

SENATE
S.B. No. 175

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Introduced by SEN. WIN GATCHALIAN

**AN ACT
PROMOTING THE USE OF MICROGRID SYSTEMS FOR THE TOTAL
ELECTRIFICATION OF UNSERVED AND UNDERSERVED AREAS**

EXPLANATORY NOTE

Access to electricity affects productivity, health, education, climate change, food and water safety, and communication services. Due to the encompassing effect of energy access in communities and countries as a whole, one of the sustainable development goals of the United Nations is "Affordable and Clean Energy" where countries are encouraged to accelerate the transition to an affordable, reliable, and sustainable energy system by investing in renewable energy resources, prioritizing energy efficient practices, and adopting clean energy technologies and infrastructure.¹ President Rodrigo Roa Duterte, in his Report to the People, recognized the crucial role of energy access when he emphasized the necessity of reliable energy to support the growing industries of the country. His administration aims to achieve 100% household electrification level by 2022 that would benefit 13.32 million households in Luzon, 4.40 million households in Visayas, and 5.27 million households in Mindanao.²

Despite this, an alarming number of 2,779,530 households or 11.7% of the total number of households nationwide still have no access to electricity.³ The

¹ United Nations. "Sustainable Development Goals". Goal 7: Affordable and Clean Energy

² THE PRESIDENT'S REPORT TO THE PEOPLE 2016-2017: Laying the Foundation Towards a Comfortable Life for All. Published by the Office of the President - Presidential Management Staff in collaboration with the national government departments and agencies. (2017) Page 53.

³ DOE. "Total Electrification Strategy" presentation on Senate Committee on Energy hearing on SRN 695 and SRN 753 conducted on 13 August 2018.

government has stated that total electrification in unserved areas cannot be done by traditional grid extension alone but non-traditional means such as microgrid systems are needed.⁴ The problem of energy access is also a concern even in "electrified" areas with limited electricity service, also referred to as underserved areas. For example, just last year, of the 171 areas serviced by the National Power Corporation - Small Power Utilities Group, 83 or 48.5% of areas received only 4 to 8 hours of electricity service, while 34 or 19.9% of areas received only 9 to 16 hours of electricity service.⁵

The government has tapped the private sector as partner in delivering electricity and improving the quality of service in unserved and underserved areas. However, there are significant barriers to entry because of tedious bureaucratic processes, lack of information on prospective areas for electrification, and difficulties in obtaining waivers from incumbent utility franchise holders.⁶

This bill addresses acceleration of total electrification and the provision of reliable electricity service in unserved and underserved areas. The salient provisions of this bill include (1) mandating the Department of Energy to annually release and update the list of unserved and underserved areas for prospective Microgrid Service Providers (MSPs), (2) creating a streamlined process for MSPs with clear timelines and stiff sanctions, and (3) removing the requirement of obtaining waivers from incumbent franchised utilities for MSPs to provide electricity in unserved and underserved areas. Given the foregoing, the immediate passage of this measure is sought.



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⁴ Hearing on Senate Resolution No. (SRN) 695 conducted on 16 April 2018 where NPC-SPUG manifested that microgrid systems are viable solutions for rural electrification of remote and unviable areas as well as hearing on SRN 695 and SRN 753 conducted on 13 August 2018 where the DOE manifested its intention of crafting and promulgating an Executive Order for the President's approval and signature which would allow and promote private sector participation in microgrid systems. In the same August 2018 hearing, the NEA presented the Strategized Sitio Electrification Program (SSEP) which utilizes self-contained power systems such as mini-grids, confined to small geographic areas, powering up distant clusters of houses or villages and the Strategized Household Electrification Program (SHEP) which utilizes solar home systems that target dispersed households with no access to the grid.

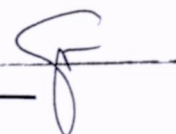
⁵ Hearing on Senate Resolution No. (SRN) 695 conducted on 16 April 2018.

⁶ European Union (EU) - Access to Sustainable Energy Programme (ASEP). Draft on "Encouraging Private Sector Participation Through Policy Reforms in Offgrid Areas" (2018)

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AN ACT
PROMOTING THE USE OF MICROGRID SYSTEMS FOR THE TOTAL
ELECTRIFICATION OF UNSERVED AND UNDERSERVED AREAS

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

- 1 Section 1. *Title.* – This Act shall be referred to as the "Microgrid Systems Act."
- 2 Sec. 2. *Declaration of Policy.* – It is hereby declared the policy of the State
- 3 to:
- 4 a) Pursue rural development and poverty reduction towards nation building
 - 5 through energy access;
 - 6 b) Accelerate total electrification and the provision of reliable electricity service in
 - 7 unserved and underserved areas;
 - 8 c) Promote private sector participation in electrification not only of remote and
 - 9 unviable areas in particular but also of unserved and underserved areas in
 - 10 general;
 - 11 d) Provide a competitive environment and level-playing field for different kinds of
 - 12 energy sources; and
 - 13 e) Ensure that electricity consumers will benefit from technologies and
 - 14 innovations in the electric power industry.
- 15 Sec. 3. *Scope and Application.* – This Act shall apply to the development of
- 16 microgrid systems in unserved and underserved areas nationwide.

1 Sec. 4. *Definition of Terms.* – For purposes of this Act, the following terms
2 shall be defined as stated below:

- 3 a) *Annual penetration limit* refers to the maximum total capacity of grid tied
4 microgrid systems that can electrically connect to a specific distribution
5 utility's system, and as a result, buy and sell from the grid taking into account
6 the distribution utility's Distribution Development Plan and existing power
7 supply agreements, Transmission Development Plan, distribution and
8 transmission system, and other technical considerations as may be
9 determined by the Energy Regulatory Commission (ERC);
- 10 b) *Benchmark rate* refers to the maximum retail rate or generation rate,
11 whenever applicable, that an MSP can charge and collect from end users
12 taking into account the microgrid system's technology, capacity, number of
13 off-takers, and other technical, financial, and economic considerations as may
14 be determined by ERC;
- 15 c) *Distributed energy resource (DER)* refers to smaller power sources that could
16 be aggregated to provide power necessary to meet regular demand;
- 17 d) *Distribution system* refers to the system of wires and associated facilities
18 belonging to a franchised distribution utility, extending between the delivery
19 points on the transmission, subtransmission system, or generating plant
20 connection and the point of connection to the premises of the end user;
- 21 e) *Distribution utility (DU)* refers to any electric cooperative, private corporation,
22 or government-owned utility which has a franchise to operate a distribution
23 system including those whose franchise covers economic zones;
- 24 f) *End user* refers to any natural or juridical person requiring the supply and
25 delivery of electricity for its own use;
- 26 g) *Grid* refers to the high voltage backbone system of interconnected
27 transmission lines, substations and related facilities;
- 28 h) *Grid tied* refers to a situation in which a microgrid system is connected to the
29 distribution system for main or backup power source;

30

- 1 i) *Island mode* refers to a situation in which a microgrid system is electrically
2 isolated from the grid, and the isolated system is energized by embedded
3 generation or DER;
- 4 j) *Microgrid system* refers to a group of interconnected loads and DER with
5 clearly defined electrical boundaries that acts as a single controllable entity
6 with respect to the distribution, subtransmission, or transmission grid,
7 whichever is applicable, and can connect and disconnect from the grid to
8 enable it to operate in both grid tied or island mode;
- 9 k) *Micro grid system provider (MSP)* refers to a natural or juridical person whose
10 business includes the installation of microgrid systems, power generation
11 assets, or other associated power delivery systems in unserved or
12 underserved areas nationwide;
- 13 l) *National Power Corporation - Small Power Utilities Group (NPC-SPUG) areas*
14 refers to a geographical area currently being served by the NPC-SPUG or by a
15 new power provider, and may be an underserved area;
- 16 m) *New power provider (NPP)* refers to MSPs who have taken over the function
17 of National Power Corporation - Small Power Utilities Group (NPC-SPUG)
18 through the mechanism of privatization provided by the Department of
19 Energy (DOE) consistent with Republic Act No. 9136, otherwise known as the
20 Electric Power Industry Reform Act of 2001, and whose functions are further
21 defined under this Act;
- 22 n) *Qualified Third Party (QTP)* refers to MSPs which serve as the alternative
23 electric service provider authorized to serve remote and unviable areas under
24 Republic Act No. 9136, and whose functions are further defined under this Act
- 25 o) *Remote and unviable area* refers to a geographical area within the franchise
26 of a DU where immediate extension of distribution lines is not feasible, and
27 may be an unserved or underserved area;
- 28 p) *Universal charge* refers to a non-bypassable charge which shall be passed on
29 and collection from all end users on a monthly basis by the distribution
30 utilities pursuant to Republic Act No. 9136;

31

- 1 q) *Underserved area* refers to an area currently served by home power systems,
2 microgrids, or DUs whose electricity services are less than twenty-four (24)
3 hours daily because of non-implementation of applied capital expense
4 projects, non-compliance with the service parameters of the Philippine
5 Distribution Code, or any other reason, resulting to an overall failing mark
6 based on the latest annual technical evaluation of performance of distribution
7 systems in relation to ERC's imposed targets; and
8 r) *Unserviced area* refers to an area with no electricity access, no distribution
9 system lines, no home power systems, or no connection to any microgrid.

10 Sec. 5. *Microgrid Systems in Unserved or Underserved Areas.* - Microgrid
11 systems shall be installed in unserved or underserved areas by accredited MSPs after
12 the conduct of a competitive selection process in accordance with Sections 6 and 7
13 of this Act: *Provided*, That the installation shall not require a waiver from the
14 concerned DU and shall not revoke the DU's franchise over the said area: *Provided*
15 *further*, That the installation of grid tied MSPs shall be within the annual penetration
16 limit determined by the ERC in accordance with Section 6 of this Act: *Provided*
17 *finally*, That the permitting process of all MSPs shall comply with the time frames
18 specified in this Act and with the provisions of Republic Act No. 11234, otherwise
19 known as the Energy Virtual One Stop Shop Act.

20 Accredited MSPs that operate in NPC-SPUG areas as NPPs, or remote or
21 unviable areas as QTPs shall be subsidized through the universal charge for
22 missionary electrification. Accredited MSPs that operate in unserved or underserved
23 areas which are not NPC-SPUG areas or remote or unviable areas shall be
24 unsubsidized.

25 All rates charged by accredited MSPs, whether subsidized or unsubsidized,
26 shall be equal to or lower than the applicable benchmark rate as determined by ERC
27 in accordance with Section 6 of this Act: *Provided*, That transmission, distribution,
28 wheeling, and universal charges imposed on end users, whenever applicable, shall
29 continue to be regulated by the ERC.

30

1 Sec. 6. *Duties and Functions of the Energy Regulatory Commission.* – In
2 addition to its functions under Republic Act No. 9136, the ERC shall:

3 a) Develop, establish, and promulgate the following within six (6) months from
4 the effectivity of this Act, in consultation with the DOE, the National
5 Transmission Corporation, the transmission concessionaire, the National
6 Electrification Administration, the National Power Corporation, and other
7 relevant government agencies and private stakeholders in the electric power
8 industry:

9 i. Parameters for the determination of the annual penetration limit and
10 each DU's annual penetration limit: *Provided,* That DUs shall be
11 necessary parties in the determination of their respective annual
12 penetration limits. The ERC shall conduct a regular review of these
13 parameters, and shall release all the annual penetration limits not later
14 than December 15 of each preceding year;

15 ii. Technical and service standards for microgrid systems, whether grid
16 tied or on island mode both for operations in unserved and
17 underserved areas: *Provided,* That these standards shall be compliant
18 with the Philippine Distribution Code, Philippine Grid Code, and other
19 relevant rules and regulations;

20 iii. Rules for grid tied microgrid systems to buy and sell from the grid,
21 whenever applicable: *Provided,* That this shall not result to increased
22 retail rates for other end users, or compromise grid stability; and

23 iv. An accreditation mechanism for MSPs: *Provided,* That such procedure
24 shall be no longer than thirty (30) calendar days: *Provided further,*
25 That the list of accredited MSPs shall be updated, published, and
26 posted on the ERC and DOE websites not later than January 15 of
27 every year.

28 b) Monitor the operations of all awarded MSPs and their respective contracts:
29 *Provided,* That the ERC, upon complaint or motu proprio, can conduct a
30 review of an awarded MSP's operations and the corresponding contract

1 should it find reasonable grounds for non-compliance with the benchmark
2 rate and other provisions of the standardized contract; and

- 3 c) Exercise its rate making power through the determination of benchmark rates
4 for different microgrid systems and standardized contracts based on
5 technology, capacity, and other considerations: *Provided*, That the list of
6 benchmark rates shall be updated, published, and posted on the ERC and
7 DOE websites not later than December 15 of each preceding year.

8 *Sec. 7. Duties and Functions of the Department of Energy.* – In addition to its
9 functions under Republic Act No. 7638, otherwise known as the Department of
10 Energy Act of 1992, the DOE shall:

- 11 a) Release and update a list of unserved and underserved areas as well as NPC-
12 SPUG areas and remote or unviable areas: *Provided*, That the list shall be
13 updated, published, and posted on the ERC and DOE websites not later than
14 January 15 of each preceding year;
- 15 b) Create an annual schedule of competitive selection process based on the list
16 of unserved and underserved areas: *Provided*, That the schedule shall be
17 published and posted on the ERC and DOE websites not later than January 15
18 of the current year;
- 19 c) Establish and conduct a simple, uniform, and streamlined process for
20 competitive selection of MSPs, whether subsidized or unsubsidized: *Provided*,
21 That the entire procedure from commencement to submission to the ERC of
22 the awarded contract shall be no longer than ninety (90) calendar days:
23 *Provided further*, That information on interested MSPs and their respective
24 proposed systems and rates shall be made available to end users in the
25 concerned area within five (5) days from the MSP's submission of the intent
26 to participate; and
- 27 d) Determine a detailed procedure for the transition of electricity service from
28 DUs to awarded MSPs in underserved areas: *Provided*, That such transition
29 shall not exceed three (3) months from the award of the contract through no
30 fault of the awarded MSP.

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1 Sec. 8. *Microgrid Systems of Electric Power Industry Participants.* - Generation
2 companies, DUs, retail electricity suppliers, and their respective subsidiaries or
3 affiliates may engage in the business of MSPs in unserved and underserved areas:
4 *Provided,* That a separate account is maintained for such business undertaking.

5 Sec. 9. *Effect of Grid Extension.* - In the event that the grid is extended to
6 previously unserved, NPP, or QTP areas, the DU shall have the option to acquire the
7 distribution system of the MSP upon the expiration of the MSP contract, subject to
8 the approval of the ERC.

9 Sec. 10. *Prohibited Acts.* - Any person, natural or juridical, is prohibited from
10 the following acts:

- 11 a) Refusal to allow the installation of any microgrid system: *Provided,* That the
12 requirements under Sections 5, 6, and 7 of this Act are complied with;
13 b) Imposition of new charges and contractual terms on the end user which are
14 not part of the benchmark rate and awarded MSP contract;
15 c) Refusal to allow a DU to acquire an MSP distribution system: *Provided,* That
16 the DU has a franchise over the area and the acquisition is in accordance with
17 Section 9 of this Act; and
18 d) Failure to comply with the duties, obligations, and time frames specified in
19 Sections 6 and 7 of this Act.

20 Sec. 11. *Penalties.* - The responsible officers and employees of any
21 establishment or organization, whether public or private, who commits the following
22 prohibited acts of this Act shall, upon conviction, suffer the following penalties:

- 23 a) Violation of Section 11 (a) - Imprisonment of six (6) years to eight (8) years,
24 or a fine ranging from a minimum of Seventy five million pesos
25 (P75,000,000.00) to One hundred million pesos (P100,000,000.00), upon the
26 discretion of the court;
27 b) Violation of Section 11 (b) - Imprisonment of four (4) years to six (6) years,
28 or a fine ranging from a minimum of Fifty million pesos (P50,000,000.00) to
29 Seventy five million pesos (P75,000,000.00), upon the discretion of the court;
30 and

1 c) Violation of Section 11 (c) - Imprisonment of two (2) years to four (4) years,
2 or a fine ranging from a minimum of Twenty five million pesos
3 (P25,000,000.00) to Fifty million pesos (P50,000,000.00), upon the discretion
4 of the court.

5 Any person who willfully aids or abets the commission of these prohibited acts
6 or who causes the commission of any such act by another shall be liable in the same
7 manner as the principal. In cases of an association, partnership, or corporation, the
8 penalty shall be imposed on the member, partner, president, chief operating officer,
9 chief executive officer, director, or officer responsible for the violation.

10 Any person found guilty of violating Section 11 (d) of this Act shall be
11 penalized as follows:

- 12 a) First offense - Thirty (30) days suspension without pay and mandatory
13 attendance in Values Orientation Program;
14 b) Second offense -Three (3) months suspension without pay; and
15 c) Third offense - Dismissal and perpetual disqualification from public service,
16 and forfeiture of retirement benefits.

17 Sec. 12. *Congressional Oversight.* – The Joint Congressional Energy
18 Commission shall exercise oversight powers over implementation of this Act. The
19 DOE and ERC shall submit annually to the Joint Congressional Energy Commission a
20 thorough report on the implementation of this Act not later than 15 March of every
21 year: *Provided,* That the report shall include identification of legislative gaps, if any,
22 and recommended ways forward.

23 Sec. 13. *Implementing Rules and Regulations.* – The DOE, in consultation
24 with the appropriate government agencies mentioned herein and electric power
25 industry stakeholders, shall issue the implementing rules and regulations of this Act
26 within sixty (60) days upon its effectivity.

27

1 Sec. 14. *Amendatory Clause.* – This Act amends Section 43 of the Electric
2 Power Industry Reform Act of 2001 insofar as the rights, obligations, and powers of
3 the ERC are concerned.

4
5 Sec. 15. *Separability Clause.* – If any portion or provision of this Act is
6 declared unconstitutional, the remainder of this Act or any provisions not affected
7 thereby shall remain in force and effect.

8
9 Sec. 16. *Repealing Clause.* – Any law, presidential decree or issuance,
10 executive order, letter of instruction, rule or regulation inconsistent with the
11 provisions of this Act is hereby repealed or modified accordingly.

12 Sec. 17. *Effectivity Clause.* - This Act shall take effect fifteen (15) days
13 following its complete publication in the Official Gazette or a newspaper of general
14 circulation.

15
16 Approved,