



2nd Asia-Pacific Regulatory Forum on Power System Connectivity

6 - 7 June 2023, 12:00 - 16:00 hrs (GMT + 7)

Implications of pricing for power system integration

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CONCEPT NOTE. The integration of power systems across borders provides the opportunity for commercial exchanges between the different jurisdictions, thus creating a cross-border or regional market. The benefits of such markets for electricity consumers in the region are clear, in terms of reduction in the cost of serving them by dispatching the most efficient set of resources at regional level compatibly with the transmission capacity within and between the different jurisdictions.

Therefore, it is essential that the transmission tariffs applicable to cross-border exchanges do not unduly hinder them.

The application of national tariff frameworks to cross-border exchanges might result in the so-called 'tariff pancaking', whereby transmission charges applicable to cross-border exchanges reflect the accumulation of the different national tariffs and therefore are higher than those applied to internal transaction. These higher charges, beyond being a barrier to cross-border exchanges, may not be justified if cross-border transactions reduce the loading on the power system.

The participants in the Forum will be invited to discuss which transmission tariff approach is best suited to support cross-border exchanges, while conveying the correct signals regarding the cost imposed on the transmission systems in the different jurisdictions.

The objective of transmission pricing regulation

- Sound pricing regulation that **avoids unnecessary investment risk** to attract private investment
 - Transmission prices that **recover the efficient cost of service** of transmission (with a reasonable return on investment)
- A sound approach to **transmission cost allocation** that
 - **does not discourage trade** unnecessarily
 - **does not create opposition** to beneficial transmission projects unnecessarily

Transmission remuneration & unnecessary regulatory risks

First, let's avoid unnecessary risk in transmission remuneration

- Regulation must try to **avoid unnecessary financial risks** (*which have negative consequences on the cost of capital*) to a natural monopoly activity like transmission, subject to regulation
 - The next slide offers a list of actions – mostly with origin in **flawed regulation** – that create unnecessary risk (*therefore perfectly avoidable*) in the remuneration of the distribution activity

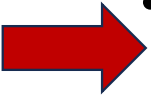
Flawed regulation creates investment risks

These are frequent **unnecessary regulatory risks** in the remuneration method

- **Revenues that depend on transactions or volume of utilization**, instead of the actually incurred costs, or standards, or results of an auction
- **Regulatory updates of the historical rate base**, based on “replacement costs”, “market value”, or other creative methods
- **Failure in ring fencing the transmission revenue requirement** in the revenues obtained from the end customer tariffs
- **Flawed cost allocation methods** that lead to opposition to pay charges that are considered unfair
- **Frequent re-calculation of transmission charges** or changes in methodology
- Performance-based **incentives that go beyond the equipment failure**
- Uncertainty in remuneration beyond the economic life of the transmission asset

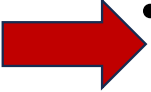
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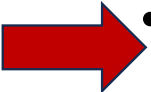
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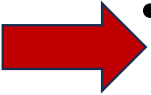
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Follow international best practice in regional transmission cost allocation

Second, regulation for regional trade must be guided by the “Single system paradigm”

The “Single system paradigm”

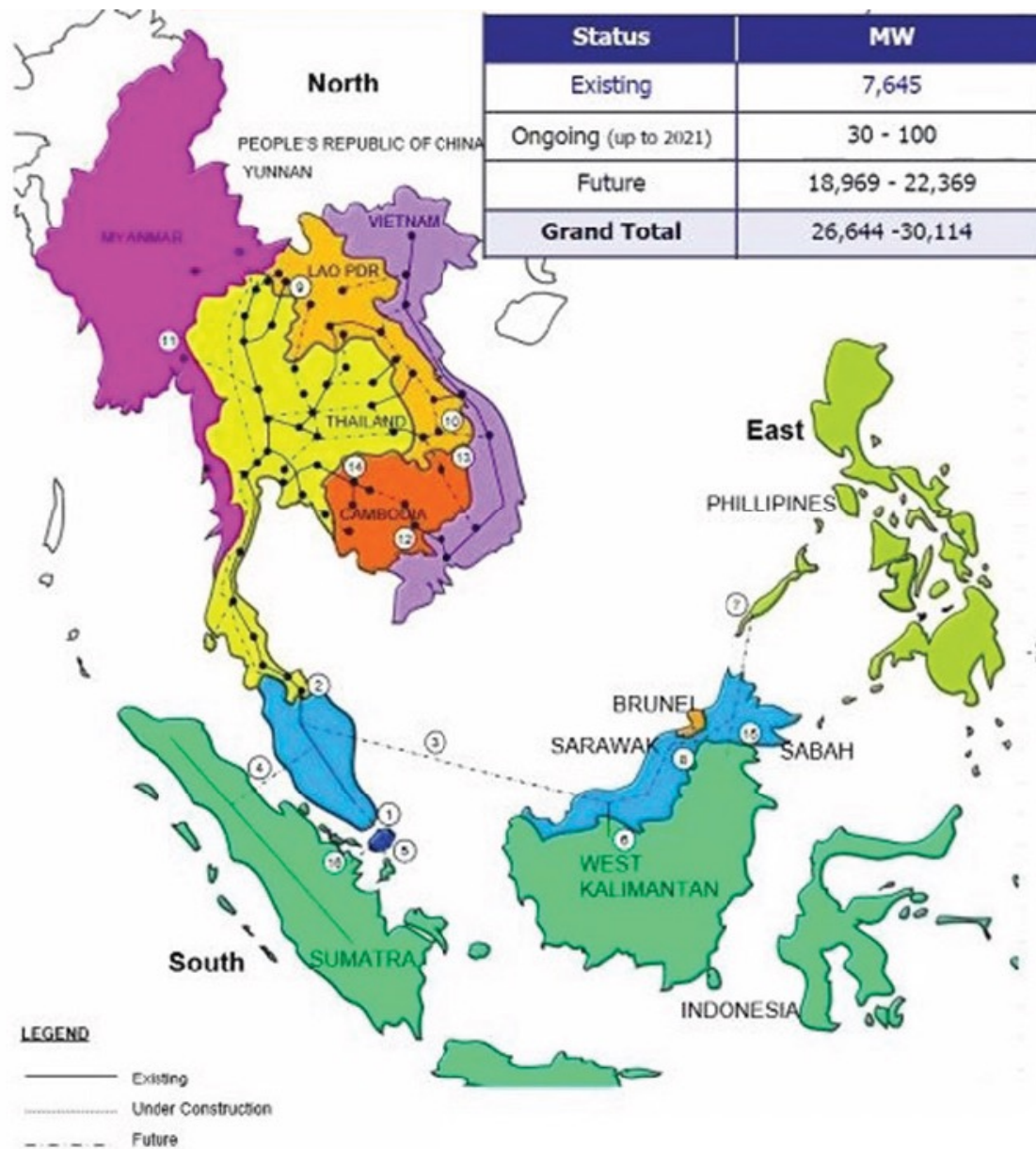
Design regional regulation so that the expected outcome is as close as possible to that of a sound regulation for *a single system of regional dimension.*

EUROPE



ASEAN Interconnection Projects

(Updated in April 2020)





Cost allocation of regional transmission projects

- Avoid “**pancaking**” (single system paradigm!!!) & charges associated to **commercial transactions**
- Agreement **among countries** for a **stable allocation to countries** of the cost of **major projects**
 - Try allocation to countries **based on estimated benefits**, otherwise...
 - ... **track sources and sinks** of actual or forecasted flows, minimizing the use of extra assumptions
- Tracking sources & sinks allows determining **inter-country compensations**.
 - After that, each country will allocate internally the modified transmission total cost following its own principles.

Unfortunately, everyone starts by getting it wrong...

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RESOLUTION N°006/ERERA/15
**Adoption of the Tariff Methodology for Regional
Transmission Cost and Tariff**

The Regulatory Council,

Mindful of Article 18.5 of Regulation C/REG.27.12/07 of 15 December 2007, as amended, on the composition, organisation, functions and operations of ERERA, and


After the review of the Tariff Methodology for Regional Transmission Cost and Tariff for the West African Power Pool (WAPP) by ERERA's Consultative Committees,


RESOLVE THAT:

1. The Tariff Methodology for Regional Transmission Cost and Tariff for the West African Power Pool, hereby attached, is approved.
2. The Tariff Methodology for Regional Transmission Cost and Tariff for the West African Power Pool shall be published in the ERERA official Bulletin and Website.

Done in Accra, GHANA, on August 18, 2015


Mr. Alagi Basiru GAYE
Council Member


Mrs. Ifeyinwa IKEONU
Acting Chairperson



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**CONTINENTAL TRANSMISSION TARIFF
METHODOLOGY FOR INTERNATIONAL
BILATERAL TRANSACTIONS**

**THEME: → DEVELOPING SMART
INFRASTRUCTURE TO BOOST AFRICA'S
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TECHNICAL PAPER

Thanks