



# Egypt: Regulatory Framework for Private Sector Participation in Electricity Market

Consultation of proposed framework for Private-to-Private (P2P) Projects

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# Meeting Agenda

09:00 – 09:30 Registration and coffee

- 09:30 – 11:00 Session 1: Proposed role and form of P2P projects
- Role of P2P projects as part of wider market reforms
  - Key properties of, application for and selection of P2P projects
  - Questions & answers

11:00 – 11:20 Coffee break

- 11:20 – 13:00 Session 2: Draft rules and draft agreements
- P2P rules
  - Connection and Use of system agreements
  - Residual sale and supply agreements
  - Template power purchase agreement
  - Questions & answers

13:00 – 14:00 Lunch and networking



# Session 2: Rules and agreements

## ✓ Rules Governing Private-to-Private (P2P) Projects in the Transition Phase of the Competitive Electricity Market of Egypt

- Registration of eligible consumers and producers
- P2P projects – Rules and process for application, authorization, approval, operation and transfer
- Trade and Settlement Rules
- Invoicing

## ✓ Necessary agreements

- Connection Agreement (Producer vs. consumer)
- Use of System Agreement (Producer vs. consumer)
- Residual Supply Agreement (Producer vs. consumer)
- Residual Sales Agreement (Producer vs. consumer)
- Template power purchase agreement

## ✓ Questions and Answers



# Rules Governing P2P Projects in the Transition Phase of the Competitive Electricity Market of Egypt

- “Master document” for:
  - Registration of eligible consumers and producers and P2P projects, and
  - Daily operation of the P2P market
- Glossary serves as master for standard agreements
- Drafted to apply for initial transition phase:
  - Specific rules, criteria and restrictions on eligibility and acceptance of P2P projects to be amended for later stages of market reforms
  - Trade & Settlement Rules and invoicing drafted to minimise changes in case of further market liberalisation
- Grid Code(s) included by reference

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Glossary and Abbreviations
Part 1 – Eligibility Rules
Part 2 – List of Agreements
Part 3 – Trade and Settlement Rules
Part 4 – Invoicing
Part 5 – Schedules

# Part 1: Eligibility Rules

## Section 1 - Eligible Consumers and Producers

- Applications can be submitted by existing and prospective consumers and producers at any time
- Structured process for review and rejection/approval of all applications by EgyptERA
- Public *Register of Eligible Consumers and Eligible Producers* to contain key details on eligible parties

### Requirements for eligible consumers

- Final consumer, i.e. not engaged in distribution
- No structural outstanding payments to public sector
- Valid commercial license
- Specify existing and prospective consumption sites

### Requirements for eligible producers

- Independent of public sector (NREA, EEHC)
- Independent of (regional) distribution activities<sup>(1)</sup>
- Valid commercial license
- Production license (for existing producers)
- Specify existing and prospective production sites
- Proof of financial standing (new producers only)
- Proof of references (new producers only)<sup>(2)</sup>

<sup>(1)</sup> – Need to discuss difference between regional distribution and industrial sites

<sup>(2)</sup> - Applies to producers without a valid production license in Egypt

# Part 1: Eligibility Rules

## Section 2 - Applications for P2P Projects and P2P Agreements (1/3)

- Applications can be submitted by eligible producers at any time
- During pilot phase,
  - Each eligible producer may engage into 1 P2P project and 3 P2P agreements only
  - Each consumption site can be supplied by 1 P2P agreement only
- Structured process for initial review and rejection/acceptance of all applications by EgyptERA
- All accepted applications:
  - Are registered in the public *Register of P2P Applications* maintained by EgyptERA
  - May be conditional for new consumption/production sites or prospective producers, i.e. if certain conditions cannot yet be fulfilled by such parties (e.g. valid production license, fully commissioned consumption/production site etc.)
  - Are assigned a rank (first-come-first-served)
- Applications will become invalid:
  - At request of the applicant
  - If any of the parties or projects fails to comply with defined preconditions

# Part 1: Eligibility Rules

## Section 2 - Applications for P2P Projects and P2P Agreements (2/3)

- As stated before, participation in P2P projects is limited to transmission-connected sites during pilot phase
- All consumption / production sites must be equipped with (hourly) interval metering
- To comply with wider energy policy goals and manage effective market opening, EgyptERA is authorised to define additional preconditions and restrictions (see below)
- EETC authorised to define additional technical preconditions for production sites (see below) to preserve the technical integrity of the transmission system
- Applicants must:
  - Provide proof of their possession or right to use the land of new sites
  - Hold all necessary permits / authorisations (as far as possible)
  - Have signed all necessary agreements with EETC at least as “binding in principle”
  - Commit themselves to develop and commission new sites within a defined period after authorisation of the P2P project
  - Have signed at least as “binding in principle” power purchase agreement between themselves, “substantially in form and content” of the template agreement provided by EgyptERA



# Part 1: Eligibility Rules

## Section 2 - Applications for P2P Projects and P2P Agreements (3/3)

### Requirements for consumption sites

- To avoid over-sizing, max. purchases are limited to:
  - Average of quarterly peak load or 80% of contract capacity (new sites)
  - Expected annual consumption
- Additional conditions imposed by EgyptERA, e.g.
  - Voltage level of connection
  - Min. consumption

### Requirements for production sites

- To avoid over-sizing, P2P projects are limited to:
  - Lesser of [100] MW or 120% of the cumul. MW of electricity supplied under P2P agreements
  - Annual volume (GWh) to be supplied under P2P agreements
- No deliveries to public sector (outside P2P rules)
- Additional conditions imposed by EgyptERA, e.g.
  - Voltage level of connection
  - Permitted generation technologies and/or fuels
  - Installation and use of storage facilities
- Additional conditions defined by EETC, e.g.
  - Locational restrictions
  - Hourly generation profile



# Part 1: Eligibility Rules

## Section 3 - Selection and Authorisation of P2P Projects

- To avoid an unlimited growth of P2P projects, EgyptERA is entitled to limit the number and aggregate capacity (in MW) of P2P projects that may be developed and operated.
- P2P will be authorised to proceed if:
  - They comply with all applicable preconditions set during the registration process (see above), and
  - The total number and capacity of the current and all lower-ranked P2P applications remains in line with any limits set by EgyptERA as above, i.e. projects are authorised on a ‘first-come-first-served’ basis
- Once a project has been authorised, the parties involved:
  - Shall develop and commission any new sites (if applicable) within the defined deadlines
  - Eligible producer may have to submit security cover to deter unrealistic projects
- Once a P2P project has been fully developed and all preconditions are met, the project will become an Active P2P Project and be allowed to start commercial operations



# Part 1: Eligibility Rules

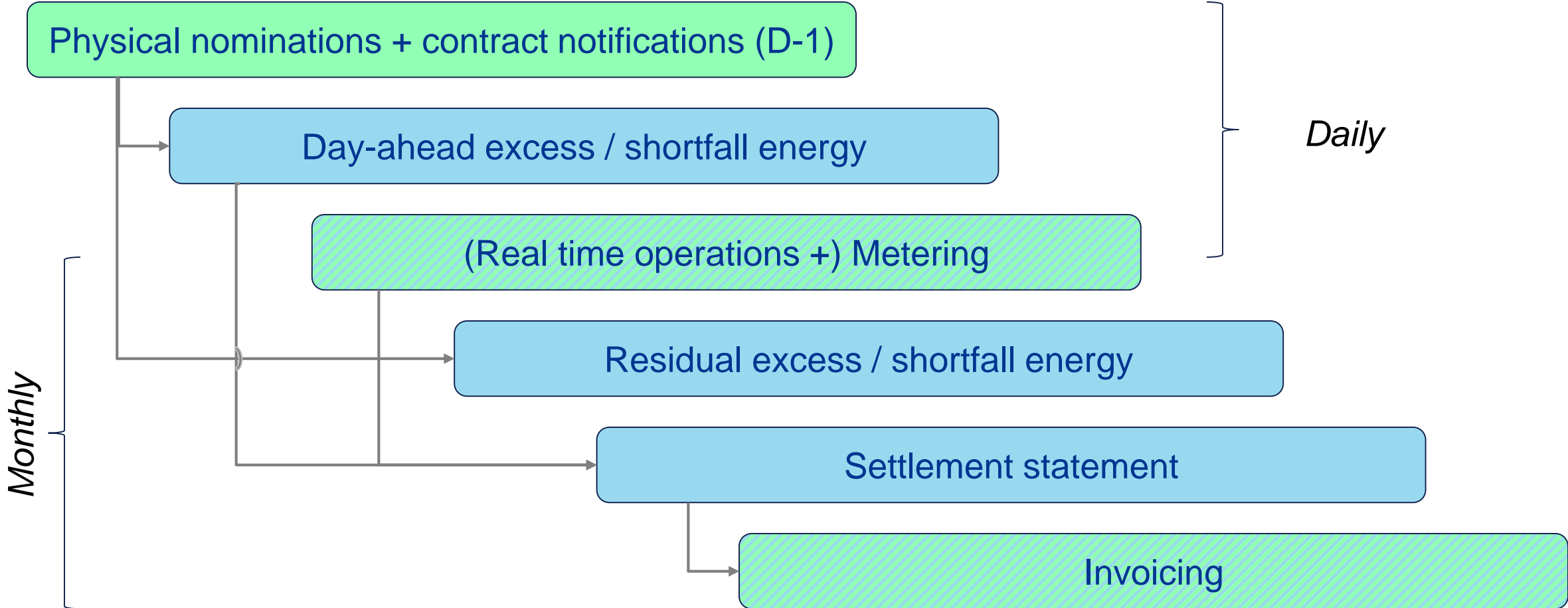
## Section 4 - Active P2P Projects and P2P Agreements

- Active P2P Projects are allowed to:
  - Operate for up to [20 years],
  - Be prolonged for additional [5] year periods
- Active projects must be operated in line with Trade & Settlement Rules
- P2P Agreements may be terminated or assigned to other parties, but not earlier than after [3] years and subject to agreement of the counterparty
- P2P production facilities may be transferred to other parties, but not earlier than after [3] years and subject to agreement of consumer counterparts
- If either party loses its status as eligible consumer/producer or if any of the underlying agreements with EETC are terminated, the other party is allowed to assign its P2P agreement to another eligible party
- EgyptERA may terminate P2P agreements or projects if parties violate their obligations
- After termination of a P2P agreement, consumers can return to the regulated market



# Part 3: Trade and Settlement Rules

## From day-ahead scheduling to invoicing



# Part 3: Trade and Settlement Rules

## Section 6 - Day-ahead scheduling

- Daily process to inform EETC about:
  - Planned operation of production and consumption sites (Physical Nominations)
    - to be submitted by eligible consumers and producers -
  - Firm contractual exchanges / deliveries under P2P agreements (Contract Notifications)
    - to be submitted by eligible producers -
- Information to be submitted (incl. modifications)
  - For each hour of the delivery day
  - Between [20] days in advance and Initial Day-Ahead Gate Closure [10 AM on last business day before delivery)
  - In a format and using the means of communications specified by EETC
- Structured process for:
  - Checks by EETC and option for corrections by the submitting parties
  - Forced corrections by EETC if volumes do not match contractual and/or physical limits
- All volumes confirmed by EETC are binding and basis for commercial settlement!



# Part 3: Trade and Settlement Rules

## Section 7 - Purchase of D/A Excess and Sale of D/A Shortfall Energy

- Commercial settlement of all deviations between Physical Nominations and Contract Notifications
  - Consumer to purchase residual consumption as Day-ahead Shortfall Energy from EETC
  - Producer to sell residual production as Day-ahead Excess Energy to EETC
- Pricing
  - Day-ahead shortfall energy sold at the applicable retail energy charge in the regulated sector
  - Day-ahead excess energy bought at price of avoided fuel cost, i.e. the lesser of the standard fuel costs of an efficient CCGT plant or the lowest price paid to other RE operators under BOO projects

# Part 3: Trade and Settlement Rules

## Section 8 - Metering

- Metered volumes based on main revenue meters, read by EETC
- Structured process for dealing with incorrect / missing meter data
  - Use of back-up meter
  - Method for determination of replacement and/or substitute values
- Metering data to be shared with consumers and producers for review
- Objections to be dealt with by EETC; remaining conflicts to be resolved by EgyptERA
- Final Metering Data become basis for Commercial Settlement



# Part 3: Trade and Settlement Rules

## Section 9 – Sale/Purchase of Residual Excess and Shortfall Energy

- Hourly imbalances determined as follows:
  - Producers = Metered production – nominated production
  - Consumers = Nominated consumption – metered consumption
- Positive volumes correspond to Residual Excess Energy, which is sold to EETC
- Negative volumes correspond to Residual Shortfall Energy, which is purchased from EETC
  
- Pricing of residual shortfall / excess energy similar to day-ahead settlement, but subject to penalty factor aimed at incentivising honest scheduling:
  - 1.1 for shortfall energy
  - 0.9 for excess energy

# Part 3: Trade and Settlement Rules

## Section 10 – TUOS and Retail Demand Charges

- Producers to pay regulated transmission use of system (TUOS) charges for all energy delivered under P2P agreements
  - Corresponds to current practices in Egypt
  - Limitation to P2P volumes avoids double-charging of sales of excess energy to and purchase of shortfall energy from EETC
- Consumers to pay the applicable regulate retail demand charge
  - Equal treatment with consumers in regulated sector





# Part 3: Trade and Settlement Rules

## Section 11 – Settlement

- EETC to prepare and share monthly settlement for each calendar month, specifying

### Physical volumes

- Final meter values for each hour of the month
  - Hourly and aggregate volumes of excess and shortfall energy, separately for day-ahead and residual volumes
  - Monthly peak load (for consumers)
  - Aggregate consumption of consumers supplied under P2P agreements (for producers)
- Settlement statements needs to identify values based on provisional metering data
  - Consumers and producers may raise objections to factual errors only
  - *Note: Settlement of P2P deliveries to be independently settled between producers and consumers*

### Payments by EETC

- Day-ahead and residual excess energy

### Payments by EETC

- Day-ahead and residual shortfall energy
- Retail demand charges
- TUOS energy charges



# Part 4: Invoicing

- All parties, incl. EETC, need to invoice for payments to be made to them
- Full payment even in case of disputes, subject to possible reconciliation payments later on
- EETC entitled to deduct or set off due amounts owed to it against its own payment obligations
- All payments due within 15 business day
- Standard interest rate on outstanding payments
  
- *Note: Invoices of P2P deliveries to be governed by P2P agreements between producers and consumers*



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# Connection Agreement

- Standard agreements defining the conditions for being allowed to connect to and synchronously operate in parallel with the transmission system
- Differences between producer and consumer version mainly related to technical details
- Relevant areas:
  - Specification of the asset and its connection, ownership boundaries, metering & communications etc.
  - Technical / Formal requirements, Grid Code compliance
  - Access for EETC personnel
  - Determination and payment of connection charges
  - Connection work, commissioning and connection
  - Data exchanges
  - Outage coordination and dispatch
  - Emergency de-energisation and disconnection

DATE:
MODEL CONNECTION AGREEMENT
Between The Egyptian Electricity Transmission Company S.A.E ("EETC") and [•] (as the "Producer")



# Transmission Use of System Agreement

- Standard agreement governing conditions for third-party access to the network for deliveries of electricity under P2P agreements (or more generally, the competitive market)
- Key area
  - Determination, payment and invoicing of TUOS charges
  - Largely by reference to Trade & Settlement Rules (see above)

<b>DATE:</b>
<hr/>
<b>MODEL USE OF SYSTEM AGREEMENT</b>
<hr/>
Between <b>The Egyptian Electricity Transmission Company S.A.E</b>  ("EETC")  and  [•] (the "Producer")

# Residual Supply and Sale Agreements

- Standard agreements governing conditions for delivery of shortfall and excess energy:
  - Between EETC and consumers (residual supply agreement)
  - Between EETC and producers (residual sales agreement)
- Key area
  - Sales and purchase of shortfall and excess energy
- Largely limited to standard contractual terms
- Core parts governed by reference to Trade & Settlement Rules (see above)

<b>DATE:</b>
<b>RESIDUAL SALE AGREEMENT</b>
Between <b>The Egyptian Electricity Transmission Company</b> ("EETC") and [●](as the "Producer")

# Template Power Purchase Agreements

- Drafted as template agreement, which may be used by parties to a P2P Agreement but can be flexibly adjusted and amended based on bilateral negotiations
- Agreement does not have to be “approved” by EgyptERA
- Purely bilateral and private relation, no participation by EETC / public sector
- Two sections specifically drafted to facilitate relation with P2P Rules
  - Section 4 – Application for and registration of P2P Agreement (=> Eligibility Rules)
  - Section 5 – Sale and Purchase (=> Trade & Settlement Rules)
- Key conditions to be specified in separate schedule on a case-by-case basis, such as:
  - Specification of production and consumption sites
  - Agreed volumes and prices
  - Rules for dealing with unavailabilities of generator (or consumption site)



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# Thank you!

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