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ECONOMIC CONSULTING ASSOCIATES

Turkey:

Electricity Market Support – Security of Supply, Capacity Mechanism and Auction

Draft Regulation on Capacity Certificates

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ELECTRICITY MARKET

CAPACITY CERTIFICATE REGULATION

1 PART ONE: General Provisions

1.1 Section One: Objective, Scope, Legal Basis and Definitions

1.1.1 Objective

The objective of this Regulation is to set forth the principles and procedures regarding the activities related with the determination of the obligations to provide security of electricity supply and the means of satisfying those obligations.

1.1.2 Scope

The scope of this Regulation covers parties involved in the Firm Capacity Certificate mechanism, duties, authorities and responsibilities of the related parties and the principles and procedures regarding activities related with: the determination of the marginal value of security of supply, the determination of the ability of generation in Turkey to provide supply security, the creation, award and obligations to procure FCCs, and financial settlement of payables and receivables arising from participation of the licensees in the Firm Capacity Certificate mechanism.

1.1.3 Legal basis

This Regulation has been issued in compliance with the provisions of Electricity Market Law no. 4628 and the *Law On Amendment Of Electricity Market Law And Certain Other Laws no [XX]*.

1.1.4 Definitions

For the purposes of interpretation and implementation of this Regulation, the following terms and abbreviations shall bear the following meanings:

Term	Definition
Active energy:	Energy measured in kWh that is the product of active power and time,
Authority:	The Energy Market Regulatory Authority
Autoproducer group:	Any legal entity engaged in electricity generation primarily for the needs of its partners
Autoproducer:	Any legal entity engaged in electricity generation primarily for its own needs,
Balancing and Settlement Regulation (BSR):	Regulation issued in compliance with the provisions of *Electricity Market Law no. [4628 Article 2] as amended*
Balancing Mechanism:	System consisting of the activities carried out by NLDC and balancing mechanism participants for balancing, parties involved in these activities and relations among these parties.
Connection point:	The site or point where participants and/or eligible consumers connects to the transmission or distribution system as per the connection agreements,
Distribution Licensee:	Any legal entity engaged in electricity distribution in a designated geographical region,
Distribution Region:	The region defined in a distribution license,
Distribution System:	Electricity distribution facilities and grid operated and/or owned by a Distribution Licensee within its designated distribution region,
Eligible Consumer:	Any real person or legal entity that has the liberty to choose its supplier, due to its consumption of more electricity than the amount set by the Board or its direct connection to the transmission system,

Term	Definition
FCC Account:	Account registered with the FCC Administrator for the recording of FCCs held by the Market Participant
FCC Administrator:	The division of TEIAS responsible for the administration of the FCC Obligation arrangements
FCC Register:	The register in which the FCC Administrator records the FCCs of each Market Participant
Firm Capacity Certificate (FCC):	The ability to serve 1 MW of load at any point in time meeting the system supply reliability standards
Generation Facility:	Facilities generating electricity,
Generation Participant:	A Market Participant who has registered Generation Facilities eligible to be awarded FCCs
Hydroelectric Plant (or hydro):	A Generation Facility relying on the flow of water in the process of generating electricity
Law:	*The Electricity Market Law no 4628 dated 03.03.2001 and its amendments*
Load Factor:	The average hourly level of annual demand expressed as a percentage of demand in the peak hour of the year.
Load Responsible Party (LR)	Licensee authorised to accept energy to serve electricity load consumers from the grid
Load Supplying Capability (LSC):	The level in (MW) of electricity load that can be supplied throughout the year meeting the system supply reliability standards
LR Facility:	Facilities for offtaking electricity from the Grid that a Load Responsible Party is responsible for

Term	Definition
LR Participant:	A Market Participant who has registered LR Facilities and is responsible for satisfying a FCC Obligation to provide security of supply to the Turkish electricity system
LSC Model:	Model used for calculating the reliable Load Supplying Capability of installed Generation Facilities
Marginal Plant:	The Generation Facility considered to be needed to supply one additional MW over and above the LSC of the system
Marginal Value of Availability:	The cost per MW of keeping the Marginal Plant available
Market Financial Settlement Centre (MFSC):	The unit under the body of TEIAŞ that shall operate the settlement side of balancing and settlement system by calculating amounts payable or receivable by legal entities operating in the market, based on differences between actual purchases and sales as a result of the real time physical balancing of energy supply and demand by NLDC, in accordance with the provisions of the relevant legislation,
Market Participant:	A Generation Participant or a LR Participant
Metering systems:	Active electricity energy metering systems allowing calculation of settlement volumes,
Ministry:	Ministry of Energy and Natural Resources (MENR)
Settlement Aggregation Entity:	Active electricity generation – consumption unit defined by participants and registered with the MFSC in order to make the settlement calculations for each participant
System Operator:	TEIAS in its role of manager of the physical operation of the Transmission System

Term	Definition
System Planner:	TEIAS in its role of planning the development of the Transmission System and forecasting of national demand
TEDAS:	Turkish Electricity Distribution Company
TEIAS:	Turkish Electricity Transmission Co. Inc.,
TETAS:	Turkish Electricity Trading and Contracting Co. Inc.,
Thermal Plant (or thermal):	A Generation Facility relying on the combustion of fuel to create steam in the process of generating electricity
Transition Contracts:	Arrangements put in place under Law [xx] for the allocation of energy contracts (either directly or through TETAS) between certain Generation Facilities and Distribution Licensees (either directly or through TEDAS)
Transmission system:	Electricity transmission facilities and network,
Unserved Energy (UE):	The measure of acceptable security of supply
Value at risk:	Maximum amount a market participant may become indebted in case the market participant is not able to fulfil its financial obligations,
Wind Plant (or wind):	A Generation Facility relying on wind in the process of generating electricity

1.2 Section Two - Principles of Capacity Certificates, Parties, Duties, Authorities and Responsibilities of Parties

1.2.1 Valuation of security of supply

Valuation of security of supply shall include the following activities performed by the Ministry and related information provision by Market Participants and the System Operator:

- Selection of candidate Marginal Plants by analysis of the prices in bids submitted to the Balancing Mechanism or prices in Ancillary Service Contracts for reserve
- Collection of information on fixed costs of the candidate Marginal Plants
- Analysis of information on fixed costs of the candidate Marginal Plants
- Calculation of an averaged Marginal Value of Availability.

1.2.2 Principles of security of supply valuation

The value of security of supply will be determined by the Ministry, applying economic analysis of the cost of making the marginal unit of generating capacity available (the Marginal Value of Availability) determined by the methodology set out in Part 3.

The Ministry will determine the frequency with which it makes these calculations applying the following considerations:

- the provision of capacity for security is a long-term investment undertaking and so long-term certainty as to price levels and requirements should be set out in order to reduce the regulatory risk to the investor, which leads to long-term prediction of demand and costs, with a degree of smoothing of the results and with specific assumptions as to export options for new capacity;
- The cost of provision must be related to a view as to the likely cost of provision in a competitive market were security to be offered as a specific central product; and
- The cost of provision of security must be affordable.

The value of the FCC incentive payment made by LR Participants who do not fulfil their obligations to procure FCCs will be the Marginal Value of Availability.

1.2.3 Determination of load supplying capability and allocation of FCCs

Determination of the LSC of Turkish Generation Facilities will consist of the following activity performed by the Ministry:

- ❑ Determination of the security of supply criterion in terms of the acceptable level of Unserved Energy for forecast years;

the following activities performed by LR Participants:

- ❑ Making medium-term forecasts of expected annual and peak load to be served by the LR;

the following activities performed by the System Planner:

- ❑ Selection of a computer model for calculation of the overall LSC of the Generation Facilities in Turkey;
- ❑ The making of medium-term annual forecasts of national annual load and load in as many blocks of hours as are required for operation of the selected model;
- ❑ The collection or estimation of statistics on the availability of each Generation Facility;
- ❑ The collection of system technical data for existing and new Generation facilities in order to calculate the LSC and FCCs;
- ❑ The operation of the LSC model using the statistics collected to assess the LSC of generation in Turkey in each forecast year;
- ❑ Assessment of the contribution of each Generation Facility to the load supplying capability of the Turkish electricity system and the consequent number of FCCs to be awarded to the generator for each forecast year, consistent with that calculation;
- ❑ Allocation of FCCs to existing Generation Facilities based on historic allocations;
- ❑ Allocations of FCCs to new and prospective Generation Facilities based on the expected contribution it will make to LSC;
- ❑ Adjustments to allocations of FCCs to existing Generation Facilities based on changes in historic availability of the Generation Facilities;
- ❑ Adjustments allocations of FCCs to existing Generation Facilities when the relevant facilities are substantially refurbished;
- ❑ Periodic recalculation and allocation of FCCs to all Generation Facilities;

and the following activities performed by the System Operator:

- Collection of data on physical availability of Generation Facilities and advising the System Planner of such physical availability;
- Periodic challenge of Generation Facilities to demonstrate the accuracy of availability declarations made to it.

1.2.4 Principles of determining LSC and allocation of FCCs to Generation Facilities

The determination of the Load Supplying Capability of the system shall set the overall level of capacity of Generation Facilities that is required to supply a forecast of demand at a level where the volume of Unserved Energy can be expected to be at or below the level determined as acceptable by the Ministry. The calculation shall apply to forecast years as the basis for incentives to the construction and commissioning of additional Generation Facilities sufficient to meet the set criterion of acceptable level of Unserved Energy in the forecast year.

In calculating the Load Supplying Capability of the Turkish electricity system, the following will be taken into account:

- Generation Facilities may be either capacity-constrained (where the limiting factor on output is maximum MW of the Generation Facility) or energy-constrained (where the limiting factor on output is a lack of sufficient means to continue generation over a period of time, which is a prevalent feature of hydroelectric generation dependent on availability of water). Therefore, the LSC of the Turkish electricity system must be expressed in an index that captures its ability to serve peak load and ability to serve annual load.
- Each Generation Facility has a defined probability of not being available at any particular time but the probability of more than one such Generation Facility being unavailable at the same time is lower. Therefore the LSC of Generation Facilities collectively is higher than the sum of the LSCs of each such Generation Facility individually.
- The LSC of the Turkish electricity system will be dependent on the forecast type and number of Generation Facilities relying on different methods of generation, and on the level of consumer demand at different times of the forecast year.

In allocating FCCs to generators, the following will be taken into account:

- The FCCs allocated will represent the expected ability of each Generation Facility to contribute to LSC in the forecast year and the Generation Participant must have a strong incentive to ensure that it can make that expected contribution by maintaining its level of reliability; but
- FCCs are passed from Generation Participants to LR Participants and so the number of FCCs allocated to a generator in a forward year should be the same in each such year such that the Generation Participant can

reasonably rely on the number of FCCs that it can pass to an LR participant by way of trade.

1.2.5 Transfer of FCCs to LRs and the LR Obligation

Transfer of FCCs from Generation Participants to LR Participants consists of the following activities performed by Market Participants:

- Notification to the FCC Administrator of an intent to transfer FCCs; and
- Notification to the FCC Administrator of an intent to receive the transferred;

and the following activities performed by the FCC Administrator:

- Registration of Market Participants and the FCCs allocated to them
- Recording of the transfer of FCCs in accordance with notifications submitted to it;
- Receipt of information about the electricity received by LR Participants on behalf of their customers;
- Calculation of the FCC Obligations of each Market Participant;
- Submission of notification and invoices to Market participants who have not satisfied their FCC Obligations by acquiring sufficient FCCs;
- Recalculation of FCC Obligations where anti-hoarding measures are in place;
- Payment of all monies collected from Market Participants to other Market Participants who have satisfied their FCC Obligations by the acquisition of FCCs.

1.2.6 Principles of FCC Transfer, LR Obligation, shortfall payments and anti-hoarding measures

The following principles shall apply:

- LR Participants will have an obligation to procure FCCs to cover the higher of:
  - The peak load of their customers in each month; and
  - The annual load of the customers in each 12-month period.
- Generation Participants have an obligation to acquire sufficient FCCs by way of being allocated FCCs by the System Operator or by way of acquisition from other Market Participants to match:

- The FCCs that they may have transferred to LR Participants; and
- FCCs removed from their accounts due to non-performance of their required levels of availability.

- Any Market Participant with insufficient FCCs will be in shortfall and will pay to the FCC Administrator the Marginal Value of Availability (in TRY) for each FCC by which they are short of their obligation.
- If the Authority determines that anti-hoarding measures are required then any FCCs held by a Market Participant in excess of a prudent level determined by the Authority will be temporarily reallocated to those Market Participants with insufficient FCCs for the purposes of offsetting shortfalls in FCCs held.
- The FCC Administrator will not profit by any monies taken from Market Participants by way of shortfall payments but will pay such monies to those Market Participants that had acquired FCCs but only up to the level of FCCs that they needed to satisfy their obligations.
- Payments that might be made for transferred FCCs are a bilateral arrangement between Market Participants and are outside the scope of this Regulation.

1.2.7 Market Participants

The participants in the market shall be all licensed entities who have registered settlement aggregations with the MFSC under the terms of the Balancing and Settlement Regulation and shall consist of the following:

- Generation licensees,
- Autoproducer licensees,
- Autoproducer group licensees,
- Wholesale licensees,
- Retail licensees.

1.2.8 Obligation of market participants to register

Market Participants shall be obliged to register with the FCC Administrator within one month following the effective date of their licenses

1.2.9 Responsibilities of the Ministry

The Ministry will be responsible for:

- Calculation of the Marginal Value of Availability;

- ❑ Determination of the level of Unserved Energy that is acceptable at any time.

1.2.10 Responsibilities of the FCC Administrator

The FCC Administrator will be the authorised as the market operator and will perform the following activities related to the administration of Firm Capacity Certificates:

- ❑ Receiving and processing registration applications from Market Participants;
- ❑ Establishment of a register of the Market Participants and the FCCs attributable to them;
- ❑ Receiving and processing notifications of allocations of FCCs to Market Participants and transfers of FCCs from one Market Participant to another;
- ❑ Receiving and processing data from the MFSC regarding the peak and monthly energy received by LR Participants on behalf of their customers;
- ❑ Calculation of shortfalls of FCCs held by Market Participants with due regard to the number of FCCs each needs to cover the consumption of its customers (in the case of LR Participants) and the need to avoid deficit (in the case of Generation Participants);
- ❑ Calculation of the receivables and payables to be accrued to Market Participants with due regard to shortfalls, reallocation of FCCs hoarded, and the extent of compliance by Market Participants; and preparation of related settlement notifications; and carrying out the related payable, receivable and credit cover management activities, and
- ❑ Preparation and publication of the reports that may be requested by the Authority regarding Firm Capacity Certificates.
- ❑ Performance of other related activities indicated in this Regulation.

1.2.11 Responsibilities of the System Operator

The National Load Dispatch Centre shall be authorised as the System Operator and shall perform the following activities related to the allocation of Firm Capacity Certificates:

- ❑ Recording and calculation of the availability of each Generation Facility;
- ❑ Performance of other related activities indicated in this Regulation.

1.2.12 Responsibilities of the System Planner

The relevant department of TEIAS shall be authorised as the System Planner and shall perform the following activities in relation to FCCs:

- ❑ Procuring forecasts of demand from LR Participants;
- ❑ Making forecasts of demand and of levels of consumption in different hour blocks during each forecast year;
- ❑ Procuring information on the potential availability of current and prospective Generation Facilities;
- ❑ Procuring and operating a model of Turkish Generation Facilities and their collective Load Supplying Capability and the contribution of each such generator to LSC;
- ❑ Allocation of FCCs to Generation Facilities;
- ❑ Operation of a periodic challenge process for Generation Facilities to prove their availability;
- ❑ Adjustments to allocations of FCCs to Generation facilities based on availability data;

1.2.13 Responsibilities of other TEIAS departments

Other departments and units of TEIAS, according to the duties and responsibilities assumed with regard to the Main Charter of TEIAS and/or Executive Board Decisions, shall perform the following activities related to FCCs:

- ❑ Provision of information to the FCC Administrator on the registration of Market Participants with regard to their Settlement Aggregation Entities;
- ❑ Provision of information to the FCC Administrator on the peak and overall offtake of relevant Settlement Aggregation Entities in each month;
- ❑ Performance of other related activities indicated in this Regulation.

2 PART TWO: Registration of the Market Participants

2.1 Section One: Registration Rules

2.1.1 Generation and related registration rules

Market Participants (Generation Participants) who had defined and registered Settlement Aggregation Entities under the Balancing and Settlement Regulation shall be responsible for registering the same Settlement Aggregation Entities as Generation Facilities if the entity is:

- A generation facility with a total installed capacity that exceeds 10MW and above,
- A generation facility with a total installed capacity of below 10 MW, if the related participant prefers to include such generation facility as a Generator,

Each Generation Facility defined can be registered with the FCC Account of only one Generation Participant.

2.1.2 LR and related registration rules

Market Participants (LR Participants) who had defined and registered Settlement Aggregation Entities under the Balancing and Settlement Regulation shall be responsible for registering the same Settlement Aggregation Entities as LR Facilities if the entity is:

- The consumption facility of eligible consumers that are supplied electricity by a supplier outside their distribution region through bilateral contracts or that are connected at the transmission level,
- The consumption facility of a consumer of an autoproducer or an autoproducer group;
- A distribution region,
- Connection point of the national transmission system to a neighbour country's transmission system.

Each LR Facility defined can be registered with the FCC Account of only one LR Participant. LR Facilities as connection points of the national transmission system to a neighbour country's transmission system shall be registered to TEIAS name; the total settlement volumes of these kinds of settlement aggregation entities registered to TEIAS name shall be distributed completely to the related market participants' settlement accounts.

During the registration of the LR Participants, the metering systems that allows for metering or calculation of the settlement volumes, shall be registered. The metering systems that allow for metering of the following energy flows should be registered:

- ❑ The energy supplied to or withdrawn from the transmission system,
- ❑ The active energy supplied to or withdrawn from the distribution system by a generation facility with a total installed capacity of 10 MW or above,
- ❑ The energy supplied to or withdrawn from the distribution system by a generation facility with a total installed capacity below 10 MW, if the related participant prefers to include such generation facility in settlement calculations,
- ❑ The energy withdrawn from the distribution system by eligible consumers that are supplied electricity by a supplier outside their distribution region through bilateral contracts,
- ❑ The energy withdrawn from the distribution system by consumers that are members of autoproducers and autoproducer groups, and
- ❑ The energy flows between two distribution regions.

2.2 Section Two: Registration Process

2.2.1 Registration

As part of the registration process, the following shall be registered:

- ❑ Market Participants as legal entities,
- ❑ Generation Facilities chosen by Market Participants to be registered to their FCC Accounts,
- ❑ LR Facilities chosen by Market Participants to be registered to their FCC Accounts,
- ❑ Metering systems included in the metering system configuration of each registered LR Facility.

2.2.2 Application for Market Participants as Legal Entity Registration

The Market Participants shall be registered with the FCC Administrator as a legal entity upon notification from the MFSC that the Market Participant is a legal entity registered under the Balancing and Settlement Regulation.

2.2.3 Registration of Generation Facilities

All Generation Facilities that are registered to Market Participants as Settlement Aggregation Entities with the MFSC will be registered to the Market Participant as Generation Facilities by the FCC Administrator.

Each Generation Facility must be registered as one of:

- A capacity-constrained generator;
- An energy-constrained generator without storage facilities; or
- An energy-constrained generator with storage facilities.

The applicable category of Generation Facility will be determined by the System Operator.

2.2.4 Registration of LRs

All LR Facilities that are registered to Market Participants as Settlement Aggregation Entities with the MFSC will be registered to the Market Participant as LR Facilities by the FCC Administrator.

2.2.5 Registration of metering systems

All metering systems registered to Settlement Aggregation Entities with the MFSC will be registered to the relevant Market Participant by the FCC Administrator.

2.2.6 Modification of the registration data

The FCC Administrator will modify its registers of Market Participants, Generation Facilities, LR Facilities and Metering Systems upon notification of changes made by the MFSC.

3 PART THREE: Valuation of Certificates and Incentives

3.1 Selecting the Marginal Plants

The Marginal Value of Availability will be determined from the costs of the Marginal Plant selected by the Ministry following a request for information from the System Operator.

The System Operator will provide a list of three candidate plants selected by:

- Analyse of the bids submitted to the Balancing Mechanism from generating units over a period of three months who will identify no more than [3] generators submitting, on average, the highest priced bids to decrease output provided that generators freely bidding to reduce output in the balancing mechanism price their bids at slightly below their variable costs such that the highest bid prices reasonably reflect the highest variable costs, which will determine the most marginal plants; or

- If the System Operator has entered into Ancillary Service Agreements with generators for the provision of reserve, it will select no more than [3] generators that have contracted to deliver reserve at the highest price to be paid for energy delivery under the contracts provided that the pricing in the agreement consists of an availability fee likely to reflect the fixed costs of the generator providing the service and an exercise price to be paid whenever the generator delivers reserve energy that will normally reflect the variable costs of that generator such that the highest exercise price in such agreements reflect the most marginal plants.

3.2 Submission of Applicable Cost Information

The Ministry will enquire of the Generation Participants who are registered to these plants, having given a confidentiality undertaking, as to the components of fixed costs as follows:

- The year when the generating unit was first commissioned and the expected design life of the unit;

- The available generating capacity in MW;

- The generating technology (e.g. oil-fired, gas-fired, open cycle or combined cycle, hydro, etc.);

- Capital expenditure on rehabilitation of the plant made since the original installation was commissioned:

  - Year of expenditure;

  - Gross investment in TRY;

- Estimated annual operating and maintenance fixed costs in TRY.

The Ministry will then use best practice published engineering cost studies available to it to calculate:

- The gross replacement cost per MW of usable capacity of each candidate plant;
- The investment discount rate applicable to generating projects at an assumed zero inflation rate;
- Normal period of amortisation for any rehabilitation investments;
- The percentage return on equity expected in the power sector at an assumed zero inflation rate.

Additionally, the Ministry will use the published retail price deflator for the Turkish economy to revalue all rehabilitation investments at current market prices.

3.3 Calculation Procedure

The Ministry will calculate the annual fixed costs per MW of available capacity for each candidate plant as the sum of the following components:

- Annual operating and maintenance fixed costs;
- Return on equity of the depreciated residual value of the plant;
- Amortised annual costs of rehabilitation investments.

These components are each calculated as follows.

3.3.1 Treatment of O&M Costs

These are the costs submitted by the plant on enquiry from the Ministry representing a reasonable fixed cost of operation and maintenance of the plant. They are expressed as a cost per year per MW of available capacity. Where such information is not made available, the Ministry will consult such studies as are publicly available relating to the relevant technology and will apply a best estimate of the cost per MW.

3.3.2 Treatment of Return on equity

The Ministry will calculate a depreciated value of equity in each candidate plant as follows:

- A percentage depreciation will be assessed as the number of years since first commissioning divided by the design life of the plant (and multiplied by 100).

- The residual equity percentage will be 100 minus the percentage depreciation; if the plant has lasted beyond the design life then it will be treated as fully depreciated and the residual equity percentage will be zero.

- The residual equity per MW in the plant will be the gross replacement cost per MW (derived from the Ministry analysis of best practice published engineering studies) times the residual equity percentage (divided by 100).

The return on equity per MW will be calculated as the residual equity per MW multiplied by the figure derived by the Ministry as the percentage return on equity expected in the power sector (divided by 100).

3.3.3 Treatment of Rehabilitation Investments

The annual amortised cost of rehabilitation investment will be calculated using a standard amortisation function that seeks to simulate paying off an initial capital investment in equal annual instalments over a fixed number of years. This model will be applied separately to each rehabilitation investment at the candidate plant where such investment was made more recently than 'n' years ago, where 'n' is the best practice normal years of amortisation for rehabilitation investments.

For each relevant rehabilitation investment, the Ministry will revalue the expenditure to current values using the applicable retail price deflator and will use this calculated value, together with the normal period for amortisation of rehabilitation investments and the best practice applicable investment discount rate to calculate the annual cost per MW of rehabilitation investments.

3.4 Averaging Procedure

Once the Ministry has calculated an average fixed cost per MW for each candidate plant, the Ministry will take a simple average of the calculated figures to arrive at an average cost per MW for the Marginal Value of Availability.

3.5 Publication of results

Once the Ministry has calculated the Marginal Value of Availability, it will produce a report detailing the assumptions and calculations made including the technologies of the candidate plant but taking such steps as necessary such that the specific plants analysed cannot be identified. It will circulate this report to interested parties and will invite comments on the report.

The Ministry will take such account of those comments as it reasonably sees fit and will then publish a final report in which it will notify of its decision as to the Marginal Value of Availability. This value will be the payment required of those who do not hold the relevant FCC when required.

4 PART FOUR: Capacity Certificates Quantity and Allocation to Generators

4.1 Section One: Assessment of Security of Supply

4.1.1 Determination of Security of Supply Criterion

The [Ministry/Council of Ministers] will periodically determine the level of potential Unserved Energy (UE) as a proportion of annual demand that will be acceptable for the purposes of this Regulation using the following criteria:

- The level of UE should be at an acceptable level for efficient development of the Turkish economy; and
- The cost of provision of new generating capacity to meet a level of UE should not exceed a reasonable estimate of the value that consumers would place on receiving a lower level of supply interruption.

The Ministry will determine the level of security in terms of the acceptable UE for the year of first allocation and for the next [three] years using the following additional criterion:

- The level of UE should not exceed the level which the Generation Facilities expected to be available in the year could reasonably sustain.

The level of UE acceptable will remain unchanged from year to year unless the Ministry notifies that a new level of UE will apply from a specific future year.

The Ministry will notify the FCC Administrator and the System Operator of any change to the acceptable level of UE and the year from which that level will apply.

4.1.2 Selection of model for determining Load Supplying Capability

The System Planner will be responsible for assessing the extent to which the installed generation capacity of the Turkish system is capable of providing continuous supplies of electricity to Turkish consumers to a reliability level determined by the level of acceptable UE for the current and future years. For this it may rely on the output from a model of the Load Supplying Capability of Turkish generation capacity and the demand load that must be served during each year (the LSC Model).

4.1.3 Data input for the LSC Model

The System Planner will collect and apply the following data when using the LSC Model:

- Yearly hourly demand (MW);

- For each hydroelectric plant:
  - The Hydro Plant Production Coefficient
  - The minimum storage level of each reservoir (in Hm^3)
  - The maximum storage level of each reservoir (in Hm^3)
  - The composite outage rate of each hydro generator (p.u.)
  - The maximum turbined outflow level of each reservoir (in m^3/s)
  - The installed capacity of each hydro plant (in MW)
  - The historical record of monthly inflows of each plant (m^3/s)
- For each thermal plant:
  - The composite outage rate
  - The installed capacity (in MW)
- For each wind plants: the non-dispatchable generation profile (in MW)

4.1.4 Medium Term Demand Forecast

In [June] of each year the System Planner will request forecasts of annual demand from each LR for each of the next [4] years containing the following information:

- Expected annual demand of all customers forecast to be served by the LR in the year; and
- Expected peak hour demand of all customers forecast to be served by the LR in the year.

An LR Participant who is not a Distribution Licensee is not obliged to provide a forecast to the System Planner when requested but, if no forecast is produced, the System Planner will be entitled to assume that the levels of demand in the forecast year (both peak hour and annual demand) will be the same as the demand in the most recent year available.

A Distribution Licensee will also provide separately:

- The expected growth in demand of Eligible Consumers currently served by it;
- The annual load of those Eligible Consumers that the Distribution Licensee expects to cease being served by the Licensee;
- The annual load of Eligible Consumers not currently served by the Distribution Licensee, which the Licensee expects to be served by it in the future.

In providing a forecast of future demand, a Distribution Licensee must make a forecast of growth of demand of all consumers currently served by it regardless of whether it expects those consumers to continue to be served by the Licensee or not.

All forecasts provided to the System Planner by LR Participants must be delivered to it by the end of [July].

4.1.5 Consistency with long-term forecast

As soon as the System Planner has received forecasts for the years ahead it will make its own forecast for each of the next [4] years of:

- National customer demand in the peak hour of the year;
- National customer demand for the full year;
- Indices of customer demand relative to peak hour demand for each hour of the year or else for such other blocks of hours as it sees fit for the purposes of operating its LSC Model.

The System Planner will take account of forecasts made by LR Participants but is not obliged to base its analysis on those forecasts.

In making the forecast for the indices of blocks of hours and for the peak hour, the System Planner will be entitled to rely on historic records and such details as are reasonably available to it.

The System Planner will calculate the Load Factor for each year using the formula:

*Load Factor = Annual Demand Forecast * 100 / Peak hour demand forecast / 8760*

The System Planner will submit a report to the Authority in which it will present in aggregated form:

- The forecasts made to it by LR Participants;
- The projected demand of LR Participants who had not submitted forecasts;
- The System Planner's own forecasts of future demand;
- A description of differences between the System Planner's forecasts and the sum of forecasts made by LR Participants with an explanation of why such differences occur.

4.1.6 Availability of Generation Facilities to be provided to the LSC Model

The System Operator will determine actual availability of each capacity-constrained Generating Facility using:

- ❑ Declarations made by the Generation Participant; and
- ❑ Measured production data.

Availability declarations by generators will be used to compute self-declared outage.

Once a capacity-constrained Generation Facility is dispatched, its availability during each hour of dispatch (measured in MW) will be given its measured production, unless the plant cannot produce its full capacity due to local transmission constraints (recognized by the System Operator), in which case it will be deemed available as per the corresponding declaration by its owner. During the hours that a plant is not dispatched, its availability (in MW) will be assumed to be equal to the minimum between:

- ❑ Last measured availability value (measured over the last 4 hours of full plant dispatch, including test dispatch); and
- ❑ Availability declared by generator.

At the end of each month, the System Operator will publish the following data for each capacity-constrained Generation Facility in each hour of the preceding month:

- ❑ Availability declared by generator (in MW);
- ❑ Scheduled generation (in MW);
- ❑ Scheduled generation due to plant testing (MW);
- ❑ Actual production (in MW);
- ❑ Maximum production due to transmission limitations (in MW);
- ❑ Availability if plant is not dispatched (MW); and
- ❑ Final availability for the hour, to be considered for FCC allocation purposes, computed as specified above (MW).

These data will constitute the full record for plant availability of capacity-constrained Generation Facilities, and will be recorded by the System Operator.

Each year "*y*", the System Operator will calculate the non-availability percentage "*p*" of each capacity-constrained Generation Facility "*a*" using the formula:

$$p_{ay} = 100 * (D_{ay} + F_{ay}) / (O_{ay} + D_{ay})$$

Where:

D_{ay}	Hours of declared non-availability in year "*y*" for generation Facility "*a*"
F_{ay}	Hours of failed dispatch in year "*y*" for generation Facility "*a*"

O_{ay} Hours of dispatch in year "*y*" for generation Facility "*a*"

The System Operator will measure the total production of energy-constrained Generation Facilities (in MWh) and will add an estimate for energy not produced due to transmission constraints. At the end of each month, the System Operator will publish the following values for each such energy-constrained plant:

- ❑ Total availability during the period, as declared by plant owner (in MWh);
- ❑ Actual production (in MWh); and
- ❑ For energy-constrained Generation Facilities that do not have storage facilities, energy not produced due to transmission constraints (difference between availability as declared by plant owner and maximum injection into the grid, as estimated by the System Operator, integrated over the measurement period, in MWh).

The System Operator will keep a record of all published results and will sum the monthly results over each year.

The System Operator will calculate availability for each energy-constrained Generation Facility as the lowest availability in the preceding 5 years.

For each Generation Facility, the System Operator will calculate the level of average availability as the simple average of annual availability over the previous five years where availability in a year is 100 minus percentage non-availability. This level of availability will be applied to the Generation Facility in all calculations of the LSC of the system and in the award of FCCs to the Generation Facility unless:

- ❑ The affected Generation Participant submits a challenge to the System Operator providing information indicating that the availability statistics used by the System Operator do not accurately reflect expected availability and the System Operator then modifies the statistics used; or
- ❑ Failing an agreement between the Generation Participant and the System Operator, an appeal to the Authority is made and the Authority determines that the availability statistics used should be modified.

4.1.7 Availability parameters for Generation Facilities with insufficient history

New plant, or plant without previous history, will have availability parameters declared by the relevant Generation Participant, subject to review by the System Operator, according to the following procedure:

- ❑ The System Operator will periodically publish availability statistics of existing generation by technology type, using measurements from similar plant in Turkey and abroad;

- If requested, the System Operator will advise prospective generators on interpretation of information it has published;
- The prospective generator will then declare expected availability; the System Operator will accept that declaration unless it is manifestly unrealistic.
- If the System Operator does not agree with the generator's assessment of prospective availability it will advise the generator of this and will seek to negotiate a different availability factor but will nevertheless accept the generator's revised proposal (whether changed from the original or not).
- In the case of hydroelectric plant, the prospective generator will base its assessment of availability on its own hydrological analysis. The System Operator may query an assessment not based on the energy delivery in a dry year.
- In the case of wind energy plant, the prospective generator will base its assessment of availability on its own wind study. The System Operator may query an assessment not based on the energy delivery in a low wind year.

The System Operator will not adjust the availability parameters applicable to a new generator during the first three years of plant operation. After three full years of statistics have been accumulated, the System Operator will calculate availability parameters in accordance with Section 4.1.6 except that, until five years of statistics are available, an average will be taken based on only the number of years for which statistics are available.

4.1.8 Generator Challenge

In order to ensure that Generation Participants accurately declare availability to the System Operator:

- The System Operator will publish a methodology for non-discriminatory selection of Generation Facilities for its testing regime which will have the following features:
  - Those generators with the lowest levels of historic reliability will be tested more frequently than annually;
  - Other Generation Facilities will be subject to random selection but will be tested no more frequently than once per year (unless the generator elects for additional testing);
  - Hours for which delivery must be demonstrated (which should be daytime hours) will be randomly selected;
- The System Operator will give the Generation Participant 48 hours notice that a test is required during a period when the generator has not declared unavailability.

- ❑ The test will require the Generation Facility to deliver energy at the capacity rate specified for it for [four] daytime hours.
- ❑ Once a generator has been notified of a test, it may not then declare unavailability without thereby failing the test.
- ❑ The generator must deliver the required energy through its meter unless specifically instructed not to generate due to a system constraint.
- ❑ A generator can request that it be retested at any time giving the System Operator 48 hours notice.

Any Generation Facility that does not deliver the requested energy that is subject to the test will be deemed to have failed the test and will be considered unavailable for the purposes of calculation of availability statistics for all hours until another test is undertaken which is successful.

4.1.9 Operation of the LSC Model

The LSC Model will apply a common framework to calculate Firm Capacity Certificates (FCC) of power plants of different technologies.

The methodology applied in the LSC Model will take into account the following aspects:

- ❑ The contribution of hydroelectric plants is energy-constrained due to hydrology;
- ❑ All power plants can experience forced outages;
- ❑ The critical demand must meet system reliability indicators, such as loss of load probability (LOLP);
- ❑ The sum of the FCCs equals the system critical demand, the allocation being proportional to the contribution of each plant to the system reliability.

The methodology will apply the following steps in sequence:

- ❑ Step 1 will apply the calculation of the Firm Energy of a set of power plants, including the modelling of the hydro power plants, which are simulated using the historical inflows. Their contribution will be energy-limited in a period, known as the critical period, where no further MWh can be produced due to lack of water;
- ❑ Step 2 will apply a "peak-shaving" procedure for allocating the amount of hydropower obtained in the preceding step in order to flatten the load profile in accordance with the expectation that LOLP will grow with the demand, so that allocating hydropower to reduce demand peak will contribute to to the reduction of the system LOLP;

- Step 3 will apply a binary search to calculate the Load Supplying Capability (LSC) which is the level of demand that is supplied consistent with the chosen reliability criterion;
- Step 4 will apply an llocation of the LSC among the power plants in proportion to their contribution to the system reliability, in calculate the Firm Capacity Certificates (FCCs) of the power plants.

Step 1: Firm Energy Calculation

The LSC model shall solve the following Linear Programming Problem:

Max F (1)

subject to:

$\Sigma_{i=1..I}\, h(t,i) + \Sigma_{j=1..J}\, g(t,j) + \Sigma_{n=1..N,k=1..K}\, e(t,n)^* \geq F$ (1.1) t=1..T

$v(t+1,i) = v(t,i) + a(t,i) - u(t,i) - s(t,i) + \Sigma_{m\in\Omega(i)}\, [u(t,m) - s(t,m)]$ (1.2) t=1..T, i=1..I

$v_{min}(i) \leq v(t+1,i) \leq v_{max}(i)$ (1.3) t=1..T, i=1..I

$h(t,i) \leq h_{max}(i) \times (1\text{-}COR(i))$ (1.4) t=1..T, i=1..I

$h(t,i) = \rho(i) \times u(t,i) / d(t)$ (1.5) t=1..T, i=1..I

$u(t,i) \leq u_{max}(i) \times (1\text{-}COR(i))$ (1.6) t=1..T, i=1..I

$g(t,j) \leq g_{max}(j) \times (1\text{-}COR(j))$ (1.7) t=1..T, j=1..J

Where the problem parameters are:

T	number of stages (months x years) of the historical inflows record
I	number of hydro power plants centrally dispatched
J	number of thermal power plants centrally dispatched
N	number of power plants not centrally dispatched, such as wind power plants or small hydro power plants
K	number of load blocks
$m\in\Omega(i)$	set of hydro plants located immediately upstream of hydro plant i
d(t)	number of hours of month t

The decisions variables are:

h(t,i) hydro generation of the plant *i* in the stage *t* and load block k (MW).

g(t,j) thermal generation of the plant *j* in the month *t* , load block k (MW).

v(t,i) reservoir storage at the stage *t* of plant *i* (Hm^3).

u(t,i) hydro turbined outflow in stage *t*, block k, hydro plant *i* (m^3/s).

s(t,i) spilled outflow in stage *t* of plant *i* (Hm^3).

The input data are:

$e(t,n,k)^*$ non-centrally dispatched energy of project n in month t, load block k(MW)

$\rho(i)$ hydro plant production coefficient (MWh/Hm^3)

$v_{min}(i)$ minimum storage level of reservoir *i* (Hm^3)

$v_{max}(i)$ maximum storage level of reservoir *i* (Hm^3)

$u_{max}(i)$ maximum turbined volume level of reservoir *i* (Hm^3)

c(i) combined outage rate (forced and scheduled outages) for plant i (p.u.)

$h_{max}(i)$ installed capacity of hydro plant *i* (MW)

$g_{max}(j)$ installed capacity of thermal plant *j* (MW)

a(t,i) incremental inflow volume in stage t of the plant *i* (m^3/s)

$\varphi(t,k)$ relationship between the maximum yearly demand and the demand in each month and load block k (discrete representation of the month load duration curve)

The constraints shall be interpreted as follows:

- Constraints in (1.1) ensure that in every stage and every load block the system total electricity production (MW) is higher than the critical demand in the same period given by F*. Because F is being maximized in the objective function and as such it measures the amount of total energy that can be delivered on a sustainable basis.

  F will be limited both to the installed capacity of the power plants, and to the amount of hydroelectric energy which, in turn, will be conditioned to the worst hydrological years. It is not necessary to know beforehand when this "critical" hydrological period will take place. It is

necessary that all historical inflows are used. The number of stages T in the problem is given by the number of hydrological years.

- Constraints (1.2) are the water balance equations. For each plant i and in each month t, the change in storage is given by the difference between total inflow and total outflow volume. The total inflow is given by the natural incremental volume plus the outflows of the set of plants immediately upstream (turbined + spilled), whereas the outflow of plant i is given by the sum of its turbined volume in each load block within the month and the spilled volume. The equation presented may be additionally supplemented by terms for evaporation and irrigation volumes.

- Constraints (1.3) set minimum and maximum bounds on the storage volumes of reservoirs.

- Constraints (1.4) define that the hydro production of each hydro plant is bounded by the available power which is given by its installed capacity derated by its composite (forced and maintenance) outage rate (COR).

- Constraints (1.5) convert the turbined outflows to energy production in each plant, which depend on the reference head.

- Constraints (1.6) define that the turbined outflow are limited to the maximum turbined values.

- Constraints (1.7) define the maximum generation of the thermal power plant, which, likewise the hydro plants, is given by the installed capacity derated by the composite outage rate.

Let $D_0(t,k) = F^* \times \varphi(t,k)$ be the critical initial load in each block *k*, month *t*, where F* is the optimum solution of problem (1).

Step 2:Allocation of the energy constrained generation in the load blocks

Let $D_1(t,k) = D_0(t,k) - \varphi(t,k) \times \Sigma_{n=1..N}\, e(t,n)^*$ be the demand (MW) that will be met by the hydro and thermal power producers. In this step we use a "peak shaving approach" to determine the "energy-constrained" hydropower in each load block, $g_h(t,i,k)$. Because both LOLP and UE increase (non-linearly) with the demand, the objective of the peak shaving approach is to minimize these values.

The critical period *CP* can be determined by examining the set of stages *t* with dual variables different from zero in the first set of constraints (1.1). In these periods the constraints are active meaning that F cannot be increased.

For each month $t \in CP$ within the critical period and load block *k* the following problem is solved:

Min α (2)

$\alpha\alpha \geq D_1(t,k) - \Sigma_{i=1..I}\, g_h(t,i,k)$ (2.a) k =1,…,K

$g_h(t,i,k) \leq h_{max}(i) \times (1\text{-}COR(i))$ (2.b) i-1..I; k =1,…,K

$\Sigma_{k=1..K}\, [g_h(t,i,k) \times \tau(t,k)] \leq h^*(t,i)$ (2.c) i=1..I

The decision variables of problem (2) are given by $g_h(t,i,k)$, which measure the hydro generation of the plant *i* in the stage *t* and block *k*.

The input data are:

$h_{max}(i)$ installed capacity of hydro plant i

$h^*(t,i)$ hydro energy generation (optimized decision variable of (1))

$\tau(t,k)$ number of hours of load block k, stage t

Step 3: Reliability evaluation

Let $D_2(t,k) = D_1(t,k) - \Sigma_{i=1..I}\, g_h^*(t,i,k)$ be the critical residual load profile that will be met by the thermal generators. The available capacity of each thermal power unit has the following probability distribution:

$g(j) = 0$ with probability FOR(j),

$g(j) = g_{max}(j)$ with probability 1-FOR(i)

Where FOR(j) is the forced outage rate of plant j.

To evaluate the system reliability, the thermal available capacity *G(J)* of the set of thermal plants J is compared in each month t and load block k with the demand that should be supplied, $D_2(t,k)$. It is possible to analytically compute the probability distribution of $G(J) = \sum_{j=1}^{J} g(j)$ by convolution of the Bernoulli probability distribution of the available capacity of each thermal plant *j*.

Let $r(t,k) = | D_2(t,k) - G |^+ = \max(D_2(t,k) - G, 0)$ be the random variable representing the unserved load in the stage *t* and block *k*. The expected value of the unserved energy (UE) is given by:

$$UE(t,k) = E[r(t,k)] = \sum_{s=1}^{S} | D_2(t,k) - G_s |^+ \; p_s \qquad (3)$$

Where:

S is the number of states of the random variable G;

p_s is the probability that the random variable *G(J)* is in state *s*.

Let L be the set of states that the system has load shedding, i.e., $L = \{s : D_2(t,k) \geq G_s\}$.

The loss of load probability (LOLP) is given by:

$$LOLP(t,k) = \sum_{s \in L} p_s \qquad (4)$$

The following reliability evaluation is made, where θ is the accepted level of the expected value of the unserved energy with respect to the system demand:

IF

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THEN

DECREASE $D_2(t,k)$

ELSE

INCREASE $D_2(t,k)$

END-IF

A binary search algorithm is to calculate the Load Supplying Capability (LSC). LSC is obtained after scaling $D_2(t,k)$ by a proper factor in order to that match the UE criterion. The reliability-adjusted critical demand in each month t and load block k is:

$$D_3^* = D_2'(t,k) + \sum_{i=1}^{I} gh(i,t,k) + \sum_{n=1}^{N} e(n,t,k) \qquad (5)$$

Step 4: Contribution of each power plant to the system reliability

Each generator's contribution to the meet critical demand is given by the expected value of its generation in the scenarios with load shedding. The non-centrally dispatched generation is treated as constant (input data) in each stage t and block k, so the contribution of this set of plants is given by the expected value of their generation times the system LOLP(t,k) calculated for D2'(t,k).

$$C(n,t) = \sum_{k=1}^{K} e^*(t,n,k) \times LOLP(t,k) \qquad (6)$$

Similarly, the contribution of the hydropower plants is given by:

$$C(i,t) = \sum_{k=1}^{K} g_h^*(i,t,k) \times LOLP(t,k) \quad (7)$$

The thermal generators' contribution is obtained by measuring their expected generation in the scenarios where there is unserved energy but, taking into account that this set of plants can breakdown, their contribution to the system reliability is not given by their expected generation multiplied by the system LOLP but from the total probability theorem:

$LOLP(t,k) = FOR(j)*LOLP_{-j}(t,k)+(1-FOR(j))*LOLP'(t,k)$

Where:

$LOLP_{-j}(t,k)$ isthe loss of load probability with generator *j* is unavailable;

$LOLP'(t,k)$ is the loss of load probability with generator *j* is available.

which will be expressed as:

$$LOLP'(t,k) = LOLP(t,k) - FOR(j)* LOLP_{-j}(t,k) \quad (8)$$

so that the contribution of the thermal generator *j* in each month t and load block k can be expressed as a function of the system LOLP computed with and without generator *j*:

$$C(j,t) = \sum_{k=1}^{K} (LOLP(t,k) - FOR_t(j) \times LOLP(t,k)_{-j}) \times g_{max}(j) \quad (9)$$

The System Operator will use the LSC Model to calculate the LSC of the system using the capacity and availability statistics of each Generation Facility as determined in accordance with Sections 4.1.6 and 4.1.7 and the forecast demands derived in accordance with Section 4.1.3.

The System Operator will recalculate LSC using the LSC Model on the following occasions:

- ❑ Initially in respect of each of the current and the next [four] years;
- ❑ Each year in respect of the year that is [four years ahead];
- ❑ For a forecast year whenever a new generator or prospective new generator proposes to connect to the system.

Where, in a forecast year, not all the Generation Facilities that are expected to be required have been definitively constructed or planned, the System Operator will make such assumptions about new Generation Facilities that would need to constructed as it sees fit and will then use the LSC model to produce as many different forecasts of the LSC of the system as it sees fit.

4.2 Section Two: Allocation of the firm energy certificates

Once the System Planner has applied the LSC Model to determine the contribution of each plant to system reliability it will allocate the system reliability-adjusted critical demand in proportion to each plant's contribution and will determine the the Firm Capacity Certificates to be awarded to any new plant determined as follows:

$$FCC(m) = D_3^* \times \lambda(m) \qquad (10)$$

where

$$\lambda(m) = \frac{\sum_{t \in CP} C(m,t)}{\sum_{t \in CP} \sum_{m=1}^{M} C(m,t)} \qquad (11)$$

4.3 Section Three: Allocation of Firm Capacity Certificates to Generators

4.3.1 Determination of Load Supplying Capability in the Forecast Year

Each year, in respect of a forecast year, [four] years ahead, the System Planner will, based on a forecast of the number and type of Generation Facilities expected to be in existence in the forecast year, calculate the contribution of each generator to the Load Supplying Capability of the Turkish System.

Whenever a new generator seeks to connect to the system then, for the year when the connection is to be made (the forecast year), the System Operator will, based on a forecast of the configuration of Generation Facilities expected to be in existence in that year, calculate the contribution of each generator to the Load Supplying Capability of the Turkish System. In calculating the Load Supplying Capability of the system, the System Operator is entitled to rely on information it has calculated relating to generator availability pursuant to Section 4.1.6 and information provided by the Generation Participant pursuant to Section 4.1.7.

For any Generation Facility that has not had a record of allocated FCCs for the year preceding the forecast year, an allocation of FCCs representing the contribution of that generator to forecast Load Supplying Capability (as calculated by the System Operator) will be made for the forecast year to the generator and that number of FCCs will be recorded to the account of that Generation Facility in the FCC Register. For all other generators an allocation of FCCs will be made based on the number of FCCs recorded in the FCC Register in accordance with Section 4.3.3.

4.3.2 Initial Allocation of FCCs to existing generators

In the month that is [6] months before the first allocation of FCCs, the System Operator will:

- Consult with the Authority on the number of Generation Facilities and their Generating Characteristics that are expected to be in operation in the year of first allocation and in the next [three] years;
- Consult with the Ministry on the level of Unserved Energy that will be acceptable in the year of first allocation and in the next [three] years; and then
- Calculate for each such year:
  - The LSC for that year; and
  - The number of FCCs to be allocated to each Generation Facility.

The System Operator will notify the FCC Administrator that it has re-calculated the Load Supplying Capability and the number of FCCs it has calculated for each Generating Facility. For each forecast year for which this Section 4.3.2 applies, the resultant allocation of FCCs will be deemed to have resulted from a general recalculation of FCCs in accordance with Section 4.3.6 regardless of the requirements specified in Section 4.3.3.

The FCC Administrator will record FCCs to the FCC Accounts of the relevant Generation Participants and will notify the Generation Participants of their allocation.

4.3.3 Ongoing Allocation of FCCs to existing Generators

Once FCCs have been awarded to a Generation Facility then the number of FCCs recorded for that Generation Facility will remain unchanged unless and until:

- A performance adjustment with respect to that Generation Facility is made;
- The Generation Facility undergoes a capacity re-rating; or
- A general recalculation occurs.

4.3.4 Performance Adjustment for an individual Generation Facility

Once each year, the System Operator will calculate a revised allocation of FCCs to each generator using the formula:

Basically, FCCs allocated to each plant are adjusted according to the following formula:

$$FCC_{new} \leftarrow FCC_{original} \times Availability_{new} / Availability_{original}$$

Where:

FCC_{new}	FCCs after adjustment
$FCC_{original}$	FCCs originally allocated to Generation Facility
$Availability_{new}$	Availability during the previous 60 months, measured as specified in the preceding section. For energy-constrained plant, lowest full-year production in the preceding 60 months. If Generation Facility has been operational for 36 months or more, but less than 60 months, the statistics refer to the full record of the operational period (for non-energy-constrained plant) or to worst 12-month period on record (for energy-constrained plant). If Generation Facility has been operational for less than 36 months, then $Availability_{new}$ is equal to $Availability_{original}$.
$Availability_{original}$	Availability used for the Generation Facility's original FCC allocation.

4.3.5 Capacity Re-rating for an individual Generation facility

At any time, a Generation Participant may notify the System Operator that substantial change has been made to the production facilities at a Generation Facility which has necessitated a re-rating of the Generation Facility. The Generation Participant will supply to the System Operator:

- Evidence of the change; and
- A notification of:
  - The new capacity at the Generation Facility;
  - The new expected availability of the Generation Facility; and
  - The date from which the new configuration of the Generation Facility will apply.

The System Operator will:

- Withdraw the previous registration of the Generation Facility and all FCCs previously awarded to the Generator;
- Register the facility as a new Generation Facility using the capacity and availability data provided by the Generation Participant;
- Recalculate the LSC of the system under the resulting new configuration; and
- Award FCCs to the Generation Facility based on the LSC calculation.

4.3.6 General recalculation of FCCs

[Three] years after the first allocation of FCCs and then after every [five] years, the System Operator will calculate the LSC of the system for the year that is four years after that year of calculation and will calculate the FCCs to be awarded to each Generation Facility. From the year (the target year) for which the calculation was made until the next such recalculation, each Generation Facility will be awarded the FCCs resulting from that calculation with the following restriction:

- The allocation of FCCs to any Generation Facility resulting from a general recalculation shall not be less than [95%] of the allocation applying in the period immediately prior to the recalculation.

4.3.7 Prospective Generator request of FCC allocation

When a Generation Participant seeks to connect a new Generation Facility pursuant to Section 4.3.1, it may request an allocation of FCCs for the year when it intends to connect and such allocation will be made by the System Operator and recorded by the FCC Administrator in accordance with Section 4.3.1 provided that:

- The Generation Participant has been granted a Licence for the proposed Generation Facility by the Authority; and

- The year specified in the Licence when the Generation Facility is expected to start generating is the same as or earlier than the year for which FCCs have been requested.

At the request of the Generation Participant, the number of FCCs calculated (or such lower number as the Generation Participant may request) will be recorded to the relevant Generation Account in the FCC Register.

4.3.8 Effect of Failure of a New Generator

Where the system operator becomes aware that a new generator has been awarded FCCs pursuant to Section 4.3.7 but is not generating energy then the System Operator will notify the relevant Generation Participant that it considers that the awarded FCCs should not be considered valid and, if not satisfied that the Generation Facility will be operational during the year in question, the System Operator will notify the FCC Administrator who will immediately award to the relevant Generation account a negative number of FCCs equivalent in magnitude to the number of FCCs previously awarded with respect to the non-performing Generation Facility.

Where the System Operator has requested that a non-performing Generation Facility be awarded negative FCCs and the Generation Participant subsequently requests that the availability of the Generation Facility be tested pursuant to Section 4.1.8 then, if the Generation facility demonstrates that it is now available, the System Operator will request that the FCC re-award the number of FCCs consistent with the level of capacity made available in the test.

5 PART FIVE: Registration and Transfer of Certificates

5.1 Certificate register

The FCC Administrator will establish and maintain a register (the FCC Register) in which will be recorded the FCC Accounts of each Market Participant and in each FCC Account will be recorded:

- The Generator Eligibility (in MW) for each Generation Facility registered to that Market Participant including any Generation Facilities that have been licensed and have rated MW to be available in a forward year and all Provisional Generation Facilities (to be constructed following any Capacity and Energy Auction that is intended to be run);
- The number of FCCs held for each year;
- All FCC transfers identified by their FCC transfer-IDs;
- All FCC transfer proposals identified by their FCC transfer-IDs; and
- All lapsed FCC transfer proposals identified by their FCC transfer-IDs.

5.2 Adjustment of Generator FCC allocations

Whenever the System Operator notifies the FCC Administrator that the number of FCCs to be allocated to any Generation Facilities has changed then, for each year from the year to which the change is applicable (which may be a forward year) until the last year for which the FCC Administrator had allocated FCCs to Generation Facilities, the FCC Administrator will subtract the previously prevailing FCCs and add the new figure that has been notified. The FCC Administrator will register the resultant FCCs into the FCC Account to which the Generation Facility is registered. For the avoidance of doubt, if the new allocation of FCCs is less than those recorded before then a negative number of FCCs will be registered into the FCC Account.

5.3 FCC Transfer

A FCC transfer between two Market Participants may be initiated by either of those parties by the submission of a FCC transfer proposal in a FCC transfer notification specifying:

- The party-ID of the FCC transfer submitting party, which must be the same as the party-ID of either the FCC Account to be credited or that of the FCC Account to be debited;
- The party-ID of the FCC Account intending to be debited with the FCCs (the first party-ID);

- ❑ The party-ID of the FCC Account intending to be credited with the FCCs (the second party-ID);
- ❑ The contracted FCC transfer expressed in MW; and
- ❑ The first year and the last year for which the transfer applies.

Not later than the first business day following receipt of the FCC transfer notification the FCC Administrator will record the FCC transfer proposal in the FCC Register with records for both the FCC transfer submitting party and the FCC transfer counter-party, giving a unique FCC transfer-ID to the FCC transfer proposal and will notify both Market Participants referred to in it of that FCC transfer-ID and of the content of the FCC transfer proposal.

At any time prior to midnight of the day of settlement calculation applying to a year identified in the FCC transfer proposal, the FCC transfer counter-party may submit a FCC transfer confirmation notice to the FCC Administrator that will identify the FCC transfer proposal using its unique FCC transfer-ID.

On receipt of a FCC Transfer confirmation notice, the FCC Administrator will record the contracted FCC transfer in the relevant FCC transfer proposal for each year identified in the FCC transfer proposal and will debit and credit the relevant FCC Accounts of each of the Market Participants identified in that FCC transfer proposal. The FCC transfer proposal will become a confirmed FCC transfer and the FCC Administrator will:

- ❑ Record the FCC transfer as such for the relevant FCC Accounts in the FCC Register;
- ❑ Notify both the FCC transfer submitting party and the FCC transfer counter-party of the number of FCCs transferred and the years to which the transfer applies.

If no FCC transfer confirmation notice is received by the FCC Administrator before the deadline then the relevant FCC transfer proposal will lapse and will be recorded as such in the FCC Register.

Each month, the FCC Administrator will submit a report to each Market Participant listing the details of FCC transfers where relevant to that Market Participant as follows:

- ❑ Each FCC transfer proposal yet to be confirmed;
- ❑ Each FCC transfer confirmed in the last month;
- ❑ Each FCC transfer proposal that lapsed in the last month.

6 PART SIX: Shortfall Payments and Financial Provisions

6.1 Section One: Shortfall Payments Process

6.1.1 FCC Surplus or deficit calculation

On the [11th] Day of each calendar month the FCC Administrator will procure from the MFSC with respect to the preceding calendar month:

- The hour when the highest demand level was recorded in the month; and
- For each LR Participant:
  - The energy recorded as consumed by the customers of the LR Participant; and
  - The energy recorded as consumed by the customers of the LR Participant in the hour when demand was at its highest.

For the purposes of the Section 6.1.1 the following shall be included as net energy consumed by customers of an LR Participant:

- The net energy flowing through a connection point of the national transmission system to a neighbour country's transmission system and:
  - Net imports of energy into Turkey will be deemed as a reduction in net consumption of the consumers of the relevant LR Participant; and
  - Net exports of energy from Turkey will be deemed as an increase in net consumption of the consumers of the relevant LR Participant.
- The energy generated by an autoproducer or autoproducer group or other small generating facility where the relevant generation facilities have not been registered as a Generator in line with section 2.1.1 will be treated as a reduction in net consumption of the consumers of the relevant LR Participant;.

The FCC Administrator will record this information in the FCC Accounts of the relevant LR Participants.

The FCC Administrator will then examine the FCC Register and for each FCC Account (whether an FCC Account of a Generation Participant or a LR Participant) it will calculate the surplus or deficit of FCCs held as well as other relevant variables on the [11th] Day of the month using the formulae:

$$Req_A = Max\ (DD_{peakA},\ \sum_{m=1}^{12} DD_{mA}/8760/LF*100)$$

$$SD_A = FCC_A - Req_A + SFCC_A$$

$$Rec_A = Max\ (0,\ Min\ (FCC_A,\ Req_A))$$

Where:

A	FCC Account subscript
Req_A	The required number of FCCs that must be in the FCC Account to satisfy the LR Participant's security of supply obligations
FCC_A	The number of FCCs recorded in FCC Account "*A*" on the day of calculation
$SFCC_A$	the number of the surplus FCCs to be awarded to each FCC Account "*A*" that is in shortfall calculated in accordance with Section 6.1.2, which will apply if the Authority has determined that anti-hoarding measures should be in place
DD_{peakA}	The energy recorded as consumed by the customers of the LR "A" in the hour when demand was at its highest in the last month
DD_{mA}	The energy recorded as consumed by the customers of the LR "A" in month "m" where "m" is a month between 12 months and 1 month before the month when the calculation was made
LF	The national annual Load Factor of Turkey
SD_A	The surplus or deficit of FCCs in FCC Account "*A*"
Rec_A	The basis on which an account holder can receive money accumulated from payment of FCC Obligations

6.1.2 FCC shortfall calculation

For each FCC Account that is in deficit ($SD_A < 0$), the FCC Administrator will calculate an invoice amount for the relevant Market Participant for an amount (the FCC Obligation, "FCO_A") calculated as:

$$FCO_A = |SD_A| * Marginal\ Value\ of\ Availability$$

6.1.3 Application of shortfall monies

The FCC Administrator will sum the FCC Obligations charged to each Market Participant and, if the sum is greater than zero, will calculate the rebate payment rate (*Reb*) using the formula:

$$Reb = \sum_{i=1}^{N} FCO_i / \sum_{j=1}^{T} Rec_j$$

Where:

N	The total number of FCC Accounts from which FCC Obligations are due
T	All FCC Accounts
FCO_i	The FCC Obligation payments received by the FCC Administrator from FCC Account "*i*"
Rec_j	The basis on which FCC Account "*j*" receives repayment of money paid in from FCC Obligation payments

The FCC Administrator will calculate the amount of rebate payable (Pay_j) to each FCC Account "*j*" using the formula:

$$Pay_j = Reb * Rec_j$$

6.1.4 Anti-hoarding measure

The Authority will from time to time determine:

- ❑ Anti-hoarding measures are applicable;
- ❑ The month from which anti-hoarding measures should apply;
- ❑ The month up till when anti-hoarding measures will continue to apply; and
- ❑ The maximum Margin of surplus FCCs that an account may reasonably hold, which will be in the form of a percentage figure.

If the Authority determines that anti-hoarding measures are applicable it will publish a rationale for the decision stating that, in its reasonable opinion either:

- ❑ Independent generators, who face a definable risk that failure of their plant or investment will lead to FCCs being removed from their FCC Accounts, are being unduly discouraged from participating in the

Turkish energy market because there are not sufficient opportunities to acquire FCCs in the open market due to hoarding by other market participants; or

- LR Participants are unable to supply additional Eligible Consumers because there are insufficient FCCs available in the open market due to hoarding by other market participants.

During the period when anti-hoarding measures are applicable, the FCC Administrator will take the following additional steps:

- It will calculate the required number of FCCs (Req_A) with respect to each FCC Account "*A*" in accordance with the formula specified in Section 6.1.1;

- It will calculate the Normal number of FCCs ($Norm_A$) that each FCC Account "*A*" should hold using the formula:

$$Norm_A = Req_A * (100 + Margin) / 100$$

Where:

Margin	The Margin of surplus FCCs that the Authority has notified as the amount that could reasonably be held in a FCC Account

- It will calculate the surplus ($Surplus_A$) that each FCC Account "*A*" holds and the total available surplus (Tot) using the formulae:

$$Surplus_A = Max\ (FCC_A - Norm_A\ ,\ 0)$$

$$Tot = \sum_{A1} Surplus_A$$

Where:

FCC_A	The number of FCCs recorded in FCC Account "*A*" on the day of calculation

- It will calculate the shortfalls (SF_A) of each FCC Account "*A*" that has insufficient FCCs and the total shortfall of FCCs (Shortfall) using the formulae:

$$SF_A = Min\ (FCC_A - Req_A\ ,\ 0)$$

$$Shortfall = \sum_{A1} Rec_A \quad if\ SF_A < 0$$

Where:

Rec_A	The basis on which an account holder can receive money accumulated from payment of FCC Obligations as calculated in accordance with the formula specified in Section 6.1.1

- If the total shortfall is greater than zero then the FCC Administrator will calculate the number of the surplus FCCs to be awarded to each FCC Account "*A*" that is in shortfall ($SFCC_A$) by calculating the rate per FCC held in each affected FCC account (SFRate) using the formulae:

$$SFRate = Tot / Shortfall$$

$$SFCC_A = Rec_A * SFRate$$

6.1.5 FCC Administrator Charge

The Authority will determine the rate of payment that the FCC Administrator may levy on Market Participants to cover the cost of administering the FCCs. The FCC operation charge ($FCCO_A$) with respect to each FCC Account "A" will be calculated using the formula:

$$FCCO_A = Req_A * R$$

Where:

Req_A	The required number of FCCs that must be in the FCC Account to satisfy an LR Participant's security of supply obligations
R	The rate per required FCC that the FCC Administrator may charge for administering FCCs

6.2 Section Two: Credit Cover

6.2.1 Obligation to provide Credit Cover

The FCC Administrator shall receive credit cover from Market Participants for their liabilities arising from FCC deficit processes in the name of TEIAS.

In case of failure to provide the required credit cover, the registration process for Generation Facilities and LR Facilities shall not be completed.

6.2.2 Calculation of Credit Cover

The credit cover to be deposited by each market participant shall be calculated in accordance with the following formula:

$$TT_A = RMD_A * TO$$

Where:

TT_A	the credit cover that needs to be deposited by a market participant, "A"
RMD_k	Value at Risk for a market participant, "k", as calculated in line with the provisions of Section 6.2.3
TO	Credit Cover Ratio with value 1

6.2.3 Calculation of Value at Risk

The Value at Risk (RMD_A) for each Market Participant "A" shall be calculated in accordance with the following formula:

$$RMD_A = Min\ (-MVA * (Req_A - FCC_A)\ ,\ 0)$$

Where:

MVA	Marginal Value of Availability
Req_A	The most recent calculation (made in accordance with Section 6.1.1) of the required number of FCCs that must be in the FCC Account to satisfy the LR Participant's security of supply obligations calculated or else zero in the case of a Generation Participant
FCC_A	The number of FCCs recorded in FCC Account "*A*" on the day of calculation

6.2.4 Credit Cover Instruments

The instruments that may be accepted as credit cover shall be as follows:

- ❑ Turkish currency in effect.
- ❑ Irrevocable and non-time limited letter of guarantees in compliance with the related bank legislation and issued by banks and special finance houses operating in Turkey

- State Domestic Borrowing Bonds issued by the Undersecretariat of Treasury or other documents issued in place of these.
- Irrevocable and non-time limited letter of guarantees issued by foreign banks that are allowed to operate in Turkey in compliance with relevant banking legislation, banks those operate in Turkey based on counter guarantee of foreign banks or similar financial institutions, private financial institutions.

State Domestic Borrowing Bonds and the documents, that are issued in place of these and exported with interest added on their nominal values, shall be deemed as credit cover at their sales values corresponding to the face value.

The credit covers issued can be merged with other instruments that are deemed as credit cover. All the incurred costs associated with credit covers shall be met by related market participant.

6.3 Section Three: Notifications, Invoicing, Payments, Failure to Pay

6.3.1 Notifications

By the [11th day] of each month, the FCC Administrator shall send to each Market Participant a notification showing the amount which, as a result of the FCC shortfall calculations, is to be paid by a Market Participant to the FCC Administrator or to that to be paid to a Market Participant by the FCC Administrator for the related invoicing period.

The amounts stated in the notification prepared by the FCC Administrator shall include the taxes and fees as required by the relevant legislation.

The notification sent by the FCC Administrator to Market Participants shall include the following items:

- Receivables as a result of FCC Obligation payments for the month,
- Retrospective correction factor,
- Rebates payable from monies collected through FCC Obligation payments,
- Non-collected receivables share.
- FCC operation charges.

6.3.2 Corrections in notifications

If a Market Participant identifies any numeric errors in the notifications, it shall file objections. The FCC Administrator will endeavour to resolve any objection submitted before 16:00 hours of the 14th day of the month by 16:00 hours of the 18th

day of the month in accordance with this Section 6.3.2 but objections submitted after that time will be considered in accordance with Section 7.1.1.

If an objection is considered correct by the FCC Administrator before 16:00 hours of the 18th day of the month then invoices shall be based on the amounts in the corrected notifications. If the FCC Administrator does not consider an objection valid and has determined this before 16:00 hours of the 18th day of the month then it will notify the relevant Market Participant at the same time as it issues invoices.

If an objection is not determined by the FCC Administrator before 16:00 hours of the 18th day of the month then the procedures described in Section 7.1.1 shall apply.

6.3.3 Invoicing

By the 18th day of the month in which a notification is sent, the FCC Administrator shall send the invoice based on the amounts in the notification or in case of any objection to notification is deemed correct, the amounts in the corrected notifications, to the relevant Market Participant who will make the payment.

By the 18th day of the month in which a notification is sent, the Market Participants, who will receive payments, shall send an invoice to the FCC Administrator, based on the amounts in the settlement notification or in case any objection to notification is deemed correct, the amounts in the corrected notifications.

6.3.4 Payments and Collections

The payments for invoices sent to Market Participants as a result of the shortfall calculation process shall be made by Market Participants to the FCC Administrator within 5 days following the invoice notification date.

The payments for invoices sent to the FCC Administrator by the Market Participants shall be made by the FCC Administrator to Market Participants within 7 days of the invoice notification date.

6.3.5 Failure to Pay

If a Market Participant fails to pay the invoiced amounts within 5 days following the invoice notification date, a daily interest rate, determined in line with the provisions of Article 51 of Law no. 6183 regarding the Procedures for the Collection of Public Receivables, shall become applicable.

If a Market Participant fails to pay the invoice amount within 15 days following the invoice notification date, the Market Participant shall be deemed to be in default. The Market Participants in default shall be subject to the following procedures, in addition to any other legal action required:

- The credit cover submitted by the Market Participant in default shall be cashed by the FCC Administrator to be used to net-off all due payables as of 14:00 of the working day following the last payment day.

- The Market Participant shall be notified by the FCC Administrator to increase the credit cover amount to the initial level as of the invoice amount that was in default and shall be asked to cover the credit cover within the 5th of the month following the invoice.

If the Market Participant fails to complete the credit cover amount despite the above notification;

- The Authority shall be notified about the Market Participant in default.
- The FCCs registered to the FCC Account of the Market Participant in default shall be removed and may be offered to other Market Participants in such manner as the Authority may direct.
- If the cashed credit cover is more than all due payables of the Market Participant in default, the remaining portion shall be returned to the Market Participant.
- If the cashed credit cover is less than all due payables of the Market Participant in default, the non-collected amounts shall be collected from other Market Participants as the non-collected receivables share, where the share of each such Market Participant shall be in direct proportion to its share of all rebates payable from monies collected through FCC Obligation payments.
- The late payment interest shall continue to be applied on the portion of the non-collected amounts and legal proceedings shall be commenced for collection.
- If the receivables, that are not collected and have been paid by other Market Participants, are collected at a later date, the collected amounts shall be repaid to other Market Participants on the same basis as the share of all rebates payable from monies collected through FCC Obligation payments.

6.3.6 Return of Credit Cover

If the total amount of credit cover submitted by a Market Participant to the FCC Administrator is higher than the total value at risk for the same Market Participant, a portion of the credit cover, which will not exceed the difference between the total credit cover amount and value at risk amount of the Market Participant, shall be returned to the Market Participant by the FCC Administrator upon the request of the relevant Market Participant.

7 PART SEVEN: Other Provisions

7.1 Data to be provided to market participants

The FCC Administrator shall notify Market Participants of all data regarding FCC arrangements as soon as reasonably possible and shall similarly publish all information that is contemplated for publication as soon as reasonably possible. All data within the scope of information rights law that are of a commercial secret nature shall not be subject to the provisions of this Section.

7.1.1 Objections

A Market Participant may object to notifications and invoices for an invoicing period. The applications for objections shall be filed in writing to the FCC Administrator within 8 days following the date of notification. In their applications for objections, the Market Participants shall indicate their reasons for such objection.

The objections to settlement notifications and/or invoices shall not stop the obligation to pay the invoice in full.

Depending on the reason for the objection, the FCC Administrator shall investigate the reasons for such objection through communicating with the relevant department of TEIAS or the relevant Distribution Licensee if the objection is regarding metered data; or by examination of the registration data and FCC accounts in all other cases.

The objections shall be brought to conclusion by FCC Administrator within 20 working days. If the objection is deemed to be valid and/or if the FCC Administrator determines an error without any objection, the relevant corrective actions shall be taken.

7.1.2 Corrections

If objections by a Market Participant regarding notifications or invoices are deemed valid by the FCC Administrator as a result of its investigations, the FCC Administrator shall make the required corrections. The payment due to or from the Market Participant as a result of the correction shall be included as the "retrospective correction factor" in the notifications and invoices corresponding to the first invoicing period following the finalization of the objection decision by the FCC Administrator and written notification thereof to the relevant Market Participant.

7.2 Failure to fulfil the obligations

If the Authority finds that the FCC Administrator has been engaged in discriminatory conduct while implementing this Regulation, the sanctions shall be imposed on TEIAS in accordance with Article 11 of the Law.

If legal entities fail to fulfil their obligations within the scope of this Regulation, the FCC Administrator shall send a written notification to the relevant legal entities, stating that the violation should be stopped within 15 days. In case the violation is not stopped within this time period, the FCC Administrator shall prepare a report providing the details of the infringement and apply to the Authority.

The Authority shall review the report and may decide to impose sanctions on the relevant legal entity in line with the provisions of Article 11 of the Law.

7.3 Transfer and assignment

The transfer and assignment of obligations under the scope of this Regulation shall not be accepted by the FCC Administrator. The transfer and assignment of the rights under the scope of this Regulation might be accepted subject to FCC Administrator's approval.

7.4 Notification

The provisions of Notifications Law no. 7201 shall be applicable for all notifications and invoices under this Regulation.

7.5 Recourse

TEIAS, in accordance with the provisions of Obligations Law no. 818 dated 22 April 1926, shall reserve the right to recourse the related parties any and all loss it may suffer due to implementation of this Regulation.

7.6 Emergency and Force Majeure

The provisions of this Regulation shall be continued to apply under emergency and force majeure states.

8 Provisional Articles and Final Provisions

8.1 Registration of Market Participants

The market participants that have registered with the MFSC shall complete their registrations with the FCC Administrator within 1 month following the publication date of this Regulation in line with the provisions of this Regulation.

The licensees shall complete the registration of their legal entities, Generation Facilities, LR Facilities and metering systems not later than one month following the publication of this Regulation.

8.2 Transfer of FCCs from Transition Contracts

Before the start of each year, the Authority will notify the FCC Administrator of the following:

- The identity of each Generation Facility that is subject to a Transition Contract;
- For that Generation Facilities, the Percentage of the FCCs that is allocated to the Transition Contract; and
- The share of Transition Contract energy to be allocated to each Distribution Licensee.

For each such Generation Facility, the FCC Administrator will multiply the total FCCs allocated to each generator by the notified Percentage of the Available Capacity to determine how many FCCs should be transferred out of the relevant FCC Accounts. The FCC Administrator will register these FCCs as negative FCCs in the relevant FCC Accounts.

The FCC Administrator will sum the FCCs so calculated and, for each Distribution Licensee, it will apply the notified share of Transition Contract energy to this FCC total. The FCC Administrator will register the resultant FCCs into the FCC Account of each relevant Distribution Licensee.

The FCC Administrator will then notify each affected Market Participant of the number of FCCs either debited or credited to its FCC Account for the year.

8.3 Obligations of distribution licensees with regard to accepting customers without FCCs

Until the Authority determines that this Section 8.3 should no longer apply, a Distribution Licensee may apply to the Authority for relief from certain obligations regarding Eligible Consumers who had been supplied by another supplier but who then seek to return to the Distribution Licensee to be supplied on a regulated tariff.

To be granted relief, the Distribution Licensee must demonstrate to the Authority that:

- It does not hold or will not hold sufficient FCCs to accept the proffered load without incurring an FCC Obligation payment; and
- Either:
  - There are insufficient FCCs nationally to meet the requirements for security of supply such that it will be difficult for the Distribution Licensee to acquire additional FCCs without undue cost; or
  - There are sufficient FCCs nationally but traded markets for FCCs are insufficiently developed for the Distribution Licensee to acquire additional certificates.

If the Authority determines that the affected Distribution Licensee is entitled to relief from certain obligations it may allow:

- The Distribution Licensee to levy a surcharge on the Eligible Consumer in question; or
- To refuse to supply the Eligible Customer until a specified number of months (which shall be no more than [36]) has elapsed.

8.4 Transitional credit cover arrangements

Until the Authority determines that a Distribution Licensee should no longer be relieved of its obligations to provide credit cover, the provisions of Section 6.2.1 will not apply with respect to that Distribution Licensee.

The Authority will determine when a Distribution Licensee should be required to provide credit cover based on a reasonable assessment of the ability of that licensee to procure financial securities on normal commercial terms.

8.5 Effectiveness

This Regulation shall become effective as of its publication date.

8.6 Enforcement

The provisions of this regulation shall be enforced by President.