General Framework for Secondary Control Service by CIPU Technical Units

2019-2021

Version of January 2019

Between

Elia Transmission Belgium, a limited liability company incorporated under Belgian law, with registered office at Boulevard de l'Empereur 20, 1000 Brussels, Belgium, registered with the Register of Legal Entities (Brussels) under number 0731.852.231, and represented by **Patrick de Leener** and **Chris Peeters**, authorised signatories;

Hereinafter referred to as "ELIA"

and

Company name	
Company Registration Number	
Address Head Office	
V.A.T. Number	
Represented by	
Contract Reference	

Hereinafter referred to as the "BSP",

ELIA and the BSP are referred to as "The Parties".

This version of the General framework for Secondary Control Service by CIPU Technical Units (Hereinafter referred to as "General Framework") replaces the previous version of the General framework for Secondary Control Service signed between 20/12/2017 and 31/12/2018 by the Parties (Hereinafter referred to "Initial General Framework R2").

All auctions organized as from 20/12/2018 and the resulting contracted volumes are subject to this General Framework R2. All R2 Power contracted before 20/12/2018 is still subject to the Initial General Framework R2.

BSPs who did not have an Initial General Framework R2 with ELIA have to sign this version only as it replaces the initial version.

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WHEREAS:

ELIA provides for the operation of the transmission grid over which it has right of ownership – or, at least, user rights (hereinafter referred to as "Transmission Grid");

ELIA has been appointed as transmission grid operator, in accordance with the law of 29 April 1999 concerning the liberalisation of the electricity market and supervises the safety, reliability and efficiency of the Transmission Grid;

ELIA must therefore ensure the provision of the requisite ancillary services – in particular Secondary Control– in accordance with Art. 243 *et seq* of the Grid Code;

In this context ELIA purchases the Secondary Control Service and/or Variant Services, in order to comply with:

- the rules and recommendations of ENTSO-E OH Policy 1

and

- the quantity of Secondary Control Power needed to guarantee the safety, the reliability, and the efficiency of the Transmission Grid proposed by ELIA and validated by CREG cfr Art. 233 of the Grid Code

The BSP is a CIPU holder for the requisite Secondary Control Production Units capable of providing ELIA with the Service and to supply (upwards and/or downwards) Secondary Control Power to the Transmission Grid, and thus to participate in the Secondary Control Service by generators (hereinafter referred to as "Service") in accordance with Art. 243 et seq of the Grid Code and with the rules and recommendations of ENTSO-E;

ELIA and CREG will define in the Balancing Rules and the Dossier Volumes the repartition of Primary and Secondary Control Power to be procured from BSPs holding a valid General Framework for the Service;

The Service is procured through an Open Qualification Procedure in which auctions can be organized subject to this General Framework. This General Framework for the Service is a multiannual Framework that can be updated when required;

This General framework for Secondary Control Service applies at all times to all parties that submit a valid candidature to ELIA, within the framework of an Open Qualification procedure published by ELIA on ***http://ted.europa.eu/TED/main/HomePage.do***.

The present General framework for the Service lays down the mutual rights and obligations of ELIA and the BSP in relation to the procurement of Secondary Control Power and the eventual provision by the BSP of the Secondary Control Power within the Control Area.

1 DEFINITIONS

Access Responsible Party or "ARP"	Any natural or legal person listed in the register of Access Responsible Parties in accordance with the Federal Grid Code for Transmission. Also referred as Balance Responsible Party or “BRP”;
Balancing Rules	A document, validated by the CREG, describing the market operation rules for the compensation of quarter-hourly imbalances, pursuant to Article 159,§1 of the Federal Grid Code;
Balancing Service Provider or “BSP”	Any natural person or legal entity, as defined in article 2 (6) of the Electricity Balancing Guideline, and with whom ELIA has concluded a General Framework to provide Balancing Services;
Balancing Services	As defined in article 2 (3) of the Electricity Balancing Guideline;
Base	A Period defined as all hours of the day and all days of the year, equivalent to the superposition of the Long Off Peak and Peak Periods;
Bidding Obligations for Capacity Bids	The obligations to be respected by the BSP when submitting Capacity Bids;
Capacity Bid(s)	A number of combinations of offered volumes (asymmetrical power band) in combination with a price, allowing ELIA to procure the Service for a defined Delivery Period;
CIPU Technical Unit	A production unit that is included in a CIPU contract;
Clean Spark Spread	A value in €/MWh calculated as the difference between the hourly market price of electricity per MWh and the sum for a considered production unit of the fuel cost per MWh of electricity generated for the same hour and the cost of the emissions rights corresponding to the generation of one MWh of electricity for the same hour
Confirmed Transfer of Obligation	A quantity of Reserve Power to be made available by a Counterpart BSP to ELIA resulting from a transfer of obligations from the BSP to said Counterpart BSP, declared to ELIA and accepted by ELIA;
Contracted Secondary Control Power or “Contracted R2”	The quantity of the Service (in MW) contracted by ELIA with the BSP for a defined Delivery Period;
Control Area	The area in which a transmission grid operator controls the permanent balance between demand and offer of electricity, taking into account the exchanges of active power with the control areas of other transmission grid operators;

Counterpart BSP	A party holding a valid General Framework for the Service that is allowed to perform Transfers of Obligations;
CREG	The federal regulating authority of gas and electricity markets in Belgium;
Delivery Period	The timeframe and Period in which the corresponding reserve power has to be made available to ELIA;
Dossier Volumes	A document, validated by the CREG, defining the required volumes of FCR, secondary and tertiary Control Power to be procured by ELIA, pursuant to Article 233, of the Federal Grid Code;
Efficiency	A value in % that qualifies the capacity of a Production Unit to convert a MWh of fuel into a MWh of electricity. A Production Unit with a 50% Efficiency needs 2 MWh of fuel in order to generate 1 MWh of electricity;
Elia Control Area	The area in which ELIA controls the permanent balance between demand and offer of electricity, taking into account the exchanges of active power with the control areas of other transmission grid operators;
Energy Bid(s)	A combination of volumes (in MW) and activation prices (in €/MWh), nominated by the BSP to ELIA;
ENTSO-E	European Network of Transmission System Operators for Electricity;
Forced Outage	An unforeseen and unpredictable (full or partial) outage of Technical Units making it impossible for the BSP to deliver (part of) the Service;
Federal Grid Code	The provisions of the Royal Decree of 19 December 2002, as amended from time to time, regarding the technical regulations for operating an electricity grid and access thereto;
Frequency Containment Reserve or “FCR”	The automated and local increase/decrease of active power in reaction to a frequency deviation from the frequency of 50,00Hz. All Service Types of Frequency Containment Reserve together lead to linear reaction for Frequency Deviations between -200mHz and +200mHz, as described by ENTSO-E;
General Framework	The present General Framework for Secondary Control Service by CIPU Technical Units;
General Terms & Conditions	The General Conditions governing ancillary services at the time valid Capacity Bid is made for the applicable Delivery Period. At the moment of the signature of the General framework, this is the version of 13/05/2013. All references in the General framework are made based on this version;

Local Procurement Platform or Local Platform	Web-based procurement platform on which ELIA will organize, prior to each Delivery Period, its auction to procure a volume of balancing reserves as defined in the Dossier Volume;
Long Off Peak or LOP	A Period defined as follows : the hours between 08:00 hrs and 20:00 hrs for all 7 days of the week and the hours between 08:00 hrs and 20:00 hrs on Saturday and Sunday;
R2 Missing MW upwards or "R2up_missing" and/or R2 Missing MW downwards or "R2down_missing"	The difference (in MW) between Secondary Control Power Obligation and Secondary Control Power Made Available by the BSP;
Month	Period starting at 0hrs the 1st of the month until 24hrs the last day of the month
Monthly Remuneration	The remuneration for the reservation of the Service, as specified in the General Framework, calculated on a monthly basis irrespective of the Delivery Period of the products
Open Qualification Procedure	A pre-qualification procedure in which prospective BSPs are screened based on criteria set by ELIA in a publication on ted.europe.eu.
Peak or "P"	A Period defined as follows: the hours between 08:00 hrs and 20:00 hrs during weekdays (from Monday till Friday, including holidays)
Period	A tariff period : Peak (P), Long Off-Peak (LOP) hours or Base (BASE) hours;
Prequalification Procedure	The procedure to be completed in order for a Production Unit and/or Delivery Point and/or Providing Group to be pre-qualified by ELIA;
Secondary Control or "R2"	The increase/decrease of active power based on a signal sent by ELIA. Also referred in the Guideline on electricity balancing by the term "Automatic Frequency Restoration Reserve" or "aFRR";
Secondary Control Power Made Available	the quantity of Secondary Control Power (in MW) of the Service actually made available to ELIA by The BSP in relation to and under the terms of the present General framework: ▪ "Upward Secondary Control Power" "R2up_mad" : a reserve of power enabling a power plant to increase its output in case of an activation by ELIA; ▪ "Downward Secondary Control Power" "R2down_mad" : a reserve of power enabling a power plant to decrease its output in case of an activation by ELIA.
Secondary Control Power Obligation or "R2 Obligation",	The sum of Short Term Contracted Secondary Control Power and Confirmed Transfers of Obligation of the Service in relation to the

	General Framework. This can be both upwards "R2up_obligation" and/or downwards "R2down_obligation":
Secondary Control Power	A quantity of Secondary Control expressed in MW.
Secondary Control Power Required or "ΔP" (upwards or downwards)	The Secondary Control Power of the Service to be supplied by the BSP to ELIA;
Secondary Control Power Supplied (upwards or downwards):	The quantity of Secondary Control Power of the Service physically supplied by the BSP to the Transmission Grid.
Secondary Control Production Unit	A production unit connected to the Transmission Grid that is technically capable of making available Secondary Control Power and supplying (upwards and/or downwards) Secondary Control Power as mentioned in the General Framework. A list of the Secondary Control Production Units is agreed and kept up to date between both parties;
Secondary Control Service by CIPU Technical Units	The Secondary Control service supplied by CIPU Technical Units and that is governed by the General Framework for Secondary Control Service, comprising at least the following: ▪ the provision of the Secondary Control Power Obligations; and ▪ the activation of this Secondary Control Power (activated upwards and/or downwards);
signal_$\Delta Psec_{tot}$	The instantaneous value, which: • is calculated by ELIA in each calculation cycle, and • is made available to the BSP, and • corresponds to the part of the Secondary Control Power to be activated (upwards or downwards) by the BSP in the Control Area as a whole.
Transfer of Obligations	Part or all of the quantity of contracted reserve power that the BSP transfers to a Counterpart BSP;
Transmission Grid	The electricity transport system for which ELIA has proprietary rights or at least user or operating rights and for which ELIA is the designated transmission grid operator;
Week	Period starting at 0hrs Monday morning until 24hrs the next Sunday

2 Application of the General Framework

2.1. The BSP makes best effort (not being unreasonable) by signature of the General Framework to participate in the procurements for the Service throughout the validity period of the General Framework, i.e. from General Framework signature to 31 December 2021, and in case of Contracted Secondary Control Power for a Delivery Period, to provide the Service throughout this Delivery Period. This does not limit the BSP in any way to optimize its Secondary Control by CIPU Technical Units portfolio and thus withdraw such Technical Unit from Annex 5.

2.2. The performance of the General Framework is governed by the General Terms & Conditions. Updates of the General Terms & Conditions are done in accordance with the rules set forth in Chapter .9.

2.3. The clauses of the General Framework will be supplemented by the General Terms & Conditions. If there is a contradiction between the General Framework and the General Terms & Conditions, the General Framework shall take precedence.

2.4. The BSP declares that he has received a copy of the General Terms & Conditions, which can also be consulted on ELIA's website (www.elia.be) and that he accepts them. The BSP hereby renounces his own general conditions, special or otherwise, regardless of the time when they were remitted or the form of their remittance.

2.5. The General Framework come into force subject to the conditions set forth in the Open Qualification Procedure.

2.6. ELIA is entitled to evaluate, at any time during the validity period of the General Framework, whether the BSP complies with the conditions mentioned in Art. 2.5. For the avoidance of doubt, this does not entail any right for ELIA to physically access BSP's assets without prejudice to the right to access the BSP's connection installations. If it is confirmed that the BSP no longer complies with these conditions, ELIA will notify the BSP and the General Framework will be suspended. If after 15 working days the BSP remains uncompliant to these conditions, the General Framework will be terminated without prior approval by a court of law in accordance with the terms of Art. 11 of the General Conditions.

3 Procurement and provision of the Service

3.1. The General Framework governs the general agreement between the Parties regarding the procurement of the Service by ELIA and the rights and obligations of the Parties with regard to the provision of the Service, in accordance with the terms and specifications hereof.

3.2. Within the framework of these General Framework, ELIA will procure the Service, consisting of different types of the Secondary Control provided by TSO connected generators:

a) Upward Secondary Control Power, during Peak and Long-Off Peak hours
b) Downward Secondary Control Power, during Peak and Long-Off Peak hours

The repartition of the total procured volume by ELIA, between these different types of the Service and Variant Services of the R2 products, will be determined based on the awarding criteria as defined in art. 3.3.2.

3.3. For the purpose of determining the Secondary Control Power Obligations, the quantity of Contracted Secondary Control Power (hereinafter referred to as "Contracted R2") is determined as follows:

3.3.1. Principles

- ELIA will contract its Secondary Control Power from BSPs holding a valid General Framework. The total volume to be procured by ELIA is determined and fixed in the Dossier Volumes and the Balancing Rules, both approved by the CREG.

- To participate in an auction for the Service organized by ELIA, The BSP must have signed a valid General Framework with ELIA which is valid at least until the end of the applicable Delivery Period.
  - If the conditions set forth in the Open Qualification Procedure are not valid during the entire Delivery Period, the BSP should reapply via the Open Qualification Procedure and sign a new General Framework for the Service with ELIA
  - The BSP allows ELIA to publish aggregated and anonymized information relating to the Long Term and Short Term results on ELIA's website.
- The present General Framework lays down the conditions and procedures for participation in the procurement of the Service.

3.3.2. Procedure for participation in the Short Term procurement

ELIA will duly inform all BSPs of the specific conditions for the procurement of the Service. These conditions will contain at least what follows:

- The auctioning for Delivery Period P will take place earliest at the start of Delivery Period P-1. The volumes and Delivery Periods put out to tender will be published by ELIA on its website.
- The platform and/or formats, are defined by ELIA and are published on ELIA's website (www.elia.be)
- Valid Capacity Bids will consist of:
  - a volume for the Service, being Upward and/or Downward Secondary Control Power (eventually combined with a type of Primary Control)
  - a unit price for the reservation in €/MW/h
  - if applicable, some optional conditions set by the BSP as part of an ELIA-pre-defined list of eligible conditions
- The permitted number of Capacity Bid(s) is unlimited. When participating , the BSP will make its best efforts (not being unreasonable) to introduce the largest number of (if necessary mutually exclusive) combinations of Capacity Bid(s) possible, even if the offered price does not change for different volumes and/or combinations of Capacity Bid(s), in order to facilitate the determination of the overall lowest-cost choice.
- Capacity Bids will be at least 1MW and any additional capacity must be offered in minimum increments of ±1 MW.
- For the duration of the entire applicable Delivery Period, the provision of Secondary Control Power is portfolio based, meaning that Capacity Bids are linked to the portfolio of Secondary Control Production Units agreed between both Parties as defined in art. 4.2, but not to a specific Production Unit.
- A Capacity Bid is a firm commitment by the BSP to deliver the corresponding Secondary Control Power Obligation at the specified unit price if awarded by ELIA as part of the procurement process. A BSP shall not use the offered capacity in any way until he has been notified of the outcome of the tender or until the deadline for communication of the awarded R2, as specified with the call for tender or in the bidding instructions, has passed.
- At the moment that ELIA has received all valid Capacity Bids, ELIA might ask a modification of some specific Capacity Bids. This in order to guarantee the optimal economical selection. In case insufficient volume has been offered to ELIA, ELIA might contact all parties with a General

Framework for Secondary Control and ask to make more Secondary Control Power available. The BSP will make its best efforts to respond to such request.

- Once a Capacity Bid is awarded, the award decision will be communicated to the BSP by ELIA. As from that moment the awarded Bid is considered to be the Contracted Secondary Control Power. ELIA will publish relevant, aggregated and anonymized information regarding the awarded volumes and prices on their website.
- The awarding criteria are published on ELIA's website.

3.3.3. For every Capacity Bid awarded by ELIA, the BSP will receive an order confirmation stating the volume, the Delivery Period and the amount of remuneration. Consequences of Contracted R2:
If a Capacity Bid is awarded, the BSP undertakes to supply the Service to be provided for the entire duration of the applicable Delivery Period (without further action by ELIA).

This implies:

- The quantity of Contracted Secondary Control Power is a part of the Secondary Control Power Obligation for the application of all provisions of the present General Framework.
- Consequently, the Secondary Control Power Made Available to be activated by the BSP on his Production Units, the record and monitoring of the provision of the Service, the resulting penalties for non-compliance according to Ch. 7 among other provisions, will be based on the R2 Obligations.
- The remuneration for the Contracted R2 will be based on the offered unit price as described in Art.6.2.

3.4. Transfer of Obligations between the BSP and a Counterpart BSP

3.4.1. Principles

- In order to grant the BSP more flexibility and to allow him to optimize the cost of delivering the Service, for instance but not exclusively in case of a Forced Outage or when having to carry out planned or unplanned maintenance, ELIA gives the BSP the possibility to transfer in day-ahead or in intraday for a certain quarter-hour part or all of his R2 Obligations in the framework of the present General Framework to one or several Counterpart BSP(s) to the date of the performance of the Obligation.
- Similarly, the BSP may agree with a Counterpart BSP to make an additional quantity of Secondary Control Power available to ELIA as a result of a Transfer of Obligations from a Counterpart BSP to the BSP.
- The BSP should always, even in case of Forced Outage, maintain his Contracted Power available to ELIA either by providing its Obligations by himself or by transferring part or all of them to a Counterpart BSP.
- The Transfer of Obligations may concern both the Upward Secondary Control Power and the Downward Secondary Control Power as mentioned in Art. 3.2.
- The present General Framework lays down the conditions under which the Transfer of Obligations may occur with regards to ELIA and defines the rules that ELIA, the BSP and the Counterpart BSP must observe in the execution of said transfer.
- The conditions, financial or otherwise, of the Transfer of Obligations between the BSP and the Counterpart BSP are to be arranged between them. ELIA is not to be informed nor involved in any decision in this respect beyond the observance of the rules laid down in Annex 2.

- Likewise, any dispute arising from a failure on the part of the BSP or the Counterpart BSP to comply with his commitments in the framework of the agreement under which they are bound to one another for the Transfer of Obligations is not to be reported to ELIA nor arbitrated by ELIA.

- Nevertheless, ELIA informs the BSP that CREG may ask to be informed about the financial conditions of the Transfers of Obligations between the BSP and Counterpart BSPs. The BSP and the Counterpart BSP agree to provide the CREG with this information.

3.4.2. Procedure for declaring a Transfer of Obligations

- The procedure to be followed by the BSP, ELIA and the Counterpart BSP in case of a Transfer of Obligations is described in Annex 2.

- As long as the Transfer of Obligations is not confirmed by ELIA, the Secondary Control Power Obligation remains with the BSP.

3.4.3. Consequences of a Transfer of Obligations on the provisions of the General Framework

Once confirmed by ELIA according to the procedure in Annex 2, the Transfer of Obligations from the BSP to a Counterpart BSP implies:

- The quantity of Contracted R2 is amended according to the Transfer(s) of Obligations that has(have) been validated by ELIA, in accordance with the procedure described in Annex 2, for the application of all provisions of the present General Framework, without prejudice to the provisions of Art. 6.2 (Remuneration).

- Consequently, the Secondary Control Power Required to be activated by the BSP on his Production Units, the record and monitoring of the provision of the Service, the resulting penalties for non-compliance according to Art. 7 among other provisions, will be based on the R2 Obligations of the BSP.

- The remuneration of the Contracted Secondary Control Power remains fixed as per Art. 6.2 irrespective of the Transfers of Obligations that the BSP has agreed with Counterpart BSP(s), declared to ELIA and that ELIA has validated.

- Similarly, ELIA will not owe any remuneration under Art.6.2 (reservation) to the Counterpart BSP with whom the BSP has agreed a Transfer of Obligation. Nevertheless, ELIA will pay the Counterpart BSP to whom The BSP has transferred his Obligation for the Secondary Control Power Supplied as per Art.6.3 (activation).

- The BSP and Counterpart BSP respectively transferring and undertaking an Obligation should update their nominations, as provided by Art. 3.5, in order to reflect the agreed Transfer of Obligations.

3.5. Day ahead nomination of Energy Bids

3.5.1. The BSP has the obligation to offer his Secondary Control Power Obligations to ELIA in Day Ahead (D-1) for possible activation by ELIA in day D. These Energy Bids will be placed by the BSP according to the rules set out in Annex 7.

3.5.2. The BSP shall make Secondary Control Power available in such a way that, at all time during the Delivery Period P, in case of a Forced Outage the BSP is able to reconstitute said Secondary Control Power within a period of maximum 6 hours after the Forced Outage either by supplying the Secondary Control Power from another CIPU Technical Unit, either by transferring his obligations through the Intra-day secondary market.

3.5.3. The BSP may make more Secondary Control Power Available to ELIA than his Secondary Control Power Obligations without additional cost to ELIA with regard to the remuneration foreseen for the reservation under Art. 6.2.

3.5.4. In this case, the Secondary Control Power Required to be activated by the BSP on his Production Units, the record and monitoring of the provision of the Service will be based on the Secondary Control Power Made Available by the BSP. Also the resulting penalties for non-compliance will be calculated taking into account at maximum the Contracted Secondary Control Power according to Art. 7.2 and with respect to the penalty cap described in Annex 13.

3.5.5. Nevertheless, the remuneration of the Contracted Secondary Control Power will remain fixed as per Art.6.2 irrespective of the additional Secondary Control Power Made Available to ELIA by the BSP.

3.5.6. In case ELIA activates the additional Secondary Control Power Made Available by the BSP as per Art.3.6, the remuneration foreseen under Art.6.3 is due by ELIA to the BSP for the corresponding energy resulting from the Secondary Control Power Supplied.

3.5.7. In order to avoid any misunderstanding between the Parties, it is specified and accepted by the Parties that ELIA is free to select all or part of the R2 offered by the BSP via the Energy Bids. ELIA shall select Energy Bids on the basis of the principle called “merit order”.

- Upward R2 Energy Bids are ranked from the lowest bid to the highest bid. The selection is made by selecting among them the most advantageous Bids in line with the desired power value.
- An identical merit order is implemented for Downward R2, in which the Energy Bids are ranked from the highest bid (payment to ELIA by the producer) to the lowest bid.
- The Energy Bids not selected by ELIA in the framework of the “Day-Ahead” selection for the Activation of the R2 may be selected as “I-Bid” / “D-Bid” in the “Nomination” and “Exploitation” procedures of the “CIPU” contract.

3.6. Activation of Energy Bids

In real time (day D), ELIA may activate the Secondary Control Power according to the specifications set out in Annex 3 of the present General Framework.

3.7. Correction of the ARP’s imbalance

ELIA will correct the ARP’s imbalance on a quarter-hourly basis as provided for in the “Access Responsible Party Contract” between ELIA and the ARP. The imbalance will be corrected according to the calculation in Annex 4.

3.8. During an availability test for the FCR service, the BSP may temporarily interrupt his delivery of the Service without being penalized for doing so. The BSP is expected to resume Service delivery immediately after the end of the test.

4 Conditions for participation in the Service (selection conditions in the Open Qualification Procedure)

4.1. For the avoidance of any misunderstanding, the Parties are aware of the mutual relationships that exist between the present General Framework, the CIPU Contract, other ancillary service contracts, the ARP Contract and the Access Contract, as each of them is an essential constituent of the means that ELIA uses to ensure the safety, reliability and efficiency of the Transmission Grid. The observance of the rules set out in the aforementioned contracts is necessary for the proper implementation of the present General Framework.

4.2. The BSP and ELIA agree on the list of Secondary Control Production Units that the BSP declares technically capable of providing the Service and that are prequalified. This list shall be kept up to date by exchanging an updated list based on the template in Annex 5 via e-mail and by agreeing with this new list.

4.3. In order for the BSP to add new Production Unit(s) to the list of Secondary Control Production Units the Production Unit(s) have to be qualified to deliver the Service and meet the technical an

organizational requirements. Therefore the Prequalification Procedure must be completed and be pre-qualified by ELIA for the concerned Production Unit(s) as described in Annex 6.

4.4. Notwithstanding the fact the BSP has met the selection conditions in the Open Qualification Procedure, ELIA is entitled to evaluate at any time during the validity period of the General Framework, whether the BSP complies with these conditions. (cf Art 2.4).

5 Exchange of information, record and monitoring of the Service

5.1. The exchange of information for the performance of the General Framework will be done through Real-Time Communication and Off-Line Communication, as described in Annex 7.

5.2. The exchange of information for the performance of the General Framework will be directed to the respective contact persons of The Parties (list of contact persons exchanged as described in Art. 10).

5.3. Day Ahead nomination - combination of Production Units

- The BSP will decide and inform ELIA in Day Ahead about the combination of Production Units that will provide for his Secondary Control Power Obligations (for upward Control Power this obligation is called "R2up_obligation" and for downward Control Power this is called "R2down_obligation") among the list of Secondary Control Production Units as agreed upon in art. 4.2, taking into account the procedure and rules set forth in article 5.2 and without prejudice to ELIA's right to demand any change in accordance with the CIPU contract.

- After checking the validity of the nominations sent on D-1 by the BSP to ELIA and any corrections according to the rules under each contract mentioned in Art. 4.1, the reserve nominations thus obtained will be subject to a cross-check for coherence between other ancillary service contracts concluded between ELIA and the BSP (in particular the "CIPU" contract, the General Framework for Primary Control and the General Framework for Tertiary Control) and, as the case may be, corrected according to the procedure described in Annex 8.

- Via the above mentioned cross-check, ELIA establishes the value of Secondary Control Power Made Available by the BSP for each quarter-hour. Said value is the quantity of Secondary Control Power that will be considered as actually Made Available to ELIA by the BSP:
  - for upward Control Power, it is called "R2up_mad"
  - for downward Control Power, it is called "R2down_mad"

5.4. Record and monitoring of the Secondary Control Power Obligations (Availability)

- ELIA will check every month that the BSP has made, for each quarter-hour of month M-1, the amount of Secondary Control Power Obligations available to ELIA during month M-1 in the agreed Period(s) as per Art. 3 (i.e. taking Confirmed Transfers of Obligation and Contracted Secondary Control Power into account)

- Availability of the Service will be monitored on the basis of the values of Secondary Control Power Made Available and communicated by the BSP in accordance with Art. 5.3 of the present General Framework, for each quarter-hour.

- The Parties agree that if the Secondary Control Power Obligations are not fulfilled, penalties will be applied as foreseen in Art 7.1., taking into account the dispute resolutions mechanisms described in art. 8.3 & 8.4.

5.5. Record and monitoring of the Secondary Control Power Required (Activation)

- ELIA will check every month that the energy resulting from the Secondary Control Power Supplied upwards and/or downwards (for each day) by the BSP during the previous month meets the

contractual requirements (energy resulting from Secondary Control Power Required during the considered day). Said check is performed by calculating the Discrepancy as per the method described in Annex Annex 10.

- The evaluation by ELIA of the Secondary Control Power Supplied by the BSP will be completed at the latest two months after the respective month. Should a dispute arise about the Discrepancy measured by ELIA, the measurements made by ELIA may be compared with those made by the BSP, provided both measurements have comparable time references. If the BSP observes a significant error or difference between both series of measurements, the BSP will inform ELIA hereof by the deadline specified in Art.8.3. of the present General Framework.
- The Parties agree that if Discrepancies occur, penalties will be applied as described in Art.7.2, taking into account the dispute resolutions mechanisms described in art. 8.3 & 8.4.

6 Remuneration

6.1. The remuneration of the Service consists of a remuneration for the Contracted R2 (reservation) and a remuneration for the energy supply (upwards or downwards) resulting from the activation of the Service.

6.2. Remuneration for Reservation

6.2.1. The foreseen remuneration or Monthly Remuneration for the delivery of the Contracted Secondary Control Power will be calculated on a monthly basis, based on unit prices of the corresponding Contracted R2. The remuneration corresponds to the sum of the remunerations for the various selected Capacity Bids where the remuneration is the product of:

- The unit price, in €/MW/h; for the Short Term Contracted Secondary Control Power in accordance with Art. 3.3,
- The number of MW of said Contracted Secondary Control Power in accordance with Art. 3.3. and
- The number of corresponding hours of the Delivery Period concerned. For a weekly Delivery Period a length of 168h will be taken into account for remuneration.

6.3. Remuneration for the activation of Secondary Control Power

- The remuneration of the energy activated on day D by ELIA shall be calculated according to Annex 14. The amount owed by ELIA to the BSP for a given month is the sum of the individual remunerations calculated according to Annex 14, without prejudice of ELIA's right to apply the penalties foreseen under Art.7.

7 Penalties for non-performance of the General Framework

7.1. Non-compliance with the Secondary Control Power Obligation (Availability)

- If ELIA establishes, based on the quantity of Secondary Control Power Made Available in D-1 as per Art. 5.3, that the BSP has failed for a particular quarter-hour to provide at least the quantity of his Secondary Control Power Obligations, ELIA will apply a penalty.
- The penalty is an incentive for the BSP to limit his failure to make this R2 Obligations available to ELIA and to resort as much as possible to the procedure of Transfer of Obligations.
- The penalty is valued by means of a simple and universal parameter, the Clean Spark-Spread, in order to take into account the market situation and its evolution in time.

- The penalty is based on the quantity of Secondary Control Power Made Available in D-1 as per Art. 5.3.
- The penalty applies to any R2 Missing MW and for any quarter-hour of the considered month in which ELIA establishes that the quantity of Secondary Control Power Obligations has not been reached.
- For each quarter-hour the number of R2 Missing MW is determined as the highest value of:
  - Upward R2 Missing MW or "R2up_missing"
  - Downward R2 Missing MW or "R2down_missing"
- Until 31/12/2016 ELIA reserves the right to limit the value of Secondary Control Power Made Available by the BSP in case the BSP has not complied with the 50MW rule as described in Art 3.6.
- The calculation of the penalty is detailed in Annex 11.

7.2. Non-compliance with the Secondary Control Power Required (Activation)
In case ELIA establishes that the BSP has failed to deliver the Secondary Control Power Required foreseen under Art. 5.5., ELIA is entitled to apply penalties as defined in Annex 12.

7.3. If the following conditions are met :

- The BSP incurs a Forced Outage on a Secondary Control Production Unit on which the BSP had Made Available Secondary Control Power as described in Art.5.3;

and

- The BSP respects his Obligations in the next nomination of Secondary Control Power.

ELIA will not apply the penalty foreseen in Art.7.2 for the quarters of hour between the Forced Outage and the time of delivery of the next nominated Secondary Control Power (maximum 6 hours).

7.4. Burden of proof
ELIA will apply the exemptions mentioned in Art. 7.3 based on the information and measurements it has at its disposal. In case the BSP disputes ELIA's calculation of penalties and wants to appeal on the above mentioned exemption, burden of proof is on the BSP.

7.5. Accumulation of penalties
Penalties for non-compliance with Secondary Control Power Obligation and penalties for non-compliance with the Secondary Control Power Required can be accumulated.

7.6. Penalty cap
The sum of the penalties under Art. 7.1 and Art. 7.2 of the present General Framework will be subject to a monthly cap, without prejudice to any liability on the part of the BSP for the non-fulfillment of his obligations in accordance with Art. 6 of the General Conditions. The method for calculation of this penalty cap is detailed in Annex 13.

8 Invoicing and payment

8.1. ELIA will provide at the latest the 25th (twenty-fifth) of each calendar month a report with the calculated Monthly Remuneration for the contracted R2 Power for month M, as described in Art. 5.2.Via a joint validation platform or other channel, ELIA will provide the BSP with a report, at the latest by the end of each calendar month, relating to the record and monitoring of the Service provided by the BSP in month M-2. This report will indicate, among other things, all penalties for month M-2 as calculated by ELIA in accordance with Art. 7 of the present General Framework, showing the method of calculation and all data on which the calculation is based.

8.2. If it appears subsequently that the calculated penalty(ies) is (are) incorrect, the first party to take action will inform the other party thereof as soon as possible. The Parties will then try to reach an amicable solution. In the absence thereof, the dispute settlement procedure mentioned in Art. 13.2 of the General Conditions shall apply.

8.3. Disputes from the BSP regarding the report mentioned in Art. 8.1 must be reported within 25 calendar days starting from the day following ELIA's submission of the respective report. Should this occur, the Parties shall enter into negotiations with each other with a view to reaching an agreement.

8.4. If no agreement can be reached:

- The BSP, when drawing up his pro-forma invoice for Month M as specified in Art. 8.5, shall take account of the penalties calculated by ELIA;
- The Parties shall continue their negotiations with a view to reaching an amicable arrangement and, after concluding their agreement, settle this invoice ex-post;
- if no amicable arrangement is reached, the dispute settlement procedure set out in Art. 13.2 of the General Conditions shall apply.

8.5. The BSP shall send ELIA's Settlement department (see list of contact persons exchanged as described in art. 10) his monthly pro-forma invoice no later than the end of each calendar month M. The pro-forma invoice will include, among other things:
(a) The Remuneration for the Contracted R2 for month M, calculated as described in Art. 6.2.
(b) As the case may be, the penalties for month M-3 as calculated by ELIA under Articles 7.3 and 7.2. of the present General Framework;
(d) The BSP's bank account number to which payment must be made.

8.6. ELIA shall either approve or reject the pro-forma invoice within 5 working days of receiving it. In accordance with the pro-forma invoice, the invoice may only be sent to the Invoicing & Payment department after ELIA has approved the pro-forma invoice.

8.7. Annex 15 includes the appropriation structure to be used by The BSP.

9 Modifications to the General Framework

9.1. ELIA has the responsibility to have the same General framework for the Secondary Control Service for all BSP.

9.2. Before modifying the General Framework, ELIA will inform all the BSPs who have signed a General Framework for Secondary Control Service. The modifications will then be applicable for the first auction occurring after a period of thirty calendar days following the notification at soonest.

9.3. In case the notification is made less than thirty days before the procurement, the current General framework without modifications will apply.

9.4. When ELIA does not reach an agreement with one or more parties who have signed a General framework for Secondary Control Service with ELIA, ELIA can, in order to respect Art. 9.1:

- notify all abovementioned parties that the General framework without modifications will apply for the next tender
- exclude the BSP that refuses the addendum from the future auction until both Parties agree upon the addendum.

9.5. All Contracted Secondary Control Power from the BSP in a procurement before the proposal for an addendum would come into force, is subject to the General framework applicable at that time.

9.6. A BSP can request a modification to the General Framework. ELIA will take this request in consideration. When the request is accepted, the General framework will be modified for all BSPs following the procedure as described in Art 9.2.

10 Contact persons

Both parties shall keep the contact details up to date throughout the validity of the General Framework, by exchanging the filled out template in Annex 16. These exchanges and updates can be done via e-mail.

All contacts between The BSP and ELIA regarding the present General framework should take place between the persons designated in this list.

Drawn up in Brussels in duplicate, with each Party declaring having received an original copy.

ELIA Transmission Belgium N.V., represented by:

Patrick De Leener
Chief Officer Customers, Market & System

Date:

Chris Peeters
Chief Executive Officer

Date

[BSP], represented by:

Name :
Function :

Name:
Function :

ANNEX 1. PROCUREMENT OF FCR & R2 IN THE LOCAL PROCUREMENT PLATFORM

CONTENT

A. PROCUREMENT PROCESS
B. AUCTION RULES & BIDDING OBLIGATIONS FOR CAPACITY BIDS FOR THE LOCAL PROCUREMENT PLATFORM
C. AWARD CRITERIA
D. TRANSPARENCY

A. SHORT TERM PROCUREMENT PROCESS IN THE LOCAL PROCUREMENT PLATFORM

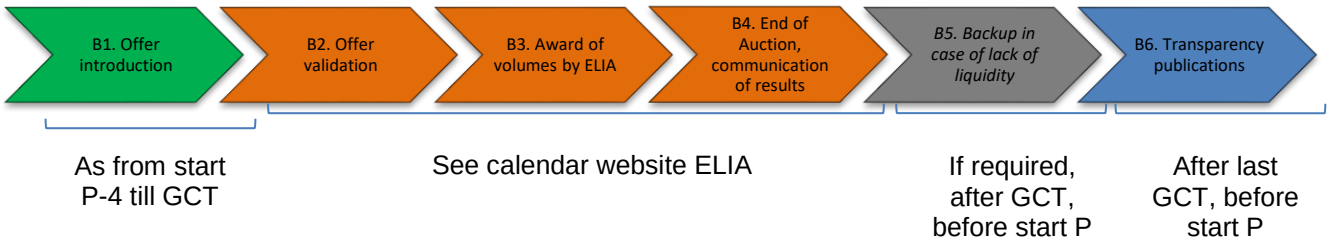
In order to participate in auctions BSPs need to have concluded a valid General Framework with ELIA.

The document called "STAR Auction Rules" that can be found on the ELIA website (www.elia.be) describes the process and all the steps of the auction in detail. This document contains at least the conditions set forth below.

0. Procurement Calendar

A calendar indicating the Delivery Period and the deadline to submit offer (hereinafter referred to as "gate closure time(s)" or "GCT") is published on the ELIA website.

In case of a change in the calendar, the BSP will be informed via an email to the contact details for Short term auctions & contractual matters, listed as Short Term contact in respect with Art. 10.



1. Submission of Capacity Bids

When:

As soon as a new delivery period starts, the Bidder can start to make Capacity Bids for the next 4 Delivery Periods. The Capacity Bids for each Delivery Period have to be introduced before each respective GCT (Gate Closure Time).

What & How:

As soon as the gate is open, new Capacity Bids can be introduced and already created Capacity Bids can be modified or cancelled, regardless of their status.

The minimum size of a Capacity Bid is 1MW. The granularity of the offers is also 1MW (no numbers after the decimal).

When a new Capacity Bid is created it automatically has a 'Received' status.

The complete set of Capacity Bids must be in respect with the Bidding Obligations for Capacity Bids as described in section B of this Annex. When this is not the case, the entire set of Capacity Bids will automatically be rejected at GCT. More details on the validation and the rejection of the bids can be found on the ELIA website (document "STAR Auction Rules").

The BSP can combine FCR 100mHz and FCR 200mHz with R2 in one Capacity Bid.

The BSP cannot combine FCR down/FCRup with R2 in one Capacity Bid.

The BSP makes best effort to offer all of its available prequalified capacity.

ELIA may request supplementary information or a justification for certain Capacity Bids via the communication channels described in the auction manual published on the ELIA website.

A log of the communications will be held at all times so that traceability is guaranteed. The log and the key facts are reported by ELIA to the CREG.

Short-term auction participants remain fully responsible for their Capacity Bids.

Bids are a firm commitment at GCT and must remain firm until the end of the auction (step B4). A BSP shall not use the offered capacity in any way until he has been notified of the outcome of the tender or until the deadline for communication has passed.

Capacity Bids are to be made in the tool STAR. The manual for the tool is published on the ELIA website.

2. Capacity Bid validation

When:

After GCT, no new Capacity Bids can be introduced, nor can existing Capacity Bids be modified or cancelled.

What:

The entire set of Capacity Bids will be evaluated with regard to the respect of the Bidding Obligations for Capacity Bids as described in section B of this annex. In case of non-respect with the Bidding Obligations for Capacity Bids, certain Capacity Bids and/or the entire set of Capacity Bids can automatically be rejected (status “Rejected”). For more information on the Bidding Obligations for Capacity Bids see Annex 1B. More details on the validation and the rejection of the bids can be found on the ELIA website (document “STAR Auction Rules”).

The permitted number of Capacity Bids is unlimited.

ELIA can also reject Capacity Bids manually in case of manifest errors.

How:

More details on the validation and the rejection process of the bids can be found on the ELIA website (document “STAR Auction Rules”).

3. Award of Volumes by ELIA

When:

After GCT, no new Capacity Bids can be introduced, nor can existing Capacity Bids be modified or cancelled.

What & How:

ELIA selects the optimal set of Capacity Bids (entirely of partially), amongst the Capacity Bids with the status “Validated”, following the award criteria as described in section C.

If, in case of an operational or technical issue with the auction process or ELIA’s IT platform a second round will be organized for the remaining volume as soon as the operational or technical issue has been solved.

4. End auction & communication of the auction results

What & How:

When ELIA ends the auction, the status of the retained Capacity Bids changes to “Retained”. The status of the other Capacity Bids remains unchanged (Accepted or Rejected).

All Bidders receive an email to inform that the auction ended and can consult if and which volume of his Capacity Bids has been retained in the Auction overview.

ELIA publishes the required information as described in section D “Transparency” of this Annex.

5. Shortfall procedure in case of insufficient volume

In case insufficient volumes R2 are offered to ELIA in a Short Term auction in the Local Platform, ELIA will award the maximum possible offered volume for the remaining volume and will organize a second auction for the remaining volume, in which ELIA will request all BSPs to make extra volume available.

Short-Term auction participants remain fully responsible for their offers. Bids are firm at GCT of this second round.

6. Transparency publications

When:

Between the end of the auction and the start of Delivery Period P.

What & How:

The aggregated and anonymous results are published on ELIA’s website. (http://www.elia.be).

B. Auction Rules & Bidding Obligations for Capacity Bids for the Local Procurement Platform

0. Introduction

In order to be able to find a valid combination of Capacity Bids, complying with the volume ELIA procures and in order to guarantee an optimal solution which minimizes overall reservation procurement costs, ELIA should dispose of as many Capacity Bids as likely possible. Not only will this improve ELIA’s chances to find an optimal solution and possibly avoid iteration & renegotiation, it will also improve the BSP chances of being selected for a certain Capacity Bid.

Besides the guarantee for ELIA to be able to find the optimal solution, this is important to ensure a level playing field for all BSPs.

To allow ELIA to achieve the latter the BSPs participating in a Short Term auction must respect the minimum ‘Bidding Obligations for Capacity Bids’ and should be aware of how Capacity Bids are treated by ELIA (the auction rules).

Capacity bids with a status “Rejected” will not be considered in the checks for the Bidding Obligations for Capacity Bids and the application of the auction rules.

This section describes these obligations, how Capacity Bids are interpreted and how Capacity Bids are attributed.

When submitting Capacity Bid a BSP will have to provide at least the following information in STAR:

- Capacity Bid number – unique identifier, automatically assigned
- Product/Service Type – Service or other Variant Services
- Volume [MW] – the offered volume
- Price [€/MW/h] – the unit price for the offered volume
- Tariff Period – the Tariff Period in which the Capacity Bid is valid

- Divisibility of a Capacity Bid – can an offered volume be divided by ELIA at the same unit price.
- Combinability of Capacity Bids via “May not be combined with”

More information on how to submit the information can be found in the “STAR Auction Rules” document published on the ELIA website.

1. Combinability of Capacity Bids

For all Base Capacity Bids:

All Capacity Bids with tariff period Base are considered as not combinable with other Capacity Bids with the tariff period Base with the same service type.

For all Peak/Long-Off peak Capacity Bids:

The BSP is free to set the combinability (or may not be combined with).

Consequently, in Base, a BSP should submit Capacity Bids for an increasing volume.

Example: A BSP wishes to offer 2 blocks of 5MW to ELIA.

ELIA expects a Capacity Bid for 5MW and a Capacity Bid for 10MW (2 combinable Capacity Bids for 5MW is not allowed).

It’s allowed to submit Capacity Bids for Peak/Long Off Peak that are combinable or not combinable with these Base Capacity Bids.

2. Obligations regarding the volumes to be offered (**obligation 1, 2 and 3**)

The obligations described under obligations 1 and 2 are only applicable to Base (Tariff Period) Capacity Bids and only offers with the same volume R2 Up as R2 Down are considered.

The following obligations are the minimum obligations to be respected for each product type. ELIA invites every BSP to submit more Capacity Bids in order to increase the possibility to be retained in the optimal selection.

Obligation 1 – Smallest offered volume: The smallest offered volume should not exceed the volumes defined below in table 1. Capacity Bids for a smaller volume are allowed and encouraged. The obligation applies for individual bids for all Primary Control Power services and Secondary Control services as well as for combined offers FCR and R2:

Product	Smallest volume / max step [MW]
FCR 200mHz	14
FCR 100mHz	6
FCR Asymmetrical Down	6
FCR Asymmetrical Up	6
R2	24

Table 1

Obligation 2 – Volume increments: When sorting the Capacity Bids in terms of offered volume, the difference in terms of volume between 2 Capacity Bids can be at maximum the volumes defined in Table 1 (maximum delta between 2 Capacity Bids).

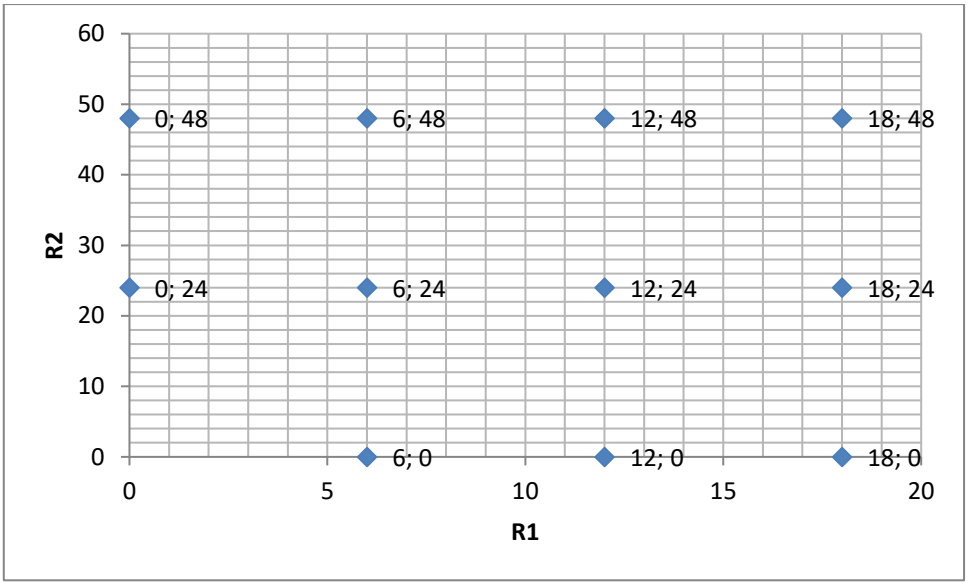
The obligation applies for individual bids for all Primary Control Power services and Secondary Control Power services as well as for combined offers for FCR and R2.

In case of combined offers for FCR and R2, the maximum increments should be respected for one product for all offers with the same amount of the other product:

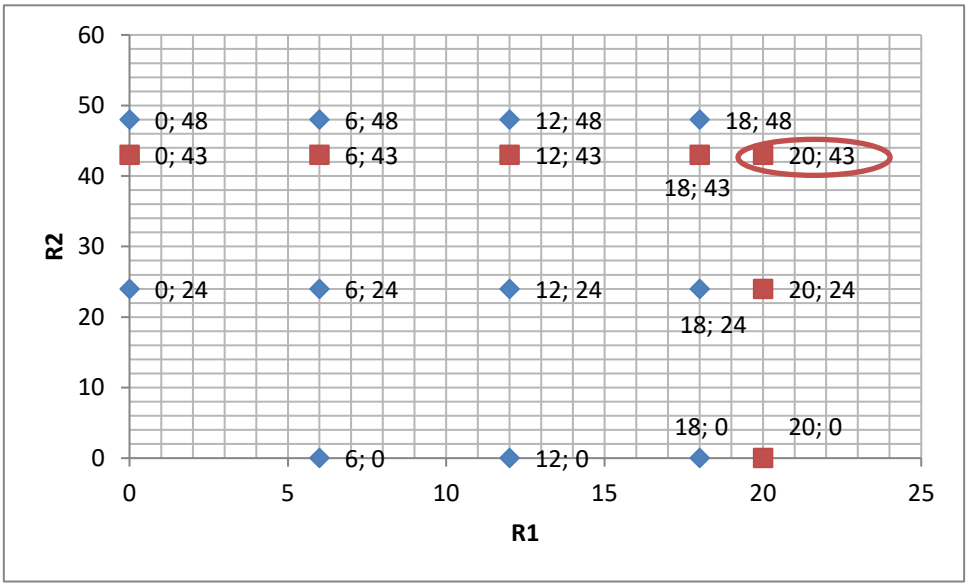
- The difference of R2 volume between 2 Capacity Bids combined with the same volume of FCR (and the same service type), can be maximum the volume as defined in Table 1.
- The difference of FCR volume between 2 Capacity Bids with the same service type combined with the same volume R2 can be at maximum equal to the volume defined in Table 1

For combined FCR and R2 offers, the smallest offered volume and volume increments rules must be respected for each combination between FCR and R2 offers. For example if a BSP wishes to offer 18MW of FCR 100 mHz and 48MW of R2 he must at minimum do the following offerset:

FCR 100mHz	R2
18	48
12	48
6	48
0	48
18	24
12	24
6	24
0	24
18	0
12	0
6	0



In the same example, if the BSP also wishes to make an additional offer of 20MW of FCR and 43MW of R2 he will then have to also add necessary offers to be in respect of the Biddding Obligations (as displayed hereby under in red).



Obligation 3 – Base offer available: When offering both in Peak and Long Off Peak, the BSP must submit a Base Capacity Bid, while respecting the obligations below, for a volume that is at least minimum of the maximum volume offered in Peak and the maximum volume offered in Long Off Peak.

Consequences of non-respect
In case a BSP does not respect the obligations, all his Capacity Bids for this product type will be rejected at Gate Closure Time.

3. Divisibility of Capacity Bids

All Capacity Bids with Service Type FCR Asymmetrical and with tariff period Base are considered to be divisible between the offered volume and the Capacity Bid with the next smaller volume at the same unit price. The smallest offered volume is indivisible.

The granularity of the divisibility is 1MW.

Example : with 30MW as the minimum volume to be offered:

#	Capacity Bids	Volume selectable *
1	5MW @ 3,00€/MW/h	[1 – 5] @ 3,00€/MW/h
2	10MW @ 2,98€/MW/h	[6 – 10] @ 2,98€/MW/h
3	11MW @ 2,07€/MW/h	[11 – 11] @ 2,07€/MW/h
4	15MW @ 4,50€/MW/h	[12 – 15] @ 4,50€/MW/h

* between brackets: the minimum and maximum volume that can be retained at the considered unit price.

For all Capacity Bids with other Service Types and/or tariff period different than Base:

The BSP can make a Capacity Bid divisible or not. Divisible means that ELIA can retain a volume between 1MW and the offered volume with a granularity of 1MW.

4. Obligations regarding the total costs of Capacity Bids (**obligation 4**)

Obligation 4 – Total cost check: The total cost (unit price * volume) of the smallest volume that can be retained resulting from a Capacity Bid, should never exceed the total cost of the smallest volume that can be retained from a Capacity Bid with a larger offered volume.

The obligation applies for individual Capacity Bids for all Primary Control Power Service Types and Secondary Control Power services as well as for combined offers for FCR and R2. In case of combined offers for FCR and R2, the check is performed while keeping the volume of one product constant and varying the volume of the other product.

Consequences of non-respect
All Capacity Bids with a higher total cost than a Capacity Bid with a larger volume will be rejected.
In case this leads to a non-respect of the previous obligations, all Capacity Bids will be rejected.

5. Example of instructions

Example Obligation 1 & 2: A BSP with the technical potential of 30MW FCR_200mHz, 15MW FCR_100mHz and 35MW R2 is expected to submit following minimum offer set in terms of Volumes.

Other alternatives respecting the instructions are of course possible by offering a lower minimum offer or reducing the step between certain offers.

Offer number	FCR [MW]	FCR Type	R2 [MW]
1	6	FCR_100mHz	0
2	12	FCR_100mHz	0
3	15	FCR_100mHz	0
4	6	FCR_100mHz	24
5	12	FCR_100mHz	24
6	15	FCR_100mHz	24

7	6	FCR_100mHz	35
8	12	FCR_100mHz	35
9	15	FCR_100mHz	35
10	14	FCR_200mHz	0
11	28	FCR_200mHz	0
12	30	FCR_200mHz	0
13	14	FCR_200mHz	24
14	28	FCR_200mHz	24
15	30	FCR_200mHz	24
16	14	FCR_200mHz	35
17	28	FCR_200mHz	35
18	30	FCR_200mHz	35

Example Obligation 4: For the offered volumes in the table below, the following should be respected:

- The total cost of offer 1 should not exceed the total cost of offer 2, and both offers should not exceed the cost of offer 3.
- The total cost of offer 4 should not exceed the total cost of offer 5 and both should not exceed the total cost of offer 6.
- The total cost of offer 1 should not exceed the total cost of offer 4.

Offer number	FCR [MW]	R2 [MW]
1	6	24
2	6	46
3	6	69
4	12	24
5	12	40
6	12	60

C. AWARD CRITERIA

When retaining Capacity Bids, ELIA will:

- retain the combination of Capacity Bids that leads to a minimal total reservation procurement cost,

while:

- retaining the minimum demanded FCR & R2 Volume, (the contracted FCR[1] and R2 must at all times be at least equal to the demanded volume);
- respecting the volume constraints per Service as described in the Balancing Rules;
- respecting the Bidding Obligations for Capacity Bids (divisibility) set forth in section B of this Annex;
- Only considering non-rejected Capacity Bids;
- respecting constraints set by the BSP in terms of combinability and divisibility.

In case an alternative optimum exists the following criteria will successively be applied to determine the solution: 1) maximizing the retained volume 2) maximizing the number of retained bidders 3) maximizing the equal distribution of the volume amongst all retained bidders.

[1] Taking the different Service Types into account

D. TRANSPARENCY

At the moment of the conclusion of the General Framework, ELIA foresees to publish aggregated and anonymous results of the Short Term auctions on its website (www.elia.be).

Annex 2. Conditions, rules and procedure for Transfer of Obligations

A) Principle for Transfer of Obligations.

In accordance with Art 3.5, ELIA allows the BSP to transfer part of or all of his R2 Obligations to one or several Counterpart BSP(s). Similarly, the BSP may agree to make an additional quantity of Secondary Control Power available to ELIA as a result of a Transfer of Obligations from a Counterpart BSP to the BSP.

Intraday Transfer of Obligation process in case of a Forced Outage will be applicable from 1st January 2017 on.

Since only Confirmed Transfers of Obligation will be considered as valid by ELIA, the present Annex lays down the conditions under which the Transfer of Obligations may occur and defines the rules and procedure that ELIA, the BSP and the Counterpart BSP must respect in order to notify and validate said transfers.

All procedures regarding the Transfer of Obligations and the tools are explained and illustrated with examples on our website. (www.elia.be)

B) Obligations that can be transferred via the secondary market.

Following signature of the General Framework, the BSP can transfer Obligations to/from a Counterpart BSP for Secondary Control.

Transfer of Obligations is applicable in Day-ahead or in Intraday.
ELIA can at any time allow new services to participate. In this case ELIA will inform the BSP.

C) Rights for announcing (requesting) Transfer of Obligations.

- Any BSP holding a valid General Framework for Secondary Control with ELIA to the date of the performance of the R2 Obligations can exchange R2 Obligations even if the quantity of Contracted Secondary Control Power is 0 (zero);

D) Constraints for announcing (requesting) Transfer of Obligations.

ELIA verifies and confirms or rejects the Transfer of Obligations requests announced by the BSP. Only requests with matching status “Confirmed” are considered as valid by ELIA.

Day-Ahead Procedure

- Transfer of Obligations requests have to be submitted by both BSPs, before 13.30 hrs on day D-1.
- One BSP can have multiple requests with different Counterpart BSPs.
- Consistent Transfer of Obligations requests are blocked at 13.30 hrs on D-1 and cannot be changed from then onwards.
- If a request is inconsistent, BSPs can correct it until 14.00 hrs on D-1.
- If a request still shows inconsistencies by 14.00 hrs on D-1, ELIA will reject (both) request(s) (the BSP’s and the Counterpart BSP’s) completely.
- One BSP can have multiple exchanges with different Counterpart BSPs.
- The Obligations undertaken by a Counterpart BSP summed to the rest of Obligations nominated in day-ahead must be in respect of the CIPU Technical Unit’s P_{max} and P_{min} limitations;
- A Counterpart BSP undertaking an Obligation cannot supply the service with CIPU Technical Units that are situated within a CIPU Red-zone;
- ___Intra-Day Procedure

- Intraday Transfer of Obligation process starts after the end of the CIPU nomination check and confirmation as per procedure described in Annex 7 (no later than 18:00 on D-1) and ends at midnight (00:00) in intraday.
- One BSP can have multiple exchanges with different Counterpart BSPs.
- The Obligation undertook by a Counterpart BSP summed to the rest of Obligations nominated in day-ahead must be in respect of the Technical Unit's Pmax and Pmin limitations;
- A Counterpart BSP undertaking an Obligation cannot supply the service with CIPU Technical Units that are situated within a CIPU Red-zone;
- The Transfer of Obligations must take place at latest one hour before beginning of the first quarter-hour of Delivery;

E) Overall processing workflow for Transfer of Obligations.

- BSP(s) are contracted for Secondary Control.
- BSPs that don't have the possibility to offer partially or completely the contracted Control Power in day-ahead (eg for technical or economical reasons) can redistribute partially or entirely their obligation towards one or several Counterpart BSP(s) who will then take over the responsibility to offer these reserves to ELIA in D-1. BSPs arrange between themselves how, when and at what price a BSP takes over obligations from a Counterpart BSP.
- Both BSPs must announce said transfers towards ELIA before 13.30hrs in D-1.
- At 13.30 hrs D-1, Transfer of Obligations requests for the next day with matching status Balance OK are blocked and their request status will become Confirmed. As from then on no new requests may be sent in except the counterparty of a Waiting for Counterpart (WFC) request.
- An email is also sent to all BSPs to indicate that the first gate is closed. The BSPs having requests for D+1 with matching status Waiting For Counterpart (WFC) and BalanceError can still change their requests till 14.00hrs.
- At 14.00 hrs, the second gate is closed, from then on no changes can be made to the requests.
- All consistent requests (BalanceOK) are confirmed, inconsistent (Waiting for Counterpart or BalanceError) requests are rejected. An email is sent to the BSPs and the status of their requests changes to “Confirmed” or "Rejected".

F) Procedure for announcing (requesting) Transfer of Obligations.

The procedures to be followed for the Transfer of Obligations and the manual for the tools are published on ELIA’s website (www.ELIA.be).

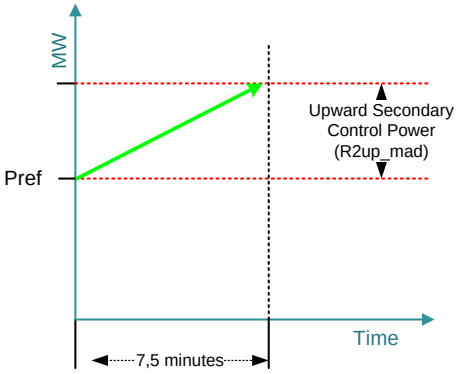
Annex 3. Quantity of Secondary Control Power Required.

Cfr Art 3.7, ELIA may activate the R2 made Available by the BSP according to the specifications set out in this Annex.

A) Ramping Rate requirements.

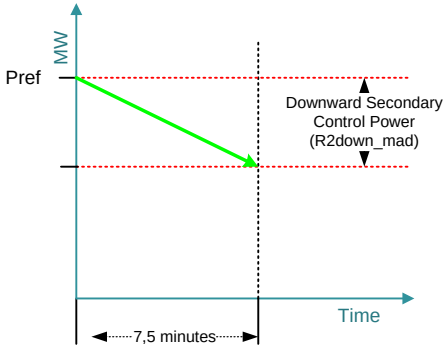
- The BSP must be able to activate the Upward Secondary Control Power Made Available to ELIA (referred to as R2up_mad), within a maximum delay of 7,5 minutes.

Schematically represented:



- The BSP must be able to activate the Downward Secondary Control Power Made Available to ELIA (referred to as R2down_mad), within a maximum delay of 7,5 minutes.

Schematically represented:



B) Calculation (by ELIA) of the Secondary Control Power Required.

- ELIA will calculate every Calculation Cycle, in real-time, the amount of Secondary Control Power that must be activated by The BSP (upwards or downwards) taking the Ramping Rate requirements and the amount of R2up_mad and R2down_mad into account.
  - The typical Calculation Cycle (Δts) is set at 10 seconds.
  - The amount of Secondary Control Power that must be activated by The BSP is referred to as ΔP_{sec_tot}.
  - The value ΔP_{sec_tot} is exchanged between ELIA and The BSP according to the protocol specified in Annex 7.

C) Maximum Deviation requirements

- "Deviation" means the difference between the power (expressed in MW) produced at time t by all of the Secondary Control Production Units of The BSP participating in the Secondary Control on one hand, and the sum of the settings Pref sent by the BSP at time t-Δts and the signal_ΔPsec_tot calculated by ELIA at this same time t-Δts on the other hand, corrected with any other needs of ELIA regarding ancillary services (Incremental and/or Decremental CIPU Bids, FCR) on these Production Units.
- The Deviation, in absolute value, shall remain below the S1 threshold in all circumstances, without prejudice to the provisions to the contrary given in Annex 10.
- The threshold S1 is set for each quarter-hour k at 15% of the average Upward and Downward Secondary Control Power selected by ELIA.
    - $S1_{[BSP,k]}$ = 0.15 * average [$R2up\_sel_{[BSP,k]}$; $R2down\_sel_{[BSP,k]}$]

      With:
        - $R2up\_sel_{[BSP,k]}$ = the sum of the selected Bids for Upward Regulation for quarter hour k by ELIA as explained in art. 3.6.7
        - $R2down\_sel_{[BSP,k]}$ = the sum of the selected Bids for Downward Regulation for quarter-hour k by ELIA as explained in art. 3.6.7

Annex 4. Formula for correction of The BSP's Imbalance

In accordance with Art 3.7 ELIA will correct the BSP's imbalance (on a quarter-hourly basis) as provided for in the "Access Responsible Party Contract" between ELIA and the BSP.

- Following the partial or total activation of the Secondary Control Power, ELIA shall include the corresponding energy based on the Secondary Control Power Required (upwards or downwards) in the quarter-hourly calculation of BSP's imbalance. Said calculation shall be done by ELIA in the framework of the Access Responsible Party Contract between the BSP and ELIA. The energy resulting from the Secondary Control Power Required by the BSP to ELIA is calculated on a quarter-hour basis as follow:

$$\int_{1/4h} signal\_\Delta P_{sec\_tot}\ dt$$

Annex 5. Template of the list of Secondary Control Production Units

In accordance with Art 4 the BSP must declare the Production Units connected to the Transmission Grid that are technically capable of making available Secondary Control Power and supplying (upwards and/or downwards) Secondary Control Power.

Production Unit	EAN Code	Participation in Secondary Control Power Upwards	Participation in Secondary Control Power Downwards	Prequalified?
		[X]	[X]	
		[ ]	[ ]	

The fact of being listed in the present Annex does not constitute a right of access for the said Production Units.

Updates of this list must be exchanged and agreed upon via email (both the contracting responsible and contracting_AS@ELIA.be)

Annex 6. Prequalification Procedure

This annex describes organizational and technical requirements for delivery of Primary and Secondary Control Services.

Because of the importance of ancillary services, ELIA must be assured that the BSP meets the organizational requirements and that his Production Unit(s) meet the technical requirements in order to be able to deliver the contracted Service.

A BSP who meets the organizational requirements can supply said services to ELIA with the pre-qualified Production Units for that service. The BSP must meet the organizational requirements before the start date of the General Framework.
BSPs which have provided these services to ELIA in previous years are considered to be pre-qualified.

A Production Unit that meets the technical requirements will be pre-qualified by ELIA and may provide ELIA with the services for which its pre-qualified. Production Units which have provided these services to ELIA in previous years are considered to be pre-qualified. A Production Unit must be pre-qualified before it can be part of a General Framework.

A) Organizational requirements for The BSP

The BSP and ELIA will check together:

- Offline Communication
  - Correct Nominations: the BSP must be able to nominate his Obligations to ELIA in the formats requested by ELIA as described in Annex 7.
- Real-time communication (if applicable for the considered Service)
  - A secure and redundant communication channel must be set up between ELIA and The BSP.
  - The BSP must be able to receive and interpret the signals as defined in Annex 7.

B) Technical Requirements: Attestation of Production Units

- In order to attest a Production Unit to participate in a specific service it must successfully pass a simulation test as described below.
- In case the Production Unit does not complete the simulation test successfully, ELIA and the BSP will make best effort to identify the source of the failure and the BSP will make best effort to solve the source of the failure.

a. Organization of the simulation

- The BSP contacts ELIA for the practical organization of the tests (planning,...)
- Any costs linked to the tests are borne by the BSP
- The tests may not jeopardize the grid security

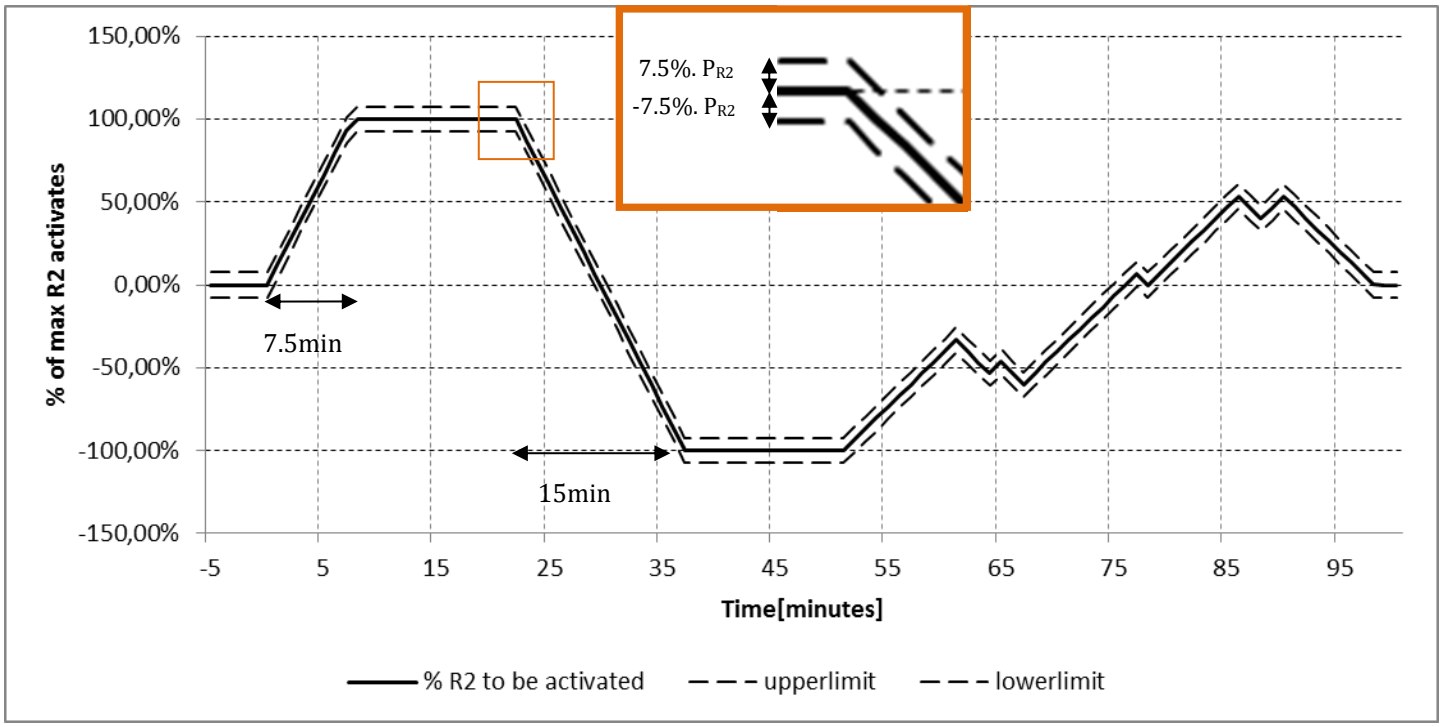
b. Simulation Test

For the simulation of Secondary Control Power, the BSP must simulate the following activation signal. With this signal ELIA will test whether the BSP can activate R2 of the Production Unit and if he is able to follow a variable signal with a deviation smaller than 7.5% of the maximum value.

This test will take 100minutes.

For this test a sample will be taken every 10 seconds (starting at 00:00:00 , 00:00:10:...). This signal must between the upper and lower limit (band of 15%) as indicated in the figure below.

1. Test signal send by ELIA



2. Checks:

Requirements for attestation
Does the R2 Supplied reaches the maximum as indicated in table 1
Is the deviation smaller than 7.5%? (2 deviations of 10 seconds allowed)

Annex 7. Rules for the exchange of information by The Parties

A) Real-Time communication

- ELIA shall communicate the following information in real time:
    - The signal ΔP_{sec_tot}.
        - All ΔPsec_tot values shall be electronically recorded by ELIA and by The BSP.

- The BSP shall communicate the following information in real time:
    - A return signal of ΔP_{sec_tot}.
        - The BSP sends the signal back to ELIA (mirror of the received signal) in order to check if the signal is received correctly.
    - For each Secondary Control Power Unit (or if applicable Power Plant):
        - "Avail_sec" = logical signal (0 or 1) that indicates whether the Secondary Control Production Unit (or if applicable Power Plant) is actually participating in the Service.
            - 0: The Production Unit is unavailable or cannot participate in the Secondary Control.
            - 1: The Production Unit is available and can participate in the Secondary Control.
        - “Psec”: The number of MW of ΔPsec_tot. that are attributed to a Power Unit
        - “Pref(t)” means the power (in MW) that each Secondary Control Production Unit of the BSP participating in the Secondary Control shall inject in t + Δts for The BSP’s own needs.
        - "Pmin_sec" = minimum power of the Secondary Control Production Unit (or if applicable the Power Plant) for Secondary Control, expressed in MW.
            - Pmin sec ≤ Pref.
            - The difference between Pref and Pmin_sec indicates the available Downward R2 on this unit.
        - "Pmax_sec" = maximum power of the Secondary Control Production Unit (or if applicable the Power Plant) for Secondary Control, expressed in MW.
            - Pmax_sec ≥ Pref.
            - The difference between Pmax_sec and Pref indicates the available Upward R2 on this unit.
        - "Rate_sec" = maximum Ramping Rate of the Secondary Control Production Unit (or if applicable the Power Plant), available for R2, expressed in MW/min.
        - The measurement of the net (gross if the net value cannot be measured) power produced per Secondary Control Production Unit.

- This real-time communication will be done with following IT solutions and responsibilities:

  <u>Process</u>

  For the correct and effective functioning of the secondary control, the process requires:
    - The BSP to continually guarantee and maintain in real time the accuracy of the information sent to ELIA.
    - The BSP to guarantee, without additional delay, the processing of the settings obtained from ELIA.
    - The BSP to guarantee, without additional delay, the real time communication of the final settings to his stations, as well as the automatic processing of these settings by the stations.

In the event of ELIA wanting to improve certain procedures and/or real time exchanges, the Access Responsible Party guarantees to apply the new procedures proposed by ELIA within a reasonable period of time.

IT solutions

Based on the importance of the Secondary Control, in terms of a technical solution ELIA recommends conducting the real time exchanges using the Tase2 protocol between Scada.

- TASE 2 means: the IEC 60870-6 or ICCP standard.

- A change of protocol may only be done after coordination and mutual agreement between the two parties.
- The entire real-time communication system and its processes must be redundant.
- With regard to the level of quality and reliability that the process demands, ELIA and the BSP share responsibilities, for the purpose of:
  - Setting up dedicated physical links between their own systems;
  - Deploying all available means to ensure duplication of the system throughout the communication chain;
  - Deploying all available means to ensure the reliability of their own systems.
- Measures to be taken in case of problems with the standard solutions:
  - The BSP and ELIA: Based on the controls introduced, they will contact their respective contact persons to report the existence of a problem;
  - The BSP and ELIA: Make every effort to install the back-up solution as quickly and effectively as possible;
  - The BSP and ELIA: Make every effort to collaborate on solving the problem and making the standard solution operational again as fast as possible.

In the event of problems vis-à-vis the “Tase2” solution, ELIA shall determine the Delta P Total settings to be followed according to the ACE, before communicating with each BSP by telephone (Backup Solution) .

In practice, always based on the above principle, the following obligations arise in the framework of the “Telephony” technical solution (Backup Solution) for the secondary control:

For the BSP:

- To use all the means available to him in order to set up and guarantee the duplication of the telephone connections linking him to ELIA (of which one must be dedicated, direct with ELIA).

- Any other exchange of information in real time shall take the form of an electronic message, according to the protocols defined by ELIA, and shall be confirmed by telephone if needed.
- The Parties agree that the phone calls shall be recorded by the dispatching departments of ELIA and/or The BSP insofar The Parties consider it necessary for themselves. The Parties accept the principle and necessity of recording these calls. The recordings of the calls may be used as evidence in the event of a dispute relating to this General Framework. Both Parties shall inform their personnel about the existence and/or possibility of said recordings.
- Because most of the information exchanged between the Parties in the context of this General Framework may have an effect in one way or another on ELIA’s operation of the ELIA Grid, it is of essential importance for ELIA, including for the safety/security of the ELIA Grid, that the information provided by the BSP to ELIA, is verified extremely carefully by the BSP before being given to ELIA.
- In this context, and in order to provide additional protection for the exchange of verbal information between the Parties and/or between their representatives, including employees, both Parties hereby accept that verbal communication, including telecommunication, is recorded. The Parties will inform their representatives and all of their employees who need to be in communication with the other Party of

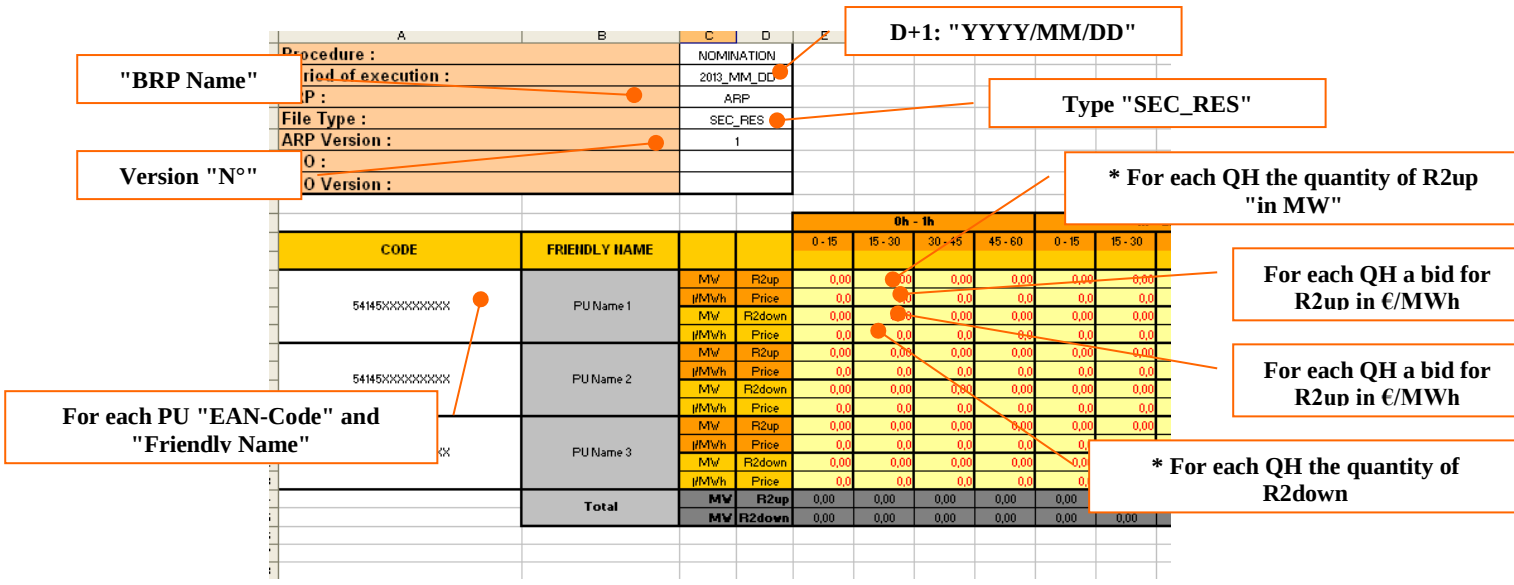
these recordings before such communication is made. The Parties will take appropriate steps to ensure that these recordings are kept safe and that access to such recordings is restricted exclusively to those persons who have a justified need to have access to the recordings. These recordings may not be used in any claim made against a natural person.

B) Off-line communication

- Off-Line Communication will take place by electronic message according to formats and software specified by ELIA.

Day Ahead Off-line communication

- The BSP shall communicate the following information off-line:
  - No later than 15:00 hrs on D-1, the BSP will decide and inform ELIA in Day Ahead about:
    - the combination of Production Units that will provide for his Secondary Control Power Obligations (for upward Control Power this obligation is called ""R2up_obligation" and for downward Control Power this is called "R2down_obligation") among the list in the list of Secondary Control Production Units as agreed upon in art. 4.2, taking into account the procedure and rules set forth in article 5.3 and without prejudice to ELIA's right to demand any change in accordance with the CIPU contract. Said nominations will indicate, quarter-hour by quarter-hour, the quantity of R2up and/or the quantity of R2down made available on each of those Secondary Control Production Units.
    - For each nomination of R2up or R2down, the BSP must also provide, quarter-hour by quarter-hour, price Bids as defined below in this annex.



Example (informative) of a D-1 .xls nomination sheet for R2

  - Each nomination of R2up or R2down made available by the BSP must comply with the specifications below :
    - Each separate nomination must correspond to a quantity of Secondary Control Power Made Available either upwards (R2up) or downwards (R2down);
    - Nominations on one single Production Unit may be asymmetric, meaning that R2up doesn't need to be equal to R2down.
    - Each bid must be a multiple of 0.1 MW with a minimum size of 1MW per bid;

- Each nomination of R2up or R2down made available by The BSP must be accompanied by a price bid expressed in €/MWh. These price Bids must comply with the specifications below:

  - For each Production Unit, the price of a bid for upward regulation (in €/MWh) shall not exceed the following limit (hereinafter termed I Bid):

    - I Bid must be ≤ $FC_{50\%CCGT}$ + 40 €/MWh
    - With:
      - $FC_{50\%CCGT}$: Fuel cost (€/MWh) of a CCGT with 50% efficiency.
        - = NG [€/GJ_t] * $S_{CCGT-50\%}$ [GJ/MWh_e]
      - $S_{50\%CCGT}$: Specific Consumption of a CCGT with 50% efficiency.
        - = 7,2 [GJ_t/MWh_e]
      - NG: The expected published market price for natural gas, according to the method described in appendix 6 of the CIPU contract.
        - = composed out of « Heren Zeebrugge Day-ahead index », increased with the forfeiture transport cost for gas 0.17 [€/GJ_t]

  - For each Production Unit, the price of a bid for downward regulation (in €/MWh) shall not be lower then the following limit (hereinafter termed D Bid):

    - D Bid must be ≥ 0 €/MWh (Zero)

  - By default (in particular in case of unavailability of the IT process, I Bid and D-bid prices will be fixed as:
    - I Bid = $FC_{50\%CCGT}$ + 20 €/MWh
    - D Bid = max [$FC_{50\%CCGT}$ - 20€/MWh ; 0]

- ELIA shall provide the following information off-line day ahead:

  - ELIA will check above mentioned nominations for coherence with the rules specified in this General Framework as well as other ancillary service contracts concluded between ELIA and The BSP and, as the case may be, nominations will be corrected accordingly, amongst others with the procedure described in Annex 8. ELIA will inform the BSP of the results of these checks no later than at 18:00 hrs on D-1.

Ex-post Off-line communication

- The BSP shall provide the following information off-line ex-post:

  - Every day (on Day D+1 for Day D) before 06:00 the BSP shall send an e-mail to ELIA containing an Excel (or csv) file. This file contains per 10 sec (or less than 10 sec if available):
    - the timestamp* (dd/mm/yyyy hh:mm:ss)

* synchronised with an official clock

- the frequency
- as well as for each Production Unit separately:
  - Avail sec = logical signal (0 or 1) which indicates whether the Production Unit was actually participating in the Secondary Control
  - The signal ΔPsec
  - The measurements of active injection
  - Pref

Annex 8. Consistency check between Ancillary Service Contracts

In accordance with Art 5.3, ELIA will check the nominations sent by the BSP on D-1 for coherence between this General Framework and other ancillary service contracts concluded between ELIA and the BSP (in particular the “CIPU” contract, the General Framework for Primary Control and the General Framework for Tertiary Control) and, as the case may be, correct the nominations according to the procedure described in this Annex. Data mentioned in this annex that do not originate from one of above mentioned contracts have a value of zero with regard to the present procedure.

Via the procedure described in this Annex, ELIA establishes the value of Primary, Secondary and Tertiary Control Power actually Made Available by The BSP for each quarter of hour. Said values are the quantities of Control Power that will be considered as actually made available to ELIA by the BSP for monitoring whether or not the BSP respected his obligations:

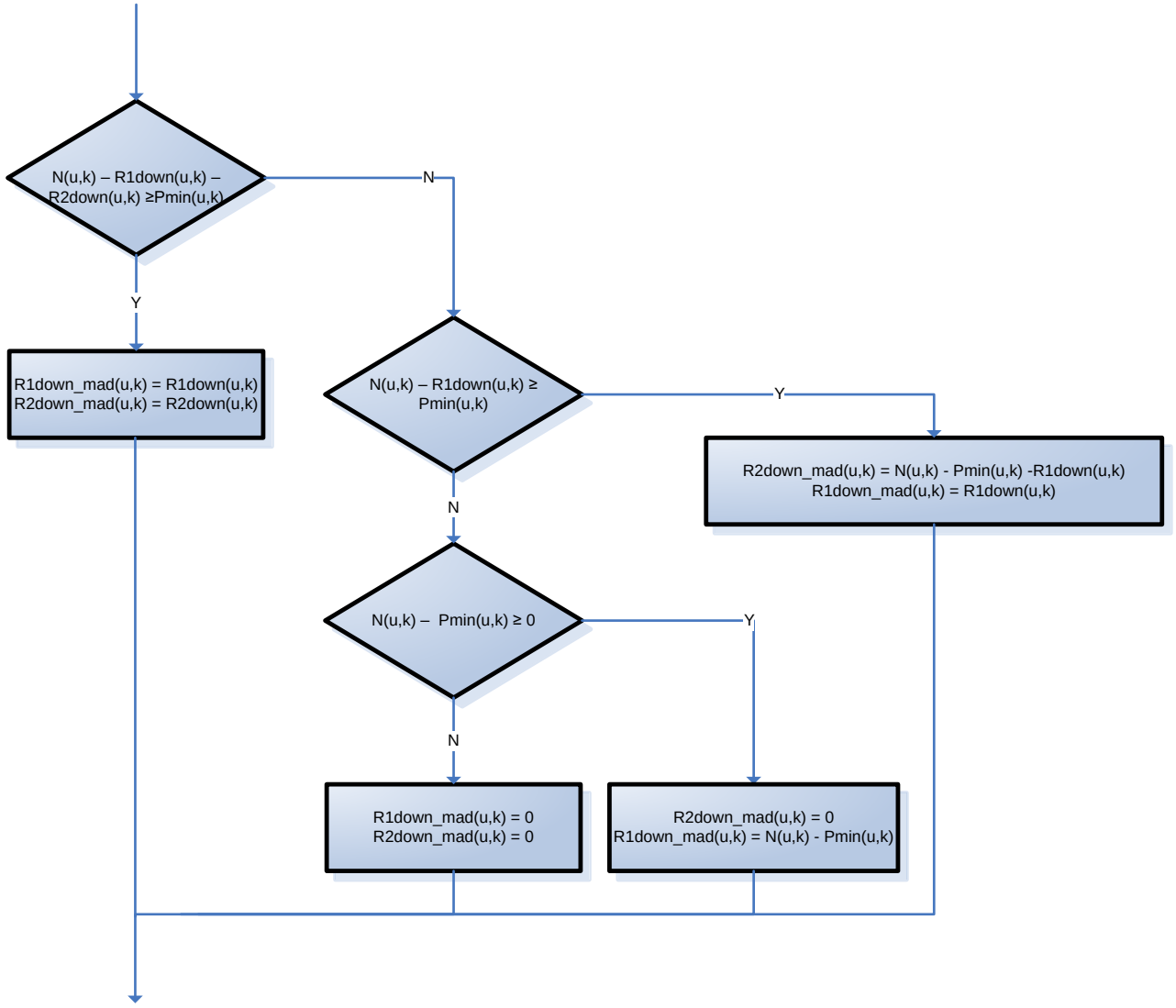
- for upward Control Power it is called "R1up_mad", "R2up_mad" and R3_mad"
- for downward Control Power it is called "R1down_mad" and "R2down_mad"

A) Definitions

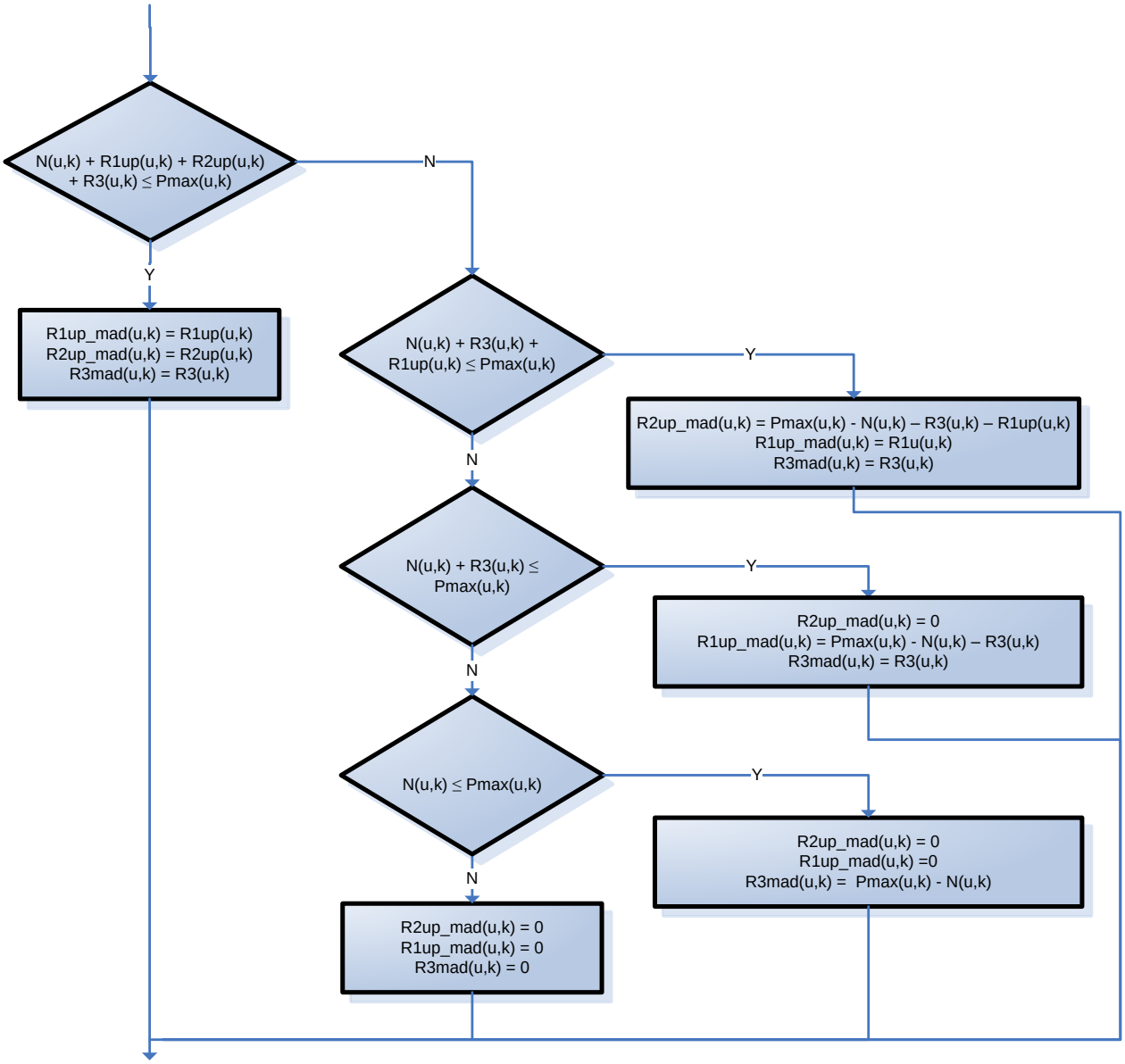
- u = An index designating a production unit mentioned in Appendix of the AS contract concerned;
- k = A parameter that represents the quarter-hour;
- N(u,k) = injection nomination for unit u, for quarter-hour k, sent to ELIA by the producer under the CIPU nomination procedure;
- $P_{min}(u,k)$ = The minimum power limit actually attainable by unit u, for quarter-hour k, corresponding to the $P_{min\ avail}$, sent on D-1 by the BSP to ELIA under the CIPU Contract;
- $P_{max}(u,k)$ = The maximum power limit actually attainable by unit u, for quarter-hour k, corresponding to the $P_{max\ avail}$, sent on D-1 by the BSP to ELIA under the CIPU Contract;
- R1up(u,k) = The quantity of Primary Control Power made available on Day D, for the Primary Control Range f < Fs, communicated on D-1 by the BSP to ELIA, for unit u and quarter-hour k;
- R1down(u,k) = The quantity of Primary Control Power made available on Day D, for the Primary Control Range f ≥ Fs and for the Primary Control Range f ≥ 50,10Hz, communicated on D-1 by the BSP to ELIA, for unit u and quarter-hour k;
- R2up(u,k) = the quantity of upward Secondary Control Power made available to ELIA on Day D, communicated on D-1 by the BSP to ELIA, for unit u and quarter-hour k;
- R2down(u,k) = the quantity of downward Secondary Control Power made available to ELIA on Day D, communicated on D-1 by the BSP to ELIA, for unit u and quarter-hour k;
- R3(u,k) = the quantity of Tertiary Control Power made available to ELIA on Day D, communicated on D-1 by the BSP to ELIA, for unit u and quarter-hour k;
- R1up_mad(u,k) = the quantity of Primary Control Power actually made available on Day D, for the Primary Control Range f < Fs, obtained at the end of the present procedure, for unit u and quarter-hour k;
- R1down_mad(u,k) = the quantity of Primary Control Power actually made available on Day D, for the Primary Control Range f ≥ Fs and for the Primary Control Range f ≥ 50,10Hz, obtained at the end of the present procedure, for unit u and quarter-hour k;
- R2up_mad(u,k) = the quantity of upward Secondary Control Power actually made available to ELIA on Day D, obtained at the end of the present procedure, for unit u and quarter-hour k;
- R2down_mad(u,k) = the quantity of downward Secondary Control Power actually made available to ELIA on Day D, obtained at the end of the present procedure, for unit u and quarter-hour k;
- R3mad(u,k) = the quantity of Tertiary Control Power actually made available to ELIA on Day D, obtained at the end of the present procedure, for unit u and quarter-hour k;

For each Production Unit u mentioned in an Appendix of a valid ancillary service contract declared available under the Nomination procedure of the CIPU Contract, ELIA will carry out the following cross-checks for each quarter-hour k:

B) Control with regard to Pmin Available



C) Control with regard to Pmax Available



D) Outcome

At the end of these cross-checks the following values will be obtained:

- R1up_mad(BSP,k) = ∑ R1up_mad(u,k)
- R1down_mad(BSP,k) = ∑ R1down_mad(u,k)
- R2up_mad(BSP,k) = ∑ R2up_mad(u,k)
- R2down_mad(BSP,k) = ∑ R2down_mad(u,k)
- R3mad(u,k);

These are the quantities of primary, secondary and tertiary control power made available, by the BSP to ELIA, which will be used for controlling the availability of the service concerned.

Annex 9. Ex-Post check of the Secondary Control Power Obligation

In accordance with Art 5.4 availability will be monitored each Month based on the values of Secondary Control Power made available by the BSP to ELIA as determined per Annex 9. If ELIA establishes that the BSP has failed for a particular quarter-hour to provide at least the quantity of his Secondary Control Power Obligations, ELIA will apply a penalty. Since this penalty applies to any R2 Missing MW, for any quarter-hour of the considered month, the number of R2 Missing MW must be determined. This annex describes the method for calculating the number of R2 Missing MW.

A) Calculation of R2 Missing MW:

The quantity of R2 Missing MW will be determined for each BSP, each quarter hour as follow:

	Name	Determination: For each BSP and each QH
1	Upward Contracted R2	Quantity awarded in Short Term procurement, see art. 3.3
2	Downward Contracted R2	Quantity awarded in Short Term procurement, see art. 3.3
3	Confirmed Transfers of Obligation Upward R2	Confirmed Transfers for Upward Contracted Secondary Control Power, as per Annex 2
4	Confirmed Transfers of Obligation Downward R2	Confirmed Transfers for Downward Contracted Secondary Control Power, as per Annex 2
5	R2up_Obligation	= [1 + 3]
6	R2down_Obligation	= [2 + 4]
7	R2up_mad	Quantity of R2up_mad(BSP,k) as defined per Annex 8
8	R2down_mad	Quantity of R2down_mad(BSP,k) as defined per Annex 8
9	R2up_missing	= Max [(5 - 7) ; 0]
10	R2down_missing	= Max [(6 - 8) ; 0]
11	**R2 Missing MW**	**= Max [9 ; 10]**

This means that for each quarter hour:

- **1 and 2:** Are the quantities of Contracted R2, these values are always positive or 0 (zero)
- **3 and 4:** Confirmed transfers of obligations as per Annex 2 are:
  i. Positive (+) in case the BSP has sold obligations: the BSP took over obligations **from** a Counterpart BSP
  ii. Negative (-) in case the BSP has bought obligations: the BSP transferred obligations **to** a Counterpart BSP
- **5 and 6**: R2up and R2down obligations are determined as the sum of Contracted R2 and Confirmed Transfers of Obligations.
- **7 and 8:** These are the quantities of R2up and R2down the BSPs had actually made available to ELIA, these values are always positive or 0 (zero)
- **9 and 10:** R2up and R2down missing is determined as the difference between the R2 actually made available and the Obligations in the respective direction (up or down) these values are:
  i. Positive (+) in case The BSP has failed to comply with all his obligations for that respective direction.
  ii. Zero (0) in case The BSP complies with all his obligations for that respective direction.
- **11:** The number of R2 Missing MW is determined as the highest value of R2up or R2down quantity that was missing.
  i. Positive (+) values will be penalized as described in Annex 11.

B) Some examples for calculation of Missing MW:

Example 1:

- Imagine we contract 0MW of Upward R2 and 40MW of Downward R2 with a BSP.
- For several cases of Confirmed Transfers of Obligation and R2up_mad and R2down_mad values one can calculate the number R2 Missing MW's as follow:

	Name	Determination: For each BSP and each QH								
1	Contracted Upward R2	0	0	0	0	0	0	0	0	0
2	Contracted Downward R2	40	50	40	40	50	50	50	40	40
3	Confirmed Transfers of Obligation Upward R2	0	0	0	30	0	0	10	10	0
4	Confirmed Transfers of Obligation Downward R2	0	0	0	0	0	-50	-20	-10	0
5	R2up_Obligation	0	0	0	30	0	0	10	10	0
6	R2down_Obligation	40	50	40	40	50	0	30	30	40
7	R2up_mad	0	0	0	30	30	0	10	0	0
8	R2down_mad	40	50	20	30	50	0	30	10	0
9	R2up_missing	0	0	0	0	0	0	0	10	0
10	R2down_missing	0	0	20	10	0	0	0	20	40
11	**R2 Missing MW**	**0**	**0**	**20**	**10**	**0**	**0**	**0**	**20**	**40**

Annex 10. Ex-post check of the Secondary Control Power Supplied

In accordance with Art 5.5 ELIA will check every month, that the quantity of Secondary Control Power Supplied upwards and/or downwards by the BSP during month M meets the contractual requirements. Said check is performed by calculating the Discrepancy between the energy resulting from Secondary Control Power Supplied with the energy resulting from the Secondary Control Power Required (calculated based on the requirements described in Annex 3). In case The BSP fails to meet the requirements, penalties will be applied as described in Annex 12.

Calculation of Discrepancy

- For this purpose, ELIA makes use of its own measuring methods and instruments.
  - The Parties expressly agree that for every difference between one or more values displayed by ELIA and by the BSP, the values displayed by ELIA shall count as proof, unless an error caused by a technical failure of the equipment used by ELIA is demonstrated. In this last case, the Parties shall consult to correct the errors. For the application of this article, the Parties agree to use a value every “10 seconds” (00:00’00’’, 00:00’10’’, 00:00’20’’, 00:00’30’’…). If the acquisition equipment operates at a different rate or at different times, The Parties shall use the last recorded values.
  - If The BSP observes a significant error or difference between measurements made by ELIA compared with those made by the BSP, ELIA will be informed hereof by the deadline specified in Art.8.3. of the present General Framework.

- When determining the R2 Supplied (upwards and/or downwards), the measurements will be corrected by ELIA for power changes at the Secondary Control Production Unit that cannot be ascribed to Secondary Control (upwards or downwards).
- ELIA shall calculate Discrepancy, for each day, based on S1 and the Deviation as defined in Annex 3 as follows:

$$\text{Discrepancy} = \int_{Jour} B\,dt$$ where:

B = | Deviation | - S1 if | Deviation | ≥ S1
B = 0 if | Deviation | < S1

  - this provision does not apply to the N greatest values of the Deviation on the considered day, where N is 2% of the number of values of the Deviation on this same day. These N greatest values are replaced by zero in the above calculation.
  - The values of the Deviation are not taken into account when the signal ΔPsec_tot, sent to the BSP by ELIA, is erroneous. ELIA undertakes to inform the BSP when ELIA notices such a situation.

ANNEX 11. Calculation of penalties for R2 Missing MW

In accordance with Art. 7.1 of the General Framework ELIA will apply a penalty if the BSP has failed, for any particular quarter-hour, to make the quantity of his Secondary Control Power Obligations available to ELIA. Said penalty is valued by means of the Clean Spark-Spread and applies to any R2 Missing MW as calculated per Annex 9.

A) Calculation of Clean Spark Spread for a standard (50%) CCGT ("$CSS_{50\%CCGT}$").

For calculation of penalties, ELIA will calculate the CSS for a Standard CCGT, hereinafter referred to as $CSS_{50\%CCGT}$,for each QH of the considered month.

- Standard formula for $CSS_{50\%CCGT}$ calculation:

$$CSS_{50\%CCGT}(t) = E(t) - \frac{1}{\eta} * \left[G(t) + (\gamma_{CO2} * CO_2(t))\right]$$ With:

  - E(t) = BPX Day Ahead price expressed in [€ / MWh_el], updated hourly
  - η = efficiency of a Standard CCGT, fixed at 50% for a standard CCGT
  - G(t) = Fuel price for Natural Gas (NG), Day Ahead, as defined in annex 6 of the CIPU Contract. The index in the formula must be expressed in [€/MWh_th].
    - This index is published daily for the next day and on Friday for the weekend.
    - At the initial signature of the General Framework this was the Heren Zeebrugge Day-ahead index which is expressed ad pence/therm, increased with a transport cost of 0,17€/GJ. The ratio's and rate of exchange required for the conversion of the index as well as rules regarding weekends and holidays, can be found in annex 6 of the CIPU Contract.
    - If for the considered day of the month there is no Fuel Cost or exchange rate available, the last valid value will be considered.
  - γ_{CO2} = the CO_2 emission of a Standard CCGT in [tonCO_2/MWh_th], fixed at 0.1836 tonCO_2/MWh_th
  - CO_2 = the price per ton CO_2 D-1 as defined in annex 6 of the CIPU contract [€/tonCO_2].
    - This index is published daily for the next day.
    - If for the considered day of the month there is no Fuel Cost available, the last valid Fuel Cost will be considered.

Example for determination of $CSS_{50\%CCGT}$ (fictive values)

Day: 27/04/2012
Quarter hour: 13h00-->13h15

- E(13h-13h15) = Belpex DA (13h00-14u00)= 55.96€/MWh_el
- η = 0.5
- G(13h-13h15) = Heren Zeebrugge Day-ahead index = 25.16 €/MWh_th
  - Heren Zeebrugge Day-ahead index: 52,12 pence/therm
  - GJs/Therm= 0.1055056
  - GJ(i)/GJs= 0.9035
  - Exchange rate= 1,2472 €/£

G(13h-13h15)= 3.6*(52.12 *(1/0.1055056)*(1/0.9035)*(1.2472/100) +0,17)
G(13h-13h15)= 25.16€/MWh_th

- γ_{CO2} = 0.1836 tonCO_2/MWh_th
- CO_2(13h-13h15) = EEX Carbix DA= 6,56 €/tonCO_2

➔ $CSS_{50\%CCGT}$ (13h-13h15)= 55.96€/MWh_el -(1/0.5*(25.16€/MWh_th +(0.1836 tonCO_2/MWh_th * 6.56€/tonCO_2)))= 3.23€/MWh

B) Calculation of Penalties when CSS50%CCGT is positive.

In cases of a positive (+) $CSS_{50\%CCGT}$ (meaning = 50%-CCGT is in the money) the level of penalties is calculated as follow for each quarter hour:

$P1(k) = \frac{Missing\_MW(k) * Max(F1 * (CSS_{50\%CCGT}); F2)}{4}$, with:

- R2 Missing_MW(k) in [MW]: R2 missing MW of Secondary Control Power Obligation for quarter hour k as calculated in Annex 9
- F1: multiplication factor of 1,3
- F2: fixed minimum value of 10 [€/MWh]
- $CSS_{50\%CCGT}$: Clean Spark Spread of a reference 50% efficient CCGT

C) Calculation of Penalties when CSS50%CCGT is negative.

In cases of a negative (-) $CSS_{50\%CCGT}$ (meaning = 50%-CCGT is out of the money) the level of penalties is calculated as follow for each quarter hour:

$P2(k) = \frac{Missing\_MW(k) * Max(F3 * -(CSS_{50\%CCGT}); F2)}{4}$, with:

- R2 Missing_MW(k) in [MW]: R2 missing MW of Secondary Control Power Obligation for quarter hour k as calculated in Annex 9
- F2: fixed minimum value of 10 [€/MWh]
- F3: multiplication factor of 5
- $CSS_{50\%CCGT}$: Clean Spark Spread of a reference 50% efficient CCGT

D) Calculation of monthly penalty

ELIA will calculate on a monthly basis the sum of penalties for all R2 Missing MW, during the concerned quarter hours:

$P_{month\ M} = \sum_{k \in Qh_1}(P1(k)) + \sum_{k \in Qh_2}(P2(k))$, with:

- k: a quarter hour of month M
- P1(k): penalty for quarter hour k in [€] as calculated in Annex 11 if $CSS_{50\%CCGT} \geq 0$ [€/MWh]
- P2(k): penalty for quarter hour k in [€] as calculated in Annex 11 if $CSS_{50\%CCGT} < 0$ [€/MWh]
- Qh1: the subset of all quarter hours of month M for which the $CSS_{50\%CCGT} \geq 0$ [€/MWh]
- Qh2: the subset of all quarter hours of month M for which the $CSS_{50\%CCGT} < 0$ [€/MWh]

E) Some examples for calculation of penalties

- For the following R2 Missing MW and the $CSS_{50\%CCGT}$:

Name	Determination: For each QH						
R2 Missing MW	0	30	10	30	10	30	5
$CSS_{50\%CCGT}$ [€/MWh]	8.32	8.32	-3.20	-3.20	-0.26	6,12	6,12
Type of Penalty	--	P1	P2	P2	P2	P1	P1

	Penalty per Qh [€]	**0**	**324.48**	**40**	**120**	**25**	**75**	**12.5**

$P_{month\ M}$=[0€ + 324.48€ + 75€ + 12.5€] + [40€ + 120€ + 25€] = 596.98€

Annex 12. Calculation of penalties for Discrepancy

In accordance with Art 7.2 of the General Framework, ELIA will apply a penalty in case the BSP has failed to deliver the amount of energy as calculated in Annex 10. This Annex described the method for calculation of this penalty.

Calculation of penalty for Discrepancy

The penalty for Discrepancy is calculated as a fixed penalty of **forty five euros (45€)** per MWh for each MWh Discrepancy as calculated by ELIA in Annex 10.

In case of erroneous data, and thus no available discrepancy during these timeframes, the penalties will be determined as follows:

- When the total duration in which erroneous data occurs in 1 day is smaller than or equal to 8 hours, the penalty of that day will be extrapolated:
    - ELIA will determine an average penalty for the considered hours based on the timeframes with valid data
    - This average penalty will be applied to the hours with erroneous data.
- When the total duration in which erroneous data occurs in 1 day greater than 8 hours, the penalty of that day will be eliminated and the penalty of that month will be extrapolated:
    - ELIA will determine an average penalty for the considered month.
    - This average penalty will be applied for the considered day with erroneous data.

Annex 13. Penalty Cap

A) Monthly Cap

$$Monthlycap = F4 * \begin{bmatrix} [Monthly\ \mathrm{Re}\ muneration(month)] * F5 \\ + Estim\_Smart(monthM) \end{bmatrix}$$

, with:

- F4: a factor of 1
- Monthly Remuneration: as described in Art. 6.2
- F5: a factor defined as:
  - $F5 = \frac{\sum_{k \in month\ M}(R2up\_obligation(k) + R2down\_obligation(k))}{\sum_{k \in month\ M}(R2up\_contracted(k) + R2down\_contracted(k))}$,

with:

  - K: a quarter hour of month M
  - R2up_obligation(k) and R2down_obligation(k): as calculated in Annex 9 R2up_contracted(k): equal to contracted Upwards Secondary Control Power for quarter hour k.
  - R2down_contracted(k): equal to Contracted Downwards Secondary Control Power for quarter hour k.

- Estim_smart, an estimated monthly remuneration for SMART deals based on the average STAR R2 price, defined as:
  - In case the contracted R2 during applicable month is greater than 0MW, the value is 0.
  - In case the contracted R2 for the entire applicable month is equal to 0MW, the following formula applies:

$$Estim\_Smart(monthM) = averageR2Obligation\_M * AvSTAR\_R2\_\mathrm{Pr}ice\_M * hours(monthM)$$

With:

  - AverageR2obligation_M: the maximum of the average R2 up obligations and the average R2 Down obligation during the month M
  - AvSTAR_R2_Price_M: the average reservation price for R2 applicable for the month M as published on the ELIA website.

Annex 14. Remuneration for activated energy bids

In accordance with Art 6.3 of the General Framework, ELIA remunerates energy resulting from the Upward and/or Downward Secondary Control Power Supplied. This remuneration is based on volumes and prices introduced by the BSP in accordance with Annex 7 and activated by ELIA in accordance with Annex 3.

A) Definitions

$BOV_{[BSP,k]}$ = Volume (brut) of Upward Secondary Control Power, activated with the concerned BSP, during quarter-hour k, expressed in MWh.

$POS_{[BSP,k]}$ = Price for Upward Secondary Control Power, activated with the concerned BSP, during quarter-hour k, expressed in €/MWh. This price is equal to the weighted average price of the offers for Upward Secondary Control Power selected with the concerned BSP during quarter-hour k.

$BAV_{[BSP,k]}$ = Volume (brut) of Downward Secondary Control Power, activated with the concerned BSP, during quarter-hour k, expressed in MWh.

$PAS_{[BSP,k]}$ = Price for Downward Secondary Control Power, activated with the concerned BSP, during quarter-hour k, expressed in €/MWh. This price is equal to the weighted average price of the offers for Downward Secondary Control Power selected with the concerned BSP during quarter-hour k.

$BAOV_{[BSP,k]}$ = The absolute value of the Volume (nett) of Upward and Downward Secondary Control Power, activated with the concerned BSP, during quarter-hour k. BAOV = ABS(BOV – BAV), expressed in MWh.

B) Remuneration for Brut activated Secondary Control Power.

Remuneration for activation of Secondary Control Power will be calculated as follow, for each quarter-hour of the concerned month:

- $Remuneration_{[BSP,k]} = (BOV_{[BSP,k]} * POS_{[BSP,k]}) – (BAV_{[BSP,k]} * PAS_{[BSP,k]})$
  - Positive (+) values mean ELIA pays The BSP.
  - Negative (-) values mean The BSP pays ELIA.

The amount owed by ELIA to The BSP for a given month is the sum of the individual remunerations calculated according to above formulas, without prejudice of ELIA's right to apply the penalties foreseen under Art.7.

C) Some examples

Day: 27/09/2012

Quarter hour: 13h00-->13h15

$BOV_{[BSP,k]}$ = 19,5 MWh

$BAV_{[BSP,k]}$ = 38,4 MWh

$POS_{[BSP,k]}$ = 64,00 €/MWh

$PAS_{[BSP,k]}$ = 50,00 €/MWh

$Remuneration_{[BSP,k]} = (BOV_{[BSP,k]} * POS_{[BSP,k]}) – (BAV_{[BSP,k]} * PAS_{[BSP,k]})$

$Remuneration_{[BSP,k]}$ = (19,5 MWh * 64,0 €/MWh) – (38,4 MWh * 50,0 €/MWh)

BSPk pays ELIA = 672 €

Annex 15. Appropriation structure

Ancillary service	Appropriation	Type of remuneration
Short Term Contracted Secondary Control Power – reservation	909098	Monthly Remuneration
Secondary control - activation	902884	Upward activation – PEAK period
	902885	Upward activation –OFF-PEAK period*
	902886	Upward activation – WEEKEND period*
	902887	Downward activation – PEAK period
	902888	Downward activation – OFF-PEAK period*
	902889	Upward activation – WEEKEND period*
Secondary control – penalties	907198	R2 - Penalty for non-delivery of the activated energy
	908441	R2 Reduction of the remuneration for non-availability of the reserve

Annex 16. Template - Contact persons

For ELIA:

1 Contractual matters

Amandine Leroux
20 boulevard de l'Empereur
1000 Bruxelles

Tél : 32 2 546 74 43
Adresse e-mail: amandine.leroux@elia.be

2 Delivery Control

Manuel Aparicio
20 boulevard de l'Empereur
1000 Bruxelles

Tél. : 32 2 546 70 62
Adresse e-mail: system.services@elia.be

3 Invoice monitoring

3.1 Settlement

Manuel Aparicio
20 boulevard de l'Empereur
1000 Bruxelles

Tél. : 32 2 546 70 62
Adresse e-mail: system.services@elia.be

3.2 Invoicing & Payment

ELIA Transmission Belgium SA
Lieve Kerckhof
Boulevard de l'Empereur, 20
1000 Bruxelles
N° TVA BE 476 388 378

4	**Real time operations and operational monitoring** Centre de contrôle national (Operations) Avenue de Vilvorde, 126 1000 Bruxelles Tél. : 32 2 382 23 83 Fax : 32 2 382 21 39 Adresse e-mail: dispatching@elia.be
5	**Offline operations (Duty)** Centre de contrôle national (Duty) Avenue de Vilvorde, 126 1000 Bruxelles Tél. : 32 2 382 23 08 Fax : 32 2 382 21 39 Adresse e-mail: dispatching@elia.be

For The BSP:

1.	**Contractual matters**
2.	**Invoice monitoring**
3.	**Real time (24h/24h)**
4.	**Offline operations**
5.	**Short Term Tendering contact**

Updates of this list must be exchanged via email (both the contracting responsible and contracting_AS@elia.be)