

# Elia Ancillary Services: Black-Start 2018-2020

## Bidding instructions and awarding criteria

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# 1 General information

## 1.1 Minimal need of ELIA

Elia needs to contract power plants able to provide the Black-Start Service for the delivery period of 01/11/2018 until 31/12/2020 with the following criteria:

Delivery period	Electrical Zone	Number of power plant(s)
1/11/2018 – 31/12/2020	North-East South-East South-West	1 power plant
	380 kV	1 power plant
1/11/2019-31/12/2020	North-East South-East South-West	1 power plant

Table 1 – Needs for BS Power plants

A candidate can offer a power plant for the 3 different lots:

- Lot 1: 01/11/2018 – 31/12/2020
- Lot 2: 01/11/2018 – 31/10/2019
- Lot 3: 01/11/2019 – 31/12/2020

If a power plant is missing for one of those 4 zones, Elia can consider the possibility of not contracting a power plant supplying Black-Start Service in the concerned zone only under the following condition: a reconstruction plan adapted to this zone can be established by either a 380 kV power supply or an additional Black-Start power plant contracted in an adjacent zone (meaning 2 power units located in the same zone would be contracted by Elia).

At most 2 power plants can be contracted by Elia in a same electrical zone because technical and operational limitations are introduced for the dispatching in their network reconstruction procedures.

## 1.2 «Black-Start » Electrical zones

Electrical zones defined for the Black-Start service correspond to the aggregation of zones defined in the CIPU contract as described below:

- North-West = Langerbrugge East, Langerbrugge West and Ruien
- North-East = Merksem and Stalen
- South-West = Hainaut East, Hainaut West and Schaerbeek/Brussels

- South-East = Liège

The 380 kV zone is supplied by a Black-Start power plant connected to the 380 kV network as stated in its connection contract.

Elia stays at disposal of the candidate in case of hesitation regarding the geographical situation of the power plant for which Black-Start service is envisaged, or for any other additional information.

## 2 Bidding instructions

The candidate who wishes to provide a Black-Start service has the choice to offer it either through a single power unit (as long as technical requirements fixed by Elia are satisfied) or through several power units located in the same power plant and connected to Elia network by the same connection point.

If several power units are needed to provide the Black-Start service, they have to be able to coordinate in such a way that their behaviour is similar to a single power unit regarding the HV network. Regarding CCGT units, the steam turbine is not eligible for providing Black-Start service.

The candidate to Black-Start service provides to Elia the following documents, containing the detail of the offer, with at least:

1. A letter where :
  - The candidate agrees with general terms and conditions and with conditions defined by Elia in the contract template<sup>1</sup>.
  - The candidate indicates that his offer(s) are valid until 31/10/2018.
  
2. The candidate informs about :
  - The list of power plants to offer Black-Start service;
  - Detail related to those power plants:
    - a. Exact number of power units located on the power plant for which the candidate offers Black-Start service, and their EAN number;
    - b. Information requested at article 5.1 of the contract template<sup>1</sup>;
  - Lot(s) for which the power plant is offered.
  
3. The candidate details its offered prices with respect to the following rule:

Prices expressed in €/MW/day for each offered power plant as mentioned in Article 7 of the contract template<sup>1</sup>. Those prices cover all costs incurred by the candidate for the delivery of the Black-start service.

In case the candidate offers a power plant not yet equipped to deliver Black-Start service, for which investment cost should be engaged, a dedicated framework to cover this unique cost has to be discussed with Elia. The costs are exclusively incurred for the technical adjustments at the concerned power plant so that it can supply Black-Start service, pursuant to Articles 261 to 264 of the Federal Grid Code. The dedicated framework has to be concluded at the latest one month after the last date for submission of offers. Nevertheless the final related investment cost should already be included in the offer to be submitted at the latest on 11<sup>th</sup> May 2018.

This dedicated framework:

- 1- will only be applicable for power plants in the market for the delivery period;
- 2- will be subject to the advice of the CREG, which will assess the reasonability of the related price.

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<sup>1</sup> The contract template is available on [Elia Website](#)

The following Power plants are eligible to conclusion of a Black-Start contract:

- ✓ Power plants that will be in the market for the delivery period corresponding to the lot for which the power plant is offered.
  
- ✓ Power plants eligible to Strategic Reserve 2018-2019 that have been granted a certification in the framework of the Call for Candidates for Strategic Reserve 2018-2019, as foreseen by the Procedure for Constitution of Strategic Reserve 2018-2019. In this case, the candidate should introduce an offer for Black-Start service that is valid at the condition that the Power Plant is awarded a contract for Strategic Reserve 2018-2019.

All offers including alternative offers (described below - see 2.1) have to be submitted to Elia at last at 18h CET (Central European Time) on 11<sup>th</sup> May 2018.

## **2.1 Alternative offers**

A candidate who cannot meet all technical requirements specified in Black-Start contract template<sup>1</sup> is still allowed to offer to Elia the Black-Start service by an alternative offer. The candidate points out in the technical form for alternative offer (Appendix 1):

- technical requirement(s) which are not respected as defined in Black-Start contract template<sup>2</sup>;
- the best performance reachable for each technical requirement that cannot be satisfied for the concerned power plant;
- reason(s) why the specified technical criteria requested by Elia cannot be respected.

However, the candidate is not allowed to derogate to the criteria related to the requested start-up times for a Black-Start power plant.

Elia will evaluate the technical feasibility of the alternative offer based on information provided as defined above. Elia reserves itself the right to reject the offer based on the conclusion of its analysis.

Awarding criteria described hereunder precise the step at which alternative offers are considered in the selection proceeded by Elia.

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<sup>2</sup> The contract template is available on [Elia Website](#)

## **2.2 Participation of power plants eligible to Strategic Reserve 2018-2019 to the Call for Tender Black-Start 2018-2020**

In order to support the functioning of the Electricity Market, with respect to the article 7septies of the Electricity Law of 29 April 1999, power plants eligible for Black-Start Service that will be in the market for the delivery period will be selected prior to power plant eligible for Black-Start Service that are out of the market. The selection is performed following the awarding criteria 1 to 5 described hereunder.

Awarding criteria 6 and 7 are dedicated to power plants eligible to Strategic Reserve 2018-2019.

### 3 Awarding criteria

- 1) Offers received by Elia are sorted by electrical zone and rated by cost for Elia (**price in €/day/power plant**).

For power plants offered with a dedicated framework for investment costs (as described above in section “Bidding instructions” – point 3), the price in €/day/power plant will be set by summing:

- a. the offered price expressed in €/day/power plant
- b. the unique cost for investment expressed in €/day/power plant (i.e., total investment cost for the concerned power plant divided by the number of days of the delivery period for which the power plant is offered).

This price is only applicable for ranking of the offers in the selection by Elia.

- 2)
  - A. Elia checks the conformity of the power plant with regards to the technical criteria defined in the table below ;
  - B. Elia adjusted prices set by candidates, based on adjustment rules described in the table below, since the candidate has declared that the concerned power plant satisfies the technical requirement. Elia uses information given in the technical form by the candidate to assess if the thresholds for applying a reduction are reached.

Technical criteria	Technical minimum requested by Elia	Criteria for gaining an adjustment of the offered price
Reactive power absorption at power plant connection point	30 Mvar, measured at connection point	If each candidate power unit present in the power plant is individually able to absorb 30 Mvar: price adjustment of 10%.
Start-up time in operating mode (power plant was injecting energy when black-out occurred)	1h30	If both start up times in operating mode and in shutdown mode are respectively less than 1h and 2h: price adjustment of 10%.
Start-up time in shutdown mode (no energy injected by the power plant when black-out occurred)	3h	
Instantaneous load acceptance	The power plant must be able to accept instantaneously a minimal load of 10 MW.	If the power plant is able to accept instantaneously a minimal load of 20 MW: price adjustment of 10%.
Minimal number of consecutive start-up in island mode.	3	
Nominal power of the power plant (without the steam turbine in case of CCGT unit)		If nominal power of the power plant exceeds 200 MW: price adjustment of 20%.
Reliability of the black-start power plant (based on the number of historic "PU" and "FO" status of the CIPU nominations of the last 3 years for the concerned power unit(s))	The average number of days of the last 3 years for which the power plant is not in « PU » or in « FO » must exceed 60%.	
Connection of the power plant to the Elia Grid	The power plant must be connected to a sub-station in which a voltage level of 150kV (or more) is present.	
Frequency control	The power plant must be equipped by a speed regulator that can control the frequency and that can be used without an insensitive zone with respect to the frequency measured.	

Example:



2 power plants are candidate for the North-East zone and have offered the same price.

Power plant 1 consists of:

- 2 power units of 125 MW
- Each power unit is able to absorb 40 Mvar
- All other technical criteria requested by Elia are satisfied.

Power plant 2 consists of:

- 2 power units of 80 MW
- Each power unit is able to absorb 25 Mvar
- All other technical criteria requested by Elia are satisfied.

Power plant 1 will gain an adjustment for its offered price of 20% (Nominal power > 200 MW + Mvar absorption capacity > 30 Mvar / power unit) whereas power plant 2 will not gain any adjustment of its offered price.

From step 3, Elia considers solutions able to cover the need for the entire delivery period of 01/11/2018 to 31/12/2020. Those solutions can consist of either one single offer for one power plant (Lot 1), or a combination of two offers (Lot 2 & Lot 3) corresponding to different power plants.

- 3) Selection of solution: Elia selects, for each electrical zone concerned, the solution with the best offered price after adjustment (step 2B) between power plants for which technical requirements are satisfied.
- 4) If the solutions needed by Elia are not fulfilled, Elia analyses the technical feasibility of the alternative offers (defined in 2.1) in the zone(s) for which no solution could be selected at step 3.

For the zones not excluded at step 3, Elia applies the same procedure described at step 3 to the solutions corresponding to alternative offers that have been validated as technically acceptable.

If two power plants or more have been offered for the same electrical zone and are both considered as technically acceptable, Elia selects the best offered price after adjustment (step 2B).

- 5) After step 4, if one zone is not covered by a solution, Elia selects the best remaining solution consisting of an additional power plant in an adjacent zone as long as a reconstruction scenario could be defined from the considered power plant.

The selection for one zone is without prejudice to the right of Elia of awarding the selected solution as first choice for an adjacent zone, to the extent that Elia does not find other alternative for the considered zone at previous steps.

If several solutions are concerned by this step, Elia applies the following criteria leading to a new price adjustment (in addition of possible adjustments defined at step 2B):

*The shortest electrical distance (number of sub-stations) between the concerned power plant and the electrical zone for which Elia is looking for a power plant is rewarded by a price adjustment of 40%.*

- 6) After step 5, if one electrical zone is not covered by a solution, Elia selects the best offered price after adjustment (step 2B) for power plants eligible to Strategic Reserve 2018-2019.
  
- 7) After step 6, if one electrical zone is not covered by a solution, Elia selects the best remaining solution consisting of an additional power plant eligible to Strategic Reserve 2018-2019 in an adjacent zone as long as a reconstruction scenario could be defined from the considered power plant.

## **Appendix 1 – Technical form for alternative offers**

### ***For each power plant concerned by an alternative offer***

If the candidate for Black-Start Service submits an alternative offer for a power plant, he must specify:

- 1) Technical criteria that cannot be respected by the power plant
  
- 2) The best performance that can be reached by the power plant for these technical criteria
  
- 3) The reason why the candidate for Black-Start Service cannot fulfil Elia requirements for these technical criteria
  
- 4) Possible alternative solutions proposed by the candidate for Black-Start Service to compensate (for example: additional equipment installation,...)