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S. B. 839

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Introduced by Mr. *Bhatia-Gautier*

Referred to the Committee on Energy Affairs and Water Resources

AN ACT

To adopt the “Energy RELIEF Act” in order to establish the public policy on energy for the future of Puerto Rico; and for other purposes.

STATEMENT OF MOTIVES

INTRODUCTION

Puerto Rico’s energy history demonstrates that, in spite of the worldwide evolution toward cleaner and more efficient energy sources, our energy sector has remained stagnant, inefficient, and excessively dependent on oil. This Act particularly addresses the issues of energy inefficiency and its high generation costs. These two factors have a direct impact on electric bills.

EFFICIENT AND LOW-COST POWER GENERATION

The U.S. Energy Information Administration (hereinafter, “EIA”) uses heat rate as an indicator of efficiency in power generation. Heat rate is established in terms of the amount of energy used by a generator to generate one kilowatt-hour of electricity, and is expressed in British Thermal Units (BTU) per net kilowatt-hour

(kWh) generated. Net generation is the amount of electricity that is actually supplied to the power transmission line connected to the power plant. Higher heat rates equal less efficiency, since more fuel is required to produce the same amount of energy. In the case of the Puerto Rico Electric Power Authority (hereinafter, “PREPA”), customers assume the total cost of such inefficiency.

According to EIA data, the average heat rate of oil-based power plants in 2011 was 10.8 BTU/kWh (in thousands), whereas the heat rate of natural gas plants was 8.1 BTU/kWh (in thousands). The heat rates of power plants in Puerto Rico, which were built decades ago, do not show the same efficiency level as other power plants currently available in the energy industry. Even the Cambalache plant, which was built in 1997, has a heat rate of 11.7 BTU/kWh (in thousands).

Energy generation technology whose heat rate is 7.5 BTU/kWh (in thousands) is already available. However, PREPA continues to operate inefficient plants and using mainly oil, which is an expensive and toxic resource. This leads to higher electric bills, since PREPA passes on the cost of said fuel to customers, regardless of whether such fuel was used to generate energy or lost in the process. This is an issue that needs to be addressed in the short term and in the most cost-effective manner possible.

Currently, cogeneration accounts for thirty percent (30%) of the energy in Puerto Rico. These cogenerators are considerably more efficient and already use cleaner energy sources. In order to protect local consumers and modernize the generation of electric power in Puerto Rico, the Legislative Assembly hereby issues a clear and precise mandate so that at least sixty percent (60%) of the energy sold in the Island is generated from highly efficient power or cogeneration plants with a maximum heat rate of 7.5 BTU/kWh (in thousands). As part of the public policy set forth herein, it is important for all electric power generators in Puerto Rico to be efficient. Thus, everyone operates on equal terms. In view of the

foregoing, this Act establishes a five (5)-year period within which all of PREPA's power plants must meet the efficiency standard of 7.5 BTU/kWh (in thousands). The measures introduced herein shall be strictly complied with and subject to stringent oversight by the Energy Regulatory and Oversight Commission to be created by law and by the People of Puerto Rico.

The cost of generating electricity is another factor addressed in this Act. The electric bill has various items, the priciest of which is fuel cost. According to PREPA, this item comprises 57.43% of the cost per kilowatt-hour. If, during fiscal year 2012, the average price per kilowatt-hour was 26.78 cents, then fuel cost represented 15.38 cents of the bill. After adding maintenance and other fixed costs, PREPA's electricity generating cost is almost twenty-two (22) cents.

If we follow the efficiency standards defined in this Act and consider fuel costs today, generating energy from natural gas, for example, would cost approximately ten (10) cents. This amount includes the generator's profit.

For all of the foregoing, this Act regulates all that pertains to the purchase of electric power by PREPA through power purchase agreements. In such agreements, energy cogenerators may not earn profits attributable to fuel costs, and the profit margin may not exceed two (2) cents per kilowatt-hour, adjusted for inflation. With the measures herein adopted, these factors that directly impact the electricity bill are addressed in the short term.

ENVIRONMENTAL REGULATIONS

We are aware that PREPA is required to comply with the Federal regulations that take effect in April 2015. The Mercury and Air Toxic Standards (M.A.T.S.), which are monitored by the U.S. Environmental Protection Agency (EPA), are the first national standards to limit mercury and air toxics such as arsenic, acid gas, nickel, selenium, and cyanide. According to EPA data, in 2011, said pollution controls were employed in more than half of U.S. electric power plants that use

carbon-based fuels. Furthermore, EPA has already begun reviewing new carbon pollution standards, which means that M.A.T.S are only the beginning of a complex and stringent framework of Federal environmental standards that are applicable to plants located in the Island.

As of today, power plants in Puerto Rico are far from meeting M.A.T.S, thus PREPA may be subject to million-dollar fines. Moreover, the People of Puerto Rico are exposed to multiple health risks on a daily basis caused by mercury and other toxic pollutant emissions from power plants. For such reason, it is imperative for PREPA to take the necessary actions to comply with Federal regulations as soon as possible. In view of all the Federal regulations that apply to PREPA's power plants, this Legislative Assembly issues a clear and direct mandate for PREPA to modify its plants so they may use energy sources that comply with Federal environmental regulations.

RENEWABLE ENERGY

Likewise, this Act requires that PREPA use existing technologies to correct the instability that renewable energy causes in the electrical grid. In 2010, Puerto Rico took a significant step forward by adopting a public policy on energy that calls for the diversification of power generating sources and technological infrastructure, and for the reduction and stabilization of energy costs through the use of sustainable renewable energy and alternative renewable energy sources. Section 2.3 of Act No. 82-2010 establishes the Renewable Portfolio Standard. This Portfolio sets forth mandatory goals to reduce conventional energy use and increase renewable energy use. From 2015 to 2019, twelve percent (12%) of the energy of each retail electricity provider shall be renewable; from 2020 to 2027, it shall be fifteen percent (15%); from 2028 to 2034, Act No. 82-2010 allows suppliers to establish a progressive plan to achieve twenty percent (20%) by 2035.

However, less than two (2) years from the first deadline set in Act No. 82-2010, renewable energy in Puerto Rico accounts for only one percent (1%) of all energy. According to information furnished by PREPA, renewable energy is not more pervasive in the Island due to the lack of continuity and stability in the generation of these renewable energy sources that cause instability in the grid. Nevertheless, this challenge can be overcome with available technologies. PREPA shall address this issue immediately, under the supervision of the Energy Regulatory and Oversight Commission. Likewise, PREPA shall facilitate the implementation of pilot projects related to new technologies for generating renewable and/or alternative energy.

CITIZEN SUITS

This Act empowers customers affected by PREPA's actions or omissions to have standing to appear in Court and require PREPA or any electric power generator to comply with the provisions of this Act. The Legislative Assembly deems this to be a momentous step towards ensuring PREPA's true accountability to its stakeholders: the People of Puerto Rico. This cause of action is employed mainly in connection with Federal environmental laws, which allow affected citizens to file citizen suits requiring compliance with laws such as the Clean Air Act of 1970 and the Resource Conservation and Recovery Act.

OTHER MEASURES FOR ENERGY INNOVATION

It is important for PREPA to seek innovative ways to address the issue of energy theft and excessive consumption. These issues could be addressed, for example, by implementing a smart grid. This grid is a technology already in use in other jurisdictions, and partly by PREPA, whereby all devices connected to the electrical grid (street lamps, traffic lights, buildings), along with commercial, industrial, and residential devices communicate with a database. This database's software gathers energy consumption data from each energy-consuming element in

the grid and allows for consumption control in real time. Functions such as the manipulation of lighting systems, the surveillance and detection of energy theft, and the immediate connection and disconnection of elements from the system shall be possible with the smart grid. We recognize that implementing a smart grid in the Island requires an investment from PREPA; however, it is a required measure to address the chaos and waste of electric power in Puerto Rico.

This Act provides that Puerto Rico shall have a fifteen to twenty percent (15% - 20%) capacity over peak demand in the medium-term. According to PREPA's website, the Island's installed electricity generating capacity is 5,839 megawatts. Peak demand is approximately 3,200 megawatts, which means that the agency has an overcapacity of more than eighty percent, compared to industry practice, which ranges from 15% to 20%. For such reason, it is imperative for PREPA to take the necessary measures within a five (5)-year period to comply with the mandate issued herein so that Puerto Rico may become a jurisdiction at the forefront of environmental responsibility with fair and reasonable energy costs for all.

Reducing electricity costs cannot be postponed any longer if we wish to be more competitive at a global level. The Island's future with regards to energy should be different from that which, for years, we were persuaded to accept. This measure is part of an integrated effort to, for the first time, promote energy savings through an Energy RELIEF Plan that includes a series of feasible measures. To meet such savings goal, this project entails the simultaneous implementation of several initiatives, such as carrying out a study of the potential separation of the energy distribution and transmission operations from the energy generation operation, opening the power generation market to competition, and creating a Regulatory and Oversight Commission to supervise and oversee the Island's electricity market, protect customers, and ensure system stability.

The measures herein established are necessary to promptly address the energy crisis affecting each and every citizen and business in Puerto Rico. Moreover, these steps are imperative to fulfill the public goal of reducing energy costs in the Island, to achieve the cost reduction that our people have been claiming, and to promote a better environment to further our economic development.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF PUERTO RICO:

1 Section 1. – Title. –

2 This Act shall be known as the “Energy RELIEF Act.”

3 Section 2. – Public Policy. –

4 It is hereby declared public policy of the Commonwealth of Puerto Rico to
5 dramatically reduce and stabilize our energy costs; if necessary, open our power
6 generation market to competition so as to allow the operation of more efficient
7 cogenerators; diversify our energy sources and technology infrastructure through
8 the reduction of our dependence on energy derived from fossil fuels such as oil;
9 fully comply in a timely fashion with Federal environmental laws and regulations
10 aimed at improving our environment, natural resources, and health; control the
11 volatility of electricity prices in Puerto Rico; reduce the flight of capital caused by
12 importing fuels derived from fossil fuels; if necessary, foster the establishment of a
13 separate and independent electricity transmission and distribution grid to allow for
14 easier interconnection of generators to the system; and promote energy
15 conservation. This public policy shall be implemented through an Energy RELIEF
16 Plan consisting of short and long term measures to be carried out by the Puerto
17 Rico Electric Power Authority, the Energy Regulatory and Oversight Commission
18 to be created by law, and other public and private entities within the energy sector
19 of Puerto Rico.

1 Section 3. – Definitions. –

2 For purposes of this Act, the following terms shall have the meaning stated
3 below:

4 (a) “PREPA” means the Puerto Rico Electric Power Authority.

5 (b) “Commission or Regulatory Commission” means the Energy
6 Regulatory and Oversight Commission.

7 (c) “Board” means the advisory entity or body designated by the
8 Regulatory and Oversight Commission to supervise and oversee the competitive
9 development process of new power generation facilities to be carried out by
10 PREPA.

11 Section 4. – Electric Power Generation in Puerto Rico. –

12 (a) High Efficiency – As part of the public policy herein established, in
13 addition to the provisions of Act No. 82-2010, known as the “Public Policy on
14 Energy Diversification by Means of Sustainable and Alternative Renewable
15 Energy in Puerto Rico Act”, within two (2) years following the approval of this
16 Act, sixty percent (60%) of the energy generated in Puerto Rico shall be “High
17 Efficiency.” Heat rate shall be the measure used by PREPA and the Commission or
18 the Board. Such heat rate shall not exceed seven point five (7.5) BTU/kWh (in
19 thousands). The percentage required by this paragraph includes the percentage of
20 energy sold under power purchase agreements as of the effective date of this Act.

21 (b) Production Costs – As part of the public policy herein adopted, if it
22 were necessary for PREPA to purchase power for Puerto Rico, such purchase
23 agreements shall meet the efficiency standards set forth in this Act. Moreover,
24 cogenerators shall not earn any profit attributable to fuel. The cogenerators’ profit
25 margin as a result of such purchase agreements shall not exceed two (2) cents per
26 kilowatt-hour, adjusted for inflation.

1 (c) New Generator Development or Bid Process – Within a term that
2 shall not exceed ninety (90) days after the Energy RELIEF Plan herein required is
3 submitted to the Regulatory Commission, PREPA shall carry out a transparent and
4 structured internal or external development process for new power generation
5 facilities under the supervision and oversight of the Commission or the Board, as
6 applicable, in order to fulfill the purposes of this Act.

7 (d) Overcapacity – Within a term that shall not exceed five (5) years after
8 the effective date of this Act, PREPA shall have an electricity generating capacity
9 over peak demand equal to fifteen to twenty percent (15% - 20%), thus ensuring
10 the stability of the electrical grid and the continuity of both the system and
11 electricity service in Puerto Rico. If the electric power system in Puerto Rico
12 requires a higher margin, PREPA shall justify such margin to the Commission for
13 its approval. If the Commission approves such margin, the provisions of this
14 subsection shall also apply to achieve the new margin within the terms herein
15 provided. If the Commission does not approve such margin, PREPA shall comply
16 with an electricity generating capacity over peak demand of twenty percent (20%)
17 within the term herein established. PREPA's request for a new margin shall not
18 interrupt the term provided in this subsection.

19 (e) Financial Matters – As a public corporation of the Commonwealth of
20 Puerto Rico, PREPA is an entity created by the Legislative Assembly with a
21 mandate to produce, distribute, and transmit electric power to all customers in
22 Puerto Rico. By virtue of such mandate, PREPA controls all the energy
23 infrastructure of the Island, including power plants and the distribution and
24 transmission grid. This Act declares that the Commonwealth of Puerto Rico has a
25 compelling interest to ensure PREPA's continuous and stable operation. For such
26 reason, PREPA shall take financially responsible and feasible measures to

1 guarantee its operation as an entity whose service and existence is closely related
2 to the security of the Island's operations.

3 (f) Other Standards – PREPA shall take the necessary actions to ensure
4 full and due compliance with the provisions of this Act, which shall include the
5 processes established in Act No. 29-2009.

6 Section 5. – Use of Technology in Puerto Rico's Electric Power System. –

7 PREPA shall use the necessary technology and mechanisms to ensure that
8 the following goals are met:

9 (a) To be in timely and full compliance with all Federal legislation and
10 regulations, including, but not limited to the Mercury and Air Toxic Standards
11 (M.A.T.S.), which are monitored by the U.S. Environmental Protection Agency
12 (EPA).

13 (b) To install the necessary equipment and technology to ensure the
14 connection of renewable energy sources to the electrical grid, thus mitigating the
15 instability that this type of energy may cause to such grid. Said installation shall be
16 completed within a term that shall not exceed eighteen (18) months after the
17 approval of this Act.

18 Section 6. – Energy RELIEF Action Plan and CONOPS. –

19 (a) Energy RELIEF Action Plan. – An action plan to achieve the purposes
20 of this Act shall be drafted and submitted to the Commission for its approval. The
21 Energy RELIEF Action Plan shall be published in its entirety on PREPA's website
22 so that it may be easily accessed by any interested party. The plan shall be subject
23 to the following conditions:

24 (i) Transitory Provision. – The plan shall be drafted and submitted
25 to the Regulatory Commission within a term that shall not exceed sixty (60) days
26 after the approval of this Act;

1 (ii) To fully comply with the guidelines set forth by the American
2 National Standards Institute/Electronic Industries Alliance (ANSI/EIA) in
3 ANSI/EIA-748-C, in which the established practices for project enterprise
4 planning and control are defined;

5 (iii) To provide the details of the required events, the
6 implementation plan, and the execution costs, together with the definition of an
7 integrated program to fulfill the purposes and comply with the mandates of this
8 Act;

9 (iv) To establish a documentation mechanism and progress report
10 filing according to the guidelines set forth in ANSI/EIA-748-C; and

11 (v) In case of changes to the plan, PREPA shall resubmit the
12 amended plan for the Commission's approval within a term that shall not exceed
13 thirty (30) days, in accordance with the rules provided in this subsection.

14 (b) Concept of Operations for Energy RELIEF. – A concept of operations
15 (CONOPS) to achieve the purposes of this Act shall be drafted and submitted to
16 the Commission for its approval. The CONOPS shall be published in its entirety on
17 PREPA's website so that it may be easily accessed by any interested party. The
18 plan shall be subject to the following requirements:

19 (i) Transitory Provision. – The concept of operations shall be
20 submitted to the Regulatory Commission within a term that shall not exceed sixty
21 (60) days after the approval of this Act, as part of the Energy RELIEF Action Plan;

22 (ii) The projected configuration of the electric power system shall
23 be defined according to the Guide for the Preparation of Operational Concept
24 Documents of the American Institute of Aeronautics and Astronautics (AIAA) and
25 the American National Standards Institute (ANSI), ANSI/AIAA G-043A-2012e;

1 (iii) To provide the details of the diversified renewable energy
2 portfolio of the Island by implementing the requirements provided in this Act, Act
3 No. 82-2010, and any other applicable law;

4 (iv) To establish the estimated dates for the effective and complete
5 implementation of the energy portfolio, indicating the date on which each system
6 component will become operational and defining the impact on energy cost as the
7 electric power system evolves, subject to the time limits provided in this Act; and

8 (v) In case of changes to the concept of operations, PREPA shall
9 resubmit the amended concept of operations for the Commission's approval within
10 a term that shall not exceed thirty (30) days, in accordance with the rules provided
11 in this subsection.

12 Section 7. – Citizen Suits. –

13 (a) All citizens shall have standing to file civil actions against PREPA or
14 any other electric power generator with any Court of the Commonwealth of Puerto
15 Rico as a result of any actions or omissions and require compliance in connection
16 with the obligations set forth herein. For purposes of this Act, “citizen” means any
17 natural or juridical person adversely affected, or that could be adversely affected,
18 by an alleged violation of the provisions of this Act, or any mandate or order
19 issued or adopted hereunder.

20 (b) Any civil action initiated under this Act may be filed with any
21 courtroom of the Court of First Instance, regardless of the place of residence of the
22 parties thereto, the place where the facts took place, or the location of the real
23 property subject to the claim.

24 Section 8. – Severability. –

25 If any clause, paragraph, subparagraph, article, provision, section, or part of
26 this Act were held to be null or unconstitutional, the holding to such effect shall
27 not affect, impair, or invalidate the remainder of this Act. The effect of such

1 holding shall be limited to the clause, paragraph, subparagraph, article, provision,
2 section, or part thereof held to be null or unconstitutional.

3 Section 9. – Effectiveness. –

4 This Act shall take effect immediately after its approval. However, Section 4
5 shall take effect once the Regulatory and Oversight Commission is duly
6 constituted.