

# Role of Regulators in Regional Electricity Trade

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# Before we start...

- Regional and national regulatory authorities play an important role in regional trade
- ACER in the EU and FERC in the US play regional regulatory roles, providing oversight of national/state regulators
- In the PAEM, it is proposed that the Pan-Arab ARC play the role of regional regulator providing oversight of national regulators in the Member States
- This presentation provides an overview of the roles and responsibilities of the Pan-Arab ARC and the national regulators relating to regional trade in the PAEM
- The roles and responsibilities of these entities are documented in the PAEM General Agreement

# Agenda

1. Overview of the US electricity market and the role of FERC
2. Overview of the EU electricity market and the role of ACER
3. Roles and responsibilities of the Pan-Arab ARC and the National Regulators in the PAEM
4. Organization and priorities of the Pan-Arab ARC

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# North American Market

## 10 ISOs and RTOs

### MRO – Midwest Reliability Organization

- MISO
- MRO-Manitoba Hydro
- MRO-SaskPower

### RF – ReliabilityFirst

- PJM

### SERC – SERC Reliability Corporation

- SERC-East
- SERC-North
- SERC-Southeast
- SERC-Florida Peninsula

### NPCC – Northeast Power Coordinating Council

- NPCC-Maritimes
- NPCC-New England
- NPCC-New York
- NPCC-Ontario
- NPCC-Québec

### SPP – Southwest Power Pool

- SPP

### Texas RE – Texas Reliability Entity

- Texas RE-ERCOT

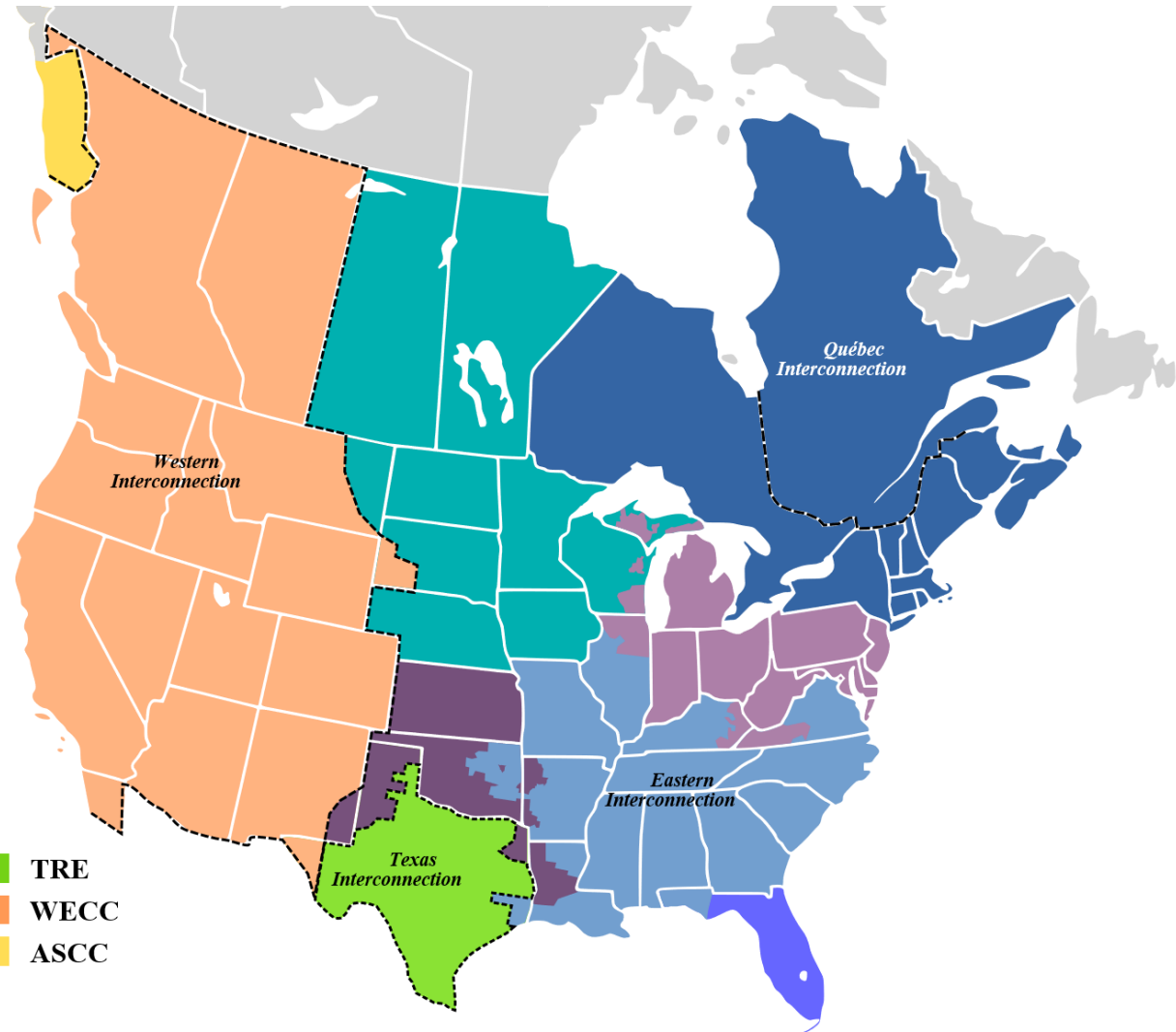
### WECC

- WECC-CA/MX
- WECC-NWPP-AB
- WECC-NWPP-BC
- WECC-NWPP-US
- WECC-RMRG
- WECC-SRSG

- NPCC
- FRCC
- TRE
- RFC
- MRO
- WECC
- SERC
- SPP
- ASCC

----- Interconnection

Source: North American Reliability Corporation



# US Market - Institutions



and other ISOs

# Role of FERC



**FERC**, the Federal Energy Regulatory Commission, is an independent agency that regulates the interstate transmission of electricity and licenses hydropower projects.

FERC has the following responsibilities:

- Regulate interstate transmission and wholesale sale of electricity
- Review certain mergers and acquisitions and corporate transactions by electricity companies
- Regulate the transmission and sale of natural gas for resale in interstate commerce
- Regulate the transportation of oil by pipelines in interstate commerce
- Approve the siting and abandonment of interstate natural gas pipelines and storage facilities
- Review the siting application for electric transmission projects under limited circumstances
- Assess the safe and reliable operation of proposed and operating LNG terminals

# Role of the FERC (continued)



- License and inspect private, municipal and state hydroelectric projects
- Protect the reliability of high voltage interstate transmission via mandatory reliability standards
- Monitor and investigate energy markets
- Enforce FERC regulatory requirements through imposition of civil penalties and other means
- Oversee environmental matters related to natural gas and hydroelectric projects
- Administer accounting and financial reporting regulations and the conduct of regulated companies



# Role of the FERC (continued)



## FERC does not:

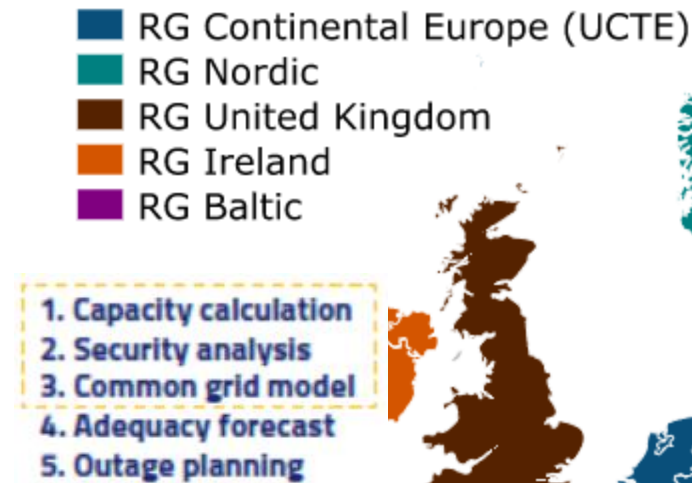
- Regulate retail electricity supply to consumers
- Approve physical construction of electric generation facilities
- Regulate activities of the municipal power systems, federal power marketing agencies, and most rural electric cooperatives
- Regulate nuclear power plants
- Address reliability problems related to failures of local distribution facilities
- Regulate tree trimming near local distribution power lines in residential neighborhoods

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# European Case

- ACER (EU Agency for the Cooperation of Energy Regulators) is the Regional Regulator
- Separate TSO and MO Roles
- ENTSO-E is the regional System Operator: 39 Member TSOs from 35 countries
- Regional Security Coordinators harmonize operations between member TSOs



# Role of ACER

- ACER, EU Agency for the Cooperation of Energy Regulators, ensures the European market functions properly
- ACER assists national regulators with the performance of their regulatory function at the European level and, where necessary, coordinates their work

# Role of ACER

ACER (with respect to electricity):

- Complements and coordinates the work of national regulatory authorities
- Helps formulate European network rules
- Where appropriate, takes binding individual decisions on terms and conditions for access and operational security for cross border infrastructure
- Advises European institutions on issues relating to electricity
- Monitors the internal markets in electricity and natural gas and reports on its findings
- Monitors wholesale energy markets to detect and deter market abuse, in close collaboration with national regulatory authorities

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# Summary of Regulatory Roles

- The regional regulator works with the national/state regulators to:
  - ensure consistency of application of transmission access terms conditions and tariffs across the region; i.e., international/out-of-state traders have access to domestic/state markets under the same terms conditions and tariffs as domestic/in-state traders
- The national/state regulators are responsible for:
  - regulating their national/state electricity sectors and ensuring that all participants, including both service providers and customers, are treated fairly within their national/state markets

# Organization of PAEM

## 1

### Pan-Arab advisory and regulatory (PAN-ARAB ARC) committee

- Review and advise on market governance documents, changes to governance documents, transmission tariffs, generation reserve criteria, cross-border transmission allocation, available transmission capacity, and so on.
- Ensure compliance with governance documentation including nondiscriminatory access.
- Market surveillance.
- Dispute resolution.

Market  
Surveillance  
Group

## 2

### Arab TSOs (PAEM TSOs) committee

- Coordinate and cooperate with national TSOs.
- Play active role in rule-setting process.
- Promote market integration, reliability, and security of supply.
- Research and development, promote public acceptability.
- Participate in energy policy.

Regional  
Market  
Facilitator

## 3

### PAEM Secretariat

- Provide administrative support to regional governing entities.
- Perform market monitoring function under Pan-Arab ARC.
- Maintain comprehensive information systems.
- Carry out other tasks as assigned.



# Roles and Responsibilities of PAEM National Regulators

- The National Regulators shall ensure that PAEM Participants and the National TSOs are treated in a fair and non-discriminatory manner
- Each Member State shall identify its National Regulator and verify that it has sufficient regulatory control over its domestic electricity system to ensure compliance with the rules and the discharge of the responsibilities set out in the General Agreement
- The National Regulators shall cooperate at the regional level with the Pan-Arab ARC
- The National Regulators shall be responsible for regulating domestic electricity transactions relevant to the PAEM based on the principles of fairness, efficiency, safety and transparency

# Roles and Responsibilities of PAEM National Regulators (continued)

The National Regulators shall be responsible for:

1. Monitoring mechanisms that deal with transmission congestion and emergencies within the national electricity systems that are relevant to the PAEM
2. Monitoring the performance of the national transmission entities
3. Monitoring and reporting information relating to interconnections, grid use and capacity allocation as provided by the National TSOs
4. Monitoring and ensuring that there is no cross-subsidization between transmission activities and other activities in the national electricity systems

# Roles and Responsibilities of PAEM National Regulators (continued)

The National Regulators shall be responsible for:

5. Monitoring and reporting on the extent to which the National TSOs complete their tasks and are in compliance with PAEM rules relating to third-party access, congestion and interconnection management on the national electricity systems
6. Ensuring that transmission and generation investment plans for the national electricity systems are reported and consistent with region-wide investment plans
7. Ensuring that the national TSOs report information pertaining to network security and reliability in the national electricity systems
8. Establishing network security and reliability rules for the national electricity systems consistent with the Arab Grid Code
9. Monitoring transparency of transactions relating to the PAEM

# Roles and Responsibilities of Pan-Arab ARC

- The Pan-Arab ARC provides advice and regulatory oversight of the PAEM
- The Pan-Arab ARC, in conjunction with PAEM Secretariat and Market Monitoring Group, shall carry out the following duties:
  1. Monitor compliance with the PAEM General Agreement
  2. Ensure that PAEM Participant behavior and the functioning of the PAEM is consistent with the intent of the General Agreement

# Roles and Responsibilities of Pan-Arab ARC (continued)

3. Review and approve methodologies for setting fees and tariffs for regulated activities in the PAEM proposed by the Arab TSOs Committee or the Regional Market Facilitator or a Member State, including each Member State's transmission services charge applicable to international transactions
4. Ensure transmission service charges for international transactions are applied in a fair and non-discriminatory manner
5. Review and advise on proposed changes to the General Agreement
6. Review and advise on proposed changes to the PAEM Agreement



# Roles and Responsibilities of Pan-Arab ARC (continued)

7. Review and approve the Arab Grid Code and subsequent proposals for changes to the Arab Grid Code and supervise implementation
8. Review and advise on proposals of the Arab TSOs Committee for expansion of international interconnection facilities
9. Review and approve Capacity Obligation criteria
10. Review and approve rules governing allocation of international interconnection capacity
11. Review and approve the methodology for calculation of available transmission capacity
12. Review and approve the level of unscheduled deviations within the PAEM

# Roles and Responsibilities of Pan-Arab ARC (continued)

14. Review and approve the adjustment mechanism and charge rate for unscheduled deviations within the PAEM
15. Review and approve credit obligations and payment default procedures
16. Perform its obligations in relation to the resolution of disputes as set out in the General Agreement, the PAEM Agreement and the Arab Grid Code
17. Coordinate with the National and sub-regional Regulators
18. Facilitate the development of the PAEM

# Roles and Responsibilities of Pan-Arab ARC (continued)

19. Review and approve proposals of the Arab TSOs Committee and the Regional Market Facilitator with respect of the targeted loss of load expectation, forecasting accuracy, capacity obligations and grace periods
20. Advise Member States on policy and regulatory issues relating to the evolution of the PAEM
21. Liaise with all relevant persons so as to ensure that its advice on matters raised by the Arab TSOs Committee, the Regional Market Facilitator or a Member State is communicated not only to the person who raised the matter but also to all Member States
22. Review and approve the performance standards proposed by the Arab TSOs Committee or the Regional Market Facilitator and the date on which such performance standards shall take effect



# Roles and Responsibilities of Pan-Arab ARC (continued)

23. Determine and apply appropriate actions to be taken as a result of the Regional Market Facilitator failing to meet performance standards
24. Recommend penalties and other enforcement actions in cases of non-compliance or breach of the PAEM Agreement or the Arab Grid Code
25. Review and approve the facilities that make up the grid and international interconnections
26. Review and recommend proposals of the Arab TSOs Committee for construction of new international interconnection facilities

# Roles and Responsibilities of Pan-Arab ARC (continued)

The Pan-Arab ARC shall establish, maintain, update and publish:

- a list of all PAEM Participants and a list of all filed Applications for Authorization to Participate in the PAEM
- a list of all PAEM Participants that will cease to be PAEM Participants and the time that each will cease to be a PAEM Participant
- a list of all PAEM Participants that are the subject of a suspension order and the time at which the rights of each listed PAEM Participant will be suspended
- **Ensure that Member States procure that PAEM Participants in their Member States maintain separate accounts to provide clear allocation of costs for each activity**

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# Organization of the Pan-Arab ARC

- The Pan-Arab ARC:
  - reports to the AMCE
  - shall not have its own administrative structure and shall be supported by the PAEM Secretariat
- The PAEM Secretariat handles all financial work on behalf of The Pan-Arab ARC and will open and manage a separate bank account under the name of the Pan-Arab ARC
- No member of the Pan-Arab ARC shall be allowed to serve concurrently as a member of the Arab TSOs Committee
- In discharging its duties, the Pan-Arab ARC may create sub-committees
- The Pan-Arab ARC shall be composed of one representative from each Member State who shall possess a vote and one representative from each sub-regional regulator who shall not possess a vote

# Organization of the Pan-Arab ARC (continued)

- Each Member State and each sub-regional regulator shall nominate for membership of the Pan-Arab ARC a senior member of the entity responsible for regulating its power sector
- Observer States may also nominate a senior member from its national regulator, but the member shall not possess a vote
- A representative can hold any office in its appointing Member State and receive remuneration from the Member State
- A representative can have commercial or other business dealings in connection with the PAEM provided that the dealings are disclosed to the Pan-Arab ARC

## Organization of the Pan-Arab ARC (continued)

- One member of the Pan-Arab ARC shall act as Chairman and two members of the Pan-Arab ARC shall act as Deputy Chairmen. The Chairman and Deputy Chairmen must be from a Member State but may not be from the same Member State at the same time
- Each of the Chairman and Deputy Chairmen shall have a term of two year
- The positions of Chairman and Deputy Chairmen shall be rotated among the Member States
- The role of the Deputy Chairmen shall be to support the Chairman and to discharge the duties of Chairman in cases where the Chairman is unavailable
- **No representative shall be entitled to remuneration or payment of expenses incurred in performance of its duties as a representative of the Pan-Arab ARC**
- **Each Member State shall be responsible for paying all costs incurred by it in relation to its participation in the Pan-Arab ARC**

# Sub-Committees of the Pan-Arab ARC

- As noted, in discharging its duties the Pan-Arab ARC may create sub-committees for the purpose of carrying out specified delegated activities
- This is a common setup globally. For example:
- FERC has established a Task Force to conduct joint hearings on electric transmission-related topics, such as: federal/state barriers to optimal transmission development, review of FERC rules for planning and cost allocation of transmission projects, barriers to the efficient interconnection of new resources, mechanisms to ensure cost effective transmission investment, etc.
- ACER has a number of committees, task forces, standing committees and regional initiatives:
  - Electricity Working Group
  - Working Groups/Task Forces related to adequacy, balancing, capacity allocation and congestion management, forward capacity allocation, future policy and governance, infrastructure, system operation and grid connection
  - ACER Remit Committee
  - ACER Retail Market Working Group
  - Gas Working group

Thank You