



DEPARTMENT CIRCULAR NO. DC 2024-09-0028 *cs*

**PRESCRIBING AMENDMENTS TO
DEPARTMENT CIRCULAR NO. DC2023-10-0029 TITLED
“PROVIDING SPECIFIC AUCTION POLICY AND GUIDELINES FOR NON-FIT-
ELIGIBLE RENEWABLE ENERGY TECHNOLOGIES IN THE GREEN ENERGY
AUCTION PROGRAM”**

WHEREAS, on 12 December 2023, the Department of Energy (DOE) issued Department Circular (DC) No. DC2023-10-0029 titled “Providing Specific Auction Policy and Guidelines for Non-FIT-Eligible Renewable Energy Technologies in the Green Energy Auction Program”;

WHEREAS, on 25 March 2024, the DOE issued amendments to the above DC clarifying that the Energy Regulatory Commission (ERC) shall promulgate the rules on the Price Determination Methodology (PDM) for Non-FIT-Eligible RE Technologies in the GEAP;

WHEREAS, Section 7 of said DC No. DC2023-10-0029 provides that the payment and settlement for the Non-FIT Green Energy Tariff (GET) to the Non-FIT Eligible RE Facilities of GEA Winning Bidders shall be collected and administered through the Wholesale Electricity Spot Market (WESM) by the Market Operator;

WHEREAS, Pumped-Storage Hydropower (PSH) is distinct from Geothermal and Impounding Hydro Facilities due to its combined ability to inject and/or draw electricity, and provide reliability services to the grid or the distribution system;

WHEREAS, there is a need to provide a separate settlement mechanism for PSH Facilities that takes into account their design and operational characteristics having the capability to support greater entry of variable REs and power system flexibility;

WHEREAS, Section 30 of Republic Act (RA) No. 9136 or the Electric Power Industry Reform Act of 2001 requires the ERC's approval of the PDM for the WESM;

WHEREAS, Section 13 of DOE DC No. DC2021-03-0009 also requires the ERC's approval of the PDM for Reserve Market transactions;

WHEREAS, the WESM Manual on Billing and Settlement (Billing and Settlement Manual) provides for the procedure for the payment and settlement in the WESM and the Reserve Market;

NOW, THEREFORE, pursuant to its authority under RA 9513 or the Renewable Energy Act of 2008, the DOE hereby adopts, issues, and promulgates the following amendments to DC No. DC2023-10-0029:

Section 1. Subparagraphs (b) and (c), Section 4 of DC No. DC2023-10-0029 are hereby amended, and a new subparagraph (e) is hereby inserted, to read as follows:

"b. Non-FIT Green Energy Tariff (Non-FIT GET) – refers to the Price Offer, in PhP/kWh, approved by the Energy Regulatory Commission (ERC) in accordance with Section 6 hereof after the conduct of each GEA for Non-FIT-Eligible RE technology corresponding to each Winning Bidder on a pay-as-bid basis: *Provided*, That the Non-FIT GET for PSH shall be the Price Offer in PhP/kWh/h;

c.1. Price Offer for Impounding Hydro and Geothermal – refers, in each Auction Round, to the price in PhP/kWh that a Qualified Bidder offers for energy generated or to be generated by its Non-FIT-Eligible RE Facility;

c.2. Price Offer for Pumped-Storage Hydro – refers, in each Auction Round, to the price in PhP/kWh that a Qualified Bidder offers for the Available Capacity of the PSH Facility: *Provided*, That the price offer shall exclude pumping cost: *Provided, further*, That the pumping cost shall be net of house load as measured from a separate metering facility installed for said purpose;

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e. PSH Available Capacity – refers to the capacity which can be utilized to inject and/or draw electricity and/or support and provide flexibility to the grid: *Provided*, That the Available Capacity shall exclude those non-operational units of the PSH Facility and shall not exceed the total P_{max} of the facility, as the case may be: *Provided, further*, That in computing the Non-FIT GET, the PSH Available Capacity shall be based on the nominated capacity in kW per trading interval without regard to the mode of operation, i.e., injecting and/or drawing electricity, how the facility is used, e.g., load following, peak shaving, load shifting, and the sub market where the capacity is sold/sourced."

Section 2. Sections 7, 7.2 and 7.3 of DC No. DC2023-10-0029 are hereby amended to read as follows:

"Section 7. Settlement of the Non-FIT GET due to the Winning Bidders for Geothermal and Impounding Hydro. The payment and settlement for the Non-FIT GET to the Non-FIT Eligible RE Facilities of Winning Bidders shall be collected and administered through the WESM by the Market Operator.

In all cases, the Geothermal and Impounding Hydro Facilities of Winning Bidders shall be paid with the Total GEA Amount, without regard to the Energy Trading Amount, subject to the collection and payment allocation methodology prescribed under the WESM Rules and the WESM Market Manual on Billing and Settlement, following the formula below:

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Section 7.2. In case the Energy Trading Amount in the WESM of a Geothermal and Impounding Hydro Facility of a GEA Winning Bidder is lower than its computed Total GEA Amount for a relevant billing month, the Market Operator shall reflect in the settlement statement of the customers the difference in amount and collect the same from the buyers in the WESM using the following formula:

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Section 7.3. In case the Energy Trading Amount in the WESM of a Geothermal and Impounding Hydro Facility of a GEA Winning Bidder is higher than the computed Total GEA Amount for a relevant billing month, the Market Operator shall reflect in the settlement statements of the customers and collect only the amount due that will satisfy the computed GEA Amount and flowback the difference following the formula for flowback to each buyer in the WESM as follows:

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Section 3. A new section, Section 8, is hereby inserted in DC No. DC2023-10-0029, to read as follows:

"Section 8. Settlement of the Non-FIT GET due to the Winning Bidders for PSH. The payment and settlement for the Non-FIT GET to the PSH Facilities of GEA Winning Bidders shall be collected and administered through the WESM by the Market Operator. As such, the PSH Facilities of GEA Winning Bidders must be registered in the WESM in accordance with the WESM Rules and Market Manuals and relevant rules and regulations and this Circular.

For the delivery of energy and/or ancillary services, the Winning Bidders for PSH shall be paid with the Total GEA Amount in consideration of its Available Capacity without regard to the Total Trading Amount in the WESM following the formula below:

$$\text{Total GEA Amount} = \sum_{i \in h} (|AC_i| \times \text{Non FIT GET} \times d_i)$$

Where,

AC_i : Absolute value of the Available Capacity in kW for trading interval i for settlement interval h ;

d_i : Duration of trading intervals in hours; and,

$$d_i = \frac{T}{60}, \text{hours}$$

T: Duration of trading intervals in minutes (i.e., 5, 15, 60, etc.);

The settlement to Winning Bidders for PSH shall be subject to the collection and payment allocation methodology prescribed under the WESM Rules and the WESM Market Manual on Billing and Settlement.

To ensure sufficient payment to the Winning Bidders for PSH, the Total Trading Amount, which shall be the basis for the determination of the collection and payment mechanism shall be determined using the formula below:

$$TTA_{PSH_{p,h}} = ETA_{PSH_{p,h}} + RTA_{PSH_{p,h}}$$

Where:

$TTA_{PSH_{p,h}}$ refers to the total trading amount in PhP of trading participant p for settlement interval h

$ETA_{PSH_{p,h}}$ refers to the energy trading amount in PhP of trading participant p at settlement interval has provided under the approved Price Determination Methodology and Billing and Settlement Manual.

$RTA_{PSH_{p,h}}$ refers to the reserve trading amount in PhP of trading participant p at settlement interval has provided under the approved Price Determination Methodology and Billing and Settlement Manual.

The provisions of this Circular relating to a Winning Bidder for PSH shall be effective only upon their registration in the WESM and Reserve Market, provided that the Transitory Provisions of Section 15 of DC No. DC2023-10-0029 as amended herein have been completed.

Pending the completion of the foregoing requirements, the Winning Bidders for PSH shall be settled in accordance with the Price Determination Methodology for the WESM, the WESM Rules, and Market Manuals.

Section 8.1. Collection and Flowback of Difference between Total Trading Amount_{PSH} and Total GEA Amount_{PSH}. To account for the total amount to be collected or flowed back to the Participants for the services of PSH Winning Bidders, the Market Operator shall calculate the difference between the Total Trading Amount in the WESM and the computed Total GEA Amount for the billing month of the PSH Facilities of GEA Winning Bidders during the preliminary and final settlement process under the WESM Rules.

Section 8.2. TTA_{PSH} is lower than Total GEA Amount $_{PSH}$. In case the TTA_{PSH} is lower than the computed Total GEA Amount $_{PSH}$ for a relevant billing month, the Market Operator shall reflect in the settlement statements the difference in amount and collect the same to satisfy the Total GEA Amount $_{PSH}$ following the formula below:

$$TTA_{PSH} < \text{Total GEA Amount}_{PSH}$$

Allocation for Customers in the Energy Market

$$\text{Collection Allocation}_{b,m} = GEASA_{energy,m} \times \frac{GESQ_{b,m}}{GESQ_{customer-total,m}}$$

Allocation for System Operator in the Reserve Market

$$\text{Collection Allocation}_{SO,m} = (TTA_{PSH,m} - GEAA_{PSH,m}) \times \frac{SRQ_{PSH,m}}{TTQ_{PSH,m}}$$

Where:

Collection Allocation $_{b,m}$ is the share in the GEA Shortfall Amount in PhP of customer b for the billing month m based on transactions in the Energy Market.

Collection Allocation $_{SO,m}$ is the System Operator's share in the GEA Shortfall Amount in PhP for the billing month m based on transactions in the Reserve Market.

GESQ $_{b,m}$ is the total GESQ of customer b (buyer in the WESM) for the billing month m in MWh.

GESQ $_{customer-total,m}$ is the total customer GESQ (buyers in the WESM) for the billing month m in MWh.

GEASA $_{energy,m}$ is the energy share for the difference between TTA_{PSH} and $GEAA_{PSH}$ for billing month m where TTA_{PSH} is lower than $GEAA_{PSH}$ for the same billing month m in PhP.

$$GEASA_{energy,m} = (TTA_{PSH,m} - GEAA_{PSH,m}) \times \frac{GESQ_{PSH,m}}{TTQ_{PSH,m}}$$

$TTA_{PSH,m}$ is the total trading amount in PhP of the PSH facility for the billing month m.

$GEAA_{PSH,m}$ is the GEA amount in PhP of the PSH facility for the billing month m.

GESQ $_{PSH,m}$ is the total GESQ in MWh of the PSH Facility for the billing month m.

TTQ_{PSH,m} is the total transacted quantity that represents the sum of the GESQ and the Scheduled Reserve Quantity in MWh of the PSH facility that was scheduled and/or dispatched in the WESM for the billing month m.

SRQ_{PSH,m} is the total scheduled reserve quantity in MWh of the PSH facility for the billing month m.

Section 8.3. TTA_{PSH} is higher than Total GEA Amount_{PSH}. In case the TTA_{PSH} is higher than the computed Total GEA Amount_{PSH} for a relevant billing month, the Market Operator shall reflect in the settlement statements the difference in amount and treat it as a flowback amount based on the following formula:

TTA_{PSH} > Total GEA Amount_{PSH}

Allocation for Customers in the Energy Market

$$\text{Flowback Allocation}_{b,m} = \text{GEAFA}_{\text{energy},m} \times \frac{\text{GESQ}_{b,m}}{\text{GESQ}_{\text{customer-total},m}}$$

Allocation for System Operator in the Reserve Market

$$\text{Flowback Allocation}_{\text{SO},m} = (TTA_{\text{PSH},m} - \text{GEAA}_{\text{PSH},m}) \times \frac{\text{SRQ}_{\text{PSH},m}}{\text{TTQ}_{\text{PSH},m}}$$

Where:

Flowback Allocation_{b,m} is the share in the GEA Flowback Amount in PhP for customer b during the billing month m based on transactions in the Energy Market.

Flowback Allocation_{SO,m} is the System Operator's share in the GEA Flowback Amount in PhP for the billing month m based on transactions in the Reserve Market.

GESQ_{b,m} is the total GESQ of customer b (buyer in the WESM) for the billing month m in MWh.

GESQ_{customer-total,m} is the total customer GESQ (buyers in the WESM) for the billing month m in MWh.

GEAFA_{energy,m} is the energy share for the difference between TTA_{PSH} and GEAA_{PSH} for billing month m where TTA_{PSH} is higher than GEAA for the same billing month m in PhP.

$$\text{GEAFA}_{\text{energy},m} = (TTA_{\text{PSH},m} - \text{GEAA}_{\text{PSH},m}) \times \frac{\text{GESQ}_{\text{PSH},m}}{\text{TTQ}_{\text{PSH},m}}$$

TTA_{PSH,m} is the total trading amount in PhP of the PSH facility for the billing month m.

GEAA_{PSH,m} is the GEA amount in PhP of the PSH facility for the billing month m.

GESQ_{PSH,m} is the total GESQ in MWh of the PSH Facility for the billing month m.

TTQ_{PSH,m} is the total transacted quantity that represents the sum of the GESQ and the Scheduled Reserve Quantity in MWh of the PSH facility that was scheduled and/or dispatched in the WESM for the billing month m.

SRQ_{PSH,m} is the total scheduled reserve quantity in MWh of the PSH facility for the billing month m."

Section 4. A new section, Section 9, is hereby inserted in DC No. DC2023-10-0029 to read as follows:

"Section 9. The DOE shall issue specific rules and regulations for the smooth integration of PSH Facilities in the market.

Section 9.1. The rules and regulations mentioned above shall include, but shall not be limited to, the following:

1. Scheduling of PSH in the Reserve Market and in the Energy Market to ensure full utilization.
2. PSH shall undergo Testing, and secure Certification of AS Capability by the System Operator or any accredited third-party testing entity.
3. To ensure that PSH can provide other grid support services, PSH shall not be limited to the current AS, such as utilization of excess energy from variable renewable energy (VRE) Facilities for pumping of PSH Facilities.
4. Ensure that the PSH Facility shall only be subjected to a single Power Delivery Service (PDS) Charge, regardless of whether it is injecting or drawing electricity. For this purpose, the DOE and ERC shall consider the updating of the Open Access Transmission Service (OATS) Rules and other relevant rules.

Section 9.2. The rules shall further provide the following responsibilities:

1. The System Operator and Market Operator shall implement the optimal dispatch of capacities from PSH providing energy and AS to ensure that the demand and AS grid requirements are always met.
2. The System Operator shall as far as practicable, consider the PSH capacities under GEA in its roster/list of Ancillary Service Provider.
3. The Market Operator shall handle the payment and settlement of the GEA amount to the PSH Facilities of GEA Winning Bidders.
4. The Market Operator shall handle the scheduling of the PSH while the dispatch in the grid shall be handled by the System Operator.
5. The System Operator shall adhere to the ERC-approved ancillary service cost recovery mechanism when recovering costs associated with the provision of ancillary services from Winning Bidders for PSH.

Section 9.3. The System Operator shall ensure that the procurement of the energy needed during pumping mode is at the least cost, whenever practicable. For the avoidance of doubt, the pumping costs of Winning Bidders for PSH shall be collected from WESM trading participants prorated based on their GESQ as defined in the WESM Rules and Market Manuals."

Section 5. A new section, Section 10, is hereby inserted in DC No. DC2023-10-0029 to read as follows:

"Section 10. Revenues Attributable to Winning Bidders.

For the avoidance of doubt, regardless of the Energy Trading Amount for Geothermal and Impounding Hydro, and Total Trading Amount for PSH, the revenues attributable to the GEA Winning Bidders shall be the Total GEA Amount which they will receive based on Actual Energy Delivered and Available Capacity, respectively, and the corresponding Non-FIT GET."

Section 6. Sections 8 to 15 of DC No. DC2023-10-0029 are hereby renumbered as Sections 11 to 18, respectively.

Section 7. Separability Clause. If any section or provision of this DC is declared invalid or unconstitutional, such parts not affected shall remain valid and subsisting.

Section 8. Repealing Clause. The provisions of other circulars, orders, issuances, rules, and regulations which are inconsistent with the provisions of this Circular, are hereby repealed, amended, modified, or superseded accordingly.

Section 9. Effectivity. This Circular shall take effect immediately after publication in two (2) newspapers of general circulation. A copy of this DC shall be filed with the University of the Philippines Law Center – Office of National Administrative Register (UPLC-ONAR).

Issued this SEP 10 2024 at the DOE, Energy Center, Rizal Drive cor. 34th Street, Bonifacio Global City, Taguig City.


RAPHAEL P.M. LOTILLA
Secretary

