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5 6 7 DEPARTMENT CIRCULAR NO. DC\_\_\_\_-\_\_-

## POLICIES TO ENHANCE THE NET-METERING PROGRAM FOR RENEWABLE ENERGY SYSTEMS AND OTHER MECHANISMS TO ENSURE ENERGY SECURITY

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WHEREAS, Republic Act No. (RA) 7638, otherwise known as the "Department of Energy (DOE) Act of 1992", declares as a 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;

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**WHEREAS**, RA 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; and (b) promote the utilization of indigenous and new and renewable energy (RE) resources in power generation in order to reduce dependence on imported energy;

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WHEREAS, Section 37 of EPIRA mandates the DOE to encourage private sector
 investments in the electricity sector and promote the development of indigenous and
 RE resources;

WHEREAS, RA 9513, otherwise known as the "Renewable Energy Act of 2008" or the "RE Act", provides that it is the declared policy of the State to accelerate the exploration and development of RE resources including hybrid systems, to achieve self-reliance, strategies to reduce the country's dependence on fossil fuels and thereby minimize the country's exposure to price fluctuations in the international markets, the effects of which spiral down to almost all sectors of the economy;

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WHEREAS, the RE Act further provides the declared policy of the State to increase
 the utilization of RE by institutionalizing the development of national and local
 capabilities in the use of RE Systems, and promoting their efficient and cost-effective
 commercial application by providing fiscal and non-fiscal incentives;

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WHEREAS, Section 10 of the RE Act and Section 7 of its Implementing Rules and Regulations (RE Act-IRR) provides that the Energy Regulatory Commission (ERC), in consultation with the National Renewable Energy Board and the electric power industry participants, shall establish Net-Metering interconnection standards and pricing methodology and other commercial arrangements necessary to ensure success of the Net-Metering for renewable energy program;

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WHEREAS, Section 10 of the RE Act further provides that the DOE, ERC, National
 Transmission Corporation or its successors-in-interest, Distribution Utilities,
 Philippine Electricity Market Corporation and all relevant parties are mandated to

51 provide the mechanisms for the physical connection and commercial arrangements 52 necessary to ensure the success of the Net-Metering for RE program, consistent 53 with the Philippine Grid and Distribution Codes;

55 **WHEREAS**, on 27 May 2013, ERC issued a Resolution No. 9, Series of 2013 56 entitled "*A Resolution Adopting the Rules Enabling the Net-Metering Program for* 57 *Renewable Energy*" or the "Net-Metering Rules";

59 WHEREAS, during implementation of Net-Metering Program from July 2013 to 60 December 2018, it was reported that a total of 17 MW of Net-Metering facilities (from 61 2,232 Qualified End-Users) have been installed in the Philippines, wherein 66% of it 62 are located within the franchised area of one Distribution Utility, equivalent to only 63 0.12% of the 2018 total non-coincident peak demand of 14,782 MW;

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65 **WHEREAS**, despite the high potential of renewable energy resources in the country, 66 numerous economic and non-economic barriers under the current design of the Net-67 Metering Program have contributed to low participation of End-Users;

69 WHEREAS, on 22 December 2017, the DOE issued the Department Circular No. 70 DC2017-12-0015 entitled, *"Promulgating the Rules and Guidelines Governing the* 71 *Establishment of the Renewable Portfolio Standards for On-Grid Areas,"* or the "RPS 72 On-Grid Rules" where every kilowatt-hour produced from the Net-Metering Program 73 are eligible to earn RE Certificates, which shall be credited as compliance of the 74 Distribution Utilities in its obligation as a mandated participant under the RPS;

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WHEREAS, the DOE is continuing its efforts in promulgating and issuing relevant
 policies and programs, e.g., RPS Off-Grid Rules, Green Energy Option Program
 Rules, RE Market Rules, etc., in order to realize the objectives of the RE Act. The full
 implementation of the aforesaid mechanisms shall boost the entry of Distributed
 Photovoltaic (DPV) Technology;

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**WHEREAS**, in partnership with the DOE, the United States Agency for International 82 Development (USAID), through the Clean Power Asia Program which leveraged the 83 expertise of the United States National Renewable Energy Laboratory, Lawrence 84 Berkeley National Laboratory and Chulalongkorn University, published the 85 "Distributed Photovoltaic Economic and Technical Impact Analysis in Philippines" or 86 the DPV Study. The study provides a data-driven analysis on three key impacts, i.e., 87 customer economics, utility revenue and retail rate, and technical impact on the 88 89 distribution grid, of DPV adoption through the Net-Metering Program, and examines the implications for potential policy and regulatory revisions; 90

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- NOW THEREFORE, after due consideration of the above, the DOE hereby adopts
   the following rules and regulations:
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95 Section 1. Title. This Department Circular shall be known as the "Policies to
 96 Enhance the Net-Metering Program for Renewable Energy Systems and other
 97 Mechanisms to Ensure Energy Security".

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- 99 **Section 2. Purpose.** This Circular shall encourage and promote Electricity End-100 Users' participation into the Net-Metering Program and into other mechanisms

- introduced herein by enhancing the current commercial arrangements while ensuring
   the economic and technical viability both from the End-Users' and the Distribution
   Utilities' perspective
- 103 Utilities' perspective.

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- Section 3. Scope. This Circular sets out the policies and guidelines on the following:
- 107 (a) Adoption of multiple compensation mechanisms for Net-Metering Program;
- 108 (b) Voluntary connection of RE Systems above 100 kW capacity; and
- 109 (c) Utilization of Own-Use RE Systems as Emergency Supply.
- Section 4. Definition of Terms. As used in this Circular, the following terms are
   herein defined:
- (a) "Distributed Generation" refers to a system of small generation entities supplying directly to the distribution grid, any one of which shall not exceed one hundred kilowatts (100 kW) in capacity, as defined in Section 4(j) of the RE Act.
- (b) "Distribution System" refers to the system of wires and associated facilities
   belonging to a franchised Distribution Utility extending between the delivery
   points on the transmission or sub-transmission system or generator
   connection and the point of connection to the premises of the End-User, as
   defined in Section 4(0) of EPIRA.
- (c) "Distribution Utility" or "DU" refers to any electric cooperative, private
   corporation, government-owned utility or existing local government unit which
   has an exclusive franchise to operate a Distribution System in accordance
   with its franchise and RA No. 9136, as defined in Section 4(I) of the RE Act.
- (d) "*Electricity End-User*" or "*End-User*" refers to any person or entity
  requiring the supply and delivery of electricity for its own use, as defined in
  Section 4(t) of EPIRA.
- (e) "Energy Regulatory Commission" or "ERC" refers to the independent
   quasi-judicial regulatory agency created pursuant to EPIRA and as defined in
   Section 4(n) of the RE Act.
- (f) "*Net-Metering*" refers to a system, appropriate for Distributed Generation, in
   which a distribution grid user has a two-way connection to the grid and is only
   charged for his electricity consumption and is credited for any overall
   contribution to the electricity grid as defined in Section 4(gg) of the RE Act.
- (g) "Non-Residential Customers" refers to captive customers that are not
   classified as residential customers, i.e., commercial, industrial, transportation,
   schools, hospitals, and government institutions.
- (h) "Qualified End-Users" refers to entities that generate electric power from an eligible on-site RE generating facility, such as, but not limited to, house or office building with photovoltaic system that can be connected to the grid, for

- the purposes of entering into a Net-Metering agreement, as defined in Section7 of the RE Act-IRR.
- (i) *"Renewable Energy Certificate"* or *"RE Certificate"* refers to a certificate
  issued by the RE Registrar to Mandated Participants of the RPS showing the
  energy sourced, produced, and sold or used from the Eligible RE Systems.
  The definition of RE Certificate as defined under Section 3(tt) of the RE ActIRR is hereby revised.
- (j) "Renewable Energy Systems" or "RE Systems" refers to energy systems
   which convert RE resources into useful energy forms, like electrical,
   mechanical, etc., as defined in Section 4(vv) of the RE Act.
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  163 (k) "Renewable Portfolio Standards" or "RPS" refers to a market-based policy
  164 that requires electric power industry participants, including suppliers, to
  165 source a portion of their energy supply from eligible RE Resources, as defined
  166 in Section 4(ss) of the RE Act.
- (I) "Residential Customers" refers to captive customers that consist of living quarters for private households as classified by the DUs wherein common uses of electricity includes space heating, water heating, air conditioning, lighting, refrigeration, cooking, and other appliances.
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  173 (m) "*Time-of-Use*" refers to a service that allows DUs to offer energy pricing scheme/s based on the time of day when electricity is generated and the cost of supplying the same to customers during these specific periods, as agreed upon by both parties.
- Section 5. Adoption of Multiple Compensation Mechanisms for Net-Metering
   Program. The concerned DUs and Qualified End-Users shall adopt the following
   compensation mechanisms as described in Table 1 (Annex A), subject to the final
   determination of the ERC:
- (a) Classical Net-Metering for Residential Customers. The excess generation
   from a billing period is valued as energy (kWh) and kept as credits that offset
   energy consumption in subsequent billing periods. The remaining credits at
   the end of the year, if any, are forfeited; and
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   188 (b) Current Net-Metering for Non-Residential Customers. The excess generation from a billing period is converted into monetary credits to offset the bills in subsequent billing periods for one calendar year. At the end of the calendar year, remaining credits are bought at blended generation or Time-of-192 Use (TOU) rates.
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The compensation mechanisms shall be subject to a joint review and evaluation by the DOE and ERC every two (2) years, from the effectivity of this Circular, to ensure that the Net Metering Program redounds to the greater benefit of the Electricity End-Users.

**Section 6. Own-Use RE Systems with Above 100 kW capacity.** As far as practicable and to maximize the development and utilization of potential RE resources, to support the obligations of DUs under RPS and to help in ensuring supply security, Own-Use RE Systems with above 100 kW capacity may export their excess energy generation into the grid, subject to the following conditions:

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205 (a) The installed capacity of eligible Own-Use RE System shall not be more than
206 the End-User's average annual peak demand, as evidenced by its historical
207 power billings, or the End-User's optimum capacity, if DPV, calculated as
208 follows:

Optimum Capacity (kW<sub>P</sub>) = <u>3-Year Average Annual Energy Demand (kWh)</u> DPV Estimated Annual Energy Yield\* (kWh/kW<sub>P</sub>)

\*may be sourced from https://globalsolaratlas.info

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- (b) All interested End-Users shall inform the concerned DUs on their intention to
   export excess energy generation into the grid at least three (3) months from
   the intended date of its commissioning;
- (c) The interested End-User and the concerned DU shall enter into an agreement, which template shall be promulgated by and submitted to the ERC. Otherwise, the franchised DU shall inform its End-Users within seven (7) working days from receipt of intent;
- (d) The exported energy shall be bought by the DU based on its blended
   generation or Time-of-Use rates or any pricing methodology as determined by
   the ERC; and
- (e) All interested End-Users shall observe strict compliance with the Philippine
   Distribution Code and Distribution Services and Open Access Rules.
- 227 Section 7. Own-Use RE System as Emergency Supply Option. To contribute in 228 the supply of electricity during power supply shortages or emergency situations, any 229 on-site Own-Use RE System connected to a distribution/transmission system with an 230 installation capacity of more than 100 kW may be allowed to provide emergency 231 supply, subject to the following:
- (a) All End-Users intending to participate in this voluntary program shall inform its
   franchised DU and shall enter into an agreement with the DU, a copy of which
   shall be furnished DOE and ERC;
- (b) Intending End-Users shall be compensated based on blended generation rate
   of the DU or Time-of-Use rate or any pricing methodology as determined by
   the ERC; and
- (c) The provisions of all necessary interconnection facilities and metering facilities
   shall be agreed by the End-Users and concerned DU.

Section 8. Rights and Obligations of the Distribution Utilities. The DUs shall be
 responsible on the following:

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- (a) The franchised DU shall conduct a Distribution Impact Study (DIS) on a
  feeder-specific level to expedite approvals of the Net-Metering and Own-Use
  RE System applications and to ensure the technical viability and safety of
  integrating the RE System into the grid. For transparency, all DUs shall
  publish the capacities that may be available for Net-Metering and Own-Use
  RE System on a per feeder or sector basis;
- (b) The electricity generated and exported by the RE System into the grid shall
   be compensated by the DU in accordance with the pricing methodology as
   determined by the ERC;
- (c) All DUs are mandated to accept all applications for Net-Metering and Own-Use RE System and conduct the DIS on a timely manner. However, the DU may not allow the integration of the RE System into its Distribution System should it find negative technical impacts and degradation thereto: *Provided*, That the reason for non-integration shall be disclosed to the End-User, copy the DOE and ERC; and
- (d) By virtue of its franchise rights, the DU has the power to terminate its services
   to any End-User should it find any on-site RE System that has not gone
   through proper application process.
- Section 9. Responsibility of the National Electrification Administration (NEA).
   The NEA shall provide necessary technical and financial assistance to all Electric
   Cooperatives in conducting Distribution Impact and Asset Studies.
- Section 10. Responsibility of the Local Government Units (LGUs). All LGUs
  shall observe strict compliance with RA 11234 or the "Energy Virtual One Stop Shop
  (EVOSS) Act" and RA 11032 or the "Ease of Doing Business (EODB) Act" in
  processing permits and licenses related to application for Net-Metering and OwnUse RE System, e.g., Building Permit, Certification of Final Electrical Inspection,
  among others.
- Section 11. Responsibilities of the ERC. To ensure that the provisions of the
   Circulars are implemented properly and encourage new investments in RE while
   ensuring customer protection, the ERC is hereby responsible for the following:
- (a) Revision of the current Net-Metering Rules including the Net-Metering
   Interconnection Standards, Net-Metering Agreement, and other commercial
   arrangements necessary to ensure the success and implementation of this
   Circular;
- (b) Formulate regulations to avoid and/or minimize the cross-subsidies, between non-adopters and adopters of Net-Metering and Own-Use RE System, including cross-subsidies between Residential and Non-Residential Customers;
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- (c) Determination and enforcement of a uniform process flow and fees and charges across all DUs for the conduct of Distribution Impact and Asset Studies and execution of Net-Metering Agreement and any commercial arrangements and agreements as required herein in accordance with RA 11234 or the EVOSS Act and RA 11032 or the EODB Act; and
- 300 (d) Develop pricing methodology to ensure the effective implementation of Own 301 Use RE Systems with above 100 kW capacity under Section 6, and Own-Use
   302 RE System as Emergency Supply as described under Section 7 of this
   303 Circular.

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**Section 12. Separability Clause.** If any provision of this Circular is declared invalid or unconstitutional, the other provisions not affected thereby shall remain valid and subsisting.

309 **Section 13. Repealing Clause.** All previous issuances, rules and regulations 310 inconsistent with this Circular are hereby repealed, amended or modified 311 accordingly.

**Section 14. Effectivity.** This Circular shall take effect fifteen (15) days after its publication in at least two (2) newspapers of general circulation. Copies of this Circular shall be filed with the University of the Philippines Law Center – Office of the National Administrative Register.

#### 317 318 319 320 321 **ALFONSO G. CUSI** 322 Secretary 323 324 325 326 \_\_\_\_ at the Department of Energy, 327 Issued on Fort Bonifacio, Taguig City, Metro Manila. 328

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## 334 Table 1. Compensation Mechanisms

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Criteria	Classical Net-Metering for Residential Customers	Current Net-Metering for Non-Residential Customers
Quantities Measured and Billed	<ul> <li>Net consumption over the billing cycle</li> <li>Net excess kWh credits to be compensated or banked</li> </ul>	<ul> <li>Instantaneous net consumption throughout the billing cycle</li> <li>Instantaneous net exports throughout the billing cycle</li> </ul>
Netting Frequency	Monthly	Hourly
Compensation for Excess Generation	Retail Rate	Blended Generation or Time-of-Use Rate
Rolling Credit	Yes (kWh)	Yes (Peso)
Banking Period	One (1) Year	One (1) Year
Buyback Rate at the end of Banking Period	No Buyback	Blended Generation or Time-of-Use Rate

**ANNEX "A"**