

BERMUDA

**REGULATORY AUTHORITY (RENEWABLE ENERGY METERING SCHEME)
GENERAL DETERMINATION 2018**

BR / 2018

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The Regulatory Authority, in the exercise of the power conferred by section 62 of the Regulatory Authority Act 2011, as read with sections 12 and 13 of that Act and sections 6, 14, 36, 65(2) and 68 of the Electricity Act 2016, makes the following General Determination:

Citation

1 This General Determination may be cited as the Regulatory Authority (Renewable Energy Metering Scheme) General Determination 2018.

Interpretation

2 In this General Determination, unless the context otherwise requires, terms shall have the meaning given in the Regulatory Authority Act 2011, the Electricity Act 2016, and the Schedule to this General Determination.

General purpose

3 This General Determination establishes the transitional renewable energy metering scheme, including a transitional rate and feed-in tariff methodology.

Determination

4 (1) This General Determination is made pursuant to the Consultation entitled "Consultation on the Regulatory Authority (Transitional Measures for Bermuda Electric Light Company Limited Solar Net Metering Scheme) Emergency General Determination" dated 16th March 2017 and the Regulatory Authority's Decision on it.

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GENERAL DETERMINATION 2018**

(2) Taking into account the received responses to the Consultation and for the reasons given in the Decision, the Regulatory Authority determines that the renewable energy metering scheme set forth in the Schedule is consistent with the purposes of the Electricity Act 2016, including to seek to—

- (a) ensure the adequacy, safety, sustainability and reliability of electricity supply in Bermuda;
- (b) encourage electricity conservation and the efficient use of electricity;
- (c) promote the use of cleaner energy solutions and technologies;
- (d) provide sectoral participants and end-users with non-discriminatory interconnection to transmission and distribution systems;
- (e) protect the interests of end-users with respect to prices and affordability, and the adequacy, reliability and quality of electricity service; and
- (f) promote economic efficiency and sustainability in the generation, transmission, distribution and sale of electricity.

Terms and conditions of General Determination

5 (1) The Schedule to this General Determination has effect.

(2) The Schedule is published on the Regulatory Authority's website (www.rab.bm), and is also available for inspection at the offices of the Authority (1st Floor, Craig Appin House, 8 Wesley Street, Hamilton HM 11) during ordinary business hours.

Effective Date of General Determination

6 This General Determination shall become effective on the day it is published in the Official Gazette.

Signed this 2nd day of March 2018



Chairman, Regulatory Authority



BERMUDA

**REGULATORY
AUTHORITY**

**Schedule to Regulatory Authority
(Renewable Energy Metering Scheme)
General Determination 2018**

General Determination
Date: 28 February 2018

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4. Final Determination

This General Determination is made by the Authority pursuant to section 62 of the Regulatory Authority Act 2011 (“RAA”) and establishes the transitional scheme for renewable energy metering, including a transitional rate and feed-in tariff methodology. The adoption and implementation of this rate and methodology is in accordance with sections 6, 14, 36, 65(2) and 68 of the Electricity Act 2016 and the general powers granted to the Authority under section 13 of the RAA and in accordance with the procedures established for this purpose in sections 61 and 62 of the RAA.

1 Definitions

“Authority” means the Regulatory Authority of Bermuda;

“BELCO” means the Bermuda Electric Light Company Limited, as established pursuant to the Bermuda Electric Light Company Act 1951;

“Commencement Date” means 28 October 2016, the date on which the EA came into force;

“EA” means the Electricity Act 2016;

“EC Response” means the recommendations presented to the Minister by the EC in a paper entitled Net Metering Inquiry Response on 11 October 2016;

“EC” means Energy Commission, the body established under the Energy Act 2009 and which (i) advised the Minister in the discharge of his functions under that Act; and (ii) considered BELCO’s proposals to vary its prices or charges; and (iii) provide a recommendation to the Minister in relation to such proposed variations of its prices and charges; and which ceased to exist when the Energy Act 2009 was repealed pursuant to section 65(1) of the EA which came into effect on the Commencement Date;

“EGD” means the Regulatory Authority (Transitional Measures for Bermuda Electric Light Company Limited Solar Net Metering Scheme) Emergency General Determination (the “Emergency General Determination”) issued by the Authority on 2nd March 2017;

“Feed-in Tariff” means the pre-determined rate at which renewable energy is purchased by the TD&R Licensee from a distributed generator, for a pre-determined period, and under predetermined conditions in accordance with Part 6 of the EA;

“Fuel Adjustment Rate” means a mechanism that is designed to recover the cost of fuel used to produce electricity, calculated based on the cost of fuel per barrel and its projected usage;

“Minister” means the Minister responsible for the Electricity sector, which is currently the Minister of Transportation and Regulatory Affairs for Bermuda;

“Net Metering Scheme” or **“Scheme”** means the scheme introduced by BELCO in or about 2010 aimed at incentivizing residential electricity customers to install solar PV, wind and tidal energy and under which they would receive payment in respect of any excess energy generated and not consumed by such customers in any calendar month and which they sold to BELCO;

“RAA” means Regulatory Authority Act 2011;

“Renewable Energy Metering Payment” means a monthly payment by BELCO to Renewable Energy Participants in respect of Renewable Energy Participants’ net excess energy in any Month, and which is calculated by multiplying the amount of such energy exported to BELCO’s grid by a set rate;

“Renewable Energy Participants” means BELCO’s residential and commercial electricity customers who: (i) currently sell excess energy generated by solar PV or Wind Generation to BELCO and (ii) any new customers who wish to sell excess energy generated by Solar PV or Wind Generation to BELCO;

“Scheme Participants” means BELCO’s residential electricity customers who have participated in the Scheme;

“Solar Photovoltaic” or **“Solar PV”** means a technology in which sunlight is converted into electrical power;

“TD&R Licence” means the Transmission, Distribution and Retail Licence referenced in section 20(1)(a) of the EA;

“Tidal Generation” means a technology in which the ocean tides (or waves) are converted to electrical power; and

“Wind Generation” means a technology in which wind power is converted into electrical power.

2 Interpretation

- (1) For purposes of interpreting this General Determination:
 - (a) unless the context otherwise requires, words or expressions shall have the meaning assigned to them by the RAA and the EA;
 - (b) where there is any conflict between the provisions of this General Determination and the EA or RAA, the provisions of the EA or RAA, as the case may be (and subject to sections 3(2) and 3(3) of the EA), shall prevail;
 - (c) terms defined herein and in the EA and RAA have been capitalised;
 - (d) headings and titles used herein are for reference only and shall not affect the interpretation or construction of this General Determination;
 - (e) references to any law or statutory instrument include any modification, re-enactment or legislative provisions substituted for the same;
 - (f) a document referred to herein shall be incorporated into and form part of this General Determination and a reference to such document is to the document as modified from time to time;
 - (g) expressions cognate with those used herein shall be construed accordingly;
 - (h) use of the word "include" or "including" is to be construed as being without limitation; and
 - (i) words importing the singular shall include the plural and vice versa, and words importing the whole shall be treated as including a reference to any part unless explicitly limited.

3 Legislative and Procedural Background

- (1) This General Determination has been undertaken in accordance with section 62 of the RAA and the exercise by the Authority of its powers under sections 6, 14, 36, 65(2) and 68 of the EA.
- (2) The Authority initiated this consultation by publishing a Consultation Document on 16 March 2017 that invited responses from members of the public, including electricity sectoral participants and sectoral providers, as well as other interested parties. The purpose of the Authority’s initial Consultation Document was to consult on the transitional tariff set forth in the EGD.

- (3) The Consultation Document asked the following questions:
- What is your view of the how renewable energy, in particular solar PV has evolved in Bermuda? Please provide views on the uptake of this technology and other technologies which may be beneficial to Bermuda.
 - Looking to the future, how important do you believe solar PV is for Bermuda? If a respondent views solar PV as important please provide your views on what its costs and benefits are, how these should be quantified, and how these should be reflected in the framework for electricity regulation.
 - Should there be capacity limits on solar systems installed on individual customers' premises in Bermuda? Should this be included within a formal licensing framework?
 - If so, who should be responsible for assessing the system sizes and their limits (BELCO, Department of Planning, RAB, etc.)
 - Should solar PV system sizing for a customers' premises be limited to the prior 12-month consumption of a residence/business and/or should it be based on forecasted consumption?
 - The Authority has, via the Emergency General Determination, and on a transitional basis, mandated that BELCO should pay for electricity received from Solar PV systems on the basis of the Energy Commission recommendations of October 2016 (see the Determination for detail). What are your views on this transitional measure?
 - What level and type of cost transparency should be mandated on BELCO to facilitate the determination of an appropriate feed-in tariff for electricity provided by Solar PV? In particular:
 - The Authority intends to mandate full accounting separation between BELCO's (i) generating, and (ii) transmission, distribution and retail activities. Please provide your views on specific aspects of BELCO's operational activities that are relevant to the cost transparency and related determination of the feed-in tariff rate?
 - What levels of cost element transparency would you expect within a BELCO feed-in tariff for Solar PV?
 - What do you believe should be the economic basis for renewable energy systems in Bermuda, specifically in the context of feed-in tariffs? Alongside any general comments by respondents please provided responses to the following:
 - Should BELCO's renewable energy Metering Scheme reflect a cost-benefit methodology or an avoided cost methodology?
 - What cost rate design for renewable energy participants is best suited to incentivizing greater utilization of cleaner energy sources and technologies in Bermuda?
 - What other factors should be considered in determining the cost rate design for feed-in tariffs?
 - Should solar PV or other renewable energy programs be incentivized within a specific regulatory framework for renewables in Bermuda?
 - In your view, are there any barriers to solar PV or other forms of renewable generation investment?

- If so, what are these barriers?
 - How could they be removed to enable further investment?
- (4) The Consultation Document also invited respondents to raise any other matters that the Authority should consider regarding the transitional solar feed-in tariff.
 - (5) Responses to the Consultation Document were solicited from the public electronically through the Authority's website at rab.bm.
 - (6) The response period commenced on 16 March 2017 and concluded on 12 May 2017.
 - (7) The Authority received eighty-three responses from the public.
 - (8) The Authority issued a Preliminary Report, Preliminary Decision and Order on 14 July 2017. The Authority invited responses from members of the public, including electricity sectoral participants and sectoral providers, as well as other interested parties.
 - (9) The Authority received 18 written responses from the public.
 - (10) On 2 September 2017, the Authority issued a notice extending the EGD until 2nd March 2018, in accordance with section 66(6) of the RAA.

4 Final Determination

- (1) Pursuant to section 62 of the RAA and in accordance with sections 6, 14, 36, 65(2) and 68 of the EA using the general powers granted to the Authority under section 13 of the RAA and in accordance with the procedures established for this purpose in section 62 of the RAA, the Authority hereby determines that:
- (2) The adoption and implementation of the Transitional Measures for BELCO's Renewable Energy Metering Scheme as set forth in paragraph 5 of this Schedule below is in the public interest and would (i) provide certainty on this matter to sectoral providers; (ii) promote the use of cleaner energy sources and technologies; (iii) provide sectoral participants and end-users with non-discriminatory interconnection to transmission and distribution systems; (iv) promote the Bermuda economy; and (v) promote and preserve competition.

5 Transitional Renewable Energy Metering Scheme

- (1) BELCO shall continue to operate its Small Scale Residential Net Metering Scheme in accordance with the following recommendation set out in section 2 of the EC Response:

The transitional solar PV power purchase program should be adopted for both the residential and commercial solar PV producers with the BELCO avoided cost proposed rate of \$0.1736 per KWh for new renewable energy systems going forward, with no limit on the number of participants as proposed by BELCO.

For the avoidance of doubt, BELCO shall pay to Renewable Energy Participants a rate of \$0.1736 per KWh in respect of any energy exported to BELCO's grid in any calendar month and which they sell to BELCO, until the issuance by the Authority of any Administrative Determination pursuant to section 37 of the EA.

- (2) The transitional Feed-in Tariff methodology set pursuant to section 36 of the EA shall be based on the net avoided costs of generation, further described in paragraph 5(3) of this Schedule. This Feed-in Tariff methodology shall be

transitional pursuant to further public consultation and analysis on key issues, including economic benefit.

- (3) The following categories are relevant in estimating the net avoided costs of generation which would constitute a benefit from deployment of distributed renewable generation (section 36(a)(i) of the EA).
 - (a) Reduction in fuel costs and other variable operating costs of generation. Distributed renewable generation may permit the avoidance of some variable operating costs of overall system generation that would otherwise be incurred. For example, since distributed generators supply renewable energy to the network, the TD&R Licensee can purchase less energy from a bulk generation licensee. Consequently, the bulk generation licensee reduces its fuel costs and other variable operating costs. The reduction in fuel costs and other variable costs does not have to be estimated based on the costs of bulk generators currently connected to the network. For example, where data is available, it would be appropriate to consider the reduction in costs that would arise in a projected least-cost scenario within an integrated resource planning (“IRP”) process.
 - (b) Reduction in further generation capacity requirements. Distributed renewable generation may mitigate the need for further investment in centralised generation capacity. For example, if, according to the IRP, the existing bulk generation licensees’ capacity is not able to meet total demand, or is not able to maintain the required level of system reliability, a significant amount of distributed renewable generation capacity could allow the avoidance of some additional fixed costs of installing further centralised generation.
 - (c) Reduction in the TD&R Licensee’s network losses. Where there is a high correlation between a customer’s demand and on-site generation, the energy losses associated with transmission and distribution may decrease with connecting distributed generators to the network
- (4) BELCO shall continue to pay Renewable Energy Metering Payments to Renewable Energy Participants in accordance with paragraph 5(1) of this Schedule pending issuance by the Authority of any Administrative Determination setting the Feed-in Tariff pursuant to section 37 of the EA using the Feed-in Tariff methodology set forth paragraph 5(2) of this Schedule.