

## ***NARUC-ERO Regulatory Assessments***

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## **Kosovo Market Design**

**ESMS**

# Introduction

- Electricity sector in Kosovo, based on energy strategy, is in process of further restructuring. There are ongoing transactions such as:
  - privatization of Distribution and Supply, and
  - private investment in generation capacities.
- To support these transactions it is necessary to redesign Kosovo Electricity Market Model (KEMM)
- Based on Law on Electricity KOSTT is responsible to propose Market Design and to submit for approval to ERO.

## Introduction, cont

- In June 2010 is prepared the Concept Paper by the Market Model Working Group formed by the Government of Kosovo.
- This Concept Paper also reflects inputs from the Donor community, including the World Bank, the European Commission, and USAID.
- Based on Concept Paper, MEM has authorized KOSTT to lead Technical Working Group (TWG) with the task to Develop KEMM.
- Until now it is issued second draft of KEMM which is under discussion.

# Market Objectives

- Market Design Objectives
  - to develop KEMM which will create precondition for a competitive electricity market and facilitate investment in Generation, more efficient cross border trading and move towards a single EU-wider electricity market.
  - to provide the conditions for a safe, reliable and permanent generation, transmission, distribution and supply of electricity, adhering to principles of energy efficiency.
- Market Rules
  - The rules seek to discharge duties of MO in a coherent framework that will clearly set out how parties can trade in this market

# Market Structure

- Bilateral capacity/energy market
  - day-ahead declaration available capacity and nominated
  - Balance Mechanism ( BM) operated by the Transmission System Operator
  - post-trading day settlement of energy scheduled and delivered under the BM
  - invoicing Parties for their due TUoS/SO/MO/etc. Charges

# Parties and Accounts

## *Relationship between the Parties, and their primary roles in the Market*

- **Market Operator** - will accede to the Market Rules in the capacity of “owner” of the Market Rules
- **Transmission System Operator** - will accede to the Rules in the capacity of system operator and service provider
- **Distribution System Operator** - will accede to the rules in the capacity of network operator and service provider
- **Generators** - will accede to the rules in capacity of Trading Parties
- **Suppliers** - will accede to the rules in the capacity of Trading Parties
- **Interconnector Traders** (Importers and/or Exporters) - will accede to the rules in the capacity of Trading Parties

# Accession and Discontinuance to MR

*This section sets out the requirements for parties to accede to the Market Rules and the procedures and timetable for Parties withdrawing*

- *Accession* to the Market Rules is mandatory for **PS, Suppliers** supplying eligible customers and **Generators**
- *Withdrawing* from the market
  - Procedures and timetable for Parties' withdrawing from the market (discontinuing), either voluntarily or not (with reasons for the latter), and the consequential obligations on both the MO and the discontinuing Party.

# Market Metering Requirements

*Efficient operation depends on the availability of quality of data and market settlement requires metering equipment of suitable accuracy and reliability standards - laid down in MC and DMC*

- **Identifies the locations** on the system that require metering equipment to be installed, and by whom
- obligations on all Trading Parties to **provide metering system information**
- For any missing or **erroneous** data, the **TSO/DSO** shall make their **best estimate** of the 'true' value
- The technical, design and operational standards for such metering systems are laid down in the **Metering Code (MC)** and the **Distribution Metering Code (DMC)**.



# Customer Transfer

*The procedures and timetable by which an Eligible Customer (EC) may change Supplier (or become an EC)*

- Market Rules will cover requirements necessary to ensure accurate market settlement, the installation of appropriate metering and the correct attribution of a customer's demand to the relevant supplier's energy account.
- Need to have interval metering fitted at their premises
- Process of customer transfer
- MO responsible to maintain register of metering points

# Interconnector Capacity Allocation and Trading

*In order to import or export energy across any of Kosovo's interconnector interfaces, Interconnector Traders must hold the requisite amount of ICRs*

- This section describes Procedures by which the MO will auction and allocate Interconnector Capacity Rights
- The methodology for allocation of ICRs is in “**use it or lose it**” basis
- MO Operational Procedure T201, provides details.

# Energy Contract Notification

*Describe why and how Trading Parties will notify the MO of the details of their bilateral contracts- but no financial details*

- The MO will maintain a register of such contracts,
- MO and TSO will use to cross-check the validity of Day-Ahead Physical Nominations of energy traded

# Day-Ahead - Demand Forecasting

*The duty of the TSO to publish on its website, its forecast of Trading Day demand*

- ATC on each interconnector interface
- Compensation Program for the Trading Day
- Preliminary estimate of transmission losses
- Required Operating Reserve margin
- DSO will inform the TSO of the planned program of output of all embedded generating units with a nominal rating of less than [5]MW, and of Power Production Sites with a nominal rating of less than [10]MW

# Day-Ahead Physical Nominations

*In order to plan for a balanced and secure system, the TSO and MO need certain information from Trading Parties*

- **Generators**

- will declare the availability of each of their generating units, less any capacity held in reserve under an ASA
- nominate output to counter-parties (Suppliers/Exporters)

- **Suppliers**

- nominate to TSO their 24-hour forecast of demand
- KEDS will be required to nominate their eligible and (PES) non-Eligible Customer demand separately

- **Interconnector Traders**

- nominate their proposed import/export flows on each interconnector interface,
- identifying both the ICRs that support these and the contract counter-parties beings served

## Day-Ahead Physical Nominations, cont.

- Until Gate closure, Suppliers & Traders may re-submit nominations
- Gate closes at 15:30 on D-1
- After confirmation of the inter-TSO schedule, Trading Parties receive confirmation of their own nominations, Interconnector Trades or Generation Schedules

**The final Nominations will be used as the basis for measuring Traders' imbalance**

# Ancillary Service Contracting and Pricing

*Ancillary Service is a service required by the TSO to the secure operation manage of the electricity system:*

- Primary Frequency regulation
- MVar support and Voltage control
- Black Start
- Secondary and Tertiary Reserve (*This service is of interest in the Market Rules*)

*An AS Agreement for Secondary Reserve is a bilateral contract between the TSO and the Trading Party*

# Balancing Mechanism: Day-Ahead and in Real-Time

*This section describes the procedures of the Balance Mechanism, the principal means by which the TSO will manage and balance the system in real-time*

- Parties are paid at their bid/offer price for balancing energy (the difference between their Nominated and Instructed position), and for Compensation Plan energy
  - maintain the system in balance
  - ensure the secure, reliable and economic supply of electricity to all customers
  - give priority to the dispatch of Renewable Energy Sources
  - give effect to its Compensation Program
- Imbalance Prices should incentivize bilateral contracting and dispatching/forecasting discipline
- The TSO/MO submits its proposed generation schedule, demand forecast and net exchange program to the Control Block Coordinator



# Energy Imbalance Calculation

*This section describes how Trading Parties' energy imbalance is calculated*

- TSO informs MO of each generating unit's Instructed Position in each hour of D, and any load reduction instructions
- TSO and DSO provide MO with all meter readings for each hour
- The MO will calculate the system imbalance for each hour (the difference between the actual interconnector meter data and the net exchange program)
- The MO will calculate Each Party's Energy Imbalance for each hour of D

# Imbalance Price Calculation

*This section describes how Trading Parties' energy imbalance is priced*

- The MO has not yet proposed exactly how the Imbalance Price will be calculated (*Imbalance Price Calculation methodology will be described in detail in the Market Rules*)
- MO is assessing certain principles and will apply any chosen method:
  - as equitable possible and transparent as possible, and only as complex as necessary
  - based on Trading Parties' bid and offer prices
  - Imbalance prices are not intended to penalize trading parties
  - The Market design does seek to encourage good Market behaviour so Trading Parties may not benefit from being out of balance

# Settlement

***The MO will run the Market settlements procedure for each Trading Day not later than the [5]th business day after.***

- Bilateral Contracts between Trading Parties are settled 'outside the Market'
- MO will settle Bilateral contracts between the TSO and Trading Parties
  - Option fees under AS agreements paid monthly as per the AS contract (outside market)
  - BM Instructions to Generators and Suppliers participating in the BM
    - ◆ paid at the Trading Party's bid or offer price
  - Renewable Energy support scheme

# System Charges

***This section describes the payments or charges that will be made between the TSO/MO and Trading Parties:***

- Network Provision (TUoS) charges
- System Operator (SO) charges
- Market Operator (MO) charges
- Balance Mechanism payments/charges
- Transmission Loss charges
- Renewable Energy Support Scheme
- Invoice Trading Parties of their due share of the RE levy
- BM cash account should operate limits agreed between KOSTT and ERO and will be periodically rebated to trading parties

# Invoices

***This section describes the timetable and procedures to be followed by the MO in issuing monthly invoices for payments/charges to Trading Parties***

- On the [6th] business day of each month, the MO will prepare an invoice for each Trading Party
- The total payable under the invoices will be paid on [5th] day thereafter
- If a Trading Party has a query on any element of the invoice they may raise this query with MO, at this time or later

# Disputes

- Disputes between Market Participants will be resolved using ERO's Dispute Resolution procedure
- The Market Rules should consider only disputes on Accession, Settlements, Invoices and Charging
- Parties to the Market Rules should attempt to resolve disputes in first the instance between themselves
- Finally either Party may refer the issue to ERO's formal Dispute Resolution procedure

# Governance

- Security Cover Requirements
- Reporting and Market Information
- System Emergencies
- Market Rules Modification Procedure
- General Provisions

*To be done*