



**THE BAHAMAS POWER AND LIGHT COMPANY LIMITED**

**Response to Consultation on**

**Standard for Power Quality and Reliability in**

**Electric Power Systems**

**Submitted to**

**The Utilities Regulation and Competition Authority**

**27 October 2023**

## **Introduction and General Comments**

The Bahamas Power And Light Company Limited (BPL) thanks the Utilities Regulation and Competition Authority (URCA) for the opportunity to provide its response to its consultation on Standards for Power Quality and Reliability in Electric Power Systems (ES 06/23) issued on 27<sup>th</sup> September 2023.

BPL notes URCA's objectives in undertaking the implementation of rules that outline the minimum technical standards for electricity supply. BPL is in agreement with URCA that such standards will assist in mitigating the inherent risks associated with the production of electricity. BPL recognizes that the now repealed Electricity Act, Chapter 194 did in fact include frequency and voltage standards and that the same were not included in the Electricity Act 2015 (the Act). BPL further notes that while the same was not explicitly included in the Act, BPL has maintained and still applies those standards in its operations. This is evidenced by the inclusion of the same in BPL's approved Consumer Protection Plan.

BPL commends URCA for its decision to reestablish and possibly expand on those standards and provides below, its representations in respect to URCA's proposals as contained in the Consultation Document and specific responses to the questions contained therein. BPL submits that failure to address any specific statement in the Consultation Document does not signify BPL's agreement to the same.

### **Section 1**

In this Section BPL provides its views on matters discussed in Section 4 of the Consultation Document.

#### Average System Availability Index

BPL notes that, in relation to this standard, URCA proposes to establish minimum acceptable service levels for SAIDI, SAIFI, CAIDI, and ASAI and signals its intent to develop minimum acceptable levels for the additional performance indices at the customer level at a later date and to consult on that process.

BPL requests an indication of whether URCA would support an additional short-term rate component to fund the necessary technology needed to provide accurate information for the calculation of these indices.

### **Section 2**

In this Section BPL provides its responses to the consultation questions posed by URCA in relation to its proposed standards discussed in Section 5 of the Consultation Document and Annex A.

#### **Applicability of the Proposed Technical Standards**

**Consultation Question 1 - Are there any other relevant standards not included in this consultation document, which URCA ought to include?**

BPL is of the view that there are no other relevant standards necessary at this time.

**Consultation Question 2 - Is this a reasonable time for the implementation of the standards contained herein?**

BPL submits that this is not a reasonable time for the implementation of the standards contained in the consultation document.

If GTDS is to accurately report the indices indicated, capital funding would have to be sourced and the solution implemented. Alternatively, BPL considers that URCA would have to accept the GTDS methodology for estimating the required input data.

**Consultation Question 3 - Do you agree with the definition of the Point of Common Coupling? If not, please provide an alternate definition with justification.**

BPL does not agree with the definition of the Point of Common Coupling as it is of the view that the definition in the document is somewhat unclear and suggest a metering configuration that may not be the case. BPL recommends the following definition:

***Point of Common Coupling: The point where the electrical conductors of the utility's distribution system are connected to the customer's conductors and where any transfer of electric power between the customer and the distribution system takes place.***

BPL submits that the suggested definition maintains consistency with definitions used in BPL's SSRG and MSGR grid interconnection requirements.

**Consultation Question 4 - Do you agree with the supply voltage limits proposed by URCA? Please give reasons why you do or do not agree with these limits and provide alternative limits. Please provide full reasoning in support of your response.**

The now repealed Electricity Act, CH 194 Rules allowed for low voltage distribution at three-phase, 60 cycles, 115/200 volts and 120/208 volts, 4-wire (neutral wire earthed) and single phase 115/230 volts and 120/244 volts, 3-wire, 60 cycles according to area:

BPL considers that provided that part of the Lyford Cay Development presently supplied at 240/415 volts, three-phase, 4-wire, with single phase 120 volts, voltage from dry-core transformers may continue to be so supplied.

Therefore, BPL is of the view that some of these voltages are/may be implemented on the existing network. It therefore may be impractical to exclude these voltages until they are no longer a part of the network.

**Consultation Question 5 - Do you agree with the allowable voltage deviation limits proposed by URCA? Please give reasons why you do or do not agree with these limits and provide alternative limits. Please provide full reasoning in support of your response**

BPL agrees with the allowable voltage deviation limits proposed by URCA. This is in line with BPL's current standards.

**Consultation Question 6 - Do you agree with the allowable frequency deviations proposed by URCA? Please give reasons why you do or do not agree with these limits and provide alternative limits. Please provide full reasoning in support of your response**

BPL agrees with the allowable frequency deviation limits proposed by URCA. This is in line with BPL's current standards.

#### **5.4 Harmonic Deviation**

URCA states that it recognizes the impact that the addition of harmonic adding equipment can have on the system and encourages system operators to advise consumers of these effects and to not add equipment that affects the impedance characteristics in a way such that the voltage distortions are increased. Further URCA states that system operators shall make every effort to minimize the harmonics produced and supplied to end users and transmitted to the grid from end users.

**BPL's Response:**

BPL submits that, although this statement indicates that URCA recognizes that harmonics on the system can be caused by end-users, it does not give operators the option of applying penalties, nor does allow for the issuance of fines by URCA for creating excessive harmonics.

Additionally, BPL considers that this section does not establish a standard for end-users regarding the level of harmonic generation they must stay below. BPL questions whether URCA will develop standards that end-users must meet. Further, will URCA support the implementation of penalties, fees and charges to be imposed on offending end-users by the operators?

**Consultation Question 7- Do you agree with the allowable harmonics limits proposed by URCA? Please give reasons why you do or do not agree with these limits and provide alternative limits. Please provide full reasoning in support of your response**

BPL does not agree with the allowable harmonics limits proposed by URCA. BPL is of the view that these levels cannot be agreed with, as there is no data on the current level of harmonics on the system. Accepting these values in advance of establishing the current base line would not be prudent in BPL's view.

**Consultation Question 8 - Do you agree that a recordable event should be any interruption that lasts more than 5 minutes? If not, please provide an alternative value with justification.**

BPL agrees. BPL is of the view that this is consistent with the IEEE standard that BPL uses for the calculation of the indicated indices.

**Consultation Question 9: As a licensee, how will you comply with this requirement? For example, where and how will the event be recorded?**

As previously indicated, in order to gather the required input data (individual customer outage frequency and duration) a major capital investment would be required. In the absence of this, a methodology for estimating the values would have to be used.

**Consultation Question 10: Do you agree with the proposed maximum SAIDI, SAIFI, CAIDI and ASAI values for New Providence proposed by URCA? Please give reasons why you do or do not agree with these limits and provide alternative limits. Please provide full reasoning in support of your response.**

BPL does not agree with the maximum SAIDI, SAIFI, CAIDI and ASAI values proposed for New Providence by URCA. BPL's SAIDI estimate for the last fiscal period was 2.32 times higher than URCA's proposed reliability indicator target. Additionally, BPL's CAIDI target compared to the proposition by URCA is 16.4 times higher and its SAIFI is 1.69 times higher. BPL is of the view that until the injection of significant capital investments for data gathering and monitoring, system reinforcements and further grid modernization, modest decreases of 2.5% per annum for 2024-2026 are proposed for SAIDI, CAIDI, SAIFI as compared to BPL's F2022 estimates.

**Question 11: Do you agree with the proposed maximum SAIDI, SAIFI, CAIDI and ASAI values for the Family Islands proposed by URCA? Please give reasons why you do or do not agree with these limits and provide alternative limits. Please provide full reasoning in support of your response.**

BPL submits that the Family Islands operations have no historical data with which to compare the target values suggested by URCA. BPL undertakes to begin to compile this data and thereafter determine if the target values are acceptable. As stated above, significant capital investments for data gathering and monitoring, system reinforcements and further grid modernization are required to assess reachable and sustainable targets.

**Conclusion**

BPL supports URCA in its establishment of power quality and reliability standards, however, with some reservations as to the timing of the same, for the reasons stated above.

**Reservation of Rights**

BPL reserves the right to comment further on all issues raised in the Consultation Document. The decision not to respond to any issue raised therein does not indicate BPL's agreement with URCA's position taken nor does any position taken by BPL in its response constitute a waiver of BPL's rights in any way.

Respectfully submitted

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On behalf of The Bahamas Power and Light Company Limited