

EAST PATHFINDER – DESIGN PHASE

TERMS OF REFERENCE (ToR)

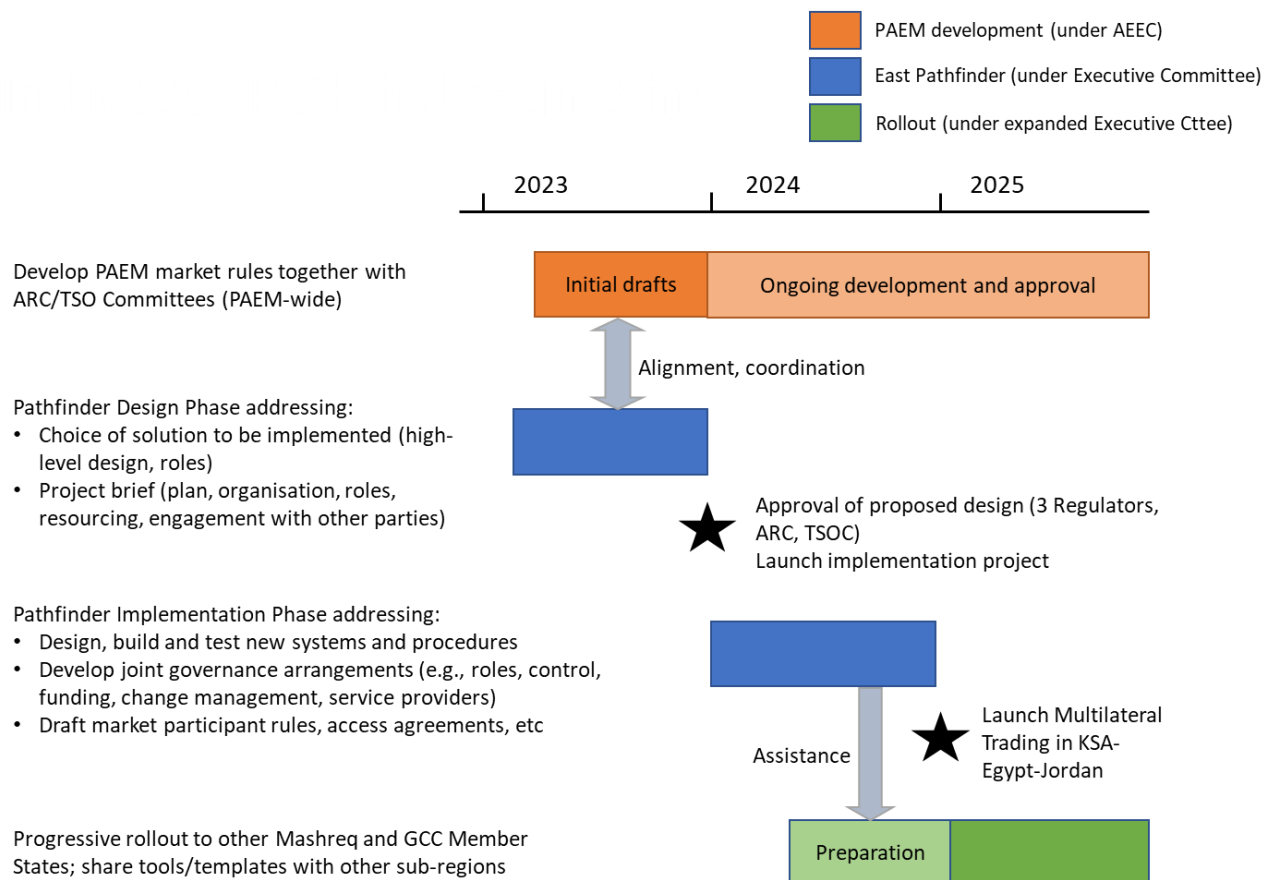
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Introduction

1. The new interconnection between KSA and Egypt planned to come into operation in 2024/5 creates a strategic opportunity to establish the arrangements to support multilateral trading between the GCC and Mashreq sub-regions. The planned Jordan-KSA interconnection will also support this strategic opportunity for trade between the two sub-regions.
2. Multilateral trading is the ability to trade with any qualified counterpart in the connected region, utilizing the network of other intermediate countries if necessary. Enabling multilateral trading requires the establishment of common rules and ‘market enablers’: supporting mechanisms, procedures and services to facilitate trading.
3. This opportunity has been recognized as a key step in the development of the Pan-Arab Electricity Market (PAEM), as set out in the PAEM Plan (‘Roadmap’). The Roadmap proposes the establishment of an ‘East Pathfinder’ to develop and implement the supporting arrangements needed to support multilateral trading between countries in the GCC and EIJLLPST sub-regions. Initially, the focus is on supporting trade between Egypt, Jordan and KSA, but with the objective that the arrangements are designed to support trade across GCC/EIJLLPST and able to be quickly extended to all countries in the two sub-regions.
4. The East Pathfinder (PF) is a cooperation led by the TSOs from Egypt, KSA and Jordan. Close coordination will, however, be needed with other countries in the GCC and EIJLLPST sub-regions to ensure the arrangements can readily be extended, and with the PAEM committees responsible for developing the PAEM rules and arrangements. It is hoped that the emerging PAEM rules will both guide and be influenced by the work of the East Pathfinder.
5. A first step in the East Pathfinder, the Design Phase, is to investigate and develop a specification of the arrangements that need to be implemented. The Design Phase should also deliver a ‘project brief’ setting out the proposed approach to the implementation of the arrangements.
6. Prior to implementation, the proposed arrangements developed in the Design Phase will need to be approved by the TSOs and regulators in the three countries. In addition, they should be endorsed by the new ARC and TSOs Committee, as supporting the development of the PAEM.
7. While the development of rules and market enablers provide the framework to support multilateral trade, trading itself will depend on the readiness of parties to trade. A parallel task is the building of the necessary competences and capabilities within the entities responsible for trading. This is a PAEM-wide issue, but should be a particular priority for the GCC/EIJLLPST countries.
8. Several TSOs are involved in a pilot project being initiated under Med-TSO (‘East Pilot’) which is looking at the market design for the Mashreq sub-region. The Egyptian and Jordanian TSOs are involved in this pilot, and it is recommended that they take the lead in seeking ways to align and coordinate these initiatives to ensure the most efficient overall process.

Indicative timeline



Objectives of the East Pathfinder Design Phase

A) Design of critical market arrangements

9. The first objective is to design the critical market arrangements to be implemented in the East Pathfinder – including the necessary systems and processes, joint governance structures, service providers, and the detailed rules and agreements necessary for market parties to participate in cross-border trading.
10. A preliminary list of the critical market arrangements that need to be addressed is set out below. This list needs to be reviewed and confirmed by the Pathfinder parties, identifying any omissions and assessing prioritisation.
 - cross-border capacity calculation
 - capacity allocation/congestion management
 - transmission services/wheeling charges
 - scheduling and treatment of unscheduled deviations
 - market facilitation services
 - data transparency
 - market participation
11. For each of the critical market arrangements mentioned above, establish the outline requirements/design of the Market Enablers, including (where relevant):

- Market rules and participation terms
 - Supporting systems, procedures
 - Delivery responsibilities – including national TSOs; service provider(s) (e.g., role of GCCIA) – and the outline contractual framework required
 - Governance structure for any multiparty cooperation
 - Potential dependencies on the emerging PAEM rules
12. An initial analysis of the issues to be addressed is attached in Annex 1.

B) Implementation Project Brief

13. The second objective is to draft a project brief for the implementation of the East Pathfinder, as developed in the design of the critical market arrangements. This should include
- Project management structure and roles/responsibilities of individual parties
 - Resourcing and funding
 - High-level project timeline
 - Mechanisms for consultation and engagement with other parties not directly in the Pathfinder (PAEM committees, other countries in GCC, EIJLLPST, any other Pathfinders)
14. The implementation phase will need to be undertaken within a contractual framework between the parties. This could be a new agreement, under the PAEM agreements, or as an extension to existing agreements between the parties. This contractual framework will need to be established prior to implementation.

C) Economic assessment

15. A third objective is to estimate the potential economic benefits of implementing multilateral trading across GCC/EIJLLPST. This should consider the incremental gains resulting from the KSA-Egypt interconnection, over and above what is already captured in the anticipated use of the interconnector in their bilateral agreement.
16. The World Bank's Energy Pricing Model can potentially support this analysis.

D) National trading competencies and capabilities

17. The final objective is to prepare the relevant national parties responsible for trading, so that they are ready to make best use of the new GCC/EIJLLPST market. Typically this includes having a focused organisation with the necessary commercial freedom and supporting legal, technical and financial resources. Pricing and access policies are also needed for cross-border trade in the context of domestic subsidies.
18. This is primarily the responsibility of the individual parties. However, the East Pathfinder (as well as the PAEM institutions) can support this process – e.g.:
- Sharing best practice
 - Ensuring consistency
 - Understanding plans and monitoring progress

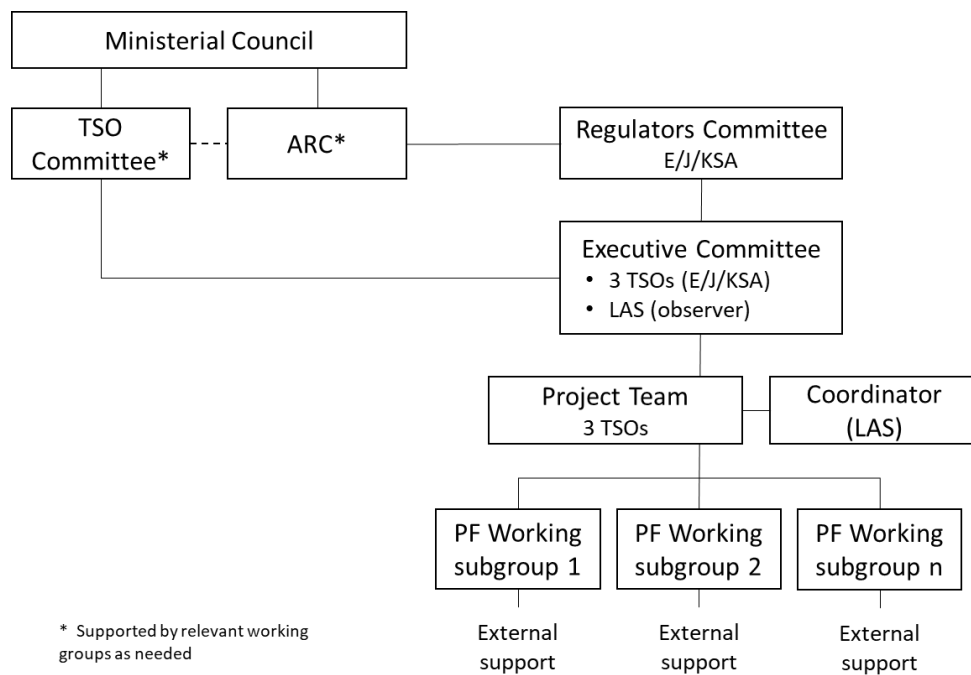
Organisation

19. The East Pathfinder is the responsibility of the TSOs in KSA, Jordan and Egypt (the 'project parties' or 'parties'):
- [List names]

20. Coordination will be necessary with the ARC and TSOs Committee:

- Guidance from the ARC/TSOs Committee to ensure that the arrangements developed are aligned with the emerging PAEM rules and policies
- Input to the ARC/TSOs Committee on the development of the PAEM rules and national regulations that are needed in the future PAEM framework, building on the practical experience in the Pathfinder
- Preparation of the plans for the further development and phased geographic rollout of the arrangements

21. A preliminary organization structure is shown below. It is for the Executive Committee to determine and establish the appropriate project structure, together with the appropriate resources.



Annex 1: Initial issue analysis

| Issue | Comment |
|--|---|
| 1. Cross-border capacity calculation | |
| 1.1 Should TSOs adopt a common methodology for calculating cross-border capacity? Should compliance be subject to regional review/challenge? | <ul style="list-style-type: none"> Capacity calculation a national responsibility, but unreasonable restrictions can limit cross-border trade Importance of issue likely to change once demand for capacity grows Relevant international experience/models |
| 1.2 How should pre-existing long-term capacity reservations be handled? | <ul style="list-style-type: none"> Capacity reservations may be essential basis for interconnector investment Need to integrate into mechanism for determining capacity offered to the market |
| 2. Cross-border capacity allocation/congestion management | |
| 2.1 Is cross-border congestion likely to emerge? | <ul style="list-style-type: none"> Auction of transmission capacity likely needed if congestion is anticipated |
| 2.2 Does this imply a need for a regional auction office? | <ul style="list-style-type: none"> Border-specific auctions possible, but single regional auction platform potentially advantageous (cf GCCIA) Relevant international experience/models |
| 2.3 If congestion is unlikely, should simpler pro rata allocation solutions be developed? | <ul style="list-style-type: none"> Mechanism needed whenever congestion arises (could emerge quite quickly) Individual TSO arrangements or appoint common service provider |
| 3. Transmission services/wheeling | |
| 3.1 What should be the key principles for recoverable costs for transit countries, and the basis for their recovery? | <ul style="list-style-type: none"> Wheeling is a critical feature of multilateral trading Need fair cost recovery (losses, infrastructure) and regulated charging mechanism Relevant international experience/models (incl GCCIA) |
| 3.2 Should invoicing and settlement of wheeling charges be centralised? | <ul style="list-style-type: none"> Potential benefits: cost efficiency, transparency, dispute management, netting, user convenience Relevant international experience/models (incl GCCIA) |
| 4. Nominations and unscheduled deviations | |
| 4.1 What should be the key principles for nominating flows and managing deviations? | <ul style="list-style-type: none"> Critical for secure system operations; parties need to be adequately incentivised to perform as scheduled Potential overlap with national imbalance arrangements (once established) Relevant international experience/models (incl GCCIA) |
| 4.2 Should invoicing and settlement of deviation charges be centralised? | <ul style="list-style-type: none"> Linked to 3.2 |
| 5. Market facilitation services | |
| 5.1 What are the critical market facilitation services – e.g., pricing model, online trading platform, voice brokering, price reporting? | <ul style="list-style-type: none"> Can help stimulate and develop the market Effectiveness depends on market interest/support Relevant international experience/models (incl GCCIA) |
| 5.2 Should market facilitation be a commercial or an institutional activity? | <ul style="list-style-type: none"> Incentives on commercial service providers to innovate and perform, but business model may not be viable Potential natural monopolies Relevant international experience/models (incl GCCIA) |