SGR Bidding instructions, rules and award criteria

In this document you will find bidding instructions and an in depth explanation of the bidding parameters given in the SGR bidding sheet and the award criteria.

1. SGR bidding sheet parameters

	General				Warmp-up cost				
Offer number	SGR Power plant	Configuration	Pmax ref [MW]	Reservation price [€/MW/h]	Fixed activation Cost (cold) [€/Act]	Activation energy (cold): Sstart cold [GJ/Act]	Fixed activation Cost (hot) [€/Act]	Activation energy (hot): Sstart hot [GJ/Act]	Start fuel type [Fuel type]
1									
2									
3									

- <u>Column A</u>: 'Offer number': Offer number = number of the offer, serving as a reference for the details inserted for each horizontal line. Each of such horizontal lines will be treated as one offer containing the offered volume in [MW] and the reservation price in [€/MW/h] for the SGR Service offered.

- <u>Column B</u>: 'SGR Power Plant': The name of the SGR Power Plant as mentioned in the candidature.

- <u>Column C</u>: 'Configuration': The offered Configuration[1] for said SGR Power Plant.

- <u>Column D</u>: 'Pmax Ref [MW]': Offered volume or the maximum reference power[2] of the offered Configuration.

  The offered volume must a least be 1MW and any additional capacity must be offered in minimum increments of 0,1MW.

  An offered volume must be entered with maximum 1 decimal. In case one or more decimals are missing, these decimals will be set to 0.

  > In case one or more decimals are missing, these decimals will be set to 0.
  > <u>Example:</u>
  > - Entered volume of 1MW, will be considered to be 1,0 MW.

  > In case of a second decimal smaller than 5, the price will be rounded down. When the second decimal after the comma is greater or equal to 5, the number will be rounded up.

- <u>Column E</u>: 'Reservation Price[3] [€/MW/h]': The reservation Price for the offered Configuration per MW and per hour and only paid during the Winter Period(s). The number of hours used for calculation of the Total Cost and attribution is defined by the hours of the Winter Period or fixed at 3623 hours as written in the Functioning Rules paragraph 6.4.

  An offered price must be entered with maximum 2 decimals.

---

[1] Configuration as defined in the Procedure for Constitution of Strategic Reserve;

[2] Maximum Reference Power (Pmax Ref) as defined in the Functioning Rules;

[3] Reservation Price as defined in the Procedure for Constitution of Strategic Reserve;

In case one or more decimals are missing, these decimals will be set to 0.

Example:
- entered price of 1€/MW/h, will be considered to be 1,00 €/MW/h.
- entered price of 1,2 €/MW/h, will be considered to be 1,20€/MW/h

In case of a third decimal smaller than 5, the price will be rounded down. When the third decimal after the comma is greater or equal to 5, the number will be rounded up.

- Column F: 'Fixed activation cost (cold) [€/Act]': Fixed costs necessary for every Warm-up of the offered Configuration from a cold state. A cold state is defined in the Functioning Rules paragraph 7.2.2 as a time between the end of an activation i (including Delivery Tests) of the SGR Power Plant and the start of a new activation i+1 higher than 24 hours.

- Column G: 'Activation energy (cold): Sstart cold [GJ/Act]': The fuel consumption needed during the Warm-up. This Warm up starts when a notification signal is sent and ends after X_{cold} hours[4] when the SGR Power Plant will receive a verification signal, a prolongation signal or a stop signal, see Functioning rules paragraph 7.2.2.

- Column H: 'Fixed activation cost (hot) [€/Act]': Fixed costs necessary for every Warm-up of the offered Configuration from a hot state. A hot state is defined in the Functioning Rules paragraph 7.2.2 as a time between the end of an activation i (including Delivery tests) of the SGR Power Plant and the start of a new, activation i+1 lower than or equal to 24 hours.

- Column I: Activation energy (hot): Sstart hot [GJ/Act]': The fuel consumption needed during the Warm-up. This Warm-up starts when a notification signal is sent and ends after X_{warm} hours when the SGR Power Plant will receive a verification signal, a prolongation signal or a stop signal, see Functioning rules paragraph 7.2.2.

- Column J: 'Start fuel type [Fuel type]': The type of fuel used during the Warm-up of the offered Configuration. The possible fuel types are limited to Natural Gas and Fuel A, should the fuel type be different than one of the above, then 'Other' can be selected and the fuel type needs to be added as a comment.

K	L	M	N	O	P	Q
Prolongation cost	Ibid cost					
	External cost					
Prolongation fuel: SProlong [GJ/h]	CO2 cost [€/MWh]	Other external [€/MWh]	Ibid fuel type [Fuel type]	Average specific consumption [GJ/MWh]	May not be combined with [Offer number(s)]	Volume(s) are divisible [Y/N]

- Column K: 'Prolongation fuel: SProlong [GJ/h]': The fuel consumption needed for each hour of prolongation of the Warm-up.

- Column L (automatically calculated based on Fuel Type): 'CO$_2$ Cost [€/MWh]': The parameter that is used for CO$_2$-price is provided in the bidding sheets and is based on the average CO$_2$ price of the coldest three days in the 3 last Winter Period as

---

[4] X is the number of hours of the Warm-up as defined in the SGR Contract. The standard parameter for X is 5 hours, but can be different, if justified by the SGR Candidate

mentioned in paragraph 6.4 of the functioning rules. The following formula is applied:

CO_2 Cost [€/MWh] = average specific consumption [GJ/MWh] * conversion parameter[5] [kg CO_2/GJ] * 10^{-3} * CO_2 price [€/ton CO_2]

The CO_2 price used in this tender is 9,53 €/ton CO_2

- Column M: 'Other External [€/MWh]': The total external cost other than CO_2 Costs linked to the electricity production by the offered Configuration, these costs should be reasonable and provable. The external cost can include, for example, the gaz and electricity injection tariff.

- Column N: 'Ibid fuel type [Fuel type]': The fuel type used during the activation of SGR, (the period from Ramp-up until the end of the Effective Delivery). The possible fuel types are limited to Natural Gas and Fuel A, should the fuel type be different than one of the above, then 'Other' can be selected and the fuel type needs to be added as a comment.

  The fuel prices used for calculation of the Total Cost and attribution in this tender (cfr. Functioning Rules section 6.4) is the average fuel price of the three coldest days from the three previous winter periods (as defined from Nov 1st to March 31st)[6] . The fuel prices used in this tender are as follows[7]:

  - Natural Gas: 8,64[€/GJ]
  - Fuel A (Fuel Oil): 8,39[€/GJ]

- Column O: 'Average Specific consumption [GJ/MWh]': The rate of fuel consumption divided by the power produced. If the SGR Powerplant has (had) a CIPU-Contract, than this value should be identical with the specific consumption currently known by Elia for a given Configuration. If this is not the case, it must be justified by the SGR Candidate.

- Column P: 'May not be combined with [Offer number(s)]': Here one can indicate if the offer can be combined with other offers. For SGR, at least one offer for the entire capacity of each Configuration of the SGR Power Plant must be entered. Multiple Configurations of the same power plant can be offered, however in this case one should be aware that multiple configurations of the same power plant cannot be combined with each other[8].

- Column Q: 'Volume(s) are divisible [Y/N]': Here one can indicate whether or not the volumes offered for the respective offer number can be divided or not. If a SGR Candidate wants to offer the entire volume at the indicated price, the offer should be indicated as indivisible so 'N'. If offer is divisible 'Y', then ELIA may freely choose a part of the offered volume at the same unity price.

---

[5] As defined in Annex 3 of the Functioning Rules
[6] The coldest days of the three previous winter periods were identified as 26/02/2018, 27/02/2018, 28/02/2018.
[7] The calculation of the fuel prices is done according to the procedure detailed in Annex 6 of the CIPU contract.
[8] For an example: see footnote 11 of the Functioning Rules.

2.   Bidding rules and instructions

Each line in the bidding sheet, corresponding to an offer number, resembles one offer containing the volume and price parameters for the Configuration[9] of the SGR Power Plant offered.

As stipulated in the law, SGR Candidates are obliged to submit for each certified SGR Power Plant at least one offer for the entire capacity of the SGR Power Plant, for a one-year period (01/11/2018-31/10/2019).

SGR Candidates may submit offers for other Configurations of the SGR Power Plant.

Multiple configurations of the same power plant must represent different offers, and these offers cannot be combined (see below). The minimum bid size of each offer is set at 1MW[10].

If the Candidate SGR Power Plant is (was) included in a CIPU-Contract (in the past), then the SGR Candidate must justify[11] any parameters and information included in the bidding sheets that differ from this (past) CIPU contract of the Candidate SGR Power Plant, SGR Power Units and/or Configuration types.

Also, the description of the bidding parameters in this document is subordinate to the information available in the Functioning Rules for Strategic Reserves and the Procedure for Constitution of Strategic Reserves (available on the website of Elia[12]).

SGR Candidates can provide more explanation on the content of their offers and/or the assumptions taken to make their offer in the part of the bidsheet "Explanation".

---

[9] Configuration as defined in the Procedure for Constitution of Strategic Reserve;
[10] See also the example in footnote 8 of the Functioning Rules;
[11] This justification can be historical start-up profiles (metering data + date), technical reports, characteristics defined by the manufacturer of the SGR Power Plant or all other to make a valid justification;
[12] http://www.elia.be/en/products-and-services/Strategic-Reserve/Documents

3.   Award criteria

The complete attribution is described in section 6.4 of the Functioning Rules.

4.   Example total cost calculation

	R	S	T	U	V
			Calculated costs (indicative)		
	Total cost [€]	Reservation cost [€]	A1 Fixed activation cost cold [€/Act]	A2 Var Act Cost [€/h]	A3 Fixed activation cost hot [€/Act]
		-			

An indication of the Total Cost, on which the attribution is based, is given in column R-V. The total costs calculated in these columns are **indicative and not binding**. The cost of the different variables is calculated according to the sections 6.4 and 7.2.3 of the Functioning Rules.

- Column R: 'TC': The Total cost of this offer is calculated by the sum of the Reservation cost (column T), and the cost linked to the activation (columns U, V & W). The formula used is (for definition, see paragraph 6.4 of the Functioning Rules):

$$TC = \text{Reservation cost} + (\#Act_{cold} * A1) + (\#Act_{hot} * A3) + (Act_{duration} * A2)$$

With $\#Act_{cold}$ set at 1, $\#Act_{hot}$ set at 0 and $Act_{duration}$ set at 3 hours (as defined in the Functioning Rules, the duration of activation for period 2018-2019 is 3 hours)

The variables Reservation Cost, A1, A2 and A3 are calculated, for SGR, in the following way:

- Column S: 'Reservation cost [€]': The total reservation cost of the offered Configuration, this value is calculated by multiplying column D and E with (x1, x2 or x3 respectively) and 3623 hours.

- Column T: 'A1 [€/Act]': The cost for each cold Warm-up is calculated by adding the fixed activation cost (cold) (column G) to the variable activation cost of a cold start-up. The variable cost of a cold start-up is calculated by multiplying the activation energy (cold) (column H) with the fuel cost linked to the start fuel. The fuel cost is calculated as the average fuel cost of the three coldest days during the three previous winter periods.

- Column U: 'A2 [€/h]': The variable cost for an activation of the offered volume is calculated with the following formula:

$$A2 \ [€/h] = Pmax \ ref * \{1,1 * (FuelCost+BHK) + External + ExtraROM\}$$

With FuelCost calculated as described above, BHK or 'Beheerskost' is fixed as 5% of the fuel cost, External cost as given in columns M and N and ExtraRom fixed at 2 €/MWh.

- Column V: 'A3 [€/Act]': The cost for each hot Warm-up is calculated by adding the fixed activation cost (hot) (column I) to the variable activation cost of a hot start-up. The variable cost of a hot start-up is calculated by multiplying the activation energy (hot) (column J) with the fuel cost linked to the start fuel. The fuel cost is calculated as the average fuel cost of the three coldest days during the three previous winter periods.