

DEPARTMENT CIRCULAR NO. DC2018-____ - ____

**ESTABLISHMENT AND DEVELOPMENT OF COMPETITIVE
RENEWABLE ENERGY ZONES IN THE COUNTRY**

WHEREAS, Section 2 (g) and (h) of Republic Act No. 9136, otherwise known as the “Electric Power Industry Reform Act of 2001” or “EPIRA,” declare, among others, as a policy of the State, to assure socially and environmentally compatible energy sources and infrastructure and promote the utilization of indigenous and new and renewable energy resources in power generation in order to reduce dependence on imported energy;

WHEREAS, Section 2 (a) and (b) of Republic Act No. 9513, otherwise known as the “Renewable Energy Act of 2008” or “RE Act,” declare, among others, the following policy of the State, to wit:

- (a) Accelerate the exploration and development of renewable energy (RE) resources such as, but not limited to, biomass, solar, wind, hydro, geothermal and ocean energy sources, including hybrid systems to achieve energy self-reliance, through the adoption of sustainable energy development 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; and
- (b) Establish the necessary infrastructure and mechanism to carry out the mandates specified in the RE Act and other existing laws;

WHEREAS, Section 37 (e) (i) of the EPIRA provides that, “following the restructuring of the electricity sector, the Department of Energy (DOE) shall, among others, encourage private sector investments in the electricity sector and promote the development of indigenous and renewable energy sources; and

WHEREAS, in order to enable the efficient and cost-effective integration of variable RE sources into the existing national transmission systems, the DOE issued Department Order No. DC 2015-11-0017, entitled, “Creating a Technical Advisory Committee and Modelling Working Groups to Enable Variable Renewable Energy Integration and Installation Targets” with the objective of doing a grid integration study to determine the following key factors, namely: (i) potential grid reliability concerns with the scaling up of Variable REs (vREs); (ii) options to improve system flexibility and power system balance; and (iii) option for new installation and grid integration targets;

WHEREAS, in a study entitled: “Greening the Grid: Solar and Wind Integration Study for the Luzon-Visayas Systems in the Philippines” (Study), it was found, among others, that RE targets of 30% and 50% are achievable in the power system as planned for 2030. These targets, however, requires certain policy changes and regulatory support of the electric power industry;

WHEREAS, in pursuit of its mandate under the RE Act, the DOE is laying the ground work to implement various RE policy mechanisms such as the Renewable Portfolio Standards (RPS), establishment of RE Market for the trading of RE Certificates (RECs), and the Green Energy Options Program (GEOP);

WHEREAS, in planning for new transmission infrastructure and/or upgrades to existing transmission infrastructure, the DOE deems it necessary to ensure the cost-effective delivery of electricity generated in regions with abundant RE resources in order to attain sustainable, stable, secure, sufficient, accessible, and reasonably-priced electricity supply and services;

WHEREAS, to achieve this goal, the DOE recognizes the need to pursue and expand the scope of works by the Technical Advisory Committee (TAC) and Modelling Working Groups (MWG) to further enhance the planning process and strengthen the implementation of the Philippine Energy Plan (PEP), the Power Development Plan (PDP), the Transmission Development Plan (TDP), and the National Renewable Energy Program (NREP), among others.

NOW THEREFORE, for and in consideration of the foregoing premises, the DOE hereby adopts the following:

SECTION 1. General Principles and Objectives. This Circular is intended to identify Competitive Renewable Energy Zones (CREZ) in the country and complement the Study, entitled “Greening the Grid: Solar and Wind Integration Study for the Luzon-Visayas System in the Philippines”.

The Philippine CREZ is intended to enhance the planning process and strengthen the implementation of the PEP, PDP, TDP and NREP. To achieve this, the DOE in partnership with other stakeholders shall identify and develop Renewable Energy Zones (RE Zones) and upgrade and expand transmission facilities through policy initiatives and activities that shall enable the optimal use of the Philippines’ indigenous RE resources.

- (a) The Philippine CREZ Process is hereby defined to support the DOE in the identification and establishment of CREZ and preparation of the PDP, and NGCP in planning transmission line enhancements (e.g., infrastructure upgrades, expansions and/or extensions) by developing a planning framework that shall direct the country’s transmission development to areas where potential RE resources are located. At the end of the CREZ Process, several CREZs shall be identified and established in the country;

(b) The CREZ Process aims to support the DOE overcome RE development obstacles such as transmission constraints and regulatory barriers to financial investment by the private sector.

~~(b)~~(c) The CREZ Process, shall:

- (i) Identify candidate RE Zones, which represent geographic areas characterized by high-quality, low-cost RE potential in addition to high levels of private-sector developer interest;
- (ii) Identify a set of transmission expansion and/or upgrade scenarios that enhance the deliverability of energy originating from candidate RE Zones;
- (iii) Analyze the economic, operational, environmental, and other costs and benefits associated with the required transmission enhancement scenarios; and
- (iv) Specify cost-effective transmission line enhancements proposed to be included in the TDP, as reviewed and approved by the DOE.

~~(e)~~(d) Expansions of and upgrades to the existing system shall be evaluated as part of the reliability analyses and other assessments conducted in the TDP process.

~~(d)~~(e) Any identified transmission line enhancement projects derived from the CREZ Process may be used as a form of justification in the approval of ERC.

SECTION 2. Scope and Application. This Circular shall apply to all agencies and entities identified in Section 4 and 6 of this Circular and to all electric power industry participants.

- (a) Study Area: The focus of the CREZ analysis shall include the Luzon, Visayas, and Mindanao interconnections.
- (b) Agencies and electric power industry participants shall provide the necessary data and information identified in the Study needed to complete the applicable analyses.

SECTION 3. Composition of the CREZ Process Study Group. The CREZ Process shall be undertaken by the TAC, made up of a Core TAC and an Ad Hoc

TAC. There shall likewise be Working Groups, to be created to support the TAC in achieving the objectives of the Study.

SECTION 4. Composition of the TAC. Following the structure established in Department Circular No. DC 2015-11-0017, the TAC shall consist of two units: the Core TAC and the Ad Hoc TAC.

- (a) Both TAC units shall provide guidance on the scenarios, methods, assumptions and interpretation of the results of the integrated clean energy generation and transmission planning analysis.
- (b) The Core TAC shall be the regular attendees of all the meetings and activities related to the conduct of the integrated clean energy generation and transmission planning analysis, while the Ad Hoc TAC shall only be invited as deemed necessary.
- (c) The Core TAC shall be comprised of the following officers/representatives:

(i) Core TAC Composition

Chairperson : DOE Undersecretary, designated by the DOE Secretary

Members : Director, Renewable Energy Management Bureau (REMB), and his/her designated technical staff

Director, Electric Power Industry Management Bureau (EPIMB), and his/her designated technical staff

Director, Energy Policy and Planning Bureau (EPPB), and his/her designated technical staff

Chairperson, National Renewable Energy Board (NREB) and his/her designated additional technical representative

President, National Transmission Corporation (TRANSCO) and his/her designated additional technical representative

Administrator, National Electrification Administration (NEA) and his/her designated additional technical representative

President, National Grid Corporation of the Philippines (NGCP) – Luzon, Visayas, and Mindanao Systems Operations and their respective designated additional technical representative

President, Philippine Electricity Market Corporation (PEMC) or Independent Electricity Market Operators (IEMO) and his/her designated additional technical representative

Chairperson or Executive Director, Grid Management Committee (GMC), Inc. and his/her designated additional technical representative

Executive Director, Distribution Management Committee (DMC) and his/her designated additional technical representative

Chairperson, Energy Regulatory Commission (ERC) and his/her designated additional technical representative

The DOE, upon recommendation of the Core TAC, shall invite other Government agencies and stakeholders as resource persons to ensure the objectives of the Philippine CREZ Process are met.

(ii) Ad Hoc TAC Composition

The Ad Hoc TAC shall be comprised of one (1) representative from each of the following:

1. President, National Power Corporation (NPC) or his/her designated additional technical representative.
2. President, Philippine National Oil Company (PNOC) or his/her designated additional technical representative.
3. President, PNOC Renewables Corporation (PNOC-RC) or his/her designated additional technical representative.
4. President, Power Sector Assets and Liability Management (PSALM) Corporation or his/her designated additional technical representative.

5. Nominated Representative each for Renewable Energy Developers Associations.
6. Nominated Representative each for Electric Power Industry Participants and Associations.
7. Invited Representative/s from the Academe.
8. Invited Representative/s from Grid Experts.
9. Invited representatives from other agencies identified by Core TAC as necessary.

SECTION 5. Responsibilities of the TAC. The TAC shall have the following functions:

- (a) Provide direction on the development, review, and validation of an integrated clean energy generation and transmission planning analysis;
- (b) Assist the Technical Assistance Team, composed of National Renewable Energy Laboratory and United States Agency for International Development, in developing analysis parameters - vision statement, detailed work plan, scenarios, and sensitivities;
- (c) Review the methods, data sources, assumptions, and other key issues of the Zone Identification and Technical Analysis and the Generation and Transmission Modeling Working Groups and provide suggestions as deemed appropriate;
- (d) Provide input on criteria for excluding certain areas from consideration for RE development;
- (e) Aid in evaluating candidate RE Zones;
- (f) Assist in interpretation of the modeling results;
- (g) Provide direction on the Generation and Transmission Modeling Working Group's recommendations;
- (h) Link model outcomes with policy, regulatory, and planning processes;
- (i) Ensure the technical rigor of the analysis; and

- (j) Participate in future workshops and development of recommendations pertaining to integrated clean energy generation and transmission planning.

SECTION 6. Composition of the Working Groups (WG). There shall be two (2) WG, namely: the Zone Identification and Technical Analysis Working Group and the Generation and Transmission Modelling Working Group. They shall provide support in the integrated clean energy generation and transmission planning analysis.

Each Working Group shall be led by the DOE and shall be comprised of two official representatives – one (1) permanent and one (1) alternate—from each of the following:

(a) The Zone Identification and Technical Analysis Working Group

1. Department of Energy (DOE):
 - (i) Renewable Energy Management Bureau (REMB)
 - (ii) Electric Power Industry Management Bureau (EPIMB)
 - (iii) Energy Policy and Planning Bureau (EPPB)
 - (iv) Information and Technology Management Service
2. National Transmission Corporation (TransCo)
3. National Electrification Administration (NEA)
4. National Grid Corporation of the Philippines (NGCP)
5. Philippine Electricity Market Corporation (PEMC) or the Independent Electricity Market Operators (IEMO)
6. Grid Management Committee (GMC)
7. Distribution Management Committee (DMC)
8. Energy Regulatory Commission (ERC)

(b) The Generation and Transmission Modeling Working Group

1. Department of Energy (DOE):
 - (i) Electric Power Industry Management Bureau (EPIMB)
 - (ii) Renewable Energy Management Bureau (REMB)
 - (iii) Energy Policy and Planning Bureau (EPPB)
2. National Transmission Corporation (TransCo)
3. National Electrification Administration (NEA)
4. National Grid Corporation of the Philippines (NGCP)
5. Philippine Electricity Market Corporation (PEMC) or Independent Electricity Market Operators (IEMO)
6. Grid Management Committee (GMC)

7. Distribution Management Committee (DMC)
8. Energy Regulatory Commission (ERC)

The DOE, upon recommendation of the Core TAC, shall invite other Government agencies and stakeholders as resource persons or to become additional members of either of the Working Groups to ensure the objectives of the Philippine CREZ Process are met.

SECTION 7. Responsibilities of the WG. The Zone Identification and Technical Analysis Working Group and the Generation and Transmission Modeling Working Group shall be responsible for the following:

(a) **Zone Identification and Technical Analysis Working Group**

1. Support the identification and sharing of the best-available data sets for energy planning analyses;
2. Support the identification and analysis of geographic areas, or “CREZ Study Areas,” with high technical potential for RE development, including the identification of criteria for exclusion of certain areas for RE development;
3. Conduct economic resource analyses to generate clean energy supply curves for the study areas to assist developers and the regulatory authority in quantifying the resource that could be developed at certain costs in each study area;
4. Develop a list of evidence that private sector developers can present to demonstrate interest in particular study areas;
5. Develop a candidate CREZ map that presents zones with significant levels of high-quality clean energy potential in addition to a high levels of developer interest in a spatial format; and
6. Perform additional analyses as deemed necessary.

(b) **Generation and Transmission Modeling Working Group**

1. Identify a set of transmission development scenarios that enhance the deliverability of energy originating from candidate RE zones;
2. Analyze the costs and benefits associated with transmission development options. Benefits shall include operational cost reductions (as determined through production cost modeling),

environmental benefits, and economic development opportunities, as determined by the Core TAC and Ad Hoc TAC;

3. Submit a recommendation to NGCP on candidate CREZs and transmission enhancements to consider for inclusion in TDP; and
4. Perform additional analyses as deemed necessary.

(c) CREZ Technical Secretariat

1. Coordinate with TAC and WG members for meetings, request for inputs/comments and other related activities of the CREZ program;
2. Compile all documents/data used in the study as requested from concerned agencies/entities for safe keeping and future reference;
3. Prepare highlights of meetings and disseminate the same to all members of TAC and WG ;
4. Provide other technical and administrative support to the TAC and WG members as required; and
5. Technical Secretariat shall come from REMB–NREB-Technical Services Management Division.

SECTION 8. Responsibilities of Energy Stakeholders. All electric power industry participants, Government agencies and other energy stakeholders shall contribute to the attainment of the objectives of this Circular.

- (a) Energy stakeholders shall provide data and information needed for the conduct and development of the integrated clean energy generation and transmission planning analysis;
- (b) The DOE shall ensure the confidentiality of proprietary and commercially sensitive information, and the data provided shall solely be used for policy and planning purposes; and
- (c) The DOE upon identification of the CREZ shall pursue, in coordination with other government agencies, the implementation of identified CREZ.

SECTION 9. Separability Clause. If for any reason, any section or provision of this Circular is declared unconstitutional or invalid, such parts not affected shall remain valid and subsisting.

SECTION 10. Effectivity. This Circular shall take effect fifteen (15) days upon the publication in two (2) newspapers of general circulation and shall remain in effect until otherwise revoked.

ALFONSO G. CUSI
Secretary

Issued on _____ at Energy Center, Bonifacio Global City, Taguig City.

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