GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU

IN RE: HIGHLY EFFICIENT FOSSIL GENERATION DEFINITION	**CASE NO.:** CEPR-MI-2016-0001 **SUBJECT:** Resolution initiating the process for the adoption of a definition of the term "Highly Efficient Fossil Fuel Generation", for the purposes of Act 60-2019.

RESOLUTION

I. Introduction

On March 20, 2019, the Energy Bureau of the Puerto Rico Public Service Regulatory Board ("Energy Bureau") issued a Resolution ("March 20, 2019 Resolution") in the instant case through which it adopted the definition of the term "Highly Efficient Fossil Fuel Generation", as required by Article 6.29 of Act 57-2014.[1]

According to the definition, a generation unit is considered "Highly Efficient" if it meets two requirements: (1) the yearly unit total cost of generating electricity cannot exceed $100/MWh (*i.e.* $0.10/kWh) adjusted to 2018 dollars ("Cost Requirement"); and (2) the average annual rate of carbon dioxide emissions from the generating unit, as measured in pounds per megawatt-hour (lbs/MWh), is lower than the United States nationwide average for plants with the same primary fuel and primary fuel generation category as reported in the U.S. Environmental Protection Agency's Emissions & Generation Resource Integrated Database ("eGRID") (or successor source) for the most recent year in which data is available ("Emissions Requirement").[2]

On July 1, 2019, Act 60-2019, known as the Puerto Rico Incentives Code, was enacted. Chapter 7 of Subtitle B of Act 60-2019 describes the eligibility criteria, tax benefits and the requirements for the concession of such benefits, pertaining to infrastructure and green energy. To that effect, Section 2071.01 of Act 60-2019 establishes that Highly Efficient Energy Producers and properties dedicated to the production of Highly Efficient Energy may be considered an Eligible Business under such Act.[3] Specifically, paragraph (10) of Section 2071.01 of Act 60-2019 establishes, among other things, that:

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[1] Known as *The Puerto Rico Energy Transformation and RELIEF Act*, as amended.

[2] March 20, 2019 Resolution, p. 6.

[3] Paragraph (a)(45) of Section 1020.01 of Act 60-2019 defines the term "Eligible Business" as those individuals or business activities that qualify for a Decree under the Act. Paragraph (a)(20) of Section 1020.01 of Act 60-2019 defines the term "Decree" as the concession though a contract issued by the Secretary of the Puerto Rico Department of Economic Development and Commerce granting an Eligible Business the incentives and/or Tax

During the first five (5) years from the effective date of this Code, a business established or to be established in Puerto Rico by a Person, whether organized or not under a common name, may apply for a Decree to carry out the following eligible activities:

(i) A High-Efficiency Energy Producer engaged in the production, sale, or operation at a commercial scale for consumption in Puerto Rico, whether as owner and direct operator, or as owner of a system operated by a third party, or as operator of a system owned by a third party, in which case, both shall be considered an Eligible Businesses under this Chapter;

(ii) Equipment assembly, including the installation thereof, for High-Efficiency Energy Generation Systems;

(iii) Property devoted to the production of High-Efficiency Energy.

(iv) Every contractor under Act No. 120-2018, as amended, known as the "Puerto Rico Electric Power System Transformation Act," shall be eligible for a Decree under this subsection and/or tax treatment provided under subsection (a) of Section 12 of Act No. 29-2009, as amended, known as the "Public-Private Partnership Act".

For the purposes of the referenced Chapter 7, Paragraph (a)(14) of Section 1020.07 of Act 60-2019, defines the term "Highly Efficient Generation" as the production of electric power at a minimum of sixty percent (60%) in a highly efficient manner, **as established by the Energy Bureau, pursuant to Act 57-2014, as amended**. Similarly, Paragraph (a)(23) of Section 1020.07 of Act 60-2019 defines the term "Highly Efficient Energy Producer" as the operator of a Highly Efficient Generation System that generates and sells electricity at a commercial scale. Finally, Paragraph (a)(20) of Section 1020.07 of Act 60-2019 defines the term "Operator" as any person that controls, operates or manages a Production Unit, a Highly Efficient Generation System, a Sustainable Renewable Energy Source or an Alternate Renewable Energy Source.

Therefore, according to the provisions of the referenced Section 2071.01, eligible Highly Efficient Energy Producers are those dedicated to the production, sale or operation at a commercial scale, may it be as owner and direct operator, the owner of a system that is operated by a third party, or as the operator of a system that is owned by a third party, in which case, both may be considered an Eligible Business under Chapter 7 of Subtitle B of Act 60-2019. Moreover, as established in Paragraph (a)(14) of Section 1020.07 of Act 60-2019,

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Credits corresponding to such Eligible Business, subject to compliance with all applicable requirements and regulations, either under Act 60-2019 or prior incentives laws.

the Energy Bureau must define the term "Highly Efficient Generation", for the purposes of Act 60-2019.

Through this Resolution, the Energy Bureau publishes its proposed definition of the term "Highly Efficient Fuel Generation" for the purposes of Act 60-2019.

II. Energy Bureau's interpretation of Act 60-2019; Case No. NEPR-IR-2019-0001

On December 23, 2019, Crowley LNG Puerto Rico, LLC ("Crowley") filed before the Energy Bureau a document through which it requested the Energy Bureau to issue an interpretative resolution regarding certain provisions of Act 60-2019 ("Crowley's Petition"). The Energy Bureau considered Crowley's Petition under Case No. NEPR-IR-2019-0001.[4]

Crowley argued that, for the purposes of Act 60-2019, the current definition of the term "Highly Efficient Generation", as adopted by the Energy Bureau on its March 20, 2019 Resolution, does not apply to the operation of Combined Heat and Power ("CHP") systems or electrical power generating units that are commonly used in industrial and commercial settings.[5] In support of its argument, Crowley stated that such definition only encompasses the requirements for the generation units owned by the Puerto Rico Electric Power Authority ("PREPA") and by third parties selling power to PREPA.[6]

According to Crowley, the current definition of the term "Highly Efficient Generation" is designed to meet the policy objectives of Act 57-2014 of ensuring the modernization and/or the efficient use of fuel in order to reduce the costs of generating electricity in Puerto Rico.[7] As such, Crowley argued, this definition is not suitable for third parties unrelated to PREPA, for the purposes of Act 60-2019.[8]

After a thorough analysis of Crowley's Petition, as well as of Act 60-2019 and Act 57-2014, on March 5, 2020, the Energy Bureau issued a Resolution in Case No. NEPR-IR-2019-0001,[9] through which it determined that, for the purpose of Act 60-2019, there are two types of fossil-fueled generation assets: (i) assets that use the electric grid to provide service to their respective clients, may it be in the form of a Power Purchase and Operating Agreement ("PPOA") with PREPA or a particular customer through the wheeling mechanism; and (ii)

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[4] Crowley's Petition, In Re: Request for Interpretative Resolution; Crowley LNG Puerto Rico, LLC – Petitioner, Case No. NEPR-IR-2019-0001, December 23, 2019 ("Crowley's Petition").

[5] Crowley's Petition, p. 4.

[6] *Id.*, pp. 4 – 5.

[7] *Id.*, p. 4.

[8] *Id.*, pp. 4 – 5.

[9] Resolution, In Re: Request for Interpretative Resolution; Crowley LNG Puerto Rico, LLC – Petitioner, Case No. NEPR-IR-2019-0001, March 5, 2020 ("March 5, 2020 Resolution").

fossil-fueled generation assets that provide service to its clients on site, may it be disconnected from the grid or connected for the purpose of exporting excess energy, or that provide service to its clients by using other means than the electric grid.[10]

To that effect, the Energy Bureau interpreted that, for the purposes of Act 60-2019, the definition of the term "Highly Efficient Generation", as established in the March 20, 2019 Resolution, applies to all assets that use the electric grid to provide service to their respective clients, may it be in the form of a PPOA with PREPA or a particular customer through the wheeling mechanism.[11] The Energy Bureau further interpreted that, for the purposes of Act 60-2019, the definition of the term "Highly Efficient Generation", as established in the March 20, 2019 Resolution, does not apply to fossil-fueled generation assets that provide service to its clients on site, may it be disconnected from the grid or connected for the purpose of exporting excess energy, or that provide service to its clients by using other means than the electric grid.[12]

The Energy Bureau further stated that it would initiate a proceeding to establish the parameters for the definition of the term "Highly Efficient Generation" that will apply to fossil-fueled generation assets that provide service to its clients on site, may it be disconnected from the grid or connected for the purpose of exporting excess energy, or that provide service to its clients by using other means than the electric grid. In establishing the proposed parameters, the Energy Bureau will take into consideration the provisions of paragraph (a) of Section 6.29 of Act 57-2014[13], as well as all other applicable statues and regulations.[14]

III. Proposed definition of the term "Highly Efficient Generation" for the purposes of Act 60-2019

The Energy Bureau hereby proposes the following definition for the term "Highly Efficient Generation", for the purposes of Act 60-2019:

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[10] March 20, 2019 Resolution, pp. 7 – 8.

[11] *Id.*, p. 8.

[12] *Id.*

[13] Paragraph (a) of Section 6.29 of Act 57-2014 establishes that the term highly efficient shall include as essential factors the electric power plant or the facility's thermal efficiency by the type of fuel used, the cost of fuel, technology, the capacity to reduce the costs of producing one (1) kilowatt-hour (kWh) of the proposed technology, and/or any other industry parameter that guarantees efficiency in energy generation. Although the main purpose of the definition of the term "Highly Efficient Generation", as established and described in Act 57-2014, was to promote the efficient use of fossil fuels in order to reduce generation costs and in turn, reduce customer bills, the provisions of paragraph (a) of Section 6.29 of Act 57-2014 can be used to guide the process to establish a definition that meets the purposes and mandates of Act 60-2019.

[14] March 5, 2020 Resolution, p. 8.

"For the purposes of Act 60-2019, a generation unit or system is considered "Highly Efficient" if it meets the Emissions Requirement and the Operational Requirement as follows:

(A) Emissions Requirement:

The average annual rate of carbon dioxide emissions from the generating unit, as measured in pounds per megawatt-hour (lbs/MWh), is lower than the United States nationwide average for plants with the same primary fuel and primary fuel generation category as reported in the U.S. Environmental Protection Agency's Emissions & Generation Resource Integrated Database ("eGRID") (or successor source) for the most recent year in which data is available. The Energy Bureau may modify the referenced limits based on updates to the eGRID (or successor) data.

The average annual rate of carbon dioxide emissions for the most recent year in which data is available are as follows:

Fuel Type	**Average annual rate of CO_2 emissions (lbs/MWh)**[15]
Coal	2,187
Residual Fuel Oil	1,930
Diesel Fuel	2,681
Natural Gas	1,433

(B) Operational Requirement:

(1) For fossil-fueled generation assets that use the electric grid to provide service to their respective clients, may it be in the form of a Power Purchase and Operating Agreement ("PPOA") with PREPA or its successor, or with a particular customer through the wheeling mechanism:

i. The yearly unit or system total cost of generating electricity cannot exceed $100/MWh (*i.e.* $0.10/kWh) adjusted to 2018 dollars. The cost per MWh shall be the total amount billed by the seller divided by the yearly net electrical power output of the unit or system.

(2) For fossil-fueled generation assets that provide service to its clients on site, may it be disconnected from the grid or connected for the purpose of exporting excess energy, or that provide service to its clients by using other means than the electric grid:

[15] Source: "egrid2018_data_v2.xlsx", Tab "PLNT18", Column "BA", "Plant annual CO2 total output emission rate (lb/MWh)", available at https://www.epa.gov/egrid/download-data, visited on October 20, 2020.

i. For Combined Heat and Power ("CHP") systems:

(a) The useful thermal energy output of the system is no less than fifty percent (50%) of the total energy output; and

(b) The fuel input, minus the useful thermal energy output, is no more than 7,000 BTU/kWh of generator output.

ii. For all other fossil-fueled generation assets:

(a) The average annual heat rate is less than 8,200 BTU/kWh.

For each "Highly Efficient Energy Producer", as such term is defined in Act 60-2019, the percentage of fossil-fueled generation considered highly efficient for any reporting year is calculated as follows:

$$\textit{Highly Efficient Generation (\%)} = \frac{Total\ kWh\ from\ Highly\ Efficient\ Units}{Total\ kWh\ from\ all\ fossil-fueled\ generating\ units} \times 100\%$$

If the percentage of fossil-fueled generation considered highly efficient is greater than sixty percent (60%) for the reporting period, then it could be construed that the "Highly Efficient Energy Producer" met the requirements established in Act 60-2019.[16]"

IV. Comments and Public Participation

All interested parties and the general public may present its comments regarding the proposed definition until December 14, 2020.

Comments may be filed as following:

a. By email to the following address: comentarios@energia.pr.gov;

b. Online, using the Energy Bureau's Electronic Filing System, at the following address: https://radicacion.energia.pr.gov.

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[16] As an example, assume a person owns two fossil-fueled assets with an installed capacity of 100 MW and 50 MW, respectively. Assume the 100 MW asset produces 438 GWh in a given year and meets the definition of Highly Efficient Generation and assume the 50 MW asset produces 219 GWh in the same year but doesn't meet the definition. Then, for this owner, the percentage of fossil-fueled generation considered highly efficient for that particular year equals to 438 GWh/(438 GWh + 219 GWh) = 438/657 = 0.667 = 66.7%. In this case, the owner meets the highly efficient generation standards, therefore, may be considered a "Highly Efficient Energy Producer", for the purposes of Act 60-2019. If the person only owns one generation asset, then such asset must meet the requirements of the Highly Efficient Generation definition in order to be considered a "Highly Efficient Energy Producer", for the purposes of Act 60-2019.

c. By mail addressed to the Puerto Rico Energy Bureau's Clerk's Office, at World Plaza Building, 268 Muñoz Rivera Ave., Suite 202, San Juan, PR 00918; or

d. In person at the Energy Bureau's Clerk's Office, at the address set forth above.

As stated before, this proposed definition is only for the purposes of Act 60-2019. It should not be construed as a modification of the definition of the term "Highly Efficient Fossil Generation", as established in the March 20, 2019 Resolution.

Be it published.

Edison Avilés Deliz
Chair

Ángel R. Rivera de la Cruz
Associate Commissioner

Lillian Mateo Santos
Associate Commissioner

Ferdinand A. Ramos Soegaard
Associate Commissioner

Sylvia B. Ugarte Araujo
Associate Commissioner

CERTIFICATION

I hereby certify that the majority of the members of the Puerto Rico Energy Bureau has so agreed on November 12, 2020 and I have proceeded with the filing of the Resolution. For the record, I sign this in San Juan, Puerto Rico, today November 12, 2020.

Wanda I. Cordero Morales
Clerk