

SEVENTEENTH CONGRESS OF THE  
REPUBLIC OF THE PHILIPPINES  
Third Regular Session

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SENATE RECEIVED BY *[Signature]*  
S.B. No. 2218

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Introduced by SEN. WIN GATCHALIAN

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**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.<sup>1</sup>

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.<sup>2</sup>

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.<sup>3</sup> The 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.<sup>4</sup>

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<sup>1</sup> United Nations. "Sustainable Development Goals". Goal 7: Affordable and Clean Energy

<sup>2</sup> 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.

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

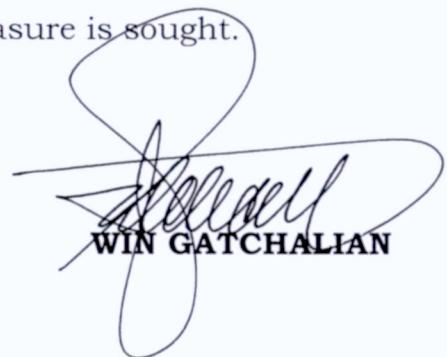
<sup>4</sup> Hearing on Senate Resolution No. (SRN) 695 conducted on 16 April 2018 where NPC-SPUG manifested that microgrid systems are viable solutions for rural electrification of remote and unviable areas as well as hearing on SRN 695 and SRN 753 conducted on 13 August 2018 where the DOE manifested 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,

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.<sup>5</sup>

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.<sup>6</sup>

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 includes (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 for bureaucratic red tape and delay, 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.



WIN GATCHALIAN

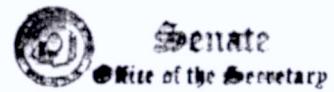
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powering up distant clusters of houses or villages and the Strategized Household Electrification Program (SHEP) which utilizes solar home systems that target dispersed households with no access to the grid.

<sup>5</sup> Hearing on Senate Resolution No. (SRN) 695 conducted on 16 April 2018.

<sup>6</sup> 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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*Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:*

1   **SECTION 1. Short Title.** – This Act shall be referred to as the “Microgrid  
2   Systems Act.”

3  
4   **SECTION 2. Declaration of Policy.** – It is hereby declared the policy of the  
5   State to:

- 6       (a) Pursue rural development and poverty reduction towards nation  
7       building through energy access;  
8       (b) Accelerate total electrification and the provision of reliable electricity  
9       service in unserved and underserved areas;  
10      (c) Promote private sector participation for electrification not only of remote  
11       and unviable areas in particular but also of unserved and underserved  
12       areas in general;  
13      (d) Provide a competitive environment and level-playing field for different  
14       kinds of energy sources; and  
15      (e) Ensure that electricity consumers will benefit from technologies and  
16       innovations in the electric power industry.

17  
18  
19   **SECTION 3. Scope and Application.** – This Act shall apply to the development  
20   of microgrid systems in unserved and underserved areas nationwide.

1

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

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

- 1       (j) **Microgrid system** refers to a group of interconnected loads and DER  
2       with clearly defined electrical boundaries that acts as a single  
3       controllable entity with respect to the distribution, subtransmission, or  
4       transmission grid, whichever is applicable, and can connect and  
5       disconnect from the grid to enable it to operate in both grid tied or island  
6       mode;
- 7       (k) **Microgrid system provider (MSP)** refers to a natural or juridical person  
8       whose business includes the installation of microgrid systems, power  
9       generation assets, or other associated power delivery systems in  
10      unserved or underserved areas nationwide;
- 11      (l) **National Power Corporation – Small Power Utilities Group (NPC-  
12       SPUG) areas** refers to a geographical area currently being served by the  
13       NPC-SPUG or by a new power provider, and may be an underserved  
14       area;
- 15      (m) **New power provider (NPP)** refers to MSPs who have taken over the  
16       function of National Power Corporation – Small Power Utilities Group  
17       (NPC-SPUG) through the mechanism of privatization provided by the  
18       Department of Energy (DOE) consistent with the Electric Power Industry  
19       Reform Act of 2001, and whose functions are further defined under this  
20       Act;
- 21      (n) **Qualified Third Party (QTP)** refers to MSPs which serve as the  
22       alternative electric service provider authorized to serve remote and  
23       unviable areas under the Electric Power Industry Reform Act of 2001,  
24       and whose functions are further defined under this Act;
- 25      (o) **Remote and unviable area** refers to a geographical area within the  
26       franchise of a DU where immediate extension of distribution line is not  
27       feasible, and may be an unserved or underserved area;
- 28      (p) **Universal charge** refers to a non-bypassable charge which shall be  
29       passed on and collection from all end users on a monthly basis by the  
30       distribution utilities pursuant to the Electric Power Industry Reform Act  
31       of 2001;
- 32      (q) **Underserved area** refers to an area currently served by home power  
33       systems, microgrids, or DUs whose electricity services are less than  
34       twenty-four (24) hours daily because of non-implementation of applied  
35       capital expense projects, non-compliance with the service parameters of  
36       the Philippine Distribution Code, or any other reason, resulting to an  
37       overall failing mark based on the latest annual technical evaluation of

1        performance of distribution systems in relation to ERC's imposed  
2        targets; and

- 3        (r) **Unserved area** refers to an area with no electricity access, no  
4        distribution system lines, no home power systems, or no connection to  
5        any microgrid.

6

7        **Section 5. Microgrid Systems in Unserved or Underserved Areas. –**

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

18

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

24

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  
27      ERC in accordance with Section 6 of this Act: *Provided*, That transmission,  
28      distribution, wheeling, and universal charges imposed on end users, whenever  
29      applicable, shall continue to be regulated by the ERC.

30

31        **Section 6. Duties and Functions of the Energy Regulatory Commission. –**

32        In addition to its functions under the Electric Power Industry Reform Act of  
33        2001, the ERC shall:

- 34        (a) Develop, establish, and promulgate the following within six (6) months  
35        from the effectivity of this Act, in consultation with the DOE, the National  
36        Transmission Corporation, the transmission concessionaire, the National  
37        Electrification Administration, the National Power Corporation, and other

relevant government agencies and private stakeholders in the electric power industry:

- i. Parameters for the determination of the annual penetration limit and each DU's annual penetration limit: *Provided*, That DUs shall be necessary parties in the determination of their respective annual penetration limits. The ERC shall conduct a regular review of these parameters, and shall release all the annual penetration limits not later than December 15 of each preceding year;
- ii. Technical and service standards for microgrid systems, whether grid tied or on island mode both for operations in unserved and underserved areas: *Provided*, That these standards shall be compliant with the Philippine Distribution Code, Philippine Grid Code, and other relevant rules and regulations;
- iii. Rules for grid tied microgrid systems to buy and sell from the grid, whenever applicable: *Provided*, That this shall not result to increased retail rates for other end users, or compromise grid stability; and
- iv. An accreditation mechanism for MSPs: *Provided*, That such procedure shall be no longer than thirty (30) calendar days: *Provided further*, That the list of accredited MSPs shall be updated, published, and posted on the ERC and DOE websites no later than January 15 of every year.

(b) Monitor the operations of all awarded MSPs: *Provided*, That the ERC, upon complaint or *motu proprio*, can conduct a review of an awarded MSP's operations should it find reasonable grounds for non-compliance with the benchmark rate and other provisions of the standardized contract;

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

(d) Monitor all awarded MSP contracts: *Provided*, That ERC, upon complaint or *motu proprio*, can conduct a review of awarded MSP contracts and their operations should it find reasonable grounds for non-compliance

1       with the benchmark rate and other provisions of the standardized  
2       contract.

3

4       **Section 7. Duties and Functions of the Department of Energy.** – In  
5       addition to its functions under Republic Act No. 7638 otherwise known as the  
6       Department of Energy Act of 1992, the DOE shall:

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

27

28       **SECTION 8. Microgrid Systems of Electric Power Industry Participants.** –  
29       Generation companies, DUs, retail electricity suppliers, or their respective  
30       subsidiaries or affiliates may engage in the business of MSPs in unserved and  
31       underserved areas: *Provided*, That a separate account is maintained for such  
32       business undertaking.

33

34       **SECTION 9. Effect of Grid Extension.** – In the event that the grid is extended  
35       to previously unserved, NPP, or QTP areas, the DU shall have the option to  
36       acquire the distribution system of the MSP upon the expiration of the MSP  
37       contract, subject to the approval of the ERC.

1  
2     **SECTION 11. Prohibited Acts.** – Any person, natural or juridical, is prohibited  
3 from the following acts:

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

14  
15     **SECTION 12. Penalties.** The responsible officers and employees of any  
16 establishment or organization, whether public or private, who commits the  
17 following prohibited acts of this Act shall, upon conviction, suffer the following  
18 penalties:

- 19         (a) Violation of Section 11 (a) – Imprisonment of six (6) years to eight (8)  
20           years, or a fine ranging from a minimum of Seventy five million pesos  
21           (P75,000,000.00) to One hundred million pesos (P100,000,000.00), upon  
22           the discretion of the court;
- 23         (b) Violation of Section 11 (b) – Imprisonment of four (4) years to six (6)  
24           years, or a fine ranging from a minimum of Fifty million pesos  
25           (P50,000,000.00) to Seventy five million pesos (P75,000,000.00), upon  
26           the discretion of the court; and
- 27         (c) Violation of Section 11 (c) – Imprisonment of two (2) years to four (4)  
28           years, or a fine ranging from a minimum of Twenty five million pesos  
29           (P25,000,000.00) to Fifty million pesos (P50,000,000.00), upon the  
30           discretion of the court.

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

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

- 3 (a) First offense – Thirty (30) days suspension without pay and mandatory  
4 attendance in Values Orientation Program;  
5 (b) Second offense – Three (3) months suspension without pay; and  
6 (c) Third offense – Dismissal and perpetual disqualification from public  
7 service, and forfeiture of retirement benefits.

8

9 **SECTION 13. Congressional Oversight.** – The Joint Congressional Power  
10 Commission shall exercise oversight powers over implementation of this Act.  
11 The DOE and ERC shall submit annually to the Joint Congressional Power  
12 Commission a thorough report on the implementation of this Act not later than  
13 15 March of every year: *Provided*, That the report shall include identification of  
14 legislative gaps, if any, and recommended ways forward.

15

16 **SECTION 14. Implementing Rules and Regulations.** – The DOE, in  
17 consultation with the appropriate government agencies mentioned herein and  
18 electric power industry stakeholders, shall issue the implementing rules and  
19 regulations of this Act within sixty (60) working days upon its effectivity.

20

21 **SECTION 15. Amendatory Clause.** – This Act amends Section 43 of the  
22 Electric Power Industry Reform Act of 2001 insofar as the rights, obligations,  
23 and powers of the ERC are concerned.

24

25 **SECTION 16. Separability Clause.** – Any portion or provision of this Act,  
26 which may be declared unconstitutional or invalid shall not have the effect of  
27 nullifying other portions or provisions hereof.

28

29 **SECTION 17. Repealing Clauses.** – All laws, ordinances, rules, regulations  
30 and other issuance or parts thereof, which are inconsistent with this Act, are  
31 hereby amended, modified, or repealed accordingly.

32

33 **SECTION 18. Effectivity Clause.** – This Act shall take effect fifteen (15) days  
34 after its publication in at least two (2) newspaper of general circulation.

*Approved,*