

CYPRUS TRANSMISSION SYSTEM OPERATOR



Executive Summary of the Trading and Settlement Rules

29 February 2016

INTRODUCTION

The draft Trading and Settlement Rules (“Rules”) provide for a net-pool design enabling new participants to become active in the market. A centralized Day-Ahead Market compatible with the Price Coupling of Regions algorithm is organized along with an over-the-counter Forward Market. The proposed design is supplemented with an Integrated Scheduling Process (ISP) and a Real-Time Balancing Market which provides the TSO with the ability to pro-actively procure and activate balancing services and a Settlement process. Entities wishing to purchase and sell electricity quantities at the wholesale level have to either represent physical generation or offtake (consumption) or being licensed as wholesale suppliers, the latter though having the possibility to participate only in the Forward Market. The Forward and Day-Ahead Markets are the markets where energy is bought and sold according to forecast of supply and demand by participants for each half hour (trading period) of day trading day D. The outcome of these two markets sets up a schedule, referred to in the Rules’ text as Market Schedule. The Market Schedule provides only for a reference point for operation. The exact units’ commitment and operation is performed after the DAM closure, on the basis of an update forecast of system load made by the TSO and new offers submitted by participants for both energy and reserves availability and for the total of the generating units’ capacity under the ISP. The Real Time Balancing Market is run, utilizing the energy offers submitted under the ISP.

The Forward Market is an ex-ante and over the counter settled market. The DAM is an-ex ante, centrally settled market. Balancing energy and reserves procurement are settled ex-post.

MARKET RULES STRUCTURE

The Market Rules give a comprehensive and complete picture on the market transformation for the electricity in the Republic of Cyprus. The Rules consist of the following sections:

SECTION A: GENERAL PROVISIONS

ANNEX A.1: TRADING AND SETTLEMENT RULES FRAMEWORK AGREEMENT

ANNEX A.2: ACCESSION AGREEMENT

SECTION B: DEFINITIONS, ABBREVIATIONS & CONVENTIONS

SECTION C: PARTICIPANTS ACCOUNTS, REGISTRATION AN METER TRANSFER

SECTION D: EXEMPTIONS

SECTION E: ANCILLARY SERVICES AND SUPPLEMENTARY SYSTEM ENERGY

ANNEX E.1: MONTHLY AUCTIONS FOR REPLACEMENT RESERVE

ANNEX E.2: YEARLY AUCTIONS FOR BLACK START SERVICE

ANNEX E.3: YEARLY AUCTIONS FOR SUPPLEMENTARY SYSTEM ENERGY

SECTION F: FORWARD MARKET

SECTION G: DAY-AHEAD MARKET

SECTION H1: INTEGRATED SCHEDULING PROCESS

SECTION H2: REAL-TIME BALANCING MARKET

SECTION H3: EMERGENCY SITUATIONS

SECTION I: SECURITY COVERS

ANNEX I.1: FORM OF SECURITY COVER STATEMENT

ANNEX I.2: FORM OF NOTICE OF DRAWING

SECTION J: METERING

SECTION K: SETTLEMENT

ANNEX K.1 - RECONCILIATION

SECTION L: INVOICING AND PAYMENTS

SECTION M: REPORTING AND MARKET INFORMATION PROVISION

SECTION N: TIMELINE OF WHOLESALE ELECTRICITY MARKET OPERATIONS

ORGANIZATIONAL STRUCTURE OF RULES AND PROCESS (SECTION A)

The Rules are drafted by the Market Operator (MO), and require approval by the Minister and the Regulator (paragraph 2.2).

The Rules enable the TSO and MO to fulfill their statutory obligations, regulate energy trade by participants and allow for settlement of balancing and reserves procurement, imbalance and other charges and obligations resulting from participation in the electricity market.

In paragraphs 2.4-2.6, reference is made to the “Trading and Settlement Rules Advisory Committee” as a central advisory group for advising the MO in developing and reviewing the Rules and the public consultation process which precedes modification of the Rules. Paragraph 2.7 provides for ways of resolving issues amicably arising out of the application of the Rules, to be verified by arbitration, including force majeure (paragraph 2.8).

Paragraph 2.9 of the Rules provides for wide-reaching disclaimers for any claims arising out of the operation of the Rules. Subsequent sections contain boilerplate

text on assignment (paragraph 2.10), notices (paragraph 2.11), confidentiality (paragraph 2.12), or applicable law (paragraph 2.13).

Participant banking accounts comprise one account for the daily Day-Ahead Market settlements (Participant DAM Account) and one for all other market settlements (Participant Market Bank Account) which are settled on a monthly basis (Paragraph 2.16).

Partner in the bank transactions as provided by the Rules is a Settlement House (paragraph 2.17). A Coverage Institution (paragraph 2.18), which is a credit institution to whom the MO can assign the financial coverage of any transaction deficit in lieu of the arrangements for Security Cover, may be assigned. The issue of securities is elaborated in Section I – Security Covers.

Paragraph 3 generally provides for the Market Management System as a central counter-face with Participants. Specifications are included in the Market Manual on the basis of which the Market Management System (MMS) shall be operated, made accessible to the Participants, and detail any data which the Participants need to know for pursuing their activities (paragraph 3.1).

The Rules specify the operational side of communication between the Market Operator and Participants in paragraph 3.2 and suitable user trainings that should be offered to Participants by MMS Operators (paragraph 3.3).

Paragraph 3.4 specifies the MMS is audited to determine its consistency with the Trading and Settlement Rules. Auditing is repeated, in partial or in full, every time significant modifications are implemented.

According to paragraph 4, the Trading and Settlement Rules are audited annually by an independent “Trading and Settlement Rules Auditor” with the purpose of establishing the extent to which the provisions of the Rules in relation to settlement and billing have been complied within that year. The Audit reports are shared with the Regulator, the MO and the TSO and a version edited, not to include confidential information, shall be accessible for Participants through the MO website.

According to paragraph 5.1 the following entities are entitled to become Parties in the Trading and Settlement Rules: the Market Operator, the Transmission System Owner, the Transmission System Operator, the Distribution System Owner, the Distribution System Operator, Suppliers, Producers, Wholesale Suppliers, RES Producers (defined to include only those operating RES units without support schemes), RES Aggregators, Auto-producers, and Balance Responsible Parties. Producers, Suppliers, Wholesale Suppliers, RES Producers,

RES Aggregators, Auto-producers and Balance Responsible Parties are also referred as “Participants”. RES Units operating under support schemes are not entitled to become Parties in the Trading and Settlement Rules. These producers are represented by EAC Supply.

By way of the Trading and Settlement Rules Framework Agreement, all rights and obligations of the Rules become applicable for the Participant, who is bound to give evidence of the requirement of a viable and credible business which is technically and financially stable at the time of its admission. For a Participant to accede the “Trading and Settlement Rules Framework Agreement”, an Accession Agreement should be prepared by the MO and signed by the applicant Participant and the MO (paragraph 5.2).

Participants may cease to be bound by the Trading and Settlement Rules by submitting a corresponding notice (“Discontinuance Notice”) (paragraph 5.4). Participants under discontinuance state carry obligation to settle outstanding debt (paragraph 5.4.), or repair any alleged outstanding infringement of the Rules.

Paragraph 8 provides for Events of Default. The Rules provide for details constituting a Default (paragraph 8.1) and consequences of Default (paragraph 8.2). Termination and expulsion from the market of a Defaulting Party requires prior approval of the Regulator whereas the Rules also allow partial or entire suspension of the Participant status.

Paragraph 10 defines that the Trading and Settlement Rules are complemented by four Manuals: the Market Manual, the Invoice Manual, the Balancing and Ancillary Services Market Manual, and the Meter and Measurement Manual.

DEFINITIONS (SECTION B)

Section B provides for the definitions and abbreviations used throughout the text of the Rules, as well as a list of superscripts, subscripts, and symbols used in the formulae and conventions contained in the Rules. Definitions comprise an important part of the Rules as they contain information that readers should be aware of when reading the remaining of the document.

PARTICIPANTS ACCOUNTS, REGISTRATION AND METER TRANSFER (SECTION C)

Every Participant shall hold one Generation Account and/or one Offtake Account and/or one RES account and/or a Balance Responsible Party Account, for the

purposes of the Trading and Settlement Rules. Depending on the type of account, Section C specifies which data TSO and DSO have to record for each settlement period and send on a monthly basis to the Market Operator and the data that the Market Operator uses in these Accounts.

The Market Operator will maintain a number of registries, including: the Generating Unit Registry (paragraph 3.1), RES Unit Registry (paragraph 3.2), Small Conventional Unit Registry (paragraph 3.3), Contracted Unit Registry (paragraph 3.4), Dispatchable Load Registry (paragraph 3.5), and Balancing Service Provider Registry (Section C paragraph 3.6).

EAC, through its Supply participation in the market, is assigned the obligation to register as the Participant of RES Units under support schemes (paragraph 2.4).

In terms of the Offtake Meter Registries, the TSO in its turn will maintain a Transmission System Offtake Registry (paragraph 4.1), whereas the DSO is obliged to maintain a Distribution System Offtake Registry (paragraph 4.2).

Section C further sets out the requirement to register Meters and related information and the requirement to notify the Responsible System Operator when Meters are transferred to another Party.

EXEMPTIONS (SECTION D)

Section D provides for possible exemptions from compliance with the Rules, subject to certain conditions as described, limited in time and relating solely to the technical inability of a Participant's installations to comply with the provisions of these Rules. Such exemptions are granted on the basis of Minister's decision, following a suggestion from the Market Operator and the reasoned opinion of the Responsible System Operator and the Regulator.

ANCILLARY SERVICES AND SUPPLEMENTARY SYSTEM ENERGY (SECTION E)

To achieve the reliable and safe operation of the system, the TSO is responsible for assessing the requirements, scheduling and managing:

- **Ancillary Services** (Frequency Containment Reserve (FCR) or primary control; automatic Frequency Restoration Reserve (aFRR) or secondary control; manual Frequency Restoration Reserve (mFRR); Replacement Reserve (RR); Voltage Control; and Black Start, and
- **Supplementary System Energy** (a type of reserve from Contracted units under which energy may be supplied to the System under TSO's

responsibility, so that the System Load and the Ancillary Services requirements are covered during periods of significant generation resources shortage).

Ancillary Services (apart from Black Start) are activated in real-time to balance the system (paragraph 3.1). Supplementary System Energy is scheduled during the Integrated Scheduling Process (described in Section H1) in order to secure adequate energy and reserves. The Balancing and Ancillary Services Market Manual contains detailed definitions concerning the method by which the capability of a Balancing Service Provider (BSP) to provide Ancillary Services is measured, and the quantitative and qualitative control procedure followed by the TSO.

Section E further details the remuneration of Balancing Service Providers for providing Ancillary Services (paragraph 5.3), and the procurement and remuneration of Supplementary System Energy Contracts (Section E paragraph 6.2 and Annex E.3).

By the end of each calendar year the TSO is obliged to notify the Regulator the schedule of meeting Ancillary Service and Supplementary System Energy needs at least for the following calendar year in the context of medium-term scheduling (paragraph 7). In addition, in the beginning of each calendar year, the TSO undertakes responsibility to prepare an annual report for the Regulator in relation to rendering Ancillary Services and Supplementary System Energy provision during the previous calendar year (paragraph 8).

FCR, aFRR and mFRR are procured through the Integrated Scheduling Process whilst Replacement Reserve, Black Start and Supplementary System Energy are in advance procured through an auctioning process.

Specifications for monthly auctions for procurement of Replacement Reserve, yearly auctions for procurement of Black Start Service, and yearly auctions for procurement of Supplementary System Energy can be found in Annexes E1, E2 and E3 respectively.

FORWARD MARKET (SECTION F)

Trading in the Forward Market is carried out on a bilateral basis only, namely through Over-The-Counter (OTC) forward energy contracts (called Bilateral OTC Contracts) with an obligation for physical delivery (energy production and offtake).

Producers operating conventional generating units above 5 MW, RES Producers (defined to be those operating outside support schemes) above 1 MW, RES Aggregators between 1-20 MW, Suppliers of end consumers, and Wholesale Suppliers may trade quantities in the Forward Market.

Bilateral contract energy quantities must be registered with the MO through a nomination process (paragraph 4). This means that corresponding contracts should refer to specific obligations for electricity quantities injection-withdrawal; if they match, the MO issues an acceptance notice.

The participants transact on the Forward Market initially on a portfolio-basis with a resulting obligation to allocate the forward sold energy quantities to their production resources individually, for the net quantity of their contracts (Net Delivery Position). The trading periods for each daily nomination of Bilateral OTC Contracts to the Market Operator is for every half-hour of the trading day.

Security covers, settlement, invoicing and payment of the Bilateral OTC Contracts are handled bilaterally between the delivering participant and the receiving participant without any involvement of the MO (paragraph 2.1).

Non-Availability Declarations apply to all faces of the electricity market – Forward Market, Day-Ahead Market, Integrated Scheduling Process and Real-Time Balancing Market. Related provisions (paragraph 3) apply to all Producers operating Generating Units and to RES Producers operating RES Units having a registered capacity above 1 MW outside support schemes. In the event of an outage due to technical reasons causing complete suspension or reduced generation and/or provision of ancillary services, the respective participant must notify without delay the TSO by submitting a Total/Partial Non-Availability Declaration (with a copy to the MO) with a description of the cause of non-availability and an indication of the affected trading periods or trading days. The most recent information in Non-Availability Declaration is used in the Forward Market, the Day-Ahead Market, the Integrated Scheduling Process and the Real-Time Balancing Market.

The TSO has the competence to verify the validity and accuracy of the submitted Non-Availability Declarations. A penalty charge is applied to Participants (as per paragraph 9.6 of Section K) in case of non-lawful submission.

Producers must immediately declare major outages as well as any operational inability.

A Producer ought to declare intention to suspend normal operation to the MO if he wishes to retire the generating unit or to suspend its operation for over three years.

Paragraph 4 of this Section sets the Forward Contract Nominations and Validation process. The MO operates an electronic Nomination Platform where all participants must register corresponding energy quantities (in MWh) for all Trading Periods of each Trading Day. The electronic platform is open from 09:00 EET 380 days before the Trading Day to 15:30 EET two days before the Trading Day (D-2) for the Energy quantities corresponding to the Trading Periods of Trading Day D. Bilateral OTC Contracts are validated if the energy quantities submitted by the Delivering and Receiving Participants are matched, otherwise they are validated up to the matching quantity. The Bilateral OTC Contracts are subsequently physically settled through delivery and offtake nominations.

The validation process assures that Wholesale Suppliers will have balanced positions. In general, Producers, RES Producers and RES Aggregators are expected to have positive positions while Suppliers are expected to have negative positions. As a next step, the Participants with positive, net selling positions must submit their physical delivery nominations per generation resource as per paragraph 5.

Regulated prices of the Bilateral OTC contracts concluded by the Dominant Participant shall be determined according the principles of CERA Decision 02/2015 (Tariff Methodology).

THE DAY-AHEAD MARKET (SECTION G)

The Day-Ahead Market (DAM) represents a compulsory market for producers, who are obliged to submit offers in the DAM for their available capacity not otherwise contracted in the Forward Market through bilateral OTC contracts or not allocated to cover replacement reserve. Wholesale Suppliers are not allowed to submit bids and offers at the Day-Ahead Market; similarly, the EAC Supply is not allowed to submit offers in the DAM for the RES Units under support schemes (paragraph 2).

Producers operating conventional generating units above 5 MW, RES Producers (defined to be those operating outside support schemes) above 1 MW, RES Aggregators between 1-20 MW and Suppliers of end consumers may trade quantities in the Day-Ahead Market.

In the DAM context, the MO collects and processes all offers submitted by DAM participants, checks the financial position of each load representative who submits energy bids and issues cleared quantities and corresponding hourly prices. The MO is responsible for calculating the amounts to be debited and credited to Participant DAM Accounts and assigns to a credit institution (settlement house) to perform the financial transactions resulting from the DAM.

The gate for the submission of orders in the DAM opens at 10:30 EET in D-1 and closes at 13:00 EET in D-1 (corresponding to the Trading Day D). The DAM distinguishes between two types of orders – subject to financial settlement – that can be submitted by participants: simple half-hourly bids/offers for generation and demand, and block offers /linked block offers for generation (paragraph 5). It is important to underline that in accordance with paragraph 5.2, the Regulator will closely monitor the Dominant Participant's bidding behaviour in the DAM to ensure normal wholesale electricity market operation and identify any potential sources of misconduct that may distort the Market Clearing Prices.

Participants are not entitled to submit energy offers for Contracted Units (for Supplementary System Energy), nor make offers in the DAM with negative prices. The Regulator decides on the administratively defined energy offer cap. The MO shall perform a validation check to ensure that the offered energy quantities satisfy the Generating Unit's or the RES Unit's capacity which is available after the Forward Market and the nomination for Replacement Reserves obligations.

Load representatives can submit a priced or non-priced energy bid, only one per each trading period of each Trading Day. The MO submits non-priced energy offers for each Trading Period of each Trading Day corresponding to the generation from Generating or RES Unit in the commissioning phase or in testing operation (paragraph 5.8).

Paragraph 5.10 details rules for energy offers submitted by RES Producers or RES Aggregators for RES Units operating outside support schemes. Additional details with regard to the contents and validation rules of energy offer and bids are specified in the Market Manual.

RES Units under support schemes, represented by EAC Supply, do not participate in the Day-Ahead Market.

The DAM clearing results constitute the Market Clearing Prices per trading period, the cleared energy volumes and the selection of bids and offers that have been accepted (paragraph 6.2). All accepted offers and bids are settled at the Market Clearing Price as defined in paragraph 4 of Section K.

All non-priced energy offers, concerning units under commissioning or testing, are cleared. As for all non-priced energy bids, they are cleared provided that there is adequate energy offered by delivering participants (paragraph 6.2). The same paragraph further sets out specific clearing rules of a step-wise priced energy bid, priced energy offer, clearing rules of a block offer, and a linked block offer.

The MO notifies the accepted bids and offers to the respective Participants along with the resulting Market Clearing Prices not later than 13:45 EET in D-1 and publishes on his website corresponding clearing prices and energy volumes per trading period, not later than 14:00 EET in D-1 (paragraph 6.2.).

Section G paragraph 7 foresees that at least [X]% of the national consumption for each trading period must be procured by Suppliers in the DAM. This requirement is then translated to percentage requirements for Suppliers, setting the maximum quantities they can actually trade in the Forward Market. The Regulator decides on an annual basis on the percentage for each Supplier, depending on the competition and overall market liquidity conditions.

INTEGRATED SCHEDULING PROCESS AND REAL-TIME BALANCING MARKET (SECTIONS H1 - H2)

The TSO follows a two-step balancing process:

- an **Integrated Scheduling Process (ISP)** is executed in order to proactively allocate upward / downward Balancing Energy, procure Reserves, and ensure network flow security in the Transmission System. It is initially run on D-1 16:00 EET, and is repeated on D 11:00 EET. The TSO may re-execute the ISP anytime during day D in case system conditions change significantly, for example if the unit commitment schedule needs to be modified.
- a real-time a **Real-Time Balancing Market** is executed in order to activate the Balancing Energy Offers and send real-time Dispatch Instructions to the Balancing Service Providers.

The TSO keeps a separate registry of Balancing Service Providers (BSPs) i.e. of those participants holding the technical requirements to provide balancing services (Section H1 paragraph 3.3). Apart from RES producers operating under support schemes that do not qualify as BSPs, Dispatchable Loads, RES Aggregators and RES Units not operating under support schemes may

participate as BSPs. Balancing services provision for other Generating Units above 5 MW is mandatory.

Participation in the balancing process requires BSPs to provide, where appropriate, Partial or Total non-Availability Declarations and Techno-Economic Declarations. Partial or Total non-Availability Declarations are discussed earlier under the Forward Market. The format and content of the Techno-Economic Declarations is described in Section H1 paragraph 6.2.

The TSO has the competence to verify the validity and accuracy of the submitted Techno-Economic Declarations. A penalty charge is applied to BSPs (as per paragraph 9.7 of Section K) in case of non-lawful submission.

Offers for Balancing Energy in the format specified in Section H1 paragraph 7.2 must be submitted by each BSP who has the technical capability to change its market schedule i.e. its combined position of the validated Forward Market and DAM cleared transactions. Offers for Balancing Energy shall be submitted before the ISP Gate Closure at 16:00 EET on D-1. BSPs cannot submit modified offers for Balancing Energy after the ISP Gate Closure. Upper and lower price limits are set for both upwards and downwards Balancing Energy offers as described in Section H1 paragraph 7.2. Non-submission of offers for Balancing Energy leads to penalties according to paragraph 9.8 of Section K.

BSPs must further submit a separate (per type of reserve and per direction) fully binding offer for reserves (excluding offers for replacement reserve, as this type of reserve is separately auctioned) for each trading period and for the whole technical capability of each BSP unit to provide upward and downward availability. Offers for reserves (excluding replacement reserve) shall be submitted before the ISP Gate Closure at 16:00 EET on D-1 in the format specified in Section H1 paragraph 8.2. Non- submission of offers for above type of reserves leads to penalties according to paragraph 9.9 of Section K.

RES energy is curtailed only in cases system operation is unsafe and a feasible solution cannot be attained by the algorithm (paragraph 9.4).

Reserves procured through the ISP are remunerated at the marginal price for each reserve category. In the context of **ISP**, in order to operate efficiently the Balancing Market the TSO undertakes the following actions for each trading period of the trading day (Section H1 paragraph 4):

- carries out a Load Forecast, RES Injection Forecast, System Reserve Requirements Forecast,

- Executes the optimization algorithm of the ISP in order to pro-actively procure reserves, determine the generating unit commitment status and provide an indicative Dispatch Schedule for the load of each Balancing Service Provider, based on the above forecasts.

The TSO notifies to participants the results of the ISP and publishes balancing information, including the deviations in the System Balance, and statistics about the accuracy of the foregoing forecasts. The **Real-Time Balancing Market** (Section H2) is a market for procuring and activating the upward and downward Balancing Energy offered by BSPs, balancing supply and demand in real-time while considering all applicable real-time System conditions.

Participation in the **Real-Time Balancing Market** is obligatory for all BSPs other than Dispatchable Load and RES Producers with all their available capacity to provide upward and downward Balancing Energy, independently whether they were (or were not) awarded mFRR or RR in the relevant procurement processes. Participation entails the submission of Total or Partial Non-Availability Declarations by BSPs in case their Available Capacity has changed from the ISP Gate Closure.

The Real-Time Balancing Market respects and follows the Integrated Scheduling Process commitment decisions (Section H2 paragraph 2).

In the context of the Real-Time Balancing Market, the TSO performs very short-term system Load Forecasts and RES Injection Forecasts and operates the Real-Time Balancing Market in order to select Balancing Energy Offers and balance the system (Section H2 paragraph 3). The selected Balancing Energy Offers are activated with the issuance of Dispatch Instruction by the TSO.

A Dispatch Instruction shall be issued by the TSO to each Balancing Service Provider for every 5-minute period according to the Real-Time Balancing Market clearing results. The TSO is tasked to send the Real-Time Balancing Market results, along with the metered generation/demand per Balancing Service Provider and per Balance Responsible Party to the Market Operator, in order for the latter to implement the Balancing Energy Settlement and the Imbalance Settlement (Section H2 paragraph 10).

Especially for the Dominant Participant, the Regulator shall ex-post check on a monthly basis the submitted upward and downward offers for Balancing Energy, per unit, and compute the revenues acquired by the Dominant Participant from its participation in the Balancing Market and through reserves procurement in conjunction with the wholesale tariff of the Dominant Participant (as defined by

the Regulator). The Regulator may impose regulatory sanctions on the Dominant Participant, in case the latter takes advantage of its market power to attain windfall profits from the balancing market and reserves procurement operations or to otherwise distort competition (Section H1 paragraph 7.2).

EMERGENCY SITUATIONS (SECTION H3)

In case of non-availability of the Market Management System the MMS Operator declares an emergency. The MMS Operator provides for a tentative time when the event shall occur and instructions to participants. The MO takes gradual steps of extending gate closures in the expectation of problem resolution. However, if the problem is not resolved by the gate closure for physical nomination of forward traded quantities, corresponding quantities will have to be traded through the DAM. If the problem is not resolved by the time the DAM has to be resolved the MO utilises an offline clearing tool employing offers determined by the MO as set out in paragraph 2.3.

Similarly the TSO, in the anticipation of problem resolution, takes gradual steps of extending gate closure for reserves and balancing energy offers. In case it is evident that the problem shall last even after the commencement of the trading day, the TSO undertakes to run the market as set out in paragraph 2.4 of this Section.

Participants receiving commitment or dispatch instructions in the context of an emergency are required to execute them, regardless of any objections or financial consequences.

Settlements in such a case are delayed until the Market Management System is restored. The Settlement price during such events is set to be the highest Imbalance Settlement Price in the preceding 168 hours (paragraph 2.5).

In case of a significant malfunction of the Transmission and/or the Distribution System or in case the available generation resources are not sufficient to cover the load, the TSR are suspended as per set out by the Transmission and Distribution Rules (paragraph 3.1).

SECURITY COVERS (SECTION I)

Security Cover for the participation in the Day-Ahead Market is provided in cash. The MO validates the Energy Bids submitted by Participants to buy energy against the estimated amount of the Bid and any other obligations of the Participant in the Day-Ahead Market. Only the Energy Bids of Participants with financially covered positions shall be processed.

Participants must post Security Cover (either a Letter of Credit from a qualified bank or a cash deposit in a deposit account), which is calculated on the basis of a process described in paragraphs 5 and 6 for all financial transactions other than transactions in the Forward Market and the Day-Ahead Market, namely for the charges (negative cash flows) settled through the Market Operator, including balancing services procurement, for Imbalances Settlement, for the settlement of TUOS Charges, DUOS Charges and Public Service Obligations, for the settlement of Uplift Accounts and Non-Compliance Charges.

Subject to the Regulator's approval, the Market Operator may assign to a financial institution or a bank (the Coverage Institution) the credit risk of all market financial transactions other than transactions in the Forward Market and the Day-Ahead Market.

This Section also sets out as Annexes: the Form of Security Cover Statement (ANNEX I.1); and the Form of Notice of Drawing (ANNEX I.2).

METERING (SECTION J)

In accordance with the Rules, the Responsible System Operator shall operate an electronic system that automatically interrogates each Non-Profiled Meter used to supply Metering Data for each Settlement Period, in accordance with the Transmission and Distribution Rules.

The division of responsibility for the provision, installation and maintenance of Meters, and associated Metering Equipment and the Metering Data retrieval, certification and transfer between the Transmission System Owner, the Transmission System Operator, the Distribution System Owner and the Distribution System Operator (DSO) is described in paragraph 2. The Responsible System Operator is the entity responsible for the retrieval, certification and transfer of the metering data.

The Responsible System Operator is tasked to provide each Participant with access to Metering Data in respect of that Participant's offtake or generation, and the Responsible System Operator shall make such data available as soon as possible after the settlement period in respect of which the data was collected.

The TSO and the DSO are required to submit the Certified Metering Data and the calculated energy quantities required for Imbalance Settlement to the Market Operator (paragraph 7). The TSO and the DSO derive the Certified Metering Data for Non-Profiled Meters, as per paragraph 3 of this Section.

The total offtake quantity at profiled meters, for each trading period, is calculated as the difference between the total offtake quantities in the distribution system and the offtake quantities at non-profiled meters. The total offtake quantities in the distribution system is calculated for each trading period based on corresponding data from the meters at the boundary between the transmission and distribution system, data from non-profiled embedded generation and estimations of the DSO regarding profiled embedded generation (paragraph 7.5).

The total offtake quantity at profiled meters for each trading period is then allocated to load representatives by applying appropriate profile classes and representation percentages. Detailed ex-ante and ex-post computations are performed with a view to better allocating quantities to load representatives on a trading period basis, taking into account embedded generation as per the provisions of paragraphs 7, 8, 9 and 10.

Section J addresses also the requirements to meters' reading; the methods of establishing estimated reads when meter readings are not available; and computation of transmission loss and distribution loss factors.

SETTLEMENT (SECTION K)

In order to perform wholesale market settlements, the MO maintains nine accounts as specified in paragraph 2.1 and detailed in paragraphs 2.2 to 2.10 of Section K. Participants hold one account for the DAM settlements and another account for the rest of the wholesale market settlements.

Participants injecting or offtaking energy in the DAM are settled for each day they have been trading quantities. Amounts for injections and offtakes are separately calculated based on the cleared quantities and the clearing price applicable for each trading period. Corresponding amounts are also separately credited and debited to corresponding participants' accounts.

The MO calculates imbalance energy for every Participant. The Imbalance energy comprises two parts: the instructed imbalance energy and uninstructed imbalance energy. The first part refers to the quantities under dispatch instructions issued by the TSO in cases when the Participant is also a BSP.

Instructed imbalance energy for BSPs is calculated as per the detailed rules provided under paragraph 4.6.

BSPs are credited /charged for the instructed imbalance energy either at the Marginal Settlement Price in case their instructed imbalance is in the opposite direction from system state or at the price of the last accepted balancing energy offer in case their instructed imbalance is in the same direction to system state (paragraph 4.6).

The Marginal Settlement Price for each Settlement Period, is the average, weighted by the system imbalance quantities, of the marginal balancing energy prices of the six 5 minute balancing periods within the trading period. Marginal balancing energy prices shall be equal to the most expensive upward balancing energy offer price activated when the system is short or the least expensive downward balancing energy offer price activated when the system is long. In case the system is neither short nor long the average of previous periods is used (paragraph 4.5).

Uninstructed imbalance energy for Participants is calculated as per the detailed rules provided under paragraph 4.8. Participants are credited /charged corresponding quantities at the Imbalance Settlement Price which is defined to equal the period's Marginal Settlement Price.

FCR, aFRR, mFRR and RR are ex-post settled per direction and type of reserve taking into account actual availability data for the provision of the services. Marginal pricing is utilized for corresponding remunerations. Any energy injections made by units contracted to provide supplementary system energy are settled through the imbalance energy settlement (paragraph 5.2) Availability payments to units providing supplementary system energy are made in accordance with the contract terms.

Paragraphs 6 and 7 of the present Section, describe the process for allocating transmission and distribution use of system charges to load representatives and the corresponding credits in the MO accounts.

Paragraph 8 describes the allocation of the uplift charges to cover the following:

- Net cost for instructed and uninstructed imbalances
- Cost of ancillary services
- Coverage Institution, Settlement House, and extra-ordinary coverages cost
- Net cost of reconciliation calculations
- National Fund for the Promotion of RES and Energy Saving
- Cost of Public Service Obligations
- Cyprus Transmission System Operator administrative expenses

To deter market participants from manipulating the market or creating obstacles in its normal operation, the Rules provide for a number of penalties which amongst others, penalize unlawful submission of offers in the DAM, non-lawful submission of Non-Availability and Techno-Economic declarations, non-submission of balancing energy offers and offers for reserves, non-compliance with TSO instructions, systematic deviations in the demand purchased or in the actual energy injected by some categories of RES units. A penalty is also foreseen for non-compliance with the maximum percentage constraint for quantities traded under bilateral contracts (paragraph 9).

The MO, on a monthly basis, prepares an initial and a final monthly settlement statement for each participant in accordance with the provisions of paragraph 10. Similarly, on a daily basis, the MO prepares an initial and a final DAM settlement statement for each Participant. Amounts to be invoiced to each participant or by each Participant are included within the final versions of these statements.

This Section also sets out as an Annex (ANNEX K.1) the processes for the periodic reconciliation of Settlement calculations following the provision of new or updated Metering Data.

INVOICING AND PAYMENTS (SECTION L)

Section L details the basic information included in the invoices and the invoice payment rules, including the consequences of late or non-payment. One invoicing process will be performed for the DAM Settlement, and another invoicing process is intended for all other settlements of the wholesale electricity market.

The MO, on a daily basis, issues invoices with regard to quantities traded in the DAM during the previous day. These invoices are copied to the Settlement House, i.e. a credit institution which shall undertake to implement corresponding payments by executing corresponding bank transactions (paragraph 3).

Monthly, quarterly as well, reconciliation invoices issued by the MO with respect to the remaining wholesale market transactions are copied to the Settlement House, i.e. a credit institution which shall undertake to implement corresponding payments by executing corresponding bank transactions (paragraphs 4.7, 5 and 6).

REPORTING AND MARKET INFORMATION PROVISION (SECTION M)

The Market Operator is required to publish at least the following market

information, subject to appropriate confidentiality issues:

- aggregated volumes of the bilaterally traded quantities ;
- aggregated volumes of RES energy by RES plants operating under support schemes;
- at least aggregated volumes per type of technology (conventional, solar, wind, etc.) scheduled under the DAM per trading period; and
- the DAM Clearing Prices and volumes scheduled for each Participant per trading period.

The MO is under obligation to maintain an archive of this information for five years, accessible in an efficient manner by all Participants and other interested parties (paragraph 2).

The TSO is subject to the data collection and publication rules under the EU Regulation No 543/2013 of 14 June 2013 and REMIT. Such data should be uploaded on the TSO's website and have connectivity with the ENTSO-E transparency platform. Details of the data to be published by the TSO is provided under paragraph 3

Paragraph 5 excludes liability in situations whereby the required information is missing or inaccurate, provided that the Market Operator and the TSO have used reasonable endeavors to provide the correct information in a timely and non-discriminatory manner.

TIMELINE OF WHOLESALE ELECTRICITY MARKET OPERATIONS (SECTION N)

Section N sets out the timeline of the Forward Market, DAM, the Balancing Market and the timeline of the imbalance settlement, invoicing, and payment processes.