REGIONAL AUTHORITY
ECOWAS ELECTRICITY REGULATOR

ECOWAS REGIONAL ELECTRICITY REGULATORY AUTHORITY

REGULATORY AUTHORITY REGIONAL SECTOR OF ECOWAS ELECTRICITY

ENERGY COMMISSION BUILDING, GHANA AIRWAYS AVENUE, PMB 76 MINISTRIES POST OFFICE, ACCRA – GHANA
TEL: (+233) 0302 817 047 (+233) 0302 817 049 FAX: (+233) 0302 817 050 WEBSITE: www.erera.arrec.org EMAIL: info@erera.arrec.org

RESOLUTION No. 020/ERERA/26
adopting the Regional Transmission Tariff Methodology (RTTM) applicable to the Regional Electricity Market (REM)

The Regulatory Council,

MINDFUL of the Revised Treaty of the Economic Community of West African States (ECOWAS) of 24 July 1993;

MINDFUL of ECOWAS Energy Protocol A/P4/1/03 of 31 January 2003;

MINDFUL of Supplementary Act A/SA.2/01/08 of 18 January 2008 establishing the ECOWAS Regional Electricity Regulatory Authority (ERERA);

MINDFUL of Regulation C/REG.27/12/07 of 15 December 2007 as amended, relating to the Composition, Organisation, Powers and Operation of ERERA, in particular Article 18.5 relating to the setting of rules for the transmission Tariff and associated services;

MINDFUL of Directive C/DIR.1/06/13 of 21 June 2013 on the Organisation of the Regional Electricity Market (REM);

MINDFUL of Resolution No. 006/ERERA/15 of 18 August 2015 adopting the Tariff Methodology for transmission costs and tariff for the West African Power Pool;

MINDFUL of Resolution No. 018/ERERA/25 of 13 September 2025 approving the Regional Electricity Market Codes of West Africa (REMC-WA);

MINDFUL of the letter WAPP/2024/SG/DICC/ja/ria/107-79 of 04 July 2024 from the General Secretariat of the WAPP requesting ERERA to adopt a new transmission pricing methodology using the Average Participation Method (APM) within the framework of the Regional Electricity Market.

CONSIDERING that the development of the Regional Electricity Market requires a transparent, fair and non- discriminatory transmission tariff methodology, promoting open access to the network and cross-border electricity trading;

CONSIDERING that the methodology adopted in 2015 which is a MW-km load-flow based approach, corresponded mainly to bilateral transactions in the initial phase of the market;

CONSIDERING that the implementation of the Regional Electricity Market and the evolution towards multilateral trading mechanisms require a tariff methodology more appropriate to the structure of the interconnected regional network;

CONSIDERING the report of the twenty-fourth joint meeting of the ERERA Consultative Committees of Regulators and Operators of October 22, 2025 recommending the adoption of the Regional Transmission Tariff Methodology (RTTM) by the ERERA Regulatory Council;

CONSIDERING the explanatory note setting out the reasons for the adoption of the draft Methodology for Regional Transmission Tariff, presented to the Regulatory Council at its ninety-third meeting;

CONSIDERING the need to adapt the transmission tariff methodology to the operational requirements of the Regional Electricity Market and to guarantee transparent, fair and non-discriminatory tariff signals for the use of the regional transmission network ;

CONSIDERING the conclusions of the 93rd meeting of the ERERA Regulatory Council held from March 17 to 19, 2026, which examined and validated the draft Regional Transmission Tariff Methodology (RTTM);

After deliberation,

RESOLVED

Article 1

The Regional Transmission Tariff Methodology (RTTM) applicable to the Regional Electricity Market (REM), hereby attached, is adopted.

Article 2

The RTTM defines the principles, rules and procedures applicable to the calculation of transmission tariffs for the use of the regional transmission network in the context of electricity trading within the Regional Electricity Market.

Article 3

The RTTM is based on the Average Participation Method (APM) which allows the costs of the regional transmission network to be allocated to users according to their average contribution to power flows on the network.

Article 4

Resolution No. 006/ERERA/15 of August 18, 2015, Adoption of the Tariff Methodology for Regional Transmission Cost and Tariff, is repealed.

Article 5

This Resolution is published in the Official Bulletin of ERERA and on its website.

Article 6

This Resolution shall enter into force from the date of its signature.

Done in Accra, Ghana , on March 19 , 2026

Charles NDIAYE

Council Member

Kocou Laurent Rodrigue Tossou

Chairman

REGIONAL TRANSMISSION TARIFF METHODOLOGY (RTTM)

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ACRONYMS

APM	Average Participation Method
CGM	Common Grid Model
ECOWAS	Economic Community of West African States
ERERA	ECOWAS Regional Electricity Regulatory Authority
MWh	Megawatt hour
NRA	National Regulatory Authority
PSSE	Power Transmission System Planning Software
RCP	Regional Compensation Party
REM	Regional Electricity Market
RETTAP	Regional Electricity Transmission Tariff Application Procedure
RTTM	Regional Transmission Tariff Methodology
SMO	System and Market Operator
SPV	Special Purpose Vehicle
TSO	Transmission System Operator
WACC	Weighted Average Cost of Capital
WAPP	West African Power Pool
WAPPITS	West African Power Pool Interconnected Transmission System

CHAPTER I. GENERAL PROVISIONS

Article 1 Introduction and Objectives

1.1 The transmission tariff methodology for the West African Power Pool (WAPP), the Regional Transmission Tariff Methodology (RTTM) formulates steps to be followed and rules that shall govern transmission cost determination and allocation for the Regional Electricity Market (REM). The RTTM shall be based on the Average Participation Method (APM) and shall be approved by the ECOWAS Regional Electricity Regulatory Authority (ERERA).

1.2 The regional System and Market Operator (SMO) shall determine, every year, the compensations to be paid or to be received by each Regional Compensation Party (RCP) in the REM by applying the rules set forth in this methodology and its application procedures.

1.3 The SMO shall submit to ERERA for approval on an annual basis, the costs of the use of regional transmission assets and associated losses, and proposed allocations. Only costs, rates and cost allocations submitted by the SMO within the framework of this Methodology shall be considered for approval by ERERA.

Article 2 Legal Basis

2.1 ERERA has been vested, under Article 18.5 of Regulation C/REG.27/12/07 of 15 December 2007, as amended, with the mandate to set regulations on accounting rules for tariff structure and cost for transmission and ancillary services and approve tariff proposals emanating from operators.

2.2 The ECOWAS Electricity Code adopted by Supplementary Act A/SA.2/07/23 of 9th July 2023 provides in Article 33 that the rules, methodologies, pricing procedures, and tariffs in the Regional Electricity Market are defined by ERERA in accordance with regional regulations.

2.3 The REM Codes approved by ERERA Resolution N°18/ERERA/25 provides in Article MC 24.3.1 of the Market Code that the Regional Transmission Tariff Methodology and the "Regional Electricity Transmission Tariff Application Procedure" shall be approved by ERERA. The methodology set out herein comprises the allocation of the costs through the APM and complies with the Transmission Pricing Principles set out in the Article MC24.2 of the Market Code.

Article 3 Definitions

ERERA	Means ECOWAS Regional Electricity Regulatory Authority, the regulator of regional cross-border trade of electricity in the West Africa Power Pool. It is mandated to regulate the regional electricity market, as defined by Regulation C/REG.27/12/07 on the Composition, Organization, Functions, and Operations of ECOWAS Regional Electricity Regulatory Authority.
Loop Flow	Unintended physical flow of electricity that deviates from the commercially agreed path, flowing instead through third-party interconnected transmission networks due to the laws of electricity.

National Regulatory Authority or NRA	Means any competent authority of a Member State responsible for the regulation of the electricity sector, including, where applicable, any authority empowered to approve electricity tariffs in that Member State.
National Tariff	The electricity tariff or cost allocation scheme approved by the NRA to be applied within the country of the NRA.
Regional Compensation Party (RCP)	Refers to the entity in each Control Area that shall receive or pay the regional compensation for transmission costs resulting from cross-border electricity trade. The Grid Operator is de facto the RCP of its Control Area, unless the relevant National Regulatory Authority (NRA) decides otherwise and notifies the RCP to ERERA and the SMO. The SPVs acting as specialized transnational transmission operators are also RCPs for what concerns the compensation for the use of their proprietary assets.
Regional Electricity Market (REM)	All cross-border electricity trading and related services made through the Cross-Border Interconnections within the WAPPITS.
REM Codes	Means the ensemble of shared principles, methods, and technical rules regulating a given aspect of the management of the interconnected WAPP Power System for the appropriate planning and operation of the Regional Electricity Market as approved by ERERA with the Resolution N°018/ERERA/25.
Rules on Sanctions	Refers to the ECOWAS Regulation C/REG.17/06/19 of 27th June 2019 on sanctions for the Regional Electricity Market (REM).
Special Purpose Vehicles (SPVs)	Means a distinct legal entity functioning as a specialized transnational transmission operator. It is established to own and manage transmission assets that serve multiple countries, as defined by inter-governmental treaties.
Standard Cost of Assets	The replacement cost, as approved by ERERA, of each type of transmission asset in the Regional Asset Database.
System and Market Operator (SMO)	As defined in the REM Codes.
WAPPITS	As defined in the REM Codes.
West African Power Pool (WAPP)	As defined in the REM Codes.

Article 4 Interpretation

4.1 The following principles of interpretation apply to these regulations unless otherwise indicated.

(a) Terms defined in the REM Codes not otherwise defined in Article 3 have the meanings given to them in the REM Codes.

(b) Where a provision of these rules is inconsistent with a provision of the REM Codes, the REM Codes will prevail to the extent of the inconsistency.

(c) A reference to any person includes that person's successors in respect of the assets, liabilities, function, or activity to which that reference relates.

(d) Where a period of time is specified in days from a given day, it is to be calculated exclusive of that day.

4.2 Pursuant to Article 17 of Regulation C/REG.27/12/07 of 15 December 2007, as amended, ERERA shall interpret technical and commercial rules on cross-border power pooling, through the WAPPITS.

CHAPTER II. ELECTRICITY TRANSMISSION PRICING

Article 5 Electricity Transmission Pricing Principles at Regional Level

5.1 The core principles of electricity transmission pricing are to:

(a) **Allocate costs proportionately to beneficiaries**, i.e., the cost of each transmission asset should be allocated proportionately to the benefits that each user receives from the use of that transmission asset.

(b) **Promote efficiency** by providing appropriate price signals to generation and demand, giving incentives for appropriate investment, and promoting competition.

(c) **Recover costs** by providing a stable regulatory framework for cost recovery, therefore lowering the risk of investment, and hence the cost of capital.

(d) **Be transparent and predictable**, the methodology should be easy to understand and should be stable in the long-term, avoiding "price shocks".

(e) **Be fair and non-discriminatory**, i.e., treat network users who have the same impact on the electricity transmission network equally.

Article 6 Average Participation Method

6.1 The Average Participation Method (APM) is the method used in this Regional Transmission Tariff Methodology to allocate the use of transmission assets and transmission losses to individual users of the WAPPITS. The method is premised on tracing the flow of electricity from an individual generator to an individual load. It identifies for each generator injecting power into the network, physical paths starting at this generator that go through the grid until they reach certain loads, where they end. The method also works the other way round, thus identifying paths from loads to generators. The entire flow on a

grid element originates in some generators and ends in some loads such that the overall usage made of that grid element by loads is the same as that made by generators.

6.2 It is possible, therefore, to allocate the cost of each line to different users according to how much the flows start at a certain point and have circulated along a specific line. Through APM, it is then possible to determine the use of the transmission assets for every single generator and for every individual load.

6.3 As the APM determines the proportional use of each asset, that same proportion can be used to allocate the yearly cost of the asset to each user. The same proportion can also be applied to the cost of losses in the system. The APM, therefore, provides for the allocation of costs of each network element to the different grid users according to their contribution to the power flows along this network element.

Article 7 Inter-Grid Operator compensation mechanism

7.1 The objectives of the compensation mechanism are to:

(a) **Ensure timely compensation among Grid Operators:** To support the smooth functioning of the Regional Electricity Market, Grid Operators shall act as intermediaries for their network users. ERERA and National Regulatory Authorities (NRA) shall establish the necessary arrangements to guarantee timely settlement of compensation and prevent any disruption in the use of the WAPPITS.

(b) **Respect the sovereignty and autonomy of Member States**: the regional compensation mechanism shall not affect the design and determination of National Tariffs beyond the minimal adjustments required for the implementation of this regional cost allocation mechanism.

(c) **Avoid linking transmission charges to commercial transactions**: Transmission charges shall not be based on commercial transactions, as such an approach could distort the optimal dispatch of power plants and would negatively impact the overall efficiency of the power system.

7.2 Through the application of the APM, it is possible to determine the proportion of usage of each national transmission asset and the associated losses that are due to cross-border flows. Once the APM has allocated the flow in transmission assets to the relevant network users, the same allocation factors shall be used to assign the losses in the assets. Compensation and charges are accordingly determined. Therefore, it is possible to determine the compensation for the cost of hosting such cross-border flows, specifically:

(a) the costs of making infrastructure available to host cross-border flows of electricity and

(b) the costs of losses incurred in national transmission systems as a result of hosting cross-border flows of electricity.

7.3 Although the APM framework permits assigning responsibility for cross-border flows directly to individual generators and loads, a simplified approach is adopted for implementing the compensation mechanism. Each Control Area shall designate a Regional Compensation Party (RCP) to act on behalf of

all generators and loads within its jurisdiction. The RCP will serve as the intermediary—either as a net receiver or net payer—of compensation payments. Accordingly, each RCP shall enter into an agreement with the SMO for the administration and settlement of these compensations.

7.4 The following principles apply to the Inter-Grid Operator compensation framework:

(a) RCPs receive or pay compensation for costs resulting from cross-border flows of electricity.

(b) Such compensations are calculated based on an appropriate allocation mechanism, between generators and loads of national transmission systems from which cross-border flows originate and the systems where those flows end.

(c) Compensation payments or receipts are made ex-ante on a regular basis with regard to a given period of time.

(d) Ex-post adjustments of compensations are made where necessary, to reflect costs actually incurred.

Article 8 Cost Recovery

8.1 The APM provides for the recovery of:

(a) capital costs of the network and equipment;

(b) operation and maintenance costs;

(c) costs related to transmission losses.

Article 9 Impact of the Inter-Grid Operator compensation mechanism on National Tariffs

9.1 The application of APM impacts the electricity tariff and payment scheme within each country, as the compensation payments to or by the RCP of that country will need to be aggregated with the National Tariff.

9.2 The National Regulatory Authorities (NRA) shall calculate the National Tariffs while taking into account the necessary adjustments so that national users shall pay compensation for the use of transmission assets located outside their country, and shall receive compensation when the assets financed through the National Tariff are used by users in other countries or in other Control Areas within the WAPPITS.

9.3 The regional compensation mechanism shall result in a reduction or an increase of the revenues to which any Grid Operator is entitled to, according to the provisions of the respective national regulation.

9.4 The National Regulatory Authorities (NRA) shall ensure that compensation payments approved by ERERA are paid on time.

Article 10 Rationale of the Inter-Grid Operator Compensation Mechanism

10.1 Access is provided to the entire West African Power Pool Interconnected Transmission System (WAPPITS) for generators and loads in all Control Areas. As a result of cross-border trades, some Control Areas will incur additional costs arising from:

(a) the use of elements of other transmission networks by their users or due to power loop flows; and

(b) losses occurring in other transmission networks caused by their users as a consequence of these cross-border exchanges and loop flows.

10.2 The Inter-Grid Operator Compensation Mechanism aims to ensure an equitable allocation of costs associated with the use of the West African Power Pool Interconnected Transmission System (WAPPITS), due to cross-border electricity exchanges and power loop flows. It compensates countries that incur additional costs, while the entities responsible for causing those costs assume the corresponding financial responsibility. No cross-border tariff shall be applied; however, the compensation mechanism is established to remunerate the use of a transmission network by users from other networks within the WAPPITS.

10.3 Compensation payments are made or received by the RCPs without affecting the revenues of Grid Operators, which will remain unchanged. However, the National Tariffs of each country are adjusted accordingly to reflect these payments.

Article 11 Steps of the WAPP Inter-Grid Operator Compensation Mechanism

11.1 The fundamental steps in the WAPP Inter-Grid Operator Compensation Mechanism are the following:

(1) Determine Regional transmission assets and asset value.

(2) Calculate the annual revenue requirement for each asset of each Grid Operator.

(3) Determine the value of electrical energy losses in the Transmission Network.

(4) Develop Input Files for APM.

(5) Apply the APM method on the model-ready format to determine:

(i) the overall flow contribution on each asset by each generator and load;

(ii) the losses allocation per asset by each generator and load;

(iii) the proportional cost allocation to each generator and load, disaggregated by asset and total assets of the Control Area;

(iv) the proportional allocation of the value of the losses to each generator and load, disaggregated by asset and total assets of the Control Area;

(v) the total amount that each RCP must pay to and must receive from any other RCP by aggregating all the cost values calculated in the previous steps;

(vi) the net amount that a RCP must pay or receive based on its overall position relative to all other RCPs, and process the corresponding payments to the SMO, which will then distribute the funds to RCPs that are net receivers.

(6) ERERA reviews and approves the results obtained.

(7) NRAs reflect the ERERA approved compensation in the National Tariffs.

(8) The SMO undertakes invoicing, payment, and settlement of the compensations.

11.2 **Step 1:** Determine Regional Transmission Assets and Asset Value

11.2.1 The Regional Transmission Network comprises all interconnected assets in the ECOWAS region whose service voltage levels are greater than or equal to 132 kV (or as agreed by ERERA), whether the elements are used for regional trading or not. Interconnected assets are all the assets that are regionally interconnected (between two or more countries), even if there are two or more synchronous areas.

11.2.2 The asset database will contain all assets per class and per Grid Operator, physical data for each network branch, including line lengths, numbers of circuits, line types, and voltages, series capacitors, transformer rating and voltage, and the commissioning date of each asset. The Grid Operator shall provide to the SMO the data required for the asset database, with a copy to the NRA.

11.2.3 The regional transmission asset database shall be kept by the SMO. The database shall be updated annually by the SMO from information provided by each Grid Operator.

11.2.4 For each element in the regional transmission asset database, a replacement value shall be agreed upon by WAPP and approved by ERERA. The replacement values are updated every five (5) years (or as agreed by ERERA).

11.3 **Step 2:** Calculate the annual cost for each Asset of each Grid Operator

11.3.1 The two cost components to be recovered are:

(a) capital costs of network elements; and

(b) operation and maintenance costs.

Calculation of asset value

11.3.2 The method for calculating annual asset value is the Depreciated Replacement Standard Cost. This method recognizes that the replacement of a specific element of the transmission system (line, transformer, switch gear) will be at the current standard asset value.

11.3.3 For the determination of asset value, ERERA shall decide in the Regional Electricity Transmission Tariff Application Procedure on the following:

(a) The standard cost of the concerned transmission asset.

(b) The asset depreciation period for :

(i) Transmission lines;

(ii) Series capacitors;

(iii) Transformers;

(iv) Any other equipment as approved by ERERA.

(c) The residual value for each asset, after the depreciation period. A residual value equal to 0% of the standard cost of the asset shall be used initially until ERERA decides otherwise after an appropriate study.

(d) Integration of future investment requirements on a case-by-case basis.

Calculation of WACC

11.3.4 The formula provides estimates of the appropriate return on equity, and the equity returns are measured in relation to the risk premium on the equity market as a whole. Thus:

$$R_e = R_f + \beta_e(R_m - R_f) \quad \textbf{(1)}$$

Where:

R_e is the return on equity;

R_f is the risk-free rate observed in the market;

$ß_e$ is the correlation between the equity risk and the overall market risk;

R_m is the return on the market portfolio;

$R_m - R_f$ is the market risk premium.

The WACC lies between the cost of equity and the cost of debt and is calculated as:

$$WACC = R_d \times {}^{D}/_{(D+E)} + R_e \times {}^{E}/_{(D+E)} \quad \textbf{(2)}$$

Where:

D is the total market value of debt;

E is the total market value of equity;

R_d is the nominal cost of debt; and

R_e is the nominal cost of equity.

This formulation does not include the effects of tax. The formulation of the WACC that allows for the effects of taxation (Tc) and used extensively by regulators is as follows:

$$Nominal\ post\ tax\ WACC\ (w) = R_e \times {}^{E}/_{V} + R_d(1 - T_c) \times {}^{D}/_{V} \quad \textbf{(3)}$$

Where:

T_c is the company tax rate;

V is the total market value of the business, i.e., debt plus equity.

A transformation is applied to derive an estimate of the real pre-tax WACC, as follows:

$$Real\ pretax\ WACC\ (RW) = \left[\left(1 + {}^{w}/_{(1-T_c)}\right)/(1+i)\right] - 1 \quad \textbf{(4)}$$

Where:

w is the nominal post-tax WACC, as given by equation (3);

i is the inflation rate.

11.3.5 The WACC values allowed shall be determined and approved by ERERA. As a general rule, a single common WACC value, approved by ERERA, will be applied to calculate the value of the assets in the WAPPITS.

11.3.6 For dedicated interconnectors such as Special Purpose Vehicles (SPVs) or privately owned transmission assets, the applicable WACC values may be the actual WACC values specified in their agreement. ERERA may approve these actual WACC values for SPVs or privately owned transmission assets in case these values are specifically included in agreements with the Member State and constitute a contractual commitment towards project sponsors and lenders.

Taxation on International Transmission Company Profits

11.3.7 The formula for WACC allows for company taxation of the transmission companies' profits. The transmission company will be registered in one particular country, and the taxation shall apply to that country only. Intergovernmental agreements will have to be reached if an alternative taxation arrangement is required.

Operation and maintenance costs

11.3.8 Operation and maintenance costs are to be recovered by allowing a predetermined margin on the capital costs of equipment to cover an appropriate amount of the operation and maintenance costs of each asset on an annual basis. This margin varies internationally and is typically in the range of 2% and 5% of the capital cost per annum for the system as a whole. The percentage allowed shall be determined and approved by ERERA.

11.3.9 For dedicated interconnectors such as SPVs or privately owned transmission assets, operating costs could be actual operating costs as approved by ERERA.

11.4 **Step 3:** Determine the value of energy losses in the Transmission Network

11.4.1 The SMO shall determine the annual volume of losses in each element of the WAPPITS using the appropriate load flow analysis software.

11.4.2 The SMO shall allocate the volume of losses (MWh) determined above based on the same proportion calculated through the APM for the use of the network determined in step 5.

11.4.3 The SMO shall apply an average unit price to the allocated volume to obtain the value of losses in each element for the year. The average unit price to use shall be the weighted average market clearing price of the Day-Ahead Market (DAM) or as determined by ERERA.

11.4.4 The value of losses shall be aggregated with the compensation.

11.5 **Step 4:** Develop the Input Files for APM

Preparing the Common Grid Model (CGM) a year ahead

11.5.1 The Common Grid Model activity is aimed at preparing a set of study models (scenarios) representing a reasonable projection or forecast of the anticipated WAPP Interconnected Transmission System (WAPPITS) conditions for specific timeframes as will be operated by the SMO in coordination with the Grid Operators. The main intent of these scenarios is to provide the SMO an effective starting point for performing operational planning and compliance assessments.

11.5.2 The scenarios to be developed are a collection of transmission system data, as submitted annually to the SMO by the Grid Operators. The submitted data are meant to represent the transmission system in the WAPPITS in a steady-state and system-intact condition. The system topology, generators dispatch, and system loads modeled in the scenarios are intended to be representative of the projected transmission system as will be operated within the WAPPITS footprint under anticipated conditions for the year and season being reasonably represented in each scenario. It is expected that reasonable projections within each case will include all firm generator commitments, forecasted load commitments, firm interchange commitments, and expected transmission topology.

11.5.3 The SMO shall prepare a procedure to provide for the annual updating of the Common Grid Model in year (Y-1) for the coming year Y. Grid Operators shall provide the SMO with such data as required by the SMO to enable an accurate reflection of the WAPPITS for system modelling purposes. The SMO shall, on the basis of the information provided by the Grid Operators, develop a number of modelling scenarios reflecting expected usage of the system for year Y.

Running the CGM on the appropriate software to obtain load flow results.

11.5.4 In this stage, the load flow result and other input files are formatted into a template suitable for the application of APM. The APM takes as inputs:

(1) The file, containing all the information about the buses, loads, generators, transformers, and circuit breakers, as well as their distribution among the Grid Operator areas.

(2) The load flow results of the power flow from each bus to the different network elements.

(3) The cost file containing all the assets, their Grid Operator ownership, and their total annual revenue requirement to be allocated.

(4) The control inputs file that contains variables used by the APM to perform the applicable functionalities.

11.5.5 The APM uses percentages that determine the proportions of the total cost of the grid to be allocated to network users, generators, and loads respectively, to determine their contributions in line flows. Initially, this proportion will be respectively 10% for generators and 90% for loads. This initial allocation of responsibility in network costs can be changed, adjusted, and updated by ERERA. The actual proportion shall be set by ERERA in the Regional Electricity Transmission Tariff Application Procedure.

11.6 **Step 5:** Applying the APM on the model-ready format.

11.6.1 The model applies the APM in the following order:

(1) The contribution of inflows to outflows according to the average participation rule is determined. The fraction of inflow that is deemed to be part of outflow is computed as the ratio of the size of the latter to the total amount of power flowing through a given node.

(2) The contribution of each generator and load to the cost of each of the network assets is determined. This is aggregated for generators and loads belonging to the same country or Control area to give the contribution per country or per Control area to the cost of each asset in the network.

(3) Then the total amount that each RCP must pay and must receive to/from any other RCP is determined by aggregating all the values calculated for network assets and the value of losses.

(4) The net amount that RCP must pay or receive based on the net sum of each RCP's position vis-à-vis all other RCPs.

(5) The SMO shall thereafter collect all funds due from the RCP net payers and disburse all funds owed to the RCP net receivers, subject to the approval of ERERA.

11.7 **Step 6:** ERERA reviews and approves the results obtained.

11.7.1 The SMO shall produce a report each year, Y-1, outlining the results obtained and any issues encountered using the methodology. The SMO shall recommend to ERERA the net amount that each RCP must pay or receive based on the APM for the following year, Y. ERERA shall review the report and recommendation and approve the payments and compensations. In the absence of current approved figures by ERERA, the SMO shall use the latest approved figures.

11.8 **Step 7:** NRAs reflect the ERERA approved compensation in the National Tariffs.

11.8.1 ERERA shall send notification of the decisions to the NRAs. Each RCP shall notify its NRA of the net amount that it must pay or receive as approved by ERERA. The NRA shall make provision for the payments to be collected from the National Tariffs or for compensations paid to be offset against National Tariffs.

11.9 **Step 8:** Invoicing, Payment and settlement of the approved compensation.

11.9.1 Following the approval of the compensations for the year Y by ERERA, the SMO shall notify each RCP, the approved compensation to be paid to or collected from the SMO. The notification shall include the payment conditions.

11.9.2 The conditions for billing, payment, and settlement are outlined in the Regional Electricity Transmission Tariff Application Procedure and set according to the relevant invoicing and settlement procedure of the REM.

11.9.3 Any default in the payment and settlement of the RCP compensations shall be dealt with by ERERA in accordance with the Rules on sanctions in the REM.

CHAPTER III. REGIONAL ELECTRICITY TRANSMISSION TARIFF APPLICATION PROCEDURE

Article 12 Application of APM

12.1 The APM requires, as its basic input data, a collection of Snapshots of the network power flows corresponding to the specific system conditions. To this end, the SMO shall develop, a year ahead (year Y-1), a basic electrical model with an electrical system simulation tool to predict network flows across the entire WAPPITS for the year Y. The system will provide for the automatic transfer of data from the CGM.

12.2 The SMO shall prepare a procedure for the modelling of various scenarios based on information received from Grid Operators in developing the CGM. The procedure shall result in the proposed allocation of costs among RCPs for year Y based on the APM.

12.3 The procedure shall provide for a review in year Y+1 of the actual power flow patterns in year Y and a comparison of allocated costs based on actual flows compared with the actual allocated costs for year Y. The SMO shall propose applying adjustments where there is a variation in cost allocation compared with the allocated costs that would apply based on the actual flow pattern for year Y. Any proposed adjustments shall be approved by ERERA.

Article 13 Development of the Regional Electricity Transmission Tariff Application Procedure

13.1 The SMO shall develop the Regional Electricity Transmission Tariff Application Procedure, which details the following business processes:

(a) Tariff Inputs for the CGM;

(b) Update of the Asset Database;

(c) Allocation of the use of the Regional Transmission System and losses;

(d) Determination of RCP compensations;

(e) Billing and Settlement of RCP compensations;

(f) Reconciliation of RCP compensations.

13.2 The detailed Regional Electricity Transmission Tariff Application Procedure developed by the SMO shall be approved by ERERA.

Article 14 Approval of the annual values

14.1 Each year ahead (Y-1), the SMO shall calculate for the coming year Y the annual net amount to be paid or to be received by each RCP as determined by the APM.

14.2 ERERA shall review and approve the annual values determined in Article 14.1, as submitted by the SMO. The ERERA resolution approving the compensation for the year Y shall set the effective RCPs.

14.3 The timeline of the determination and approval of annual values is defined in the Regional Electricity Transmission Tariff Application Procedure.

CHAPTER IV. FINAL PROVISIONS

Article 15 Review and Amendment of the Regional Transmission Tariff Methodology

15.1 ERERA may conduct a review of the Regional Transmission Tariff Methodology to ensure that the contents of the Methodology reflect the regulatory circumstances existing at the time of the review. Special circumstances may arise that may necessitate such a review and changes to be effected.

15.2 ERERA shall decide on the interpretation of the various provisions of this methodology. However, any Market Actor may, at any stage, request a reconsideration by ERERA or appeal a review decision in accordance with ERERA's enabling regulation.

Article 16 Effectiveness

16.1 This Regional Transmission Tariff Methodology (RTTM), based on the Average Participation Method (APM), is approved by the ERERA Regulatory Council on 19th of March 2026 and is effective from the said date.

DONE IN ACCRA, GHANA, ON MARCH 19, 2026

By Order of the Regulatory Council



Kocou Laurent Rodrigue TOSSOU
Chairman