Comments regarding Act 60 – 2019

Case No: CEPR–MI–2016-0001

Purpose

It is our understanding that Act 60-2019 was adopted to codify incentives granted for diverse purposes with the goal of fostering economic development more effectively. "It provides certainty related to the types of incentives that Puerto Rico offers to attract investment and create jobs in very important and traditional sectors such as manufacturing, tourism and agriculture; as well as aerospace, biosciences, technology, renewable energy, entrepreneurship and export services." We feel making this incentive program accessible is key to the economic growth and prosperity sought.

We recognize and respect the valiant effort put forth to stimulate economic growth here in Puerto Rico.

Proposal

The current Resolution states "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." We dos not seek to redefine the aforementioned term.

Current Definitions

The current definitions stated for “CHP” are as follows:

i. “For Combined Heat and Power (“CHP”) systems:
   (a) The useful thermal energy output of the system is no less that fifty percent (50%) of the total energy output; and
   (b) The fuel input, minus the thermal energy output, is no more than 7,000 BTU/kWh of generator output.”

We interpret these items as contradictory. As the electrical efficiency increases, the thermal efficiency will decrease as per the law of “Conservation of Energy”. This qualification will hinder the implementation of increasingly electrically efficient engines, thus handicapping technological advancements through R&D. Additionally, the main purpose of “CHP” is to maximize the overall efficiency of the asset, and in some cases, the electrical output is paramount compared to the thermal need, especially in Puerto Rico. We have also signed onto a comment drafted and championed by the (Combined Heat and Power Alliance (CHPA) which provides updated formulas and calculations qualifying “CHP” assets.

The additional statement added is stated as follows:

ii. “For all other fossil-fueled generation assets:
   (a) The average annual heat rate is less than 8,200 BTU/kWh.”

It is our position that this is meant for representation of an asset that is utilizing fossil-fueled assets in a gas to power (G2P) scenario. We feel that this qualification is not achievable with the current value given. This hinders the ability to implement viable G2P solutions in most cases.

Proposed Definition

We propose the value "For all other fossil-fueled generation assets" ***be set at ≤10,000 BTU/kWh when being used in a G2P scenario.***

This value shall be determined when using the **High Heat Value (HHV)** and using the **Net electrical output** of the given asset or solution.

This is the proper method for determining actual heat value for any given asset or solution.

Example in Appendix A

Appendix A

Example:

G2P asset has the given values per the data sheet.

Electrical Output (Gross):	1141 kW	(41.4 % Electrical Efficiency)
Electrical Output (Net):	1095 kW	
Thermal Output:	1295 kW	(47.0 % Thermal Efficiency)
Fuel Input (LHV):	2754 kW	
Fuel Input (HHV):	3029 kW	
High Heat Value Delta:	10%	

Btu per KW = 3412

Formula:

[Fuel Input (HHV) / Electrical Output (Net)] x 3412 (BTU/kWh) ≤ 10,000

Therefore:

3029/1095 x 3412 = 9,438 BTU/kWh **or** ≤ 10,000 BTU/kWh

This example of an asset or solution maintains environmental responsibility while attaining economical value for the end user. We feel that this is aligned with the overall goal of ACT 60-2019.

On Behalf of the Following:

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