# DEPARTMENT CIRCULAR NO. DC2023- -

# PRESCRIBING THE POLICY AND GENERAL FRAMEWORK ON EXPANDED ROOF-MOUNTED SOLAR PROGRAM IN THE PHILIPPINES

**WHEREAS**, Republic Act (RA) No. 7638, otherwise known as the "Department of Energy (DOE) Act of 1992", declares the policy of the State to, among others, ensure a continuous, adequate and economic supply of energy through the integrated and intensive exploration, production, management and development of the country's indigenous energy resources;

**WHEREAS**, Section 4 of RA No. 7638 mandates the DOE to carry, prepare, integrate, coordinate, supervise, and control all plans, programs, projects, and activities of the Government relative to energy exploration, development, utilization, distribution, and conservation;

WHEREAS, RA No. 9136, otherwise known as the "Electric Power Industry Reform Act of 2001" or "EPIRA", provides that it is the declared policy of the State to, among others: (a) assure socially and environmentally compatible energy sources and infrastructure; (b) promote the utilization of indigenous and new and renewable energy (RE) resources in power generation in order to reduce dependence on imported energy; and (c) encourage the efficient use of energy and other modalities of demand side management;

 **WHEREAS**, Section 2 of the EPIRA, declares the policy of the State, to among others, (i) ensure the quality, reliability, security and affordability of the supply of electric power; (ii) protect the public interest as it is affected by the rates and services of electric utilities and other providers of electric power; (iii) assure socially and environmentally compatible energy sources and infrastructure; and (iv) encourage the efficient use of energy and other modalities of demand side management;

**WHEREAS**, RA No. 9513, otherwise known as the "Renewable Energy Act of 2008" or the "RE Act", declares the policy of the State to, among others, accelerate the exploration, development, commercialization and increase the utilization of RE resources including hybrid systems, to among others reduce the country's dependence on imported fuels;

**WHEREAS**, pursuant to DOE Circular (DC) No. DC2017-12-0015, entitled "Promulgating the Rules and Guidelines Governing the Establishment of the Renewable Portfolio Standards for On-Grid Areas", the DOE set the aspirational target of attaining 35 percent (35%) RE Generation Share in the country's power generation mix by 2030;

**WHEREAS**, on 04 December 2019, the DOE promulgated DC2019-12-0016, entitled "Promulgating the Renewable Energy Market Rules", which sets the rules governing the RE Market;

**WHEREAS**, on 01 October 2019, the DOE promulgated DC2019-10-0013, entitled "Omnibus Guidelines Governing the Award and Administration of Renewable Energy Contracts and the Registration of Renewable Energy Developers", which provides guidelines and procedures on Certificate of Registration and RE Contracts applications, among others;

**WHEREAS**, on 06 February 2020, the DOE promulgated DC2020-02-0003, entitled "Providing a National Smart Grid Policy Framework for the Philippine Electric Power Industry and Roadmap for Distribution Utilities", which aims to modernize the country's power grid through decarbonization, digitalization, democratization, and decentralization of energy, among others:

**WHEREAS**, on 01 February 2018, the DOE promulgated DC2018-02-0003, entitled "Adopting and Prescribing the Policy for the Competitive Selection Process in the Procurement by the Distribution Utilities of Power Supply Agreement for the Captive Market", which provided guidelines to the Distribution Utilities to conduct Competitive Selection Process for the procurement of power supply in the Captive Market;

**WHEREAS**, on 24 September 2021, the DOE promulgated DC2021-09-0030, entitled "Amending Certain Provisions of and Supplementing Department Circular No. DC2018-02-0003 on the Competitive Selection Process in the Procurement by the Distribution Utilities of Power Supply Agreement for the Captive Market";

**WHEREAS**, RA 11646, otherwise known as "Microgrid Systems Act", declares the policy of the State, among others, to promote private sector participation in the electrification of unserved and underserved areas and provide a competitive environment for different kinds of energy sources while prioritizing low-cost, indigenous, renewable, and environment-friendly sources of energy;

**WHEREAS**, on 24 May 2022, the DOE promulgated DC2022-05-0017, entitled "Rules and Regulations to implement RA No. 11646" or the "Microgrid Systems Act IRR", which provided implementing rules and regulations for the Microgrid Systems Act;

**WHEREAS**, as of end-2021, the share of renewables in the country's installed capacity and power generation is at 29 percent (29%) and at 22 percent (22%), respectively;

**WHEREAS**, the DOE's National Renewable Energy Program (NREP) 2020-2040, in keeping up with the objectives of the RE Act, aims to increase the share of RE in the power generation mix to 35% by 2030 and 50% by 2040 intensified its RE plans and programs including development of various innovative business models suitable to the Philippine settings;

**WHEREAS**, the DOE recognizes the potential use of rooftops as venue to increase RE generation through solar photovoltaic technology and further promote solar roof-mounted technologies to empower more electricity end-users/building establishments, and augment power supply in the country, both for on-grid and off-grid areas;

**NOW, THEREFORE**, after due reviews and studies of the views, suggestions, and recommendations as results of the consultations with all concerned stakeholders, the DOE hereby issues and adopts the following policies for the promotion and development of a comprehensive roof-mounted solar development in the country.

**SECTION 1. TITLE.** This Circular shall be known as "Prescribing the Policy and General Framework on Expanded Roof-mounted Solar Program in the Philippines" or the "ERSP."

**SECTION 2. POLICY OBJECTIVES.** The ERSP is hereby introduced and promulgated towards the Government's goal to promote, develop, and commercialize RE systems and technologies using available rooftops in the Philippines with the following objectives:

(a) Contribute to the attainment of the objectives of the RE Act and the NREP 2020-2040 aspirational targets of achieving 35% RE share in the power generation mix by 2030 and 50% by 2040;

(b) Attract more investments in RE that leads to additional supply of electricity through innovative business models that create additional market for RE Developers, while empowering Electricity End-Users/building establishments in using and/or hosting rooftops for RE systems, particularly solar photovoltaic (PV) technologies;

(c) To decongest or relieve the transmission and distribution networks from increasing electricity demands thereby deferring grid expansions and upgrading;

(d) To offer an alternative compliance mechanism to building owners /establishments with their respective obligations/mandates under Energy Efficiency and Conservation Act and its IRRs; and

(e) To streamline and simplify the processes and requirements in the development of roof-mounted solar projects, consistent with the objectives of the Ease of Doing Business and Efficient Government Service Delivery Act of 2018 and Energy Virtual One-Stop Shop Act.

**SECTION 3. COVERAGE.** This Circular shall prescribe the rules and guidelines for all roof-mounted solar energy generating facilities with a capacity above one hundred-kilowatt peak (100 kWp), for own use consumption and/or export energy to the host DU or to the Grid. Provided that, this program shall be a different market for solar developers from the net-metering program and the GEOP. Provided further that, this program shall apply both for on-grid and off-grid areas.

**SECTION 4. SCOPE.** This Circular shall apply to the following stakeholders:

- (a) Electricity End-Users which include Utility and Non-Utility Customers;
- 144 (b) Economic Zone Developers and Utility Enterprises;
  - (c) RE Developers / Generation Companies;

- 146 (d) Retail Electricity Suppliers (RESs);
- 147 (e) Distribution Utilities (DUs);
- 148 (f) Market Operator (MO);
- 149 (g) Market Governance (MG);
- 150 (h) Microgrid Service Providers (MGSP);
- 151 (i) Roof-mounted Solar Providers (RSPs); and
- 152 (j) System Operator (SO).

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SECTION 5. DEFINITION OF TERMS. The terms as used in this Circular shall have the following meaning:

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5.1. "Competitive Selection Process" or "CSP" refers to procurement process of
 Distribution Utilities for Power Supply Agreements in the Captive Market
 pursuant to DC2018-02-0003 and DC2021-009-0030;

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5.2. "Directly Connected Customers" or "DCC" refer to industrial or bulk
 Electricity End-Users, which are supplied through the Grid or Sub-transmission
 Assets that are still owned by the National Transmission Corporation;

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5.3. "Distribution Development Plant" or "DDP" refers to the program for expansion, reinforcement and rehabilitation of the distribution system which is prepared by the DU and submitted to the DOE for integration with the Power Development Plan and Philippine Energy Plan;

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5.4. "Distribution Utility" or "DU" refers to any electric cooperative, private corporation, government-owned utility, or existing local government unit which has a franchise to operate a distribution system including those whose franchise covers economic zones;

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175 **5.5.** "Ease of Doing Business and Efficient Government Service Delivery Act of 2018" refers to RA No. 11032;

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5.6. "Electric Cooperative" or "EC" refers to a distribution utility organized pursuant to Presidential Decree No. 269, as amended, or as otherwise provided in the RA No. 9136;

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5.7. "Electricity End-User" as used in this Circular, refers to any person or entity requiring the supply and delivery of electricity, who owns distributed RE system capable of supplying for its own use requirements, either partially or fully, and is willing to participate in the ERSP;

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187 5.8. "Energy Efficiency and Conservation Act" or "EECA" refers to the RA No.188 11285

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190 **5.9. "Energy Virtual One Stop Shop Act"** refers to the RA No. 11234 ensuring among others, transparency and accountability in the process of approving power generation;

- 5.10. "Generation Company" or "GenCo" refers to any person or entity authorized by the Energy Regulatory Commission to operate facilities used in the generation of electricity;
- **5.11. "Green Energy Option Program"** or **"GEOP"** refers to a voluntary RE program under Section 9 of the RA No. 9513.

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- 5.12. "Grid" refers to the high voltage backbone system of interconnected transmission lines, substations and related facilities, located in each of Luzon, Visayas, and Mindanao, or as may be determined by the Energy Regulatory Commission in accordance with Section 45 of the RA No. 9136:
- 5.13. "Market Operator" or "MO" refers to the entity responsible for the operation of the WESM in accordance with the WESM Rules;
- 5.14. "Metering Service Provider" or "MSP" refers to a person or entity authorized
  by the ERC to provide metering services as defined in the Distribution Services
  and Open Access Rules;
- 5.15. "Micro-Grid System" refers to a group of interconnected loads and a generation facility/ies or distributed power generation/s within clearly defined electrical boundaries that acts as an integrated power generation and distribution system, whether or not connected to a distribution or transmission system;
- 5.16. "Micro-Grid System Provider" or "MGSP" refers to a natural or juridical person whose business includes the installation, operation, and maintenance of micro-grid systems in unserved or underserved areas nationwide;
- 5.17. "National Renewable Energy Board" or "NREB" refers to recommendatory
  body of DOE Renewable Energy Management Bureau created under section
  27 of the RA No. 9513;
- 5.18. "Power Supply Agreement" or "PSA" refers to the agreement, regardless of nomenclature, between a DU and a GenCo for the supply of capacity and/or energy intended for the DU's captive market;
- 5.19. "Power Supply Procurement Plan" or "PSPP" refers to a DU's plan for the acquisition of a variety of demand-side and supply-side resources to cost-effectively meet the electricity needs of its customers. The "PSPP" is an integral part of the DU's DDP;
- 5.20. "Red Alert" refers to a notice issued by the System Operator as defined in the Philippine Grid Code (PGC);
- 5.21. "Renewable Energy Certificate" or "REC" refers to a certificate issued by the
  RE Registrar representing all renewable and environmental attributes from one
  megawatt-hour of electricity generation sourced from an eligible RE generation
  facility;

- 5.22. "RE Market" or "REM" refers to the market where RE Certificates representing an amount of power generated from RE resources are traded, as provided in Section 8 of the RA No. 9513;
- 5.23. "RE Registrar" or "RER" refers to a unit designated in accordance with the RA No. 9513 that will administer and operate the REM;
- 5.24. "Roof-mounted Solar Facility" or "RSF" refers to a solar PV energy generating system, mounted on the rooftop of a residential, commercial building, industrial facility, or any similar structure, which is used for self-consumption and/or commercial purposes;
- 5.25. "Roof-mounted Solar Provider" or "RSP" refers to a natural or juridical entity whose business includes the installation, operation, and maintenance of a Roof-mounted Solar Facility;
  - **5.26.** "Wholesale Electricity Spot Market" or "WESM" refers to the market established by the DOE pursuant to Section 30 of the RA No. 9136; and
- **5.27. "Yellow Alert"** refers to a notice issued by the System Operator as defined in the PGC.
  - **SECTION 6. ERSP BUSINESS MODELS.** This Circular sets out the policies and guidelines on the following business models/supply augmentation framework for RSFs:
  - 6.1. Supply Contingency Option.

- **6.1.1.** This business model involves the participation of Electricity End-Users with RE Systems for Own Use (RESOU), with 100kW and above capacity, the option to export its energy generation during grid power supply shortages and/or emergency situations which include among others, Yellow and Red Alert situations:
- **6.1.2.** To accommodate export of energy generation, all existing Electricity End-Users with RESOU, opting to participate, shall update their meter, through their MSP to conform two-way communication to the host DU or to the Grid;
- **6.1.3.** All Electricity End-Users intending to participate in this voluntary program shall inform its host DU and shall enter into an agreement with the DU, as determined by the ERC; and
- **6.1.4.** All Electricity End-Users opting to participate in the ERSP shall be compensated as determined by the ERC.

292	6.2.	Lease-to-Generate	Roof-mounted	Solar	Arrangement.
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- **6.2.1.** This business model provides opportunity to any interested and potential RSP to lease contiguously located rooftops of buildings/establishments suitable for power generation;
- **6.2.2.** The RSP shall serve as the operator of the aggregated capacity of all RSFs and may sell or inject power to the host DU or to the Grid. In the case of injecting power to the host DU through a PSA, the RSP shall comply with the rules and guidelines of the CSP or DC Nos. DC2018-02-0003 and DC2021-09-0030 and any amendments thereto; and
- **6.2.3.** The aggregated capacity shall be registered in the WESM as only one generating facility. Provided that, this facility may also register in the RER and participate in the REM, subject to DOE REM rules and any amendments thereto.

#### 6.3. Roof-mounted Solar for Own-Use.

- **6.3.1.** This business model applies to a RSF solely used for own consumption by an Electricity End-User and shall not in any way inject or sell energy generation to the Grid or to its host DU;
- **6.3.2.** The RSF owner and the Electricity End-User shall not be the same entity.

# 6.4. Restricted Peer-To-Peer (P2P) Energy Trading.

- **6.4.1.** This business model applies to a confined area, such as economic zones, where Electricity End-Users with RSF/s participate in trading within and/or among themselves for power supply, whereby aggregated excess electricity generated may be sold to the Host DU or to the Grid;
- **6.4.2.** To align with the objectives of the DC2020-002-0003 to empower all Electricity End-Users through digitalization and decentralization of energy, the DOE, in consultation with the NREB and involved industry stakeholders, shall develop rules, design, and guidelines for the P2P Energy Trading; and
- **6.4.3.** Thereafter, the ERC shall determine the rules and regulatory framework for the P2P Energy Trading.

#### **SECTION 7. GENERAL PROVISIONS.**

- **7.1.** All ERSP Providers shall comply with the DOE and ERC pertinent rules and guidelines and other related requirements/permits prior to construction and commercial operation of any solar generating facility;
- **7.2.** The metering component shall conform two-way connection to the grid or the host DU, excluding Roof-mounted Solar for Own-Use;

- 7.3. All RECs generated under the ERSP shall be in accordance with the existing
  DOE RPS rules and any amendments thereto; and
- 7.4. In case of unserved and underserved areas, the MGSPs shall serve as the
  RSPs. Provided that, MGSPs shall comply with the Microgrid Systems Act and
  its IRR, DOE policies, and ERC rules and regulations.
  - **SECTION 8. DUTIES AND RESPONSIBILITIES.** The following shall have corresponding responsibilities:

### 8.1. Department of Energy

- **8.1.1.** Shall review and amend the DC2019-10-0013 or the Omnibus Guidelines Governing the Award and Administration of RE Contracts and the Registration of RE Developers to streamline and simplify the processes and requirements in the development of roof-mounted solar projects prior to commercial operations;
- **8.1.2.** Shall conduct intensive Information, Education, and Communication Campaigns (IECs) on the promotion of the ERSP. Such IECs shall cover, among others, basic concepts of Solar Energy generation and its benefits to the consumers, efficient use of solar energy, and best practices to mitigate the effects of climate change;
- **8.1.3.** Through the REMB, shall monitor and oversee the implementation of all ERSP business models and projects, and establish a comprehensive database for the successful implementation of this Circular;
- **8.1.4.** Shall conduct regular meetings, review, and propose amendment or enhancement of this policy, if necessary, to ensure up to date ERSP implementation; and
- **8.1.5.** Shall integrate the ERSP plans and programs to the formulation of the Philippine Energy Plan, Power Development Plan, Missionary Electrification Development Plan, and NREP, among others.

#### 8.2. Transmission Network Provider (TNP)

- **8.2.1.** In the case of interested DCCs, the Transmission Network Provider shall provide support to the metering services and connection of such Electricity End-Users to the grid; and
- **8.2.2.** In consultation with the DOE, shall include the ERSP impacts to the grid in the annual update of the Transmission Development Plan.

#### 8.3. Distribution Utilities (DUs)

**8.3.1.** Shall ensure the reliability and stability of their distribution systems to accommodate the entry of ERSP facilities;

**8.3.2.** Shall include impact of all existing and projected ERSPs' capacity and energy generation in their annual DDP and PSPP submission to the DOE; and **8.3.3.** Shall be the default MSP of an ERSP DU-connected Electricity End-User located within its franchise area, subject to pertinent ERC metering rules and guidelines.

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#### 8.4. Market Operator (MO)

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**8.4.1.** Shall review and/or propose amendments to the WESM and Retail Rules and Manuals for possible integration of ERSP to the WESM and Competitive Retail Electricity Market; and

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**8.4.2.** As may deemed necessary by the DOE, shall conduct further studies and simulations for the electricity and/or WESM price impact of the ERSP.

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### 8.5. System Operator (SO)

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**8.5.1.** Shall ensure grid reliability and stability during implementation of this Circular; and

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**8.5.2.** As may deemed necessary by the DOE, shall conduct further studies and simulations for the grid impact of the ERSP and provide recommendations to the long-term capacity and generation expansion planning of the DOE.

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# **SECTION 9. Regulatory and Other Support**

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# 9.1. Energy Regulatory Commission (ERC)

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**9.1.1.** For the successful implementation of this policy, shall formulate rules and regulations and determine pricing methodology and standards of the ERSP within one hundred twenty calendar (120) days after the effectivity of this Circular: and

**9.1.2.** Shall review and amend, if necessary, the price determination of the ERSP every three (3) years or as deemed necessary.

**9.2. National Electrification Administration (NEA).** The NEA shall assist the DOE in monitoring the ERSP in the case of ECs.

**SECTION 10. Repealing Clause.** Nothing in this Circular shall be construed as to amend, supersede, or repeal any of the mechanism or institutions already existing or responsibilities already allocated and provided for under any existing laws, rules, or contracts.

**SECTION 11. Separability Clause.** If for any reason, any section or provision of this Circular is declared unconstitutional or invalid, the other parts or provisions hereof which are not affected thereby shall continue to be in full force and effect.

438 439	its publication in two (2) newspapers	of general circulation, and copies of this Circular				
440	shall be filed with the University of the Philippines Law Center-Office of the National					
441	Administrative Register.					
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443	Signed this day of	2023 at DOE, Energy Center, Rizal				
444	Drive, Bonifacio Global City, Taguig C	ity, Metro Manila.				
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448		RAPHAEL P.M. LOTILLA				
449		Secretary				
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