

# General framework for Secondary Control Service by Generators

**Between**

**ELIA SYSTEM OPERATOR N.V.**, a company established under Belgian law with head office at Keizerslaan 20, B-1000 Brussels, company registration number 476.388.378, and represented by **Frank Vandenberghe** and **Chris Peeters**, authorised signatories;

Hereinafter referred to as "ELIA"

**and**

<b>Company name:</b>	
<b>Address head Office:</b>	
<b>V.A.T. number :</b>	
<b>Represented by:</b>	

Hereinafter referred to as the "The Supplier",

Elia and The Supplier are referred to as "The Parties"

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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 Supplier 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;

With the setup of the Short Term Procurement in 2013, ELIA and CREG defined for 2014 a share between 20 and 30% of Primary and Secondary Control Power to be procured by Short Term Products. The remaining share was procured on a yearly basis.

Similar to 2014, ELIA and CREG will on a yearly basis define the repartition of Primary and Secondary Control Power to be procured by Long Term and by Short Term Products from Suppliers holding a valid General framework for the Service or a Variant Service of Secondary Control.

It might be the case that when ELIA organizes a Long Term procurement, the repartition is not yet determined. Elia is nonetheless entitled to organize a Long Term procurement with the possibility to reduce the procured volume partially or completely in favor of Short Term procurement.

Based on the evolution towards Short Term procurement, in order to increase flexibility and to reduce the administrative work, ELIA decided after consultations of the known Suppliers to alter the yearly contract to an Open Qualification Procedure in which both Long Term and Short Term procurements can be organized subject to this General framework for the Service. This General framework 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 [www.ted.eu](http://www.ted.eu).

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

IT IS CONSEQUENTLY AGREED AS FOLLOWS:

## 1 DEFINITIONS

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
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 Secondary Control Power to be made available by a Counterpart Supplier to ELIA resulting from a transfer of obligations from The Supplier to said Counterpart Supplier, declared to ELIA and accepted by ELIA as per the rules described under Art. 3.5 and Annex 2
Contracted Secondary Control Power	The quantity of the Service (in MW) contracted by ELIA with The Supplier for a defined Delivery Period in the framework of the General framework for Secondary Control Service.
Control Area	The area for which ELIA has been designated transmission grid operator in accordance with the law of 29 April 1999
Counterpart Supplier	A party holding a valid Contract for the Service or a Variant Service of Secondary Control that is allowed to act on the secondary market;
CREG	The federal regulating body of gas and electricity markets in Belgium
Delivery Period	The timeframe and Period in which the Contracted Secondary Control Power has to be made available to ELIA (e.g. January Peak ; yearly 2013 PEAK)
Discrepancy	See definition in Annex 10
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
Energy Bid(s)	A combination of volumes and activation prices, nominated by The Supplier to Elia the day before the actual activation;
ENTSO-E	European Network of Transmission System Operators for Electricity
Forced Outage	An unforeseen and unpredictable outage of a Production Unit making it impossible for that Production Unit to generate electricity
General framework	The present General framework for Secondary Control Service by generators
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.
Grid Code	The provisions of the Royal Decree of 19 December 2002 regarding the technical regulations for operating an electricity grid and access thereto
Long Off Peak or LOP	A Period defined as follows: The hours between 20:00 pm and 08:00 am for all 7 the days of the week and the hours between 08:00 am and 20:00pm on Saturday and Sunday
Long Term	Relative to the Long-Term Products;
Long Term Product	Secondary Control Service or Variant Service with a Delivery Period greater than one Month;
Lot	A quantity of power (expressed in MW) contracted by ELIA with The Supplier for a Long Term Delivery Period.
Missing MW upwards or "R2up_missing" and/or Missing MW downwards or "R2down_missing"	The difference (in MW), if positive, between the upward (respectively downward) Secondary Control Power Obligation and upward (respectively downward) Secondary Control Power Made Available by The Supplier

Month	Period starting at 0hrs the 1 <sup>st</sup> of the month until 24hrs the last day of the month
Monthly Fixed Remuneration	The remuneration for the reservation of the Long Term Contracted R2 Power of the Service described in Art. 6.2.1 of the present General framework
Monthly ST Remuneration	The remuneration for the reservation of the Short Term Contracted R2 Power of the Service described in Art. 6.2.2 of the present General framework, calculated on a monthly basis irrespective of the Delivery Period of the Short-Term Products
Open Qualification Procedure	A pre-qualification procedure in which prospective suppliers are screened based on criteria set by ELIA in a publication on <a href="http://ted.europe.eu">ted.europe.eu</a> .
Peak or P	A Period defined as follows: the hours between 08:00 and 20:00 during weekdays (from Monday till Friday, including holidays)
Period	Peak (P) hours, or Long Off-Peak (LOP) hours
Prequalification Procedure	The procedure describing the different tests that should be completed in order for a Production Unit to be pre-qualified by Elia as described in annex 6
Secondary Control	The increase/decrease of active power based on a signal sent by Elia.
Secondary Control Power Made Available	<p>the quantity of Secondary Control Power (in MW) of the Service actually made available to ELIA by The Supplier in relation to the present General framework:</p> <ul style="list-style-type: none"> <li>▪ “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;</li> <li>▪ “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.</li> </ul>
Secondary Control Power Obligation or “R2 Obligation”,	The sum of Long Term Contracted Secondary Control Power, Short Term Contracted Secondary Control Power and Confirmed Transfers of Obligation of the Service in relation to the present General framework. This can be both upwards "R2up_obligation" and/or downwards "R2down_obligation":

Secondary Control Power or "R2"	A quantity of Secondary Control expressed in MW.
Secondary Control Power Required or " $\Delta P$ " (upwards or downwards)	The Secondary Control Power of the Service to be supplied by The Supplier to the Transmission Grid in relation to the present General framework
Secondary Control Power Supplied (upwards or downwards):	The quantity of Secondary Control Power of the Service physically supplied by The Supplier 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 this General framework. A list of the Secondary Control Production Units is agreed and kept up to date between both parties as described in Art. 4.2.
Secondary Control Service or "Service"	The service described in the present General framework provided by The Supplier, comprising at least the following: <ul style="list-style-type: none"><li>▪ the provision of the Secondary Control Power Obligations; and</li><li>▪ the activation of this Secondary Control Power (activated upwards and/or downwards) in accordance with the provisions of the present General framework;</li></ul>
Short Term	Relative to the Short-Term Products
Short Term Product	Secondary Control Service of Variant Service with a Delivery Period smaller or equal to one Month
signal_ $\Delta P_{sec\_tot}$	means the instantaneous value, which: <ul style="list-style-type: none"><li>• is calculated by ELIA in each calculation cycle in accordance with annex 3, and</li><li>• is made available to The Supplier, and</li><li>• corresponds to the part of the Secondary Control Power to be activated (upwards or downwards) by The Supplier in the Control Area as a whole.</li></ul>
Transfer of Obligations	Part or all of the quantity of Long Term and/or Short Term Contracted Secondary Control Power that The Supplier transfers to a Counterpart Supplier in accordance with the provisions of Art. 3.5



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
Variant Service	An existing or future service consisting of the provision of Secondary Control to ELIA, other than the Service described in the General framework, that can, if applicable and described in the award criteria, compete in a tender with Service offered by generators.
Week	Period starting at 0hrs Monday morning until 24hrs the next Sunday

## **2 Conclusion of the Contract and application of the General Terms & Conditions**

- 2.1. The Supplier makes best effort (not being unreasonable) by signature of this General framework to participate in the procurements for the Service throughout the validity period of the General framework, i.e. from 1 January 2015 to 31 December 2018, 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 Supplier in any way to optimize its Secondary Control Production Unit portfolio and thus withdraw such Production Unit from Annex 5.
- 2.2. The present General framework will come into force subject to the conditions set forth in the Open Qualification Procedure.
- 2.3. ELIA is entitled to evaluate, at any time during the validity period of the General framework, whether the Supplier complies with the conditions mentioned in Art. 2.2. For the avoidance of doubt, this does not entail any right for ELIA to physically access Supplier's assets. If it is confirmed that the Supplier no longer complies with these conditions, ELIA will notify the Supplier and the General framework will be suspended. If after 15 working days the Supplier remains non-compliant 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 Terms & Conditions
- 2.4. The performance of the General framework is governed by the General Terms & Conditions. An update of the General Terms & Conditions will be done in accordance with the rules set forth in Art. 9.
- 2.5. 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.
- 2.6. The Supplier declares that he has received a copy of the General Terms & Conditions, which can also be consulted on ELIA's website ([www.elia.be](http://www.elia.be)) and that he accepts them. The Supplier hereby renounces his own general terms & conditions, special or otherwise, regardless of the time when they were remitted or the form of their remittance.

## **3 Subject matter of the General framework**

- 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 this 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 Long Term Contracted Secondary Control Power (hereinafter referred to as “Long Term Contracted R2”) and Short Term Contracted Secondary Control Power (hereinafter referred to as “Short Term Contracted R2”) is determined as follows:

3.3.1. Principles

- ELIA will contract a part of its Secondary Control Power on Short Term (hereinafter referred to as “Short Term Contracted Secondary Control Power”) and a part on Long Term basis (hereinafter referred to as “Long Term Contracted Secondary Control Power”) from Suppliers holding a valid General framework for the Service or an agreement for a Variant Service with Elia.
- The repartition of the total procured Secondary Control Power by ELIA on a Short Term and/or Long Term basis and the determination of the split between the Service and other Variant Services are defined by Elia. (both Long Term and Short Term can be set at 0MW)
- ELIA is entitled to organize a Long Term procurement with the possibility to reduce the procured Secondary Control Power partially or completely in favor of Short Term procurement. It being understood that this is only valid for Primary and/or Secondary Control Power that is not yet contracted for the applicable Delivery Period.
- To participate in a Short Term and/or Long Term procurement for the Service organized by ELIA, The Supplier 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 Supplier should reapply via the Open Qualification Procedure and sign a new General framework for the Service with Elia
- The Supplier 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 this Long Term and/or Short Term procurement of the Service.

3.3.2. Procedure for participation in the Long Term and Short Term procurement

Elia will duly inform all Suppliers of the specific conditions for Long Term and Short Term procurement of the Service. These conditions will contain at least what follows:

- ELIA will announce the procurement on a Long Term basis to the Suppliers with a valid General framework at that moment, at least fourteen calendar days before the call for tender.
  - This announcement will contain at least:
    - The Long Term Delivery Period
    - If known, the volume that ELIA will contract on a Long Term Basis, if not known an estimated volume.
    - The date of the launch of the call for tender
    - The deadline to submit the Long Term Capacity Bids.
- For Short Term procurement, the tendering 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
  - For a Long Term procurement will be communicated with the call for tender.
  - For the Short Term procurements are published on ELIA's website ([www.elia.be](http://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 Supplier as part of an Elia-pre-defined list of eligible conditions
- The permitted number of Capacity Bid(s) is unlimited. When participating , the Supplier 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  $\pm 1$  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 Supplier to deliver the corresponding Secondary Control Power Obligation at the specified unit price if awarded by Elia as part of the procurement process. A Supplier 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. or. The Supplier will make its best efforts to respond to such request.
- Once a Capacity Bid is awarded, the award decision will be communicated to The Supplier 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.
- For the Short Term procurement the awarding criteria are published on ELIA's website.
- For the Long Term procurement the awarding criteria will be communicated with the call for tender.
- For every Capacity Bid awarded by ELIA, the Supplier will receive an order confirmation stating the volume, the Delivery Period and the amount of remuneration.
  - Long Term awarded Capacity Bids will be added to the General framework by exchange of a completed template Annex 1 and a purchase order will be issued by Elia.
  - Short Term awarded Capacity Bids are fixed in a purchase order.

### 3.3.3. Consequences of Contracted R2:

If a Capacity Bid is awarded, the Supplier 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 Supplier 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.

- The remuneration for the Contracted R2 will be based on the offered unit price as described in Art.6.2.

### 3.4. Change in the quantity or the characteristics of Long Term Contracted Secondary Control Power at Elia's request

3.4.1. The quantity of Long Term Contracted Secondary Control Power stated in the completed template of Annex 1 for the applicable Delivery Period might be reviewed at ELIA's request if:

- The rules, recommendations and/or procedures of ENTSO-E are changed during the Long Term Delivery Period. The review will be done in accordance with the changed rules, recommendations and procedures of ENTSO-E. ELIA shall consult the Suppliers about the introduction of such new rules;
- ELIA has the possibility, during the validity period of the General framework, to contract Secondary Control Power with other market players, in accordance with Art.233 of the Grid Code;

3.4.2. If the General framework is reviewed as per Art. 3.4.1 above, the Parties shall take into account and, as the case may be, consult one another on the time the Supplier and/or ELIA need to technically arrange the new quantity of Long Term Contracted Secondary Control Power. The procedure set out in Articles 10.1-10.4 of the General Terms & Conditions ("Review") applies to this clause;

### 3.5. Transfer of contractual Obligations between The Supplier and a Counterpart Supplier

#### 3.5.1. Principles

- In order to grant the Supplier 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 Supplier the possibility to transfer 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 Supplier(s) to the date of the performance of the Obligation.
- Similarly, the Supplier may agree with a Counterpart Supplier to make an additional quantity of Secondary Control Power available to ELIA as a result of a Transfer of Obligations from a Counterpart Supplier to the Supplier.
- 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 Supplier and the Counterpart Supplier must observe in the execution of said transfer.
- The conditions, financial or otherwise, of the Transfer of Obligations between the Supplier and the Counterpart Supplier 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 Supplier or the Counterpart Supplier to comply with his commitments in the framework of the agreement under which they are bound to one another for the Transfer of Obligations will not and is not to be reported to ELIA nor arbitrated by ELIA.
  - Nevertheless, ELIA informs the Supplier that CREG may ask to be informed about the financial conditions of the Transfers of Obligations between the Supplier and Counterpart Suppliers. The Supplier and the Counterpart Supplier agree to provide the CREG with this information.

### 3.5.2. Procedure for declaring a Transfer of Obligations

- The procedure to be followed by the Supplier, ELIA and the Counterpart Supplier 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 Supplier.

### 3.5.3. 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 Supplier to a Counterpart Supplier 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 Supplier 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 Supplier.
- The remuneration of the Long Term and Short Term Contracted Secondary Control Power remains fixed as per Art. 6.2.1 and Art 6.2.2 irrespective of the Transfers of Obligations that the Supplier has agreed with Counterpart Supplier(s), declared to ELIA and that ELIA has validated.
- Similarly, ELIA will not owe any remuneration under Art.6.2 (reservation) to the Counterpart Supplier with whom the Supplier has agreed a Transfer of Obligation. Nevertheless, ELIA will pay the Counterpart Supplier to whom The Supplier has transferred his Obligation for the Secondary Control Power Supplied as per Art.6.3 (activation).

## 3.6. Day ahead nomination

3.6.1. The Supplier 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 Supplier according to the rules set out in Annex 7.

3.6.2. The Supplier shall make Secondary Control Power available in such a way that not more than 50MW of Secondary Control Power Made Available (Upward and/or Downward) may be lost instantaneously, unless the Supplier has one or several other Secondary Control Production Unit(s) available as defined in the CIPU contract (Nomination Procedure) so that, in case of a Forced Outage, the Supplier is able to reconstitute said Secondary Control Power within a period of maximum 6 hours after the Forced Outage and that no more than 50MW remains lost after these 6 hours.

3.6.3. The Supplier 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.

3.6.4. In this case, the Secondary Control Power Required to be activated by the Supplier on his Production Units, the record and monitoring of the provision of the Service and the resulting penalties for non-compliance according to Art.7.2 will be based on the Secondary Control Power Made Available by the Supplier

3.6.5. Nevertheless, the remuneration of the Long Term and Short Term 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 Supplier.

3.6.6. In case ELIA activates the additional Secondary Control Power Made Available by The Supplier as per Art.3.6.3, the remuneration foreseen under Art.6.3 is due by ELIA to the Supplier for the corresponding energy resulting from the Secondary Control Power Supplied.

3.6.7. 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 Supplier 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.

### 3.7. Activation

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.



### 3.8. Correction of the Supplier's imbalance

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

## **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 Supplier and ELIA agree on the list of Secondary Control Production Units that the Supplier 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 Supplier 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 and 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 Supplier 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 Supplier complies with these conditions. (cf Art 2.3)

## **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 Supplier 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 5.1 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 Supplier 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 Supplier (in particular the "CIPU" contract, the Contract for Primary Control and the Contract 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 Supplier 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 Supplier:
  - 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 Supplier 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, the Long Term and the Short Term 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 Supplier 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. 8.4&8.5.

#### 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 Supplier 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 10.
- The evaluation by ELIA of the Secondary Control Power Supplied by The Supplier 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 Supplier, provided both measurements have comparable time references. If the Supplier observes a significant error or difference between both series of measurements, the Supplier will inform ELIA hereof by the deadline specified in Art.8.4. 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. 8.4&8.5.

## **6 Remuneration**

6.1. The remuneration of the Service consists of a remuneration for the Long Term Contracted R2 (reservation), a remuneration for the Short Term 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 Fixed Remuneration for the delivery of the Long Term Contracted Secondary Control Power will be calculated on the basis of the unit prices and volume of Contracted Secondary Control Power listed in the exchanged, completed template Annex 1.

It corresponds to the sum of remunerations for the various lots where each remuneration is the product of:

- The unit price for that particular Lot in accordance with the exchanged, completed template Annex 1,
- The number of MW of said Lot in accordance with the exchanged, completed template Annex 1 and
- The number of corresponding hours per year for the Delivery Period concerned, divided by 12.

6.2.2. The foreseen remuneration or Monthly ST Remuneration for the delivery of the Short Term Contracted Secondary Control Power will be calculated on a monthly basis, based on unit prices of the corresponding Short Term Contracted R2. The remuneration corresponds to the sum of the remunerations for the various selected Short Term 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 Short Term Contracted Secondary Control Power in accordance with Art. 3.3. and
- The number of corresponding hours of the Delivery Period concerned.

### 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 Supplier 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 Supplier 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 Supplier 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 described in Art.3.5.
- 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 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 Missing MW is determined as the highest value of:
  - Upward Missing MW or "R2up\_missing"
  - Downward Missing MW or "R2down\_missing"
- ELIA reserves the right to limit the value of Secondary Control Power Made Available by the Supplier in case the Supplier has not complied with the 50MW rule as described in Art 3.6.2
- 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 Supplier 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. Exemption of penalties for non-compliance with the Secondary Control Power Required

An exemption of the penalty for non-compliance with the Secondary Control Power Required mentioned in Art.7.2 is foreseen in certain specific circumstances.

7.3.1. If the following conditions are met :

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

and

- The Supplier has no other Secondary Control Production Unit(s) with the status “Available” as defined in the CIPU contract (Nomination Procedure) to make the lost Secondary Control Power available;

and

- The Supplier 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.

7.3.2. If the following conditions are met :

- The Supplier incurs a Forced Outage on a Secondary Control Production Unit on which the Supplier has made Available Secondary Control Power as described in Art.5.3 ;

and

- The Supplier has one or several other Secondary Control Production Unit(s) with the status “Available” as defined in the CIPU contract (Nomination Procedure) to make the lost Secondary Control Power available;

and

- The Supplier makes the lost Secondary Control Power available on another or other Secondary Control Power Production Unit(s) within a period of 6 hours after the Forced Outage;

ELIA will not apply the penalty foreseen in Art.7.2 for the 6 hours following the time of the Forced Outage.

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 Supplier disputes ELIA’s calculation of penalties and wants to appeal on the above mentioned exemption, burden of proof is on the Supplier.

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 and yearly cap, without prejudice to any liability on the part of the Supplier for the non-fulfillment of his obligations in accordance with Art. 6 of the General Terms & Conditions. The method for calculation of these penalty caps is detailed in Annex 13.

### **8 Invoicing and payment**

8.1. For every volume awarded (Long Term and/or Short Term Contracted Secondary Control Power) the Supplier will receive an order confirmation stating a purchase order number and the remunerations.

8.2. Via a joint validation platform or other channel, ELIA will provide the Supplier 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 Supplier 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.

8.3. 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 Terms & Conditions shall apply.

8.4. Disputes from the Supplier regarding the report stipulated in Art. 8.2 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.

8.5. If no agreement can be reached:

- The Supplier, when drawing up his pro-forma invoice for Month M as specified in Art. 8.6, 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 Terms & Conditions shall apply.

8.6. The Supplier 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 on the 25th (twenty-fifth) of each calendar month M. The pro-forma invoice will include, among other things:

- (a) the purchase order number

- (b) the Monthly Fixed Remuneration for the Long Term Contracted R2 for the following month, calculated as described in Art. 6.2.1 of the present General framework;
- (c) The Remuneration for the Short Term Contracted R2 for month M, calculated as described in Art. 6.2.2
- (d) As the case may be, the penalties for month M-3 as calculated by ELIA under Articles 7.1. and 7.2. of the present General framework;
- (d) The Supplier's bank account number to which payment must be made.

8.7. 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.

8.8. Annex 15 includes the appropriation structure to be used by The Supplier.

## **9 Modifications to the General framework**

9.1. Elia has the responsibility to have the same General framework for the Service for all Suppliers.

9.2. Therefore, before modifying the General framework, ELIA will inform the all the Suppliers who have signed a General framework for Secondary Control at least thirty days before a Short Term and/or Long Term procurement by means of a proposal for an addendum.

- For Short Term procurement this is thirty days before the opening of Gate 1;
- For Long Term procurement this is thirty days before the call for tender;

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 Power 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 Supplier that refuses the addendum from the future Long Term and/or Short Term tenders until both Parties agree upon the addendum.

9.5. All Contracted Secondary Control Power from the Supplier in a Long Term and/or Short Term procurement before the proposal for an addendum would come into force, are subject to the General framework applicable at that time.

9.6. A Supplier 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 Suppliers 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 contract, by exchanging the filled out template in Annex 16. These exchanges and updates can be done via e-mail.

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



Drawn up in Brussels on **[date]** in duplicate, with each Party declaring having received an original copy.

**ELIA System Operator S.A.**, represented by:

Frank Vandenberghe  
Chief Officer Customers,  
Market & System at Elia  
Date:

Chris Peeters  
CEO  
  
Date:

**XXX** represented by:

Name:  
Position:  
Date:

Name:  
Position:  
Date:

## Annex 1. Template Long Term Contracted Secondary Control Power

This Annex is a part of the General framework for Secondary Control concluded between both Parties and lays down the Long Term Contracted Secondary Control Power.

Delivery Period: from **XX/XX/XXXX** till **XX/XX/XXXX**

Lot	Service & Product	Volume [MW]	Price [€/MW/h]	Period
1	Upwards Secondary Control Power			Peak
2	Upwards Secondary Control Power			Long peak Off-peak
3	Downwards Secondary Control Power			Peak
4	Downwards Secondary Control Power			Long peak Off-peak

## **Annex 2. \_Conditions, rules and procedure for Transfer of Obligation.**

### **A) Principle for Transfer of Obligations.**

In accordance with Art 3.5, Elia allows the Supplier to transfer part or all of his R2 Obligations to one or several Counterpart Supplier(s). Similarly, the Supplier 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 Supplier to the Supplier.

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 Supplier and the Counterpart Supplier must respect in order to notify and validate said transfers.

All procedures regarding the nomination of the Transfer of Obligations and the tools are explained and illustrated with examples on our website. ([www.elia.be](http://www.elia.be))

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

At the signature of the General framework, the Supplier can transfer Obligations to/from a Counterpart Supplier for the products listed below. ELIA can at any time allow new services to participate. In this case ELIA will inform the Supplier

- Symmetric Primary Control, both Long Term and Short Term Contracted R1, 100mHz en 200mHZ
- Asymmetric Down Primary Control, both Long Term and Short Term Contracted R1
- Upward Secondary Control, both Long Term and Short Term Contracted R2
- Downward Secondary Control, both Long Term and Short Term Contracted R2
- Tertiary Control<sup>1</sup>

### **C) Rights for announcing (nominate) Transfer of Obligations.**

- Any Supplier holding a valid General framework for Primary Control or an agreement for a Variant Service with ELIA to the date of the performance of the R1 Obligations can exchange R1 Obligations with a Counterpart Supplier even if the quantity of Long Term and/or Short Term Contracted Primary Control Power is 0 (zero);
- Any Supplier holding a valid General framework for Secondary Control or an agreement for a Variant Service with ELIA to the date of the performance of the R2 Obligations can exchange R2 Obligations even if the quantity of Long Term and/or Short Term Contracted Secondary Control Power is 0 (zero);

---

<sup>1</sup> Only Tertiary Control supplied within the framework of the Tertiary Control Service. All obligations resulting from other Tertiary Control products as “R3 Dynamic Profile” cannot be exchanged via the secondary market.

- Any Supplier holding a valid General framework for Tertiary Control or an agreement for a Variant Service with ELIA to the date of the performance of the R2 Obligations can exchange R3 Obligations even if the quantity of Long Term and/or Short Term Contracted Tertiary Control Power is 0 (zero);

#### **D) Constraints for announcing (nominate) Transfer of Obligations.**

- Nominations announcing a Transfer of Obligations have to be submitted by both Suppliers, before 13.30 hrs on day-1.
- One Supplier can have multiple nominations with different Counterpart Suppliers.
- Consistent nominations are blocked at 13.30 hrs on day-1 and cannot be changed from then onwards.
- If a nomination is inconsistent, Suppliers can correct it until 14.00 hrs on day-1.
- If a nomination still shows inconsistencies by 14.00 hrs on day-1, Elia will reject (both) nomination(s) (the Supplier's and the Counterpart Supplier's) completely.

#### **E) Overall processing workflow for Transfer of Obligations.**

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

**F) Procedure for announcing (nominate) Transfer of Obligations.**

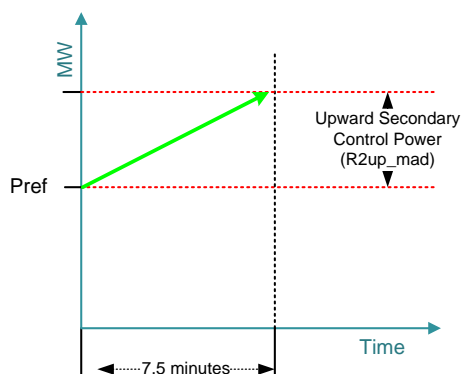
The procedures to be followed for the Transfer of Obligations and the manual for the tools are published on ELIA's website under "Grid Data", "Extranet for Customers". ([www.elia.be](http://www.elia.be))

### Annex 3. Quantity of Secondary Control Power Required.

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

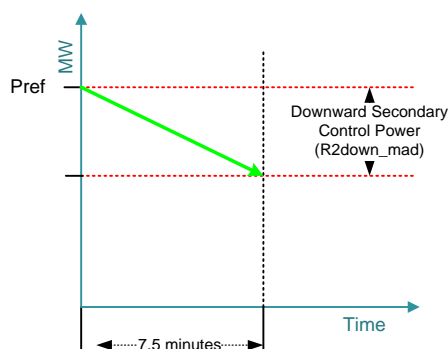
#### A) Ramping Rate requirements.

- The Supplier 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 Supplier 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 Supplier (upwards or downwards) taking the Ramping Rate requirements and the amount of R2up\_mad and R2down\_mad into account.
  - The typical Calculation Cycle ( $\Delta t_s$ ) is set at 10 seconds.
  - The amount of Secondary Control Power that must be activated by The Supplier is referred to as  $\Delta P_{sec\_tot}$ .

- The value  $\Delta P_{\text{sec\_tot}}$  is exchanged between Elia and The Supplier 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 Supplier participating in the Secondary Control on one hand, and the sum of the settings  $P_{\text{ref}}$  sent by the Supplier at time  $t - \Delta t_s$  and the signal  $\Delta P_{\text{sec\_tot}}$  calculated by ELIA at this same time  $t - \Delta t_s$  on the other hand, corrected with any other needs of ELIA regarding ancillary services (Incremental and/or Decremental CIPU Bids, R1) 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.
    - $S1_{[\text{Supplier},k]} = 0.15 * \text{average} [R2_{\text{up\_sel}}_{[\text{Supplier},k]} ; R2_{\text{down\_sel}}_{[\text{Supplier},k]}]$
- With:
- $R2_{\text{up\_sel}}_{[\text{Supplier},k]}$  = the sum of the selected Bids for Upward Regulation for quarter hour  $k$  by Elia as explained in art. 3.6.7
  - $R2_{\text{down\_sel}}_{[\text{Supplier},k]}$  = 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 Supplier's Imbalance**

In accordance with Art 3.8 ELIA will correct the Supplier's imbalance (on a quarter-hourly basis) as provided for in the "Access Responsible Party Contract" between ELIA and the Supplier.

- 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 Supplier's imbalance. Said calculation shall be done by ELIA in the framework of the Access Responsible Party Contract between the Supplier and ELIA. The energy resulting from the Secondary Control Power Required by the Supplier 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 Supplier 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 Supplier 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 Supplier who meets the organizational requirements can supply said services to Elia with the pre-qualified Production Units for that service. The Supplier must meet the organizational requirements before the start date of the contract. Suppliers 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 contract.

### **A) Organizational requirements for The Supplier**

The Supplier and ELIA will check together:

- Offline Communication
  - Correct Nominations: the Supplier 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 Supplier.
  - The Supplier 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 Supplier will make best effort to identify the source of the failure and the Supplier will make best effort to solve the source of the failure.

#### **a. Organization of the simulation**

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

**b. Simulation Test**

**i. Primary Control Power**

For the simulation of Primary Control Power, the Supplier must substitute the measured frequency with a simulated value.

In the simulation the Supplier will be tested to check whether he meets the requirements for :

1. Immediate Frequency change leading to a maximum activation of Primary Control:

This test takes 120seconds and checks whether the maximum volume indicated in table 1 of this annex can be activated within the required timeframes by simulating an immediate frequency change with the frequency's stated in the table below.

<b>Product</b>	<b>Simulated frequency at t=0sec</b>	<b>Simulated frequency from t=1sec to t=120sec</b>	<b>Simulated frequency at t=121sec</b>
<b>Symmetric Primary Control</b>	50.000Hz	49.800Hz	50.000Hz
<b>Asymmetric Primary Control</b>	50.000Hz	50.200Hz	50.000Hz
<b>Demand Side Primary Control</b>	50.000Hz	49.800Hz	50.000Hz

2. Checks:

<b>Requirements for attestation</b>
Is 50 % of the maximum R1 activated on t=15sec
Is minimum 100% of the maximum R1 activated on t=30sec
Does minimum 100% of the maximum R1 remain activated from t=30sec to t=120sec
Does the Generation/Offtake returns to its original setpoint after t=121sec.

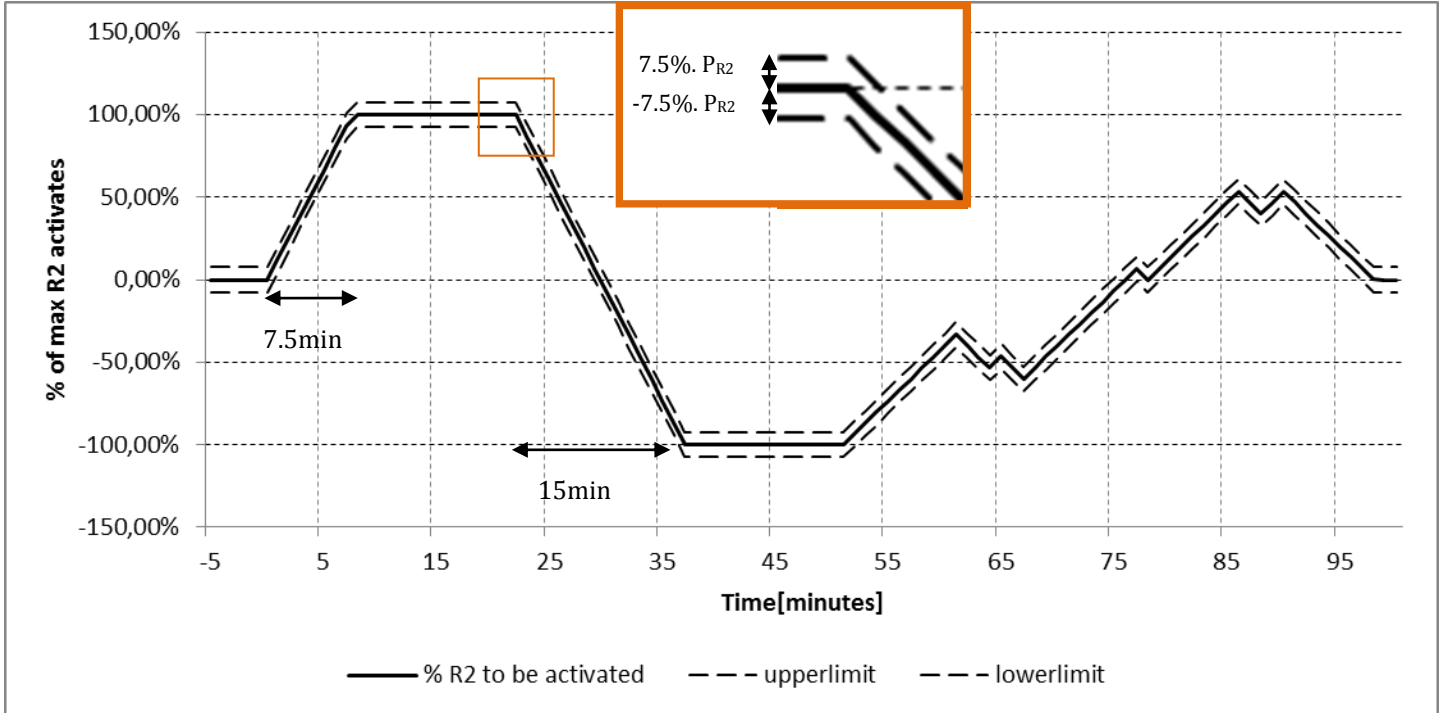
**ii. Secondary Control Power**

For the simulation of Secondary Control Power, the Supplier must simulate the following activation signal. With this signal ELIA will test whether the Supplier 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 be 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  $\Delta P_{\text{sec\_tot}}$ .
    - All  $\Delta P_{\text{sec\_tot}}$  values shall be electronically recorded by ELIA and by The Supplier.
- The Supplier shall communicate the following information in real time:
  - A return signal of  $\Delta P_{\text{sec\_tot}}$ .
    - The Supplier 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 PowerUnit (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  $\Delta P_{\text{sec\_tot}}$  that are attributed to a Power Unit
    - "Pref(t)" means the power (in MW) that each Secondary Control Production Unit of the Supplier participating in the Secondary Control shall inject in  $t + \Delta t$ s for The Supplier'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.
      - $P_{\text{min\_sec}} \leq P_{\text{ref}}$ .
      - The difference between  $P_{\text{ref}}$  and  $P_{\text{min\_sec}}$  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.
      - $P_{\text{max\_sec}} \geq P_{\text{ref}}$ .
      - The difference between  $P_{\text{max\_sec}}$  and  $P_{\text{ref}}$  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:

#### Process

For the correct and effective functioning of the secondary control, the process requires:

- The balance responsible party to continually guarantee and maintain in real time the accuracy of the information sent to Elia.
- The access responsible party to guarantee, without additional delay, the processing of the settings obtained from Elia.
- The access responsible party 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 balance 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 Supplier 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 Supplier and ELIA: Based on the controls introduced, they will contact their respective contact persons to report the existence of a problem;
  - The Supplier and ELIA: Make every effort to install the back-up solution as quickly and effectively as possible;
  - The Supplier 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 access responsible party 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 access responsible party:

- 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 Supplier 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 Contract. 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 Supplier to Elia, is verified extremely carefully by the Supplier 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 Supplier shall communicate the following information off-line:
  - No later than 15:00 hrs on D-1, the Supplier 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 Supplier must also provide, quarter-hour by quarter-hour, price Bids as defined below in this annex.

				D+1: "YYYY/MM/DD"					
<b>"ARP Name"</b>		Procedure :		NOMINATION					
		Period of execution :		2013_MM_DD					
		P :		ARP					
		File Type :		SEC_RES					
<b>Version "N°"</b>		ARP Version :		1					
		O :							
		O Version :							
				Type "SEC_RES"					
				* For each QH the quantity of R2up "in MW"					
CODE	FRIENDLY NAME			0h - 1h					
54145XXXXXXXXXX	PU Name 1	Mw	R2up	0,00	0,00	0,00	0,00	0,00	0,00
		€/Mwh	Price	0,0	0,0	0,0	0,0	0,0	0,0
		Mw	R2down	0,00	0,00	0,00	0,00	0,00	0,00
54145XXXXXXXXXX	PU Name 2	€/Mwh	Price	0,0	0,0	0,0	0,0	0,0	0,0
		Mw	R2up	0,00	0,00	0,00	0,00	0,00	0,00
		€/Mwh	Price	0,0	0,0	0,0	0,0	0,0	0,0
54145XXXXXXXXXX	PU Name 3	Mw	R2down	0,00	0,00	0,00	0,00	0,00	0,00
		€/Mwh	Price	0,0	0,0	0,0	0,0	0,0	0,0
		Mw	R2up	0,00	0,00	0,00	0,00	0,00	0,00
	Total	€/Mwh	Price	0,0	0,0	0,0	0,0	0,0	0,0
		Mw	R2up	0,00	0,00	0,00	0,00	0,00	0,00
		Mw	R2down	0,00	0,00	0,00	0,00	0,00	0,00

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

- Each nomination of R2up or R2down made available by the Supplier 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 Supplier 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  $\leq FC_{50\%CCGT} + 40 \text{ €/MWh}$
    - With:
      - $FC_{50\%CCGT}$ : Fuel cost (€/MWh) of a CCGT with 50% efficiency.
        - $= NG \text{ [€/GJ}_t] * S_{CCGT-50\%} \text{ [GJ/MWh}_e]$
      - $S_{50\%CCGT}$ : Specific Consumption of a CCGT with 50% efficiency.
        - $= 7,2 \text{ [GJ}_t/\text{MWh}_e]$
      - 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<sub>t</sub>]
  - 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  $\geq 0 \text{ €/MWh}$  (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 =  $FC_{50\%CCGT} + 20 \text{ €/MWh}$
    - D Bid =  $\max [FC_{50\%CCGT} - 20\text{€/MWh} ; 0 ]$
- 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 Supplier and, as the case may be, nominations will be corrected accordingly, amongst others with the procedure described in Annex 8. ELIA will inform the Supplier of the results of these checks no later than at 18:00 hrs on D-1.

Ex-post Off-line communication

- The supplier shall provide the following information off-line ex-post:
  - Every day (on Day D+1 for Day D) before 06:00 the Supplier 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)
    - 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  $\Delta P_{sec}$
      - The measurements of active injection
      - Pref

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\* synchronised with an official clock

## **Annex 8. Consistency check between Ancillary Service Contracts**

In accordance with Art 5.3, Elia will check the nominations sent by the Supplier on D-1 for coherence between this General framework and other ancillary service contracts concluded between ELIA and the Supplier (in particular the "CIPU" contract, the Contract for Primary Control and the Contract 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 Supplier 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 Supplier for monitoring whether or not the Supplier 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"

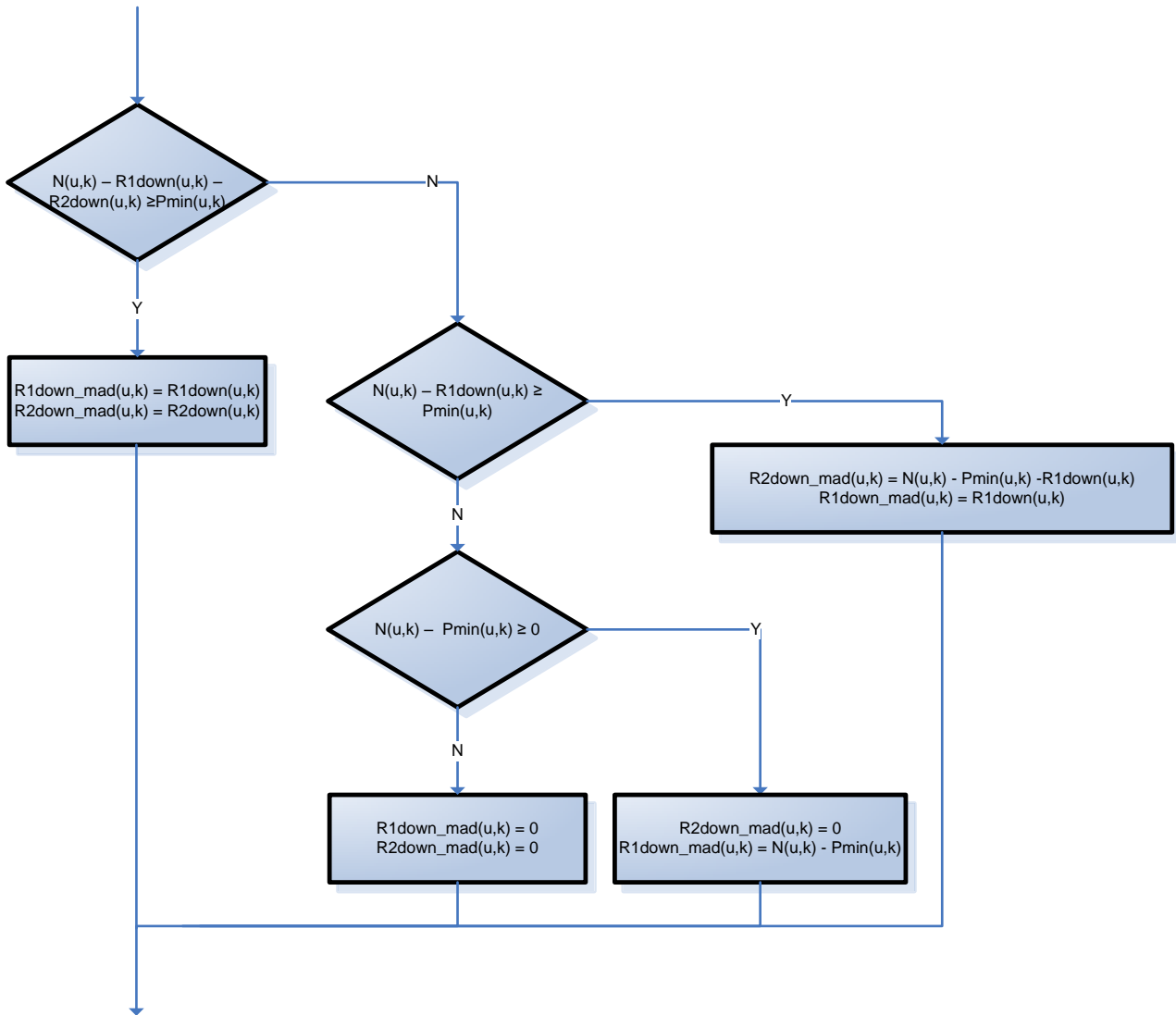
### **A) Definitions**

- $u$  = 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  $P_{\min \text{ avail}}$ , sent on D-1 by the Supplier 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  $P_{\max \text{ avail}}$ , sent on D-1 by the Supplier to ELIA under the CIPU Contract;
- $R1\text{up}(u,k)$  = The quantity of Primary Control Power made available on Day D, for the Primary Control Range  $f < F_s$ , communicated on D-1 by the Supplier to ELIA, for unit  $u$  and quarter-hour  $k$ ;
- $R1\text{down}(u,k)$  = The quantity of Primary Control Power made available on Day D, for the Primary Control Range  $f \geq F_s$  and for the Primary Control Range  $f \geq 50,10\text{Hz}$ , communicated on D-1 by the Supplier to ELIA, for unit  $u$  and quarter-hour  $k$ ;
- $R2\text{up}(u,k)$  = the quantity of upward Secondary Control Power made available to ELIA on Day D, communicated on D-1 by the Supplier to ELIA, for unit  $u$  and quarter-hour  $k$ ;

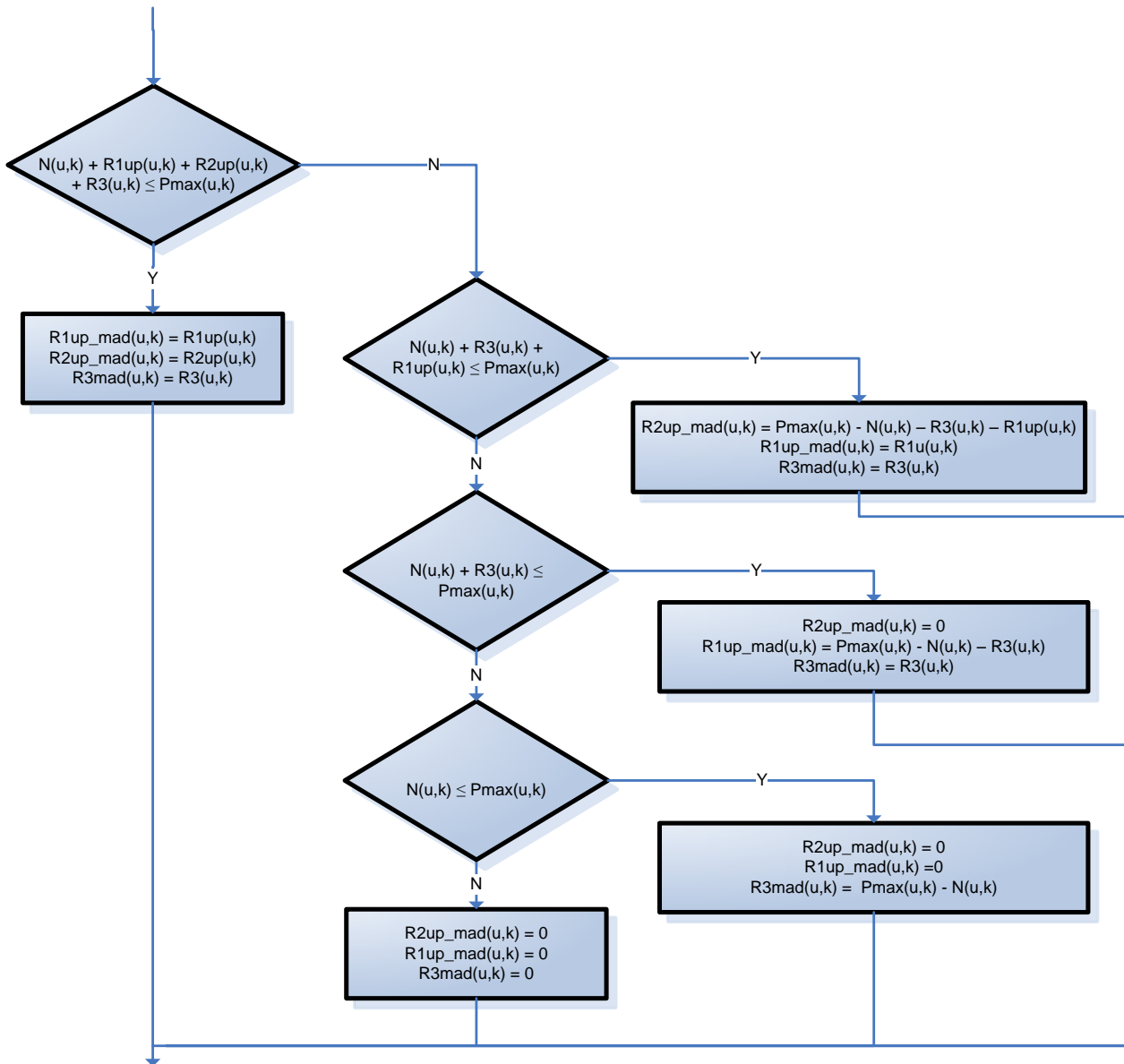
- $R2_{down}(u,k)$  = the quantity of downward Secondary Control Power made available to ELIA on Day D, communicated on D-1 by the Supplier to ELIA, for unit  $u$  and quarter-hour  $k$ ;
- $R3(u,k)$  = the quantity of Tertiary Control Power made available to ELIA on Day D, communicated on D-1 by the Supplier to ELIA, for unit  $u$  and quarter-hour  $k$ ;
- $R1_{up\_mad}(u,k)$  = the quantity of Primary Control Power actually made available on Day D, for the Primary Control Range  $f < F_s$ , obtained at the end of the present procedure, for unit  $u$  and quarter-hour  $k$ ;
- $R1_{down\_mad}(u,k)$  = the quantity of Primary Control Power actually made available on Day D, for the Primary Control Range  $f \geq F_s$  and for the Primary Control Range  $f \geq 50,10\text{Hz}$ , obtained at the end of the present procedure, for unit  $u$  and quarter-hour  $k$ ;
- $R2_{up\_mad}(u,k)$  = 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  $k$ ;
- $R2_{down\_mad}(u,k)$  = 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  $k$ ;
- $R3_{mad}(u,k)$  = 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:

- $R1up\_mad(Supplier,k) = \sum R1up\_mad(u,k)$
- $R1down\_mad(Supplier,k) = \sum R1down\_mad(u,k)$
- $R2up\_mad(Supplier,k) = \sum R2up\_mad(u,k)$
- $R2down\_mad(Supplier,k) = \sum R2down\_mad(u,k)$
- $R3mad(u,k);$

These are the quantities of primary, secondary and tertiary control power made available, by the Supplier 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 Supplier to Elia as determined per annex 8. If ELIA establishes that the Supplier 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 Missing MW, for any quarter-hour of the considered month, the number of Missing MW must be determined. This annex describes the method for calculating the number of Missing MW.

### A) Calculation of Missing MW:

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

	Name	Determination: For each Supplier and each QH
1a	Upward Long Term Contracted R2	Quantity defined in the exchanged, completed template of Annex 1
2a	Downward Long Term Contracted R2	Quantity defined in the exchanged, completed template of Annex 1
1b	Upward Short Term Contracted R2	Quantity awarded in Short Term procurement, see art. 3.3
2b	Downward Short Term 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	= [1a + 1b + 3]
6	R2down_Obligation	= [2a + 2b + 4]
7	R2up_mad	Quantity of R2up_mad(Supplier,k) as defined per Annex 8
8	R2down_mad	Quantity of R2down_mad(Supplier,k) as defined per Annex 8
9	R2up_missing	= Max [( 5 - 7 ) ; 0]
10	R2down_missing	= Max [( 6 - 8 ) ; 0]
11	<b>Missing MW</b>	<b>= Max [ 9 ; 10]</b>

This means that for each quarter hour:

- 1 and 2:** Are the quantities of Long Term and Short Term Contracted R2 based on the award in the Long Term and/or Short Term procurement, 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 Supplier has sold obligations: the Supplier took over obligations **from** a Counterpart Supplier
  - ii. Negative (-) in case the Supplier has bought obligations: the Supplier transferred obligations **to** a Counterpart Supplier
- 5 and 6:** R2up and R2down obligations are determined as the sum of Contracted R1 and Confirmed Transfers of Obligations.



- 7 and 8:** These are the quantities of R2up and R2down the Suppliers 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 Supplier has failed to comply with all his obligations for that respective direction.
  - ii. Zero (0) in case The Supplier complies with all his obligations for that respective direction.
- 11:** The number of 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 Supplier.
- For several cases of Confirmed Transfers of Obligation and R2up\_mad and R2down\_mad values one can calculate the number Missing MW's as follow:

	Name	Determination: For each Supplier and each QH								
1a	Long Term Contracted Upward R2	0	0	0	0	0	0	0	0	0
2a	Long Term Contracted Downward R2	40	40	40	40	40	40	40	40	40
1b	Short Term Contracted Upward R2	0	0	0	0	0	0	0	0	0
2b	Short Term Contracted Downward R2	0	10	0	0	10	10	10	0	0
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	<b>Missing MW</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>40</b>

## **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 Supplier 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 Supplier 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 Supplier, 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 Supplier observes a significant error or difference between measurements made by ELIA compared with those made by the Supplier, ELIA will be informed hereof by the deadline specified in Art.8.4. 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 follow:

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

$$B = | \text{Deviation} | - S1 \text{ if } | \text{Deviation} | \geq S1$$

$$B = 0 \text{ if } | \text{Deviation} | < S1$$

- 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  $\Delta P_{\text{sec\_tot}}$ , sent to the Supplier by ELIA, is erroneous. ELIA undertakes to inform the Supplier when ELIA notices such a situation.

## ANNEX 11. Calculation of penalties for Missing MW

In accordance with Art. 7.1 of the General framework Elia will apply a penalty if the Supplier 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 Missing MW as calculated per Annex 9.

### A) Calculation of Clean Spark Spread for a standard (50%) CCGT ("CSS<sub>50%CCGT</sub>").

For calculation of penalties, Elia will calculate the CSS for a Standard CCGT, hereinafter referred to as CSS<sub>50%CCGT</sub>, for each QH of the considered month.

- Standard formula for CSS<sub>50%CCGT</sub> calculation:

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

- E(t) = BPX Day Ahead price expressed in [€/MWh<sub>el</sub>], 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<sub>th</sub>].
  - 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<sub>CO<sub>2</sub></sub> = the CO<sub>2</sub> emission of a Standard CCGT in [tonCO<sub>2</sub>/MWh<sub>th</sub>], fixed at 0.1836 tonCO<sub>2</sub>/MWh<sub>th</sub>
- CO<sub>2</sub> = the price per ton CO<sub>2</sub> D-1 as defined in annex 6 of the CIPU contract [€/tonCO<sub>2</sub>].
  - 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<sub>50%CCGT</sub> (fictive values)

Day: 27/04/2012

Quarter hour: 13h00-->13h15

- E(13h-13h15) = Belpex DA (13h00-14u00)= 55.96€/MWh<sub>el</sub>
- η = 0.5
- G(13h-13h15) = Heren Zeebrugge Day-ahead index = 25.16 €/MWh<sub>th</sub>

- Heren Zeebrugge Day-ahead index: 52,12 pence/therm
- GJs/Therm= 0.1055056
- GJ(i)/GJs= 0.9035
- Exchange rate= 1,2472 €/£

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

$$G(13h-13h15) = 25.16 \text{ €/MWh}_{th}$$

- $\gamma_{CO_2} = 0.1836 \text{ tonCO}_2/\text{MWh}_{th}$
- $CO_2(13h-13h15) = \text{EEX Carbix DA} = 6,56 \text{ €/tonCO}_2$

$$\rightarrow \text{CSS}_{50\%CCGT}(13h-13h15) = 55.96 \text{ €/MWh}_{el} - (1/0.5 * (25.16 \text{ €/MWh}_{th} + (0.1836 \text{ tonCO}_2/\text{MWh}_{th} * 6.56 \text{ €/tonCO}_2))) = \underline{3.23 \text{ €/MWh}}$$

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

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

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

- Missing\_MW(k) in [MW]: 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]
- $\text{CSS}_{50\%CCGT}$ : Clean Spark Spread of a reference 50% efficient CCGT

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

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

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

- Missing\_MW(k) in [MW]: 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
- $\text{CSS}_{50\%CCGT}$ : 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 Missing MW, during the concerned quarter hours:

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

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

Name	Determination: For each QH						
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 Supplier 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

$$Monthlycap = F4 * \left[ \left[ (MonthlyFixed\ Remuneration) + MonthlyST\ Remuneration(month) \right] * F5 \right] + Estim\_Smart(monthM)$$

, with:

- F4: a factor of 2
- Monthly Fixed Remuneration: as described in art. 6.2.1
- Monthly ST Remuneration: as described in art. 6.2.2
- 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, both Long Term and Short Term.
    - R2down\_contracted(k): equal to Contracted Downwards Secondary Control Power for quarter hour k, both Long Term and Short Term.
- 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:

$$Estim\_Smart(monthM) = averageR2Obligation\_M * AvSTAR\_R2\_Price\_M * hours(monthM)$$

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.

### B) Yearly Cap

$$Yearlycap = \left[ \left[ (12 * MonthlyFixed\ Remuneration) + \sum_{allmonths} MonthlyST\ Remuneration(month) \right] * F5 \right] + Estim\_Smart(YearY)$$

, with:

- Monthly Fixed Remuneration: as described in art. 6.2.1



$$F5 = \frac{\sum_{k \in Y_{\text{star}}} (R2up\_obligation(k) + R2down\_obligation(k))}{\sum_{k \in Y_{\text{star}}} (R2up\_contracted(k) + R2down\_contracted(k))}$$

- Monthly ST Remuneration: as described in art. 6.2.2.
- 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 year is greater than 0MW, the value is 0.
  - In case the contracted R2 for the entire applicable year is equal to 0MW, the following formula applies:

$$Estim\_Smart(Y) = averageR2Obligation\_Y * AvSTAR\_R2\_Price\_Y * hours(monthY)$$

With:

- AverageR2obligation\_Y: the maximum of the average R2 up obligations and the average R2 Down obligation during the year Y
- AvSTAR\_R2\_Price\_Y: the average reservation prices for R2 applicable for the year Y as published on the ELIA website.

## Annex 14. Remuneration for activated energy

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 Supplier in accordance with Annex 7 and activated by ELIA in accordance with Annex 3.

### A) Definitions

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

$POS_{[Supplier,k]}$  = Price for Upward Secondary Control Power, activated with the concerned Supplier, 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 Supplier during quarter-hour k.

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

$PAS_{[Supplier,k]}$  = Price for Downward Secondary Control Power, activated with the concerned Supplier, 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 Supplier during quarter-hour k.

$BAOV_{[Supplier,k]}$  = The absolute value of the Volume (nett) of Upward and Downward Secondary Control Power, activated with the concerned Supplier, 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:

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

The amount owed by ELIA to The Supplier 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

$BOV_{[Supplier,k]} = 19,5 \text{ MWh}$

$BAV_{[Supplier,k]} = 38,4 \text{ MWh}$

$POS_{[Supplier,k]} = 64,00 \text{ €/MWh}$

$PAS_{[Supplier,k]} = 50,00 \text{ €/MWh}$

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

$Remuneration_{[Supplier,k]} = (19,5 \text{ MWh} * 64,0 \text{ €/MWh}) - (38,4 \text{ MWh} * 50,0 \text{ €/MWh})$

Supplierk pays Elia = 672 €

**Annex 15. Appropriation structure**

Ancillary service	Appropriation	Type of remuneration
Long Term Contracted Secondary Control Power – reservation	900079	Monthly Fixed Remuneration
Short Term Contracted Secondary Control Power – reservation	909098	Monthly ST 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

\* for reporting reasons, on the invoices, the LONG-OFFPEAK is split into OFF-PEAK and WEEKEND.

OFF-PEAK are the hours between 20:00 and 08:00 from Monday till Thursday, including Friday till 08:00.

WEEKEND are the hours between 20:00 on Friday and 08:00 on Monday.

## **Annex 16. Template - Contact persons**

For ELIA:

<b>1</b>	<b>Contractual monitoring</b>
<b>2</b>	<b>Verification of the compliance of the service provided</b>
<b>3</b>	<b>Invoice monitoring</b>
<b>4</b>	<b>Real time operations and operational monitoring</b>
<b>5</b>	<b>Offline operations (Duty)</b>

For The Supplier:

<b>1. Contractual monitoring</b>
<b>2. Invoice monitoring</b> 2.1. Settlement  2.1. Incoming Invoices
<b>3. Real time (24h/24h)</b>
<b>4. Offline operations</b>
<b>5. Short Term Tendering contact</b>

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