and grid interconnection and compensation should be based on a PPA as opposed to a variable return.

### APS Comments

URCA has not provided sufficient detail to comment. What are the “certain key criteria”. Is URCA referring to Co-Ops and Publicly Traded Companies? APS does agree with Co-Ops, Subdivisions and Condominium Co-Ops being able to band together to install one larger system with shares.

### URCA Comments

URCA does not accept BPL’s position that community renewable energy should only be allowed at a Government of The Bahamas project level. Additionally, URCA has not gleaned any practical alternative nor has there been any persuasive arguments by the respondents as to why the RESG guidelines should not include shared ownership participation. Consequently URCA reiterates that URCA will approve RESG systems under shared ownership provided certain key criteria, such as limit on the sizing of such facilities commensurate with the aggregate demand of the shared businesses, are met.

Shared Ownership RESG will allow community operated self-generation facilities, under which several people invest in an eligible system, and are therefore able to benefit from and participate in the RESG program.

Shared ownership customers must maintain a legal and beneficial ownership interest in an eligible facility. These self-generation customers must share the responsibilities and costs of the facility and resulting proportional benefits. The shared ownership customers must designate one contact person to serve as the liaison between the owners and utility. Up to 4 meters can receive credits from a single eligible facility. Credits from nettable energy is allocated to participants according to each customer's ownership interest in the facility.

## **3.4 QUESTION 4: INSURANCE**

**Do you agree with URCA’s proposed insurance requirements for owners of RESG systems? Please provide reasons and explanations for your response.**

### BPL Comments

BPL as expected agrees with the proposed insurance requirements. However, BPL has conditioned its agreement by suggesting that URCA should include injury or damage caused by the failure (electrical or physical) of any part of the RESG installation and urges URCA to include this in its final decision document.

### BESS Comments

Demanding insurance beyond and above general liability insurance is an outrageous proposal. BESS is of the view that in lieu of Insurance only allow IEEE 1547-2018 and UL 1741 listed smart inverters should be allowed on the grid and nothing else. These inverters are identified to disconnect a second after grid voltage is absent so any injury or damage to utility personnel is out of question. The added cost of expensive insurance policies would further eliminate the value proposition of solar and as such unacceptable. All listed arguments in the URCA documents are non-existing as no system should be approved that is operating outside specifications.

### APS Comments

APS does not agree with the proposed insurance requirements. APS is contending that all systems installed, as a matter of rule already meet International Safety Standards and to require the RESG to get insurance to redound to the benefit of BPL is an unnecessary expense. APS argues that what is more critical is for the Utility to have a claimable insurance policy in place, with a 30-day payout for any legitimate claims of the utility grid damaging the PV plant system. This is the actual scenario that occurs when PV grid tie inverters are connecting to the BPL Utility grid, that has frequent load shedding and surges/brownouts. No private entity, knowing the damaging effects of the current Utility Grid would enter into a “Buy All, Sell All” agreement.

### URCA’s Comments

URCA notes the disagreement amongst the respondents regarding insurance requirement for Grid-tied RESG. URCA believes that RESG owners are required to establish and maintain full insurance coverage for loss and damage resulting from the operation of the RESG facility. It is recognized that the requirement for insurance coverage is intended to mitigate against personal and property damage which may arise as a result of the operation of the renewable system with the three primary concerns being:

- a) Shock hazards for utility line personnel working on a line that may become unexpectedly energized;
- b) Damage to the utility's or customer's equipment resulting from a RESG system operating outside of specifications;
- c) Interference with automated distribution system protection functions, such as reclosing.

The safeguard against such incidents (which are accepted as rare in properly structured jurisdictions) is the use of equipment that has been approved/certified and having a competent electrical inspector.

## **3.5 QUESTION 5: AVAILABLE INSURANCE PRODUCT**

**Are there available insurance products which cover general liability available to owners of such systems, and if so, what costs are likely to be incurred? If possible, please provide information to support your response.**

### BPL Comments

BPL has indicated that there is none.

### APS Comments

There are general liability products available that cost approximately \$400 per annum for a small SSRG system under 100KW. The cost of 100KW to 1MW systems is unknown by APS. It should be noted that owners of PV plants resent having to take out an insurance policy to “Protect the Utility” when they know that it is the Utility that should be charged with protecting against damage to their PV plant.

### URCA Comments

URCA does not agree with APS that an insurance policy is to “Protect the Utility” only, but rather to protect all stakeholders concerns and hence in the best interest of the “Public Good”. URCA accepts that given and to the extent that it’s available for the SSRG, then Insurance should be available for the RESG. URCA believes that RESG should be able to benefit from economies of scale. Additionally system owners should be able to make the case to the utility and insurance brokers that the risk to utilities or to third parties of property damage or personal injury caused by the operation of customer-owned, grid-connected PV systems installed in compliance with applicable national standards appears to be extremely small.

### 3.6 QUESTION 6: RESG TERMS AND CONDITIONS

**Do you agree with URCA's proposed term and conditions for Grid-tied RESG systems? Please provide reasons and explanations for your response.**

#### BPL Comments

BPL is contending that the Consultation Document seems incomplete as URCA does not address the approval requirements.

#### BESS Comments

BESS argued that the permitting, inspection and interconnection process as it is today is a "holy mess" and can only be described as dysfunctional, full of "red tape" and take unreasonably long. BESS suggested that a whole new institutional structure must be developed to accommodate larger renewable installations. BESS confirmed that the URCA portion of the approval process is smooth and BESS appreciate the expediency of the approvals. BESS has suggested that The URCA approval should be followed by approval by a new, competent AHJ that can be contacted and consulted on technical levels.

BESS agree that the permitting requirements are as such reasonable and pointed out that the issue is more about its execution.

#### APS Comments

APS argued that a six-step process exist with the SSRG that doesn't work. The goal should be no more than 30 days for the whole bureaucratic process.

The need for (3) Printed copies in an age of reducing printing is counter intuitive. If URCA wants to print out the PDF's then let it do so. Wasteful public sector ministries should not force private industry to print unnecessarily

60 Days is too long. It should not be greater than 21 days, which is the usual amount of time given the Private Industry to complete an extensive RFP.

URCA must place a short timeline (Not to exceed 2 weeks) on the MOPW and the Ministry of the Environment (or AHJ) to Review and Approve Environmental and/or Construction Documents. Neither Ministry is known for their efficiency in Approvals. There must be real penalties for non-compliance, such as a "Guaranteed approval, that moves the paperwork to the next step, if it not completed within the time frame".

The current application process has several Duplications of Process, such as submitting an Electrical Single Line Diagram (SLD) to BPL, having it approved and then needing to submit a second, separate SLD to the MOPW. This is costly and not an Ease of Doing Business (EoDB). APS would not agree if this same requirement where in the URCA RESG Proposal.

#### URCA Comments

URCA notes the issues highlighted by the respondents regarding the proposed terms and conditions for the RESG guidelines.

The terms and Conditions are outlined in section 4.7 and 4.8 of the consultation document (ES: 05/2019). URCA considers that having reviewed the comments from the respondents it had determined that the Terms and Conditions outlined in section 4.7 and 4.8 of the consultation document (ES: 05/2019) represents the final decision. For ease of reference URCA hereby reiterate the Terms and Conditions as its final decision herewith in Annex 1



### **3.7 QUESTION 7: TECHNICAL REQUIREMENTS FOR RESG**

**Please provide any comments regarding the proposed Technical Requirements for RESG Systems.**

#### BPL Comments

BPL is of the view, that URCA's proposed technical requirements for RESG Systems are not complete. That said, BPL considers that the technical details should be provided by the specific programs offered by the PESs. BPL posited that the RESG guideline document should be no more than a framework under which the specific programs would operate rather than "command-and-control" regulations prescribing or proscribing the conduct of BPL and RESG customers.

Additionally, BPL agrees with the components of the process as outlined, BPL is of the view that the process excludes critical inspection and testing elements that must be conducted by other approving agencies as well as the PES. As such BPL considers URCA's proposal as specified in the Consultation Document to be an oversimplification of the process that will lead to issues with the participants. At a minimum, BPL considers that a reference is needed in this process to these elements being successfully completed.

#### BESS Comments

BESS is contending that utilities are usually equipped with a technical team that is part of the physical planning department as much of the approval process is to evaluate whether or not a system is compatible with grid rules and if the circuit where the system is interconnected can handle the changing conditions. BESS has suggested that feeders, fuse ratings, load flow data and distribution transformers should be all part of the considerations for eligibility.

#### URCA Comments

URCA notes respondent concerns about "command and control" and critical inspection and testing elements and is reiterating that in this the consultation document URCA sets out the background and overarching framework within which URCA is seeking to issue the proposed Guidelines.

Part V of the EA (sections 25 through 28) contains the provisions through which the legislative framework seeks to promote the installation and use of RE in The Bahamas, and outlines conditions for the liberalization of the Electricity Sector.

Sections 25 and 26 address the introduction of RE by Public Electricity Suppliers (PES) in The Bahamas. Section 25 outlines the need for PESs to, in the exercise and performance of their obligation to provide electricity to the public in The Bahamas, have regard to the NEP and ESP goals of increasing the proportion of RE in the generation mix. Building upon that section 25 requirement, section 26 seeks to ensure that RE systems are considered whenever a PES seeks to procure generation resources, and provides for regulated procedures for procurement of any utility scale renewable electricity generation that PESs seek to introduce into their electricity supply systems.

Section 27 provides for the introduction of RE through projects installed or operated for residential use and connected to the grid, allowing home owners to produce electricity using renewable sources and to sell any excess electricity produced to the PES. Section 27 allows for a utility run scheme, whereby interested persons apply directly to the PES for approval to install residential RE systems.

Section 28 of the EA completes the structure set out in Part V, by making provision for RESG projects advanced by the Government or small-scale business or commercial enterprises, as follows:

- (3) *URCA shall approve in writing the installation or operation of generating stations using prescribed renewable energy resources where—*
- (d) *renewable energy self-generation projects are advanced by—*
    - i. *the Government, in any place in The Bahamas, in relation to the supply of energy to premises occupied by a ministry, department, statutory body, agency, local government council, or other entity of Government;*
    - ii. *a small-scale business or commercial enterprise with The Bahamas*
  - (e) *such stations meet the requirements of, and are operated in accordance with regulatory or other measures issued by URCA; and*
  - (f) *such stations have no adverse impact on the reliability of the electricity supply system.*
- (4) *URCA shall maintain and publish, in accordance with section 43, a list of the names of the entities granted approval under this section together with the corresponding sizes and aggregate kilowatts of the installed generation stations.*

URCA expects that the PES in its role of the implementing agency for all Grid-tied RE will adhere with the Renewable Energy Policy and the EA. Additionally, URCA notes that it is providing the overarching requirements for participation in the RESG program by outlining this framework, while the technical details for interconnection in the case of grid-tie systems remains the purview of the respective grid operator or PES.

## 4 URCA'S FINAL DECISION ON GUIDELINES FOR THE APPROVAL OF RESG PROJECTS

In this Section, the Utilities Regulation and Competition Authority (URCA) outlines its Final Decision on the Guidelines for the Approval of RESG Projects- Small Commercial and Government. Overall, URCA considers that the Guidelines sufficiently set out the processes and all relevant terms and conditions for participation in the RESG Programme.

URCA is issuing this Final Decision in accordance with section 64 of the Electricity Act, 2015 (EA).

The Decision imposes obligations on PES and RESG participants; therefore, this Decision is addressed primarily to PESs and to those electricity consumers desirous of participating in the RESG programme.

### "WHEREAS,

*I. Section 22 of the Electricity Act, 2015 (EA) specifies URCA's role as the sector regulator*

(1) Section 6 of the EA sets out the Electricity Sector Policy (ESP) objectives, as follows:

- (1) The main goal and objective of the electricity sector policy shall be the creation of a regime for the supply of safe, least cost, reliable and environmentally sustainable electricity throughout The Bahamas.*
- (2) The principles and objectives governing the sector policy and electricity supply regime, in accordance with the aims and goals of the National Energy Policy, shall be the –*
  - (a) provision of safe, least cost electricity supplies to all consumers;*
  - (c) enhancement of the energy security of The Bahamas;*
  - (e) introduction of a structure for the sector that is overseen by an independent regulator;*
  - (f) employment of practices and technology that are designed to protect the natural environment of The Bahamas;*
  - (g) promotion of energy efficiency in the generation, distribution, and consumption of electricity throughout the economy;*
  - (h) promotion of the use of renewable energy;*
  - (i) promotion of private investment and innovation in the electricity sector;*
  - (j) creation of incentives for the private sector participants in the electricity sector to continuously improve performance in operations and customer service;*
  - (k) provision of investment and job opportunities for citizens of The Bahamas; and*
  - (l) provision of a regulatory structure that balances the interests of and affords opportunities for input from all stakeholders, honours contractual commitments and encourages investment.*

(2) Section 7 provides for URCA to issue regulatory processes that are fair, objective, non-discriminatory, transparent, and that seek to implement the NEP and ESP.

(3) Pursuant to section 9, BPL may enter into contracts with consumers in the Island of New Providence and designated Family Islands for the supply and purchase of electricity on terms and conditions approved by URCA. It allows for BPL to support the Government's NEP, including promoting and facilitating the development and use of renewable electricity generation resources and technology.

(4) Section 28 describes the legal framework for renewable energy projects advanced by the Government and small-scale business or commercial enterprises, as follows:

(1) *URCA shall approve in writing the installation or operation of generating stations using prescribed renewable energy resources where—*

(a) *renewable energy self-generation projects are advanced by—*

i. *the Government, in any place in The Bahamas, in relation to the supply of energy to premises occupied by a ministry, department, statutory body, agency, local government council, or other entity of Government;*

ii. *a small-scale business or commercial enterprise within The Bahamas;*

(b) *such stations meet the requirements of, and are operated in accordance with regulatory or other measures issued by URCA; and*

(c) *such stations have no adverse impact on the reliability of the electricity supply system.*

(2) *URCA shall maintain and publish, in accordance with section 43, a list of the names of the entities granted approval under this section together with the corresponding sizes and aggregate kilowatts of the installed generation stations.*

(5) Under section 41 of the EA, URCA has a duty to consult with the public on matters which, in the determination of URCA, are of public significance.

(6) Part VIII of the EA outlines the process of Consultation and Publication by URCA.

Section 41 of the EA prescribes URCA's duty to consult, section 42 prescribes what constitute regulatory and other measures of public significance, and section 43 prescribes URCA's duty to publish documents.

(7) Therefore, on 26 September 2019, URCA issued a Consultation Document (ES 05(B)/2019) in respect of the **"Guidelines for the Approval of RESG Projects- Small Commercial and Government."**

(8) Having reviewed the responses and submissions received to its public consultation from BPL and other interested parties URCA now considers it appropriate to make certain determinations regarding **Guidelines for the Approval of RESG Projects- Small Commercial and Government.**

### **URCA hereby determines as follows:**

#### **(1) Definition of RESG**

*A Renewable Energy Self-Generation (RESG) project is a system for the generation of electricity which:*

i. *Is installed for the use of [and owned by] the Government or a small-scale business or commercial enterprise, which is itself a consumer of electricity;*

- ii. *Generates electricity using renewable electricity resources<sup>6</sup> [only]; and,*
- iii. *Is designed to produce electricity solely or primarily for the use of its owner.”*

The term RESG shall be used solely to describe systems approved under these proposed Guidelines in accordance with section 28 of the EA. For the avoidance of doubt, a RESG project shall not include an SSRG installation<sup>7</sup>.

## (2) RESG Compensation

URCA determines the following compensation principles for customers who have installed RESG systems which are tied to the BPL electricity grid:

- Customers installing RESG projects 100 kW – 500kW shall be allowed to do so under a Net Billing arrangement as recommended by BPL.
- RESG projects 500kW – 1000kW shall be installed under a provisional price mechanism of Buy-All, Sell-All. . A Buy-All, Sell-All arrangement offers a standard sell rate to a Grid-tied RESG owner for all the electricity generated by the owner.
  - the customer would be required to pay for all electricity used by the customer (whether self-generated or BPL generated) pursuant to the current billing arrangements; and
  - BPL would be required to credit the customer’s monthly bills for all electricity produced by the customer’s RE system at the applicable monthly fuel charge per kWh during the period when the electricity was produced.

## (3) Approved RESG System Limit

URCA **shall** approve, pursuant to section 28 of the EA, RESG systems meeting the following criteria:

- The maximum installed capacity for an RESG System shall be 1000kW;
- RESG systems may be installed and/or owned:
  - By business or commercial customers installing RESG capacity solely or primarily for their own use; and
  - By or on behalf of the Government for the supply of electricity solely or primarily to premises occupied by a ministry, department, statutory body, agency, local government council or any other entity of Government, for their own use.
- The aggregate grid tied RESG capacity approved by URCA **shall** be no more than 10 percent of the gross energy generation or capacity of the relevant PES on the islands;

---

<sup>6</sup> “renewable electricity resources” means generation resources that derive electricity from sources that are naturally replenished and includes, but are not limited to, solar energy, wind, hydro-power, geothermal, biomass, wave power, ocean thermal power and waste-energy technologies;

<sup>7</sup>[https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD\\_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf](https://www.urcabahamas.bs/wp-content/uploads/2018/06/SOR-and-FD_Bahamas-Power-And-Light-Limited%E2%80%99s-Small-Scale-Renewable-Generation-Plan-.pdf)

- URCA’s approval of grid tied RESG systems shall be subject to coordination between the customer, the PESL and URCA, to ensure grid reliability, safety and stability to URCA’s satisfaction;
- BPL shall be required to provide the technical parameters for the RE generation facility, and interconnection to the grid, including terms and conditions for the applicable interconnection agreement;
- BPL shall be required to identify appropriate locations on BPL’s grid for interconnection, and any applicable limitations at such locations for the integration of RE generation; and
- The economic parameters of the arrangements (applicable charge or charging methods) may be amended by URCA making appropriate determinations following the process set out in the EA.

#### **(4) Shared Ownership**

URCA **shall** approve RESG systems under shared ownership provided certain key criteria are met.

- Shared Ownership RESG will allow community operated self-generation facilities, under which several people invest in an eligible system, and are therefore able to benefit from and participate in the RESG program.
- Shared ownership customers must maintain a legal and beneficial ownership interest in an eligible facility. These self-generation customers must share the responsibilities and costs of the facility and resulting proportional benefits.
- The shared ownership customers must designate one contact person to serve as the liaison between the owners and utility. Up to 4 meters can receive credits from a single eligible facility. Credits from nettable<sup>8</sup> energy shall be allocated to participants according to each customer's ownership interest in the facility.

RESG installations (100kW to 1000kW) in-service prior to these Guidelines coming into force will not be grandfathered, but will also be required to conform to the Guidelines and become regularised.

#### **(5) Terms and Conditions for Grid-tied RESG**

##### **Contract Term**

URCA determines that customers will enter into a contract with the PESL, with a term of fifteen (15) years, which term is renewable on agreement between the parties in the form approved by URCA, as amended from time to time. This time frame is consistent with the avoided cost credit of self-generation construct that is offered under the Grid-tied RESG arrangement.

##### **Permits, Licences and Government Approvals**

URCA determines that all relevant environmental permits and licences to be obtained by the customer in connection with the customer’s RESG facility are required to be maintained and complied with by the customer throughout the terms of the contract/agreement.

---

<sup>8</sup> **Nettable energy** is now the entire amount of energy generated by the facility, including the amount consumed by a customer “behind-the-meter

### **Maintenance**

URCA proposes that customer is required to properly maintain the RESG facility and retain proper maintenance records.

### **Purchase and Sale of Electricity**

URCA proposes that the customer will continue to receive electricity supply from the PES and pay for consumption in accordance with the PES's standard terms and conditions and the prevailing and applicable electricity rates. The PES will receive and purchase all energy generated from the customer's RESG facility whenever it becomes available at the provisional fuel rate avoided cost of generation price as established by URCA in lieu of a comprehensive cost based pricing study to be completed in 2020.

### **Billing Mechanism**

URCA determines that the billing mechanism under the Grid-tied RESG Contract shall consist of the following:

- Statements are required to be generated monthly by the PES detailing energy consumed by the customer and energy supplied to the grid;
- Amounts payable under the Contract shall be:
  - i. the amounts owed by the customer to the PES for energy consumed from the national grid; and
  - ii. the amounts owed by the PES to customer for energy supplied by the customer's facility.

Net amounts payable by the PES shall be credited to the customer's account monthly.

### **Pricing**

URCA determines that:

- Customers shall continue to pay the applicable rate for electricity consumed from the national grid as approved by URCA from time to time; and
- The PES shall pay the avoided cost of generation rate as established by URCA from time to time. At this time, URCA proposes to establish the rate as the system's total monthly fuel cost, (in month "i") divided by the net generation (in month "i") for energy supplied to the national grid.

### **Metering:**

URCA determines that revenue class demand meters shall be used to measure the interchange of energy from the national grid and the customer's RESG facility. The meters shall be the property of the PES and purchased at the cost of the customer, except that where the customer already has a meter which is to be replaced with a revenue class demand meter, then the customer will only be required to pay the difference between the cost of the revenue class demand meter, and the value of the meter being replaced. Also, in the event that the customer opts to install a production meter on his or her RESG facility to enable auditing and monitoring of the facility's profile, all costs associated with the installation of such a meter shall be borne by that customer.

### **Discrepancies:**

URCA determines that where the meter is found to be inaccurate or malfunctioning, the PES and the customer shall use all available information to agree the energy consumed/supplied and amounts payable during the period

of inaccuracy or malfunction, failing which the matter may be submitted to URCA for resolution. Customers may, with notice to the PES have the meter tested by The Bahamas Bureau of Standards and Quality at the customer's cost.

**Security Deposit:**

URCA proposes that customers who are parties to a RESG Contract are required to continue to maintain the security deposit payable under the PES's Standard Terms and Conditions of electricity supply to its customers.

**Insurance**

URCA determines RESG facility owners are required to establish and maintain full insurance coverage for loss and damage resulting from the operation of the RESG facility.

It is recognized that the requirement for insurance coverage is intended to mitigate against personal and property damage which may arise as a result of the operation of the renewable system with the three primary concerns being:

- a. Shock hazards for utility line personnel working on a line that may become unexpectedly energized;
- b. Damage to the utility's or customer's equipment resulting from a RESG system operating outside of specifications;
- c. Interference with automated distribution system protection functions, such as reclosing.

The safeguards against such incidents (which are accepted as rare in properly structured jurisdictions) are the use of equipment that has been approved/certified and having a competent electrical inspector.

**Disconnection:**

The PES may disconnect the customer's RESG facility from the national grid for non-payment of sums owing by the customer to the PES, in accordance with the PES's standard Conditions of Service, but subject to URCA's prior approval.

**Technical Requirements:**

URCA determines that:

- The customer's RESG facility shall be properly tested, commissioned and certified by the Government Electrical Inspector;
- The customer's RESG facility shall be designed, constructed and operated in accordance with all applicable industry standards and the PES technical guidelines; and
- Customers are required to install an interconnection disconnect switch and a generator disconnect switch to facilitate interruption of energy from their generation facilities or disconnection of the generation facilities as contemplated under the Standard Offer Contract<sup>9</sup> (SOC).

---

<sup>9</sup> PES Licence Condition:- The Licensee shall develop and implement a Standard Offer Contract (SOC), which shall be subject to approval by URCA and which shall reflect the objectives of Government's policy, to facilitate and encourage the development of residential and small commercial renewable energy generation.



### **Responsibility for Upgrades to PES network.**

URCA determines that a Grid-tied RESG customer shall be responsible for the total cost of any upgrades such as transformer changeouts or primary/secondary line rebuilds that are required due to the connection of the approved RE facility. Any work that is required to upgrade the PES' system to accommodate the RESG production facility shall be completed by PES personnel.

### **Interconnection**

Interconnection represents the last stage in the process before generation begins. URCA has determine that provisions for interconnection shall form part of the arrangement established in the Agreement between RESG and PES. The process is as follows:

- Customers proposing RESG are required to submit an interconnection application and an application fee;
- The PES assesses impact to its system and establishes a cost for interconnecting with and usage of its distribution system;
- The PES and the customer execute an Interconnection Agreement with Interconnection Standards if customer moves forward;
- RESG Customer demonstrates liability insurance and regulatory compliance - The goal is safe interconnection of any new generation.

### **(6) Terms and Conditions for Non Grid-tied RESG**

The following guidelines shall apply to all Non Grid-tied (off Grid) RESG systems.

#### **Requirement for Approval**

#### **Permits, Licences and Government Approvals**

URCA determines that all relevant environmental permits and licences to be obtained by the customer in connection with the customer's RESG facility shall be maintained and complied with by the customer throughout the terms of the contract/agreement.

#### **Maintenance**

URCA determines that customer shall properly maintain the RESG facility and retain proper maintenance records.

### **(7) Application for RESG System Approval**

URCA determines that Applications for Grid-tied RESG projects shall be made to URCA using the Application Form attached to, and determined by URCA in accordance with the process outlined in, Appendix A.

## **5 CONCLUSION AND NEXT STEPS**

The document represents URCA’s assessment of the responses received and Final Decision on the **Guidelines for the Approval of Renewable Energy Self-Generation Projects – Small Commercial and Government** (ES: 05/2019). Applications procedure for Grid-tied RESG projects approval are attached in Annex 1.

This Final Decision will now provide the **Guidelines for the Approval of Renewable Energy Self-Generation Projects – Small Commercial and Government**

## **Annex I: APPLICATION PROCESS AND APPLICATION FORM FOR RESG PROJECTS**

This Application Process sets out the procedure for applications for the installation, and operation of Renewable Energy Self-Generation (RESG) Projects which comply with the requirements set out in the Guidelines for Approval of RESG Projects<sup>10</sup>. For any project which falls outside of the current framework interested persons should contact URCA for specific consideration at [info@urcabahamas.bs](mailto:info@urcabahamas.bs), or see [URCA's website](#) for further information.

URCA is responsible for reviewing and approving applications for RESG projects advanced by the Government or small-business and commercial enterprises.

For Grid-tied RESG systems the application process is outlined in STEPS 1 – 6 below.

For non-Grid tied RESG systems, the application process will comprise STEPS 1 – 3 below.

URCA's approval does not, by itself, allow the installation, operation and use of a RESG system. All RESG systems must be approved by the Ministry of Public Works (MOPW) as evidenced by an Electrical Inspection Certificate before commissioning. Applicants for Grid-tied systems must also enter into an Interconnection Agreement and interconnect with the applicable Public Electricity Supplier (PES), the technical terms and conditions for which must be negotiated and agreed with the PES.

It should be noted that URCA's approval is not approval to start the project. An applicant commencing a project prior to receiving all necessary (in particular MOPW) approvals, or in the case of a Grid-tied RESG without having agreed the technical interconnection with the PES, does so at their own risk and expense.

The laws governing renewable energy within the sector can be found in Part V of [The Electricity Act \(EA\), 2015](#). Section 28 of the EA relates specifically to URCA role in the approval of renewable energy self-generation projects.

---

<sup>10</sup> [Reference to Final Guidelines Document]

## RESG Application Process

Applications for RESG Projects may be submitted to URCA at any time.

Application shall be made by submitting the **completed Application form and all supporting documents** electronically in .pdf format together with three printed (3) copies. Electronic copies may be submitted on secure removable USB compatible storage media, or by email to [info@urcabahamas.bs](mailto:info@urcabahamas.bs). Applications in excess of 8MB must be submitted on removable storage media.

The RESG Application Fee of \$250 must be paid at the time of submission. URCA shall not process any application unless the Application Form is fully completed, all required supporting documents (as set out on the form) are submitted, and the Application Fee paid in full. URCA accepts payment by cheque or credit card.

### STEP 1

The application shall be submitted on the attached form and must, at a minimum, provide the following information:

- Identification of ownership group
- Size and type of facility
- Description of the technology
- Technical details of proposal
- Projected capacity availability and annual energy supplies to the grid (Grid-tied RESG only)
- Tentative project implementation milestones
- Interconnection details (Grid-tied RESG only)
- Status of site selection or acquisition

### STEP 2

URCA will acknowledge the receipt of the Application within 5 working days of receipt, at which time URCA will confirm whether the application is complete for processing. If an application is incomplete, URCA will provide a list of the missing information, document or fees, and the applicant will have a period of one month within which to complete the Application, failing which the Application will be deemed incomplete, and the Application Fee refunded. Where an application has been deemed incomplete, URCA will destroy any documents received and the applicant will be required to restart the process in full.

### STEP 3

Following acknowledgement of a complete Application, URCA will conduct its analysis of the Application. URCA may, as part of the analysis consult with other relevant entities or persons (which may include Government entities and the relevant PES) in relation to the feasibility of the proposed RESG system.

URCA's will evaluate the proposal on the basis of:

- Compliance with URCA RESG Guidelines
- Technical feasibility
- Safety (including Grid Safety and Stability for Grid-tied systems)
- Legal and Financial soundness
- Environmental protection
- Energy efficiency
- Economic robustness

URCA will provide its decision within sixty (60) calendar days of receipt of a completed Application.

URCA's decision will be by way of Certificate of Approval of the RESG System, or a letter advising the applicant of the non-approval, with reasons.

For Grid-tied systems, the Approval process will continue through the remaining steps 4 - 6 set out below.

#### **STEP 4**

Where URCA approves a Grid-tied RESG system, URCA in consultation with the applicant and the relevant PES, will specify a time period for the negotiation of the Interconnection Agreement between the applicant and the PES, which shall commence no later than fourteen (14) calendar days after URCA's approval, and shall be no longer than thirty (30) days.

The Interconnection Agreement (including price, and all other details save for technical interconnection) shall be in the form approved by URCA and appended to the RESG Approval Guidelines. The technical details of the interconnection of the RESG system to the PES grid shall be subject to negotiation and agreement between the RESG applicant and the PES. In the event that agreement cannot be reached between the parties within the timeframe established by URCA for negotiation, URCA shall invite and consider submissions by both parties and determine the terms and conditions of the Interconnection Agreement, which determination shall be final and binding on the parties.

The Interconnection Agreement and all associated documents shall be submitted to URCA for approval.

#### **STEP 5**

URCA shall, within seven (7) days of receipt of the Interconnection Agreement provide its decision. URCA may require changes to the Interconnection Agreement where such changes are reasonably necessary to comply with any provision of the EA or to meet the ESP objectives.

#### **STEP 6**

The Interconnection Agreement and all other approvals (i.e. environmental and those related to construction) must be obtained by the RESG applicant before clearance will be given by URCA for interconnection to the public electricity supply system.



**RENEWABLE ENERGY SELF-GENERATION SYSTEM  
APPLICATION FORM**

All sections of this Application Form must be completed.

The **completed Application form and all supporting documents** must be submitted electronically in .pdf format together with three printed (3) copies. Electronic copies may be submitted on secure removable USB compatible storage media, or by email to [info@urcabahamas.bs](mailto:info@urcabahamas.bs). Applications in excess of 8MB must be submitted on removable storage media.

**1. Customer Information**

Name: \_\_\_\_\_ P. O. Box: \_\_\_\_\_

Street Address: \_\_\_\_\_

Directions: \_\_\_\_\_

\_\_\_\_\_

Island: \_\_\_\_\_ PES Account #: \_\_\_\_\_ PES Meter # \_\_\_\_\_

Telephone: Work: \_\_\_\_\_ Mobile: \_\_\_\_\_ Home: \_\_\_\_\_

Email address (REQUIRED): \_\_\_\_\_

Account Type   Commercial      Government  

**2. System Installer Information**

	RE Contractor	Electrical Contractor
Contact Person		
Company Name		
P.O. Box		
Telephone (Work)		
Telephone (Mobile)		

Email Address		
License Number		Mandatory

**3. Facility Information**

Photovoltaic (Solar) \_\_\_\_\_ kW (nom) \_\_\_\_\_ kW (peak)      Wind Turbine \_\_\_\_\_ kW

PV Module Mfr. \_\_\_\_\_ Model # \_\_\_\_\_ Power \_\_\_\_\_ Qty. \_\_\_\_\_

Wind Module Mfr. \_\_\_\_\_ Model # \_\_\_\_\_ Power \_\_\_\_\_ Qty. \_\_\_\_\_

Total Installed Generation: \_\_\_\_\_ kW AC

Installation Type: Off Grid  Split Circuits  Transfer Switch  Grid Tied

Other (please specify):

Inverter utilized:                      Yes                       No

Inverter Mfr. \_\_\_\_\_ Model # \_\_\_\_\_ Qty. \_\_\_\_\_

Inverter: Power Rating \_\_\_\_\_ kW    Rated AC Voltage \_\_\_\_\_ V    Rated Frequency \_\_\_\_\_ Hz

Listing Standard (e.g., UL1741) \_\_\_\_\_

Battery storage installed:      Yes                       No                       Capacity (Ah) \_\_\_\_\_

Off-Grid output capable (Backup Power Capable):      Yes                       No

Is there any existing Electric Generating Equipment at this location?      Yes                       No

If "Yes", please provide details (i.e., A description and any particular characteristic of the equipment which the customer/installer believes may impact the functionality of the system that is the subject of this application)

**It is required that the following be attached to this application**

- An electrical schematic diagram of the proposed installation arrangement
- Copies of the technical specifications, operation and installation manuals of the proposed equipment.
- Proof Non Refundable Application Fee of \$250 has been paid (*Please keep a copy of your receipt for your records*)

FOR OFFICIAL USE ONLY



**Failure to attach these documents will result in the application being denied.**

Signature \_\_\_\_\_

Date \_\_\_\_\_

Application, documents and proof of payment must be submitted in an envelope marked:

**Renewable Energy Self-Generation Program Application – (Applicants Name)**

**For Delivery to URCA, Utilities & Energy Sector Division**

and must be delivered to:

**Director of Utilities & Energy**  
Utilities Regulation & Competition Authority  
Frederick House, Frederick St.  
P.O. Box N-4860  
Nassau, Bahamas  
[info@urcabahamas.bs](mailto:info@urcabahamas.bs)

**Application Form Help**

In order to efficiently process applications it is critical that all the information be accurately filled in on the form. It is recommended that you have your system installer/electrical contractor assist you in completing this document if you are not familiar with all of the technical elements of your system, as incomplete or incorrect submissions will delay processing.

**Section 1 Customer Information**

In this section information pertaining to the customer should be filled in. For Grid-tied RESG the Public Electricity Supplier Account information must be supplied, the customer name must be the same as the name on the



account, and the application must be signed by a duly authorised person. Future agreements will be done in this name so it is critical that that correct information be provided.

All contact information should be filled in, especially the email address as this will be the primary method of contact with respect to the application.

**Section 2 – System Installer information**

In this section you are required to provide information on the system installer that erected your systems and the locally (Bahamas) licenced electrical contractor that is responsible for the electrical components of the installation. It must be noted that it is a requirement for all system installations to have an associated licensed electrical contractor associated who is required to submit an electrical permit for the installation to the Ministry of Works and receive an approved Electrical Inspection Certificate as prerequisites to a system being allowed to be approved for activation. This applies to both Grid Tied and Off Grid installations.

It is vital that this information be provided so that contact can be made with these individuals if necessary.

**Section 3 – Facility Information**

In this section you are to provide technical details on the system to be installed.

Name Plate Rating of each Customer – Generator System: \_\_\_\_\_ kW AC

This should be the normal AC output rating of each installed system. So if multiple inverters are used then this would be an indication of the output of each inverter.

Example 1      1 x 2000W (solar), 1 x 1 x 500W (wind)

Example 2      10 x 200W (solar, micro inverters)

Total Installed Generation: \_\_\_\_\_ kW AC

This is the total nominal AC output of the system

Example 1      2000W + 500W = 2500W

Example 2      10 x 200W = 2000W

Type:

Photovoltaic (Solar) \_\_\_\_\_ kW (nom) \_\_\_\_\_ kW (peak)

Wind Turbine \_\_\_\_\_ kW

Here you indicate the type of system installed. If both wind and solar are installed select and complete both accordingly.

Installation Type: Off Grid  Split Circuits  Transfer Switch  Grid Tied

Other (please specify):

Here select the grid connection type to be employed.

- Off Grid: The building/property is totally disconnected from the grid, that is, no utility service wire or cable connected to the building.
- Split Circuits: Some circuits in the building supplied by renewables and some supplied by the grid. The two electrical systems are in no way electrically or mechanically connected to each other.
- Transfer Switch: The building/property can be fed by either the grid or the RG, but the two sources are separated via a transfer switch. That is, the two sources are never tied to the load at the same time.
- Grid Tied: The building/ property is connected to the grid and the RG in parallel at the same time. That is, energy can flow in either direction.

Inverter utilized:                      Yes                       No                     

Here you are to indicate if inverters are being used as a part of the installation configuration

Inverter Mfr. \_\_\_\_\_ Model # \_\_\_\_\_ Qty. \_\_\_\_\_

Inverter: Power Rating \_\_\_\_\_ kW    Rated AC Voltage \_\_\_\_\_ V Rated Frequency \_\_\_\_\_ Hz

Listing Standard (e.g., UL1741) \_\_\_\_\_

If inverters are being used indicate their make (manufacturer) and model number. This is required in the event more research beyond what is provided in your submitted technical documents is needed. This includes information on micro inverters that might be integrated with the solar panels in some cases.

Battery storage installed:            Yes                       No                       Capacity (Ah) \_\_\_\_\_

In this area you must indicate if your system has battery storage and the total amp hour (Ah) capacity of the battery storage system.

Off-Grid output capable (Backup Power Capable):            Yes                       No

Here you indicate if your system is capable of supplying power to the home when the utility supply is not available. This is not the usual mode of operation for a grid tied system and generally requires a more sophisticated inverter arrangement.

Is there any existing Electric Generating Equipment at this location?            Yes                       No

Indicate Yes if there is any other source of electricity (other than the utility) supplying the property. This includes but is not limited to emergency generators and other renewable energy sources.

If “Yes”, please provide details:

Provide brief details of the existing generating equipment if you answered yes to the previous question.

**N.B.: Applicants for Grid Tied systems are hereby advised of the need to execute an interconnection agreement with the Public Electricity Supplier, and of the possibility of further commissioning requirements implemented in order ensure grid stability and safety.**