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The Director of Utility regulation,
Fair Trading Commission,
Good Hope,
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16 May 2018



OFFICE OF CHIEF EXECUTIVE OFFICER FAIR TRADING COMMISSION REFERRED TO	
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HRO	
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RENEWABLE ENERGY SUPPLIER AGREEMENT FOR DISTRIBUTED GENERATORS >500kW

Dear Madam,

Following your invitation for comments on the proposed BL&P regulations, relating to facilities larger than 500 kW, we have reviewed the document and our comments are attached.

We would be pleased to provide any additional information or discuss our comments if required.

Sincerely,

A handwritten signature in cursive script that reads "Hallam Edwards".

Hallam Edwards

Chairman

RENEWABLE ENERGY SUPPLIER AGREEMENT FOR DISTRIBUTED GENERATORS >500kW

General comments

We are concerned about the overall approach taken by BL& P regarding these proposed regulations. The impression is given that BL&P perceives that it has the right to control the type of plant being used by a supplier, the type of financial arrangement, and a right to intervene and take over the plant under a number of situations.

Philosophically we are opposed to this approach, with the utility dictating the action of suppliers and imposing constraints, restrictions and impositions at their sole discretion.

This is evident in clauses referring to consent of assignment, unnecessary liquidated damages, Unnecessary daily forecast for intermittent suppliers, right of intervention, dictating the use of equipment, ignoring the rights of suppliers to develop and test new equipment, and numerous other examples.

We accept that all equipment installed on the grid must be of appropriate quality and reliability to ensure adequate levels of security of supply. We also accept that suppliers must act responsibly and meet deadlines for the commissioning of approved projects, and project outputs, in order to maintain an efficient and reliable grid supply.

However, the regulations must address the national interests and the interests of suppliers from a cross-section of society providing and sharing in the economic benefits. The regulations should be free of artificial barriers which deter new entrants to the energy market.

There should also be no provision which allows the utility to intervene and unilaterally take over the operations of a supplier. There are provisions which can be implemented to achieve the objectives through established commercial procedures.

Categories

There are a number of clauses and provisions which should relate solely to intermittent suppliers, and others to continuous suppliers

We recommend that the regulations be arranged in three parts:

- Common provisions
- Intermittent suppliers
- Continuous suppliers.

Reciprocity and Interests

The regulations must be based on principles of reciprocity. BL&P has clearly laid out provisions for mitigating its risks with suppliers and there must be similar provisions for mitigating the risks of suppliers. It must also be recognized that there are different interests and exposures of the parties. For example, BL&P seeks the right to withhold payments due suppliers. The agreement is essentially one where BL&P pays the supplier, and is therefore in a position to withhold payments.

The suppliers will seldom owe money to BL&P and will therefore have no such meaningful right. For this reason, we have recommended to limit the amount of payments that BL&P can withhold at any one time. It should also be recognized that the supplier has one source of income, and that is from BL&P. Any withholding of payments, justified or not, could threaten the existence of the supplier. BL&P will not face a similar situation with payments withheld by a supplier.

Energy Storage

There is no reference to energy storage and presumably suppliers will be given the opportunity to provide energy storage capacity. The provisions may take some time to be developed, after BL&P has had time to evaluate the performance of the newly installed battery capacity at its St Lucy plant. Energy storage Provisions could be added as an addendum at a later date.

Balancing contradictory interests

The provisions of the regulations need to balance some interests which may appear contradictory. Proven, reliable and efficient equipment is required from all suppliers to maintain the integrity of the grid. At the same time there is the need to encourage innovation and accommodate the development of new products and technologies.

Barbados is well located, Geographically and climatically, to take advantage of solar and other renewable energies. It also faces many of the challenges of island communities including, salt laden atmospheres, hurricanes and lack of economies of scale.

It is therefore well positioned for the development and testing of renewable energy products and technologies and the regulations must accommodate this requirement.

Addendum 1 of the proposals include requirements for the supplier to provide evidence of equipment suitability "by means of at least five references in the past five years of similar sized projects". In this context these requirements are unacceptable.

Intellectual Property

The right of BL&P to be given detailed information on equipment, and to observe installation and testing needs to be restricted to protect the intellectual property rights of suppliers. In the case of developmental and innovative projects, BL&P's access should be restricted to "input and output" information necessary for the safe and efficient operation of the grid.

Transitioning Technologies

Consideration should be given to a "Transitioning technologies" or "Developing technologies" category to address the particular needs. A restriction could be placed on the size of the plant and the % of overall grid capacity assigned to this category, with projects being treated on a case by case basis. Where appropriate, there could be a tariff reduction to recognize the uncertainty of supply. Facilities should also be provided for suppliers to be reclassified to normal categories after satisfying the required reliability and availability criteria for a stated period.

The New Energy Market

History of Electricity supply

From its inception, over a century ago, the electricity market in the Caribbean has been dominated by electric utilities owned by Government or private entities, most of whom are now foreign owned. There were substantial financial and technological barriers to the market. Additionally, most of the Government entities were poorly managed and provided inadequate service. Major contributors included political interference, and utility income not being reinvested in the utility. Foreign private owners, as expected, took the profits out of the local economies for investment elsewhere. In recent years the development of renewable energy technologies has transformed the supply of electricity and provided the individual consumer with new options. Solar PV systems and small wind turbines are now available to the average consumer. Utilities are now investing in large scale solar PV and wind farms, and the concept of distributed generation is now firmly established. These developments have also transformed the economics of electricity in many ways and influenced the design of electricity grids. Distributed generation can substantially reduce the required capacity of transmission and distribution systems and save millions of dollars in capital costs.

Smart Grids

Billions of dollars are being spent globally on the development of the "smart grid". Though still ill-defined and subject to numerous interpretations, the smart grid seeks to use a number of technologies to develop a grid that can accommodate to a vast number of requirements, including energy supply and the transmission and processing of data to provide users with real time information and benefits.

Economic Grid

We now suggest the concept of the "Economic Grid" for Barbados and the Caribbean. This "Grid" covers the entire nation but is not necessarily interconnected, as it includes distributed generation. Its objectives are to:

- Eliminate the historical barriers to entering the energy market,
- Take advantage of the technological advancement in renewable and other energy supplies.
- Encourage and facilitate the active participation of, and the provision of economic benefits to, ordinary citizens, in the supply and use of electricity and energy.
- Encourage and facilitate research and development in renewable energy and other energy technologies.
- Provide customers with reliable energy service at competitive rates.
- Be a catalyst for economic development
- Reduce or eliminate the inherent advantages of large foreign investors in the market
- Maintain the market, freely open to international competition
- Implement the relevant features from the smart grid and other technologies.

The successful implementation of the Economic Grid will be dependent on Government and regulatory authorities being aware of the present challenges, committing to bring about positive change and implementing appropriate legislation and regulations to facilitate its efficient operation.

Needless to say, it would require other supportive efforts including:

Training and awareness initiatives for:

- Government employees in relevant ministries.
- Regulatory authorities
- Private sector and citizens, on the opportunities and benefits of ownership and participation

Provision of:

Adequate resources for regulatory authorities.

Development loans for qualifying businesses and individuals

The foregoing is a brief summary of a concept which would require a change in the philosophy governing electric utility and energy regulation in Barbados and the Caribbean.

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FOR DISTRIBUTED GENERATORS >500kW**

Comments on specific clauses in the proposed Regulations.

3. Performance security:

Supplier should not be required to enter into a security agreement which includes property. This exposes the supplier to possible abuse by BL & P aimed specifically at taking over the plant.

Equipment security: this is unnecessary, BL&P must provide requirements and guidelines for equipment. Supplier will submit plans and details of proposed equipment to BL&P who is required to approve the plans, or state within two weeks the specific concerns with the equipment. Supplier has the right to appeal to a pre-appointed arbitrator or body to give a ruling within a stipulated time.

3.1

The requirement for a performance security is unnecessary especially relating to intermittent suppliers who's feed in tariff is already reduced because of its intermittency. Therefore BL&P already had to accept that it must supply back-up capacity and spinning reserve. If implemented this would be penalizing intermittent suppliers twice.

Additionally, the cost of any resulting back-up generation is passed on to the customer, as it is now when BL&P equipment Fails.

The performance and equipment securities as proposed should all be removed in relation to suppliers from intermittent sources.

4.2. a

With respect to a supplier of continuous energy any liquidated damages should be a penalty to encourage contracted suppliers to meet their supply obligations on time but should not be for the purpose of providing BL&P with a windfall. Any such liquidated damages should have been according to pre-approved rates by FTC and be subject to approval of the FTC after reviewing the circumstances leading to default.

4.4 modifications to facility;

This should state "modifications to the electricity generating system at the facility". The supplier should be free to make modifications to the facility, it's site, buildings and facilities provided it does not affect the functioning of the electricity generating system, it's safety or characteristics.

The supplier should also be able to increase capacity at the site for other purposes without reference to BL&P, as long as it is not connected to the original system or the grid.

4.5 A BL&P should be required to publish clear requirements relating to features of equipment to be installed by the supplier. This should include any specific equipment characteristics needed. And there should be no performance security.

4.5 Receipt of any progress reports: BL&P should be required to respond within three days stating any concerns of plans submitted by the supplier

4.6. After operation of the facility add; "such observations may be carried out after a written request by BL&P to observe the functioning or construction of specific equipment. The supplier has the right to decline such request if in its opinion equipment is not yet in a state of installation or preparation suitable for inspection.

5.2 b Modified to read energy in excess of 110%

D delete the last sentence and add: Payment to the supplier will be based on pre-agreed rates of output for particular times of the day.

5.3 b

98% is unreasonable. BL&P already has the obligation to cover shortfalls of intermittent sources and pays the supplier reduced rates based on this assumption. Furthermore, the output of intermittent sources such as PV can vary substantially due to rain and cloud cover etc. It is therefore unreasonable to penalize a supplier whose output varies by such an insignificant %. Furthermore BL&P wants to limit the maximum output to 102 %. In summary it is impractical and unreasonable to limit the output to such a small band of + or - 2% and to apply a penalty for an insignificant shortfall, when BL&P already has the obligation to back-up the suppliers output.

6.2 c

In the event of any doubt regarding the accuracy of the meter the supplier may request a test to be carried out on the meter at the facility in the presence of the supplier. BL&P will carry out such tests within one week of receiving the request.

6.3 c.

Add: the maximum amount of payment that can be withheld by BL&P, for any particular month, is 5% of the average monthly payment to the supplier during the preceding six months.

6.4

A reciprocal clause is needed that BL&P will indemnify and hold the supplier harmless.

6.5 c

The supplier should have a right to benefit from any credits sought and obtained from international credit organizations.

6.5 d

supplier must have some recourse if BL&P acts unreasonably

8

Supplier should be entitled to a portion of any renewable energy credits. BL&P will be allowed to first deduct its reasonable expenses related to obtaining the benefit, and then supplier gets a meaningful % of the remaining benefit e.g. 25%. This recognizes that it is tedious and time consuming to obtain renewable energy credits, and the majority should go to the utility.

9.

These request for daily forecasts and on an hourly basis are impractical and meaningless for intermittent suppliers using wind or solar PV. At best the supplier could give the expected output for a typical day, a rainy day or a cloudy day. Attempting to forecast wind or cloud cover and related power output on an hourly basis is an exercise in futility.

10.2

The suppliers of marine insurance and shipping should be of no concern to BL&P. The only concern should be that the supplier has appropriate insurance to cover liabilities when the plant is connected to the grid.

13.2 b

Solar will not require 24-hour operation, only during the normal operating hours, typically 6am to 6 pm

15.2.

These provisions appear to give BL&P the right to intervene in the ownership of the facility if the supplier has difficulty in meeting its obligations with a lender. The lender has to notify BL&P of any payment difficulties and then BL&P can intervene. This is unacceptable, as the supplier must have the right to seek alternative finance, or in some other way meet its financial obligations.

The intervention by BL&P should be subject to the supplier having exhausted other options and after an agreed deadline has passed. Ideally these provisions should be deleted and BL&P can bid for ownership in competition with others through normal commercial procedures.

Schedule 1

The requirement for proven technology is understandable for suppliers of continuous energy. However, the utility should not have control over the equipment chosen by the supplier.

This is particularly so in the case of intermittent renewables where technologies are changing. The present clauses are unacceptable when suppliers must have the right to develop their own technologies or test new technologies in cooperation with third parties.

Schedule 2

Any liquidated damages for commercial operations delay for suppliers of intermittent energy should only apply after the expiration of an additional grace period e.g. three months, and this is provided that the commissioning is not delayed due to additional requirements imposed by BL&P or government agencies, or delays caused by the same parties.

Comments were made previously regarding the inappropriateness of the 98% and any charge relating to intermittent suppliers.

Schedule 6

6.1

Comments were made previously regarding the impracticality of daily predictions for the output of intermittent energy Supplies.