



Brussels, 7.2.2018  
C(2018) 589 final

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| <p>In the published version of this decision, some information has been omitted, pursuant to articles 24 and 25 of Council Regulation (EC) No 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty, concerning non-disclosure of information covered by professional secrecy. The omissions are shown thus [...].</p> |  | <p style="text-align: center;">PUBLIC VERSION</p> <p>This document is made available for information purposes only.</p> |
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**Subject: SA.48648 (2017/NN) - Belgium - Strategic Reserve**

Sir,

**1. PROCEDURE**

- (1) Following pre-notification contacts, the Belgian authorities notified on 13 July 2017 to the Commission, in accordance with Article 108(3) of the Treaty on the Functioning of the European Union (TFEU), a measure to procure a strategic reserve from winter 2017-2018 onwards up to winter 2021-2022 ("the measure"). Several exchanges took place between the Commission and the Belgian authorities.
- (2) On 11 October 2017, the Belgian authorities provided a language waiver and agreed that the decision will be adopted and notified in English as authentic language.

**2. DESCRIPTION OF THE MEASURE**

**2.1. Legal basis**

- (3) The national legal basis of the measure is the Federal Law of 26 March 2014, amending the Federal Law of 29 April 1999 concerning the organisation of the electricity market (the "Federal Electricity Law").
- (4) The general framework provided by the Federal Electricity Law is complemented by the Functioning Rules for the Strategic Reserves (the "Functioning Rules"), elaborated by the Transmission System Operator ("TSO"), Elia, and submitted to the

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National Regulatory Authority ("NRA"), the Commission de Régulation de l'Electricité et du Gaz/Commissie voor de Regulering van de Elektriciteit en het Gas ("CREG"), for approval, following a public consultation. The Functioning Rules are published on the website of the TSO. They include the more detailed operational rules of the strategic reserve (for example, definition of shortage event, activation rules of the reserve, etc.).

- (5) In addition to the Functioning Rules, the TSO is empowered to adopt a "Procedure for the Constitution of the Strategic Reserves". This Procedure defines the tendering specifications and is established by the TSO, after public consultation.

## **2.2. Objective and economic basis of the measure**

### *2.2.1. General objective*

- (6) The objective of the strategic reserve is to maintain resource adequacy in Belgium according to the security of electricity supply criteria defined in Belgian law (see recital (10)).
- (7) The Belgian authorities have identified a number of market failures which prevent the market from delivering the desired level of security of supply (see Section 2.2.3 of this decision) and developed a number of measures aiming at addressing these market failures and improving security of supply (see Section 2.2.4 of this decision). Nevertheless, they consider that these measures are unlikely to take full effect in the short term. A strategic reserve would therefore be necessary to complement these measures and ensure security of supply.
- (8) The strategic reserve will more specifically aim at meeting peak demand during winter periods (determined by law as starting on 1 November of year N and ending on 31 March of year N+1) when the market fails to do so by maintaining some generation and demand response capacity as a back-up.
- (9) The volume of reserves to be contracted is decided by the Ministry every year on the basis of a detailed adequacy assessment performed by the TSO (probabilistic adequacy assessment described in Section 2.2.5 of this decision) and a recommendation of the Federal energy administration (deterministic adequacy assessment, which compares peak demand to available generation capacity), based on a 'high impact, low probability' scenario. Other relevant adequacy studies also exist and will be presented in Section 2.2.6 of this decision.

### *2.2.2. Reliability standard*

- (10) Belgium has set a two-tier reliability standard:
  - (a) the anticipated number of hours during which it will not be possible for all the generation resources available to the Belgian electricity grid to cover the load, even taking into account demand response and interconnectors, for a statistically normal year shall not exceed 3 hours (LOLE<sup>1</sup> (average) < 3h); and

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<sup>1</sup> The Loss of Load Expectation or LOLE is a measure to quantify the expected number of hours or days in a year during which some disconnection of electricity customers is expected.

- (b) the LOLE shall remain below 20 hours for a statistically abnormal year (LOLE (P95<sup>2</sup>) < 20h).
- (11) Under the Federal Electricity Law, the TSO is required to submit by 15 November of every year a probabilistic analysis of Belgium's adequacy for the following winter. This analysis is an important element which the Federal Minister of Energy takes into account when making the decision regarding the need for a volume of strategic reserve.

### 2.2.3. Market failures

- (12) The Belgium authorities have identified several market failures that in their view create a risk for security of supply in the country.
- (13) The first alleged market failure stems from different factors that prevent efficient price signals: the lack of sufficient demand-side participation in the market, the fact that energy prices are prevented to raise to the Value of Lost Load (VOLL)<sup>3</sup> and other market design imperfections. According to Belgium, prices currently cannot reflect customers' willingness to pay for secure electricity supply, which prevents demand from being fully price-responsive. Prices therefore do not reflect the actual value of resource adequacy. Moreover, customers cannot choose their desired level of reliability, since the TSO cannot selectively disconnect them. In the coming years, Belgium will gradually roll out smart meters which will allow consumers, including households, to be able to manage their consumption in response to scarcity signals from the market. However, the deployment of smart meters will take time and cannot be expected to take effect in the short/medium term.
- (14) Moreover, the Belgian authorities argue that, in an energy-only market prices do not rise to a level reflecting the price at which consumers would no longer be willing to pay for energy (VOLL) and allowing generators to receive scarcity rents. This is particularly true insofar as price spikes might not be acceptable politically and are not only influenced by market fundamentals, but could also be due to lack of transparency, exercise of market power or IT process issues. As a consequence, price caps in the Belgian market are set below VOLL.
- (15) The second alleged market failure is the risk aversion of investors in a context of increased volatility and high regulatory uncertainty. The increasing penetration of intermittent renewable energy sources makes prices more volatile and reduces possibilities for conventional technologies to recoup their fixed costs. Slight variations of climatic and market conditions can have a significant impact on the revenues of conventional generation technologies. Some peak plants or flexible resources may count on very rare scarcity situations, which would depend on a conjunction of variable elements.

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<sup>2</sup> P95 refers to a 95<sup>th</sup> percentile standard according to which during severe conditions with a chance of 5 % of occurring (i.e. a very cold winter that occurs once in 20 years), the LOLE must be inferior to the given standard, which is, in the case of Belgium, 20 hours.

<sup>3</sup> The Value of Lost Load (VOLL) expresses the value attached by consumers to uninterrupted electricity supply (see Commission Staff working document accompanying the Final Report from the Commission of the Sector Inquiry on Capacity Mechanisms (COM (2016) 752 final, available here: [http://ec.europa.eu/competition/sectors/energy/capacity\\_mechanism\\_swd\\_en.pdf](http://ec.europa.eu/competition/sectors/energy/capacity_mechanism_swd_en.pdf), p. 29).

- (16) Third, the Belgian authorities argue that the reliability of electricity systems has certain features of a public good. This is allegedly because investments for a higher level of security of supply benefit all, while it is currently not possible for most individual final consumers to be selectively disconnected by the system operator on the basis of their willingness to pay for secure electricity supply. Thus, generators will likely have suboptimal incentives to invest in generation capacity, which would therefore ultimately deliver suboptimal levels of system reliability.

#### *2.2.4. Measures taken by Belgium to improve security of supply*

- (17) Belgium has taken a number of market improvement measures to address the market failures mentioned in the previous Section of this decision and to improve the functioning of the market in order to solve, at least partially, the root causes of the adequacy issues. The market is thus gradually reformed to deliver security of supply in the longer term.
- (18) Belgium has worked on establishing an adequate regulatory framework for demand response. At present, there are no legal obstacles to demand side response participation in the energy market. Belgium points out that this has been recognised by market participants, referring e.g. to the fact that already in 2013, Belgium was considered by the Smart Energy Demand Coalition (SEDC), the European industry association of demand response operators, as one of the three markets in Europe where the market design and environment allows demand response to be commercially active.
- (19) Belgium has moreover been an early adopter of certain improvements to the market design and regulatory framework such as the introduction of flow-based market-coupling in 2015 and certain reforms of the balancing market (including shorter balancing timeframes).
- (20) The Belgian government also approved a ten-year lifetime extension (until 2025) of certain nuclear reactors, in particular Tihange 1 (for a total installed capacity of 962 MW) and Doel 1 & 2 (for a total installed capacity of 433 MW each). However the Belgian authorities have indicated to the Commission that the law implementing the prolongation is currently subject to litigation, maintaining a certain degree of legal uncertainty regarding these lifetime prolongations.
- (21) Additionally, Belgium has in recent years made additional efforts to increase the deployment of renewable energy generation installations in the country, and notably expects the gradual commissioning of some large offshore windfarm projects in the North Sea in the coming years (for an estimated total installed capacity exceeding 2.2 GW).<sup>4</sup>
- (22) Belgium is also working on improving its interconnections with other Member States. They are all categorised as Projects of Common Interest (“PCI”), meaning that they are essential for completing the European internal energy market and for meeting the EU’s energy policy objectives of affordable, secure and sustainable energy supply. They may benefit from accelerated planning and permit granting, and

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<sup>4</sup> [http://economie.fgov.be/nl/consument/Energie/hernieuwbare\\_energieen/energiebronnen\\_offshore/](http://economie.fgov.be/nl/consument/Energie/hernieuwbare_energieen/energiebronnen_offshore/) (NL) or [http://economie.fgov.be/fr/consommateurs/Energie/Energies\\_renouvelables/Eolien\\_offshore/](http://economie.fgov.be/fr/consommateurs/Energie/Energies_renouvelables/Eolien_offshore/) (FR)

have the right to apply for special funding.<sup>5</sup> The following Belgian network reinforcements recently became, or will become operational in the coming years:

- (a) ALEGrO: The ALEGrO PCI project for a 1 GW interconnector between Belgium and Germany is on track to be commissioned by 2020.
  - (b) NEMO: The NEMO PCI project for a 1 GW interconnector between Belgium and the UK is on track to be commissioned by 2019.
  - (c) BRABO: The BRABO PCI project concerns an upgrade of the Belgian electricity grid with the aim to, among others, increase the import capacity from the Netherlands (e.g. upgrade the existing 150 kV line between Zandvliet and Doel to a 380 kV line).
- (23) Finally, the Belgian authorities have indicated that they are working on a longer-term energy strategy, the “Energy Pact”, to cope with the nuclear phase-out, scheduled to take place between 2022 and 2025, which may consider ways to ensure security of supply.
- (24) According to Belgium, these different measures will contribute to improving the electricity market functioning in Belgium and in turn its security of supply, albeit only in the longer term.

*2.2.5. Adequacy assessment: general methodology for determining the volume of the strategic reserve*

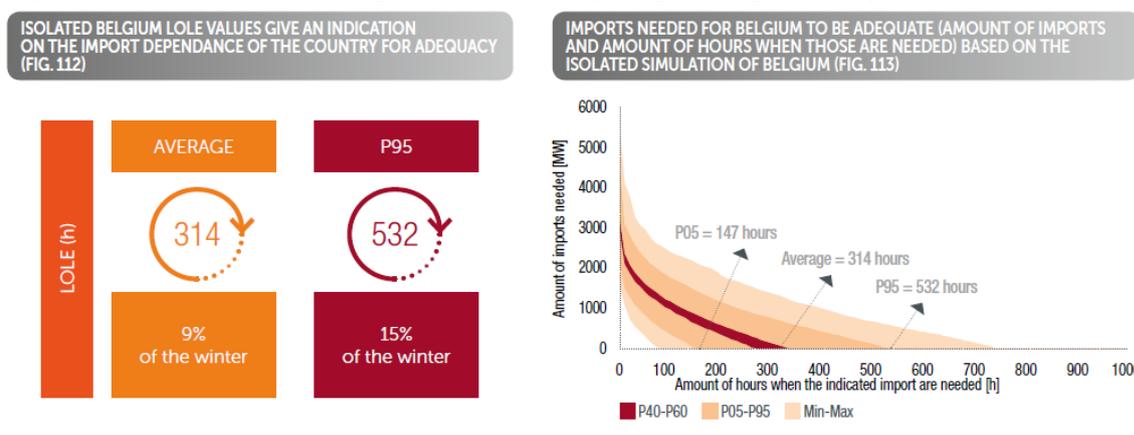
- (25) The Federal Electricity Law mandates the TSO to perform an annual adequacy assessment in order to determine whether a strategic reserve is needed in the next winter, and for which volume. For that purpose, the TSO applies the methodology described in the following recitals.
- (26) *The first step* in determining the strategic reserve volume for a given winter consists of probabilistically modelling the outlook for resource adequacy, which requires an evaluation of the forward availability of generation facilities and of the evolution of demand for electricity. This probabilistic assessment is established by the TSO on the basis of historical data regarding meteorological conditions (which have an impact on the expected availability of hydro, wind and solar generation, but also on expected load since temperature has an impact on the electricity demand) over the period 1975 to 2015 and power plants’ unavailability over the past 10 years.
- (27) *The second step* consists of identifying periods of structural shortage, i.e. times when the generation of electricity is insufficient to meet demand. To this end, an hourly market simulation is carried out for the winter period.
- (28) *The third step* consists of determining the strategic reserve volume considered necessary to meet the adequacy targets given by law. An iterative process and the sensitivity studies described at recital (31) are run to evaluate the impact of some specific risks.

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<sup>5</sup> Commission Delegated Regulation (EU) 2016/89 of 18 November 2015 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council as regards the Union list of projects of common interest (OJ L 19, 27.1.2016, p. 1).

- (29) On this basis, the TSO ran a number of sensitivity analyses for winter 2017-2018, including an outlook for 2018-2019 and 2019-2020 though only in a ‘base case’ scenario, which is according to the TSO the most likely scenario based on historical and probabilistic assumptions.<sup>6</sup>
- (30) Under this ‘base case’ scenario, the TSO did not identify a need to contract a strategic reserve for winter 2017-2018 in order to meet the reliability standard described at recitals (10)(a) and (10)(b).
- (31) However, to evaluate the impact of some specific risks which cannot be captured using a historical probabilistic approach, the TSO runs additional scenarios to factor in, for instance, some recent market developments which may have a material impact on the adequacy outlook.
- (32) In particular, Belgium argues that it is critically dependent on imports for its electricity supply. This is illustrated by the very high LOLE values in case adequacy is assessed for Belgium without interconnectors (see Figure 1 below).<sup>7</sup>

**Figure 1: illustration of Belgium’s electricity import dependency<sup>8</sup>**



Source: TSO's Adequacy Study for Belgium: the need for a strategic reserve for winter 2017-18 and outlook for 2018-19 and 2019-20, p. 90

- (33) Therefore, any change in adequacy assumptions in neighbouring countries has a potential impact on the adequacy outlook in Belgium and, thus, on the necessary strategic reserve volume. In this respect, particular concerns have arisen in recent years regarding the availability of the French nuclear fleet following inspections of the French nuclear safety agency (ASN). This resulted, for example, at the end of 2016 in the unavailability (on top of normal maintenance) of around 6 to 7 GW of French nuclear reactor capacity due to ongoing inspections and of 4 GW in long term maintenance for other reasons. This is the lowest availability of the French nuclear fleet over the past 10 years according to data from RTE (Winter outlook

<sup>6</sup> Elia, "Adequacy study for Belgium: the need for strategic reserve for winter 2017-18 and outlook for 2018-19 and 2019-20", [http://economie.fgov.be/nl/binaries/Analyse\\_Elia\\_periode\\_hivernale-2017\\_2018\\_tcm325-281832.pdf](http://economie.fgov.be/nl/binaries/Analyse_Elia_periode_hivernale-2017_2018_tcm325-281832.pdf).

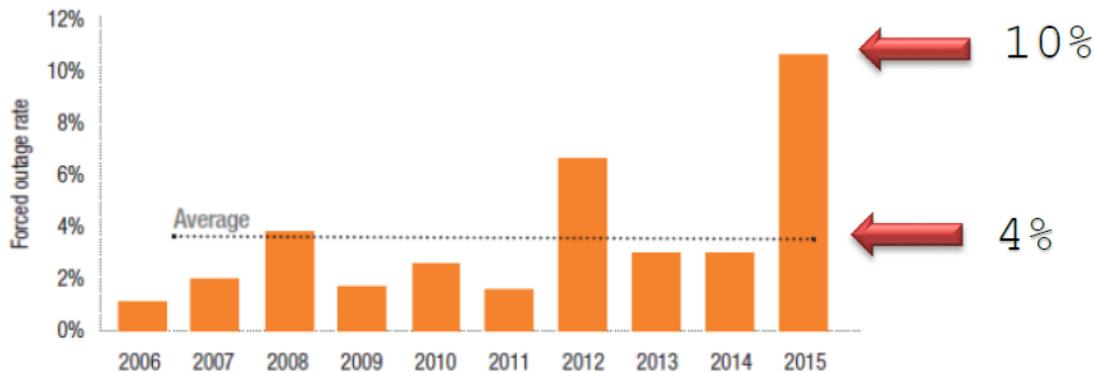
<sup>7</sup> ENTSO-E 2015 Scenario Outlook & Adequacy Forecast, 30 June 2015, available here: [https://www.entsoe.eu/Documents/SDC%20documents/SOAF/150630\\_SOAF\\_2015\\_publication\\_wc\\_over.pdf](https://www.entsoe.eu/Documents/SDC%20documents/SOAF/150630_SOAF_2015_publication_wc_over.pdf).

<sup>8</sup> Peak demand in two adequacy scenario's A & B, the red resp. blue columns, is consistently dependent on imports, the green columns.

2016-17<sup>9</sup>) and it corresponds to an average of 9 nuclear units being unavailable during the winter.

- (34) Moreover, during the past five winters Belgium experienced a high unavailability rate of its own nuclear fleet for several reasons (safety concerns, technical problems, sabotage, etc.). As indicated in Figure 2 below, the rate of forced outages of the Belgian nuclear power plants therefore reached a record of close to 11 % in 2015, while the historical average is only 4 %. The nuclear fleet accounts for around half of the thermal generation in Belgium.

**Figure 2: Forced outage rate for Belgian nuclear power plants per year**



Source: Notification

- (35) Since, according to Belgium, the recurrence of similar simultaneous problems on the Belgian and French nuclear fleet cannot be excluded, the Minister asked the TSO to run an alternative sensitivity scenario ('high impact, low probability', based on the assumptions given in **Error! Reference source not found.** below)<sup>10</sup>, which reflects the situation of a large part of winter 2016-2017. On that occurrence, approximately 1 GW of nuclear capacity (Tihange 1) was unavailable in Belgium and 9 nuclear reactors (for a total capacity of approximately 8.1 GW) were unavailable in France.

<sup>9</sup> [http://www.rte-france.com/sites/default/files/analyse\\_h\\_2016.pdf](http://www.rte-france.com/sites/default/files/analyse_h_2016.pdf).

<sup>10</sup> See Chapter 6.2 of Elia's report, *Adequacy Study for Belgium: the need for a strategic reserve for winter 2017-18 and outlook for 2018-19 and 2019-20*, November 2016.

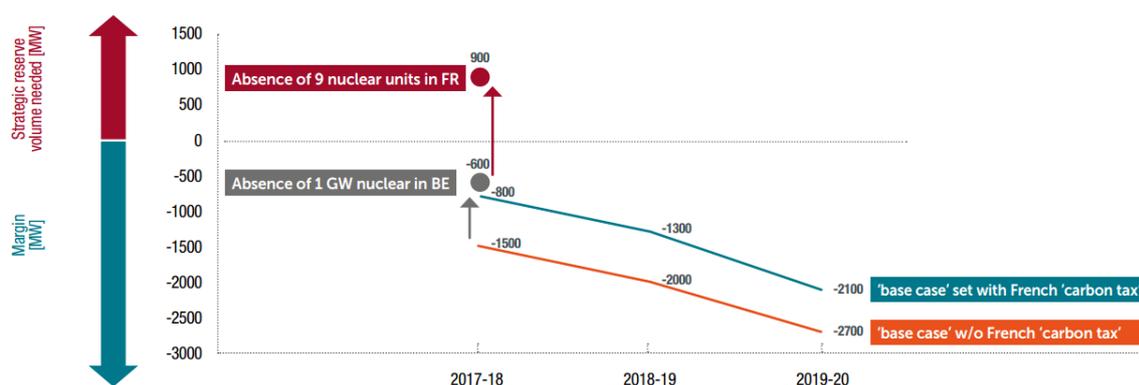
**Figure 3: sensitivity to ‘base case’ scenario: ‘high impact, low probability’ scenario**

|   | ‘Base Case’  | Sensitivity                                      |
|---|--|--|
| Low Market Response                       | 826 MW with activation limitations   |  |
| Demand growth                             | Stable (0%/year)   |  |
| Nuclear availability                      | All nuclear units available  | Absence of 1 GW nuclear for the whole winter     |
| Higher FO rates in BE                     | Forced outage rates calculated average of 2006-15                                |  |
| Late commissioning Langerlo Biomass       | Commissioned for 2018-19   |  |
| Generation facilities                     | Known closure announcements  |  |
| French coal and gas generation facilities | Coal capacity (2.9 GW) and gas (0.9 GW) removed                                  |  |
| French nuclear availability               | All nuclear units available (with planned and forced outages taken into account) | Absence of 9 nuclears units for the whole winter |
| Dutch generation facilities               | Reference scenario TenneT  |  |
| Flow based domain                         | All grid elements available  |  |
| Late commissioning NEMO link              | Commissioned for 2019-20   |  |

Source: European Commission based on the TSO's Adequacy Study for Belgium: the need for a strategic reserve for winter 2017-18 and outlook for 2018-19 and 2019-20, p. 94

- (36) In such a scenario, the reserve margin would be reduced, such that any additional limitation to imports could put Belgian security of supply at risk. More precisely, in its study of end 2016 the TSO considered that 900 MW of strategic reserve were needed in order to meet the necessary adequacy requirements for winter 2017-2018 (see Figure 4: Results for Base case scenario without French carbon tax and impact of the absence of 1 GW Belgian and 9 French nuclear units during the whole winter below).

**Figure 4: Results for Base case scenario without French carbon tax and impact of the absence of 1 GW Belgian and 9 French nuclear units during the whole winter**



Source: Notification

- (37) On the basis of this analysis, the Energy Minister instructed the TSO to procure a strategic reserve of 900 MW for a 3 year period starting on 1 November 2017.<sup>11</sup>
- (38) Moreover, the Belgian authorities argue that, since it is not unlikely that similar problems occur simultaneously on the Belgian and French nuclear fleet<sup>12</sup>, this ‘high impact, low probability’ scenario should be used to determine the need for the strategic reserve in future years.
- (39) However, with respect to the assessment for winter 2017-2018, the Belgian authorities confirmed that, after the Energy Minister instructed the TSO to procure 900 MW of reserve capacity but before the TSO had finalised the tender process for contracting the reserve capacities, [several] generation units<sup>13</sup> (representing a total installed capacity of [...] MW) returned to the market. Thus these power plants essentially withdrew their previous closure notice, which is a precondition for power plants to participate in the strategic reserve (as will be explained in more detail in Section 2.4 of this decision).
- (40) On this basis, the Belgian authorities instructed the TSO to re-perform the ‘high impact, low probability’ adequacy assessment for winter 2017-2018 in order to reflect the changed market circumstances, and came to the conclusion that only 700 MW of strategic reserve capacity would be needed.<sup>14</sup>

#### 2.2.6. Other relevant adequacy studies

- (41) The adequacy assessment carried out by ENTSO-E (the European network of TSOs) in its latest Mid-term Adequacy Forecast ("MAF")<sup>15</sup> report indicates that Belgian P95 LOLE may reach approximately 8 hours in the VP6 ‘base case’ assessment scenario in 2020<sup>16</sup>, confirming that results are in line with the Belgian TSO’s ‘base case’ assessment scenario.<sup>17</sup> ENTSO-E did not run a ‘high impact, low probability’ scenario.
- (42) In a study of April 2016, the Belgian TSO made an assessment of the future need (i.e. in the period 2017-2027) for the Belgian “structural block”, defined as being the generation fleet other than import capacity, nuclear and renewables (so mainly including gas-fired power plants).<sup>18</sup> The TSO expects that the entire gas fleet will

<sup>11</sup> Royaume de Belgique, Service Public Fédéral Economie, P.M.E., Classes moyennes et Energie Arrêté ministériel donnant instruction au gestionnaire du réseau de constituer une réserve stratégique complémentaire à partir du 1 er novembre 2017.

<sup>12</sup> Tihange 1 is currently again shut-down for unexpected maintenance, while safety inspections are still ongoing in France.

<sup>13</sup> [...]

<sup>14</sup> Belgium explained that the figure is higher than [...] MW (a mere deduction of [...] MW from 900 MW) due to some de-rating of those returning power plants for potential unavailability, combined with the fact that the simulation model used by the TSO rounds of results in the hundreds (i.e. per 100 MW).

<sup>15</sup> ENTSO-E, Mid-term Adequacy Forecast 2017 Edition, available here: <https://consultations.entsoe.eu/system-development/mid-term-adequacy-forecast-2017/> (currently under consultation).

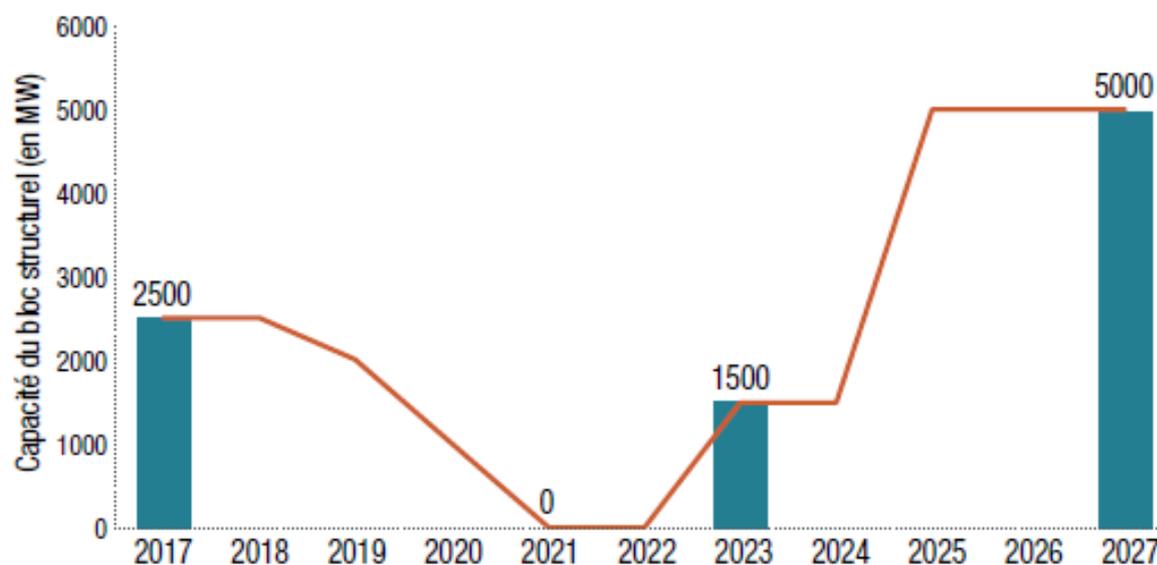
<sup>16</sup> *Ibid*, p.51.

<sup>17</sup> *Ibid*. p. 73.

<sup>18</sup> Elia, *Study concerning the need for ‘adequacy’ and flexibility in the Belgian electricity system – period 2017-2027*, April 2016, available here: [http://www.elia.be/~media/files/Elia/publications-2/studies/160422\\_ELIA\\_AdequacyReport\\_2017-2027\\_NL.pdf](http://www.elia.be/~media/files/Elia/publications-2/studies/160422_ELIA_AdequacyReport_2017-2027_NL.pdf) (in NL) and here:

not be needed for security of supply in the years 2021 and 2022. Subsequently, due to the gradual nuclear phase-out, the need for the structural block will correspondingly increase again, as is indicated in Figure 5: Required volume of Structural Bloc capacities (in MW) for security of supply assuming an annual increase in demand of 0.6 % below.

**Figure 5: Required volume of Structural Bloc capacities (in MW) for security of supply assuming an annual increase in demand of 0.6 %**



Source: TSO's Study concerning the need for 'adequacy' and flexibility in the Belgian electricity system – period 2017-2027, p. 52<sup>19</sup>

- (43) Belgium asserts that the conclusions of this 'adequacy' assessment, presented in Figure 5: Required volume of Structural Bloc capacities (in MW) for security of supply assuming an annual increase in demand of 0.6 % above, show that in the current projections of the TSO there will be no need for a 'structural block' of capacity between 2021 and when the first nuclear reactors in the Belgian production park will be phased out in 2023.

### 2.3. Tender and participation rules

#### 2.3.1. Selection process

- (44) Once the Minister has determined the required amount of reserve capacities for the next winter, the TSO has to organise a tender on this basis.
- (45) Based on the current law, the Minister can instruct the TSO to contract certain reserve volumes for one up to three year contracts. Longer contracts are only available for generation units, while demand response units obtain one year contracts. However, following discussions with the Commission, Belgium committed to only award one year contracts in order to align the contract duration with the frequency and time horizon of the adequacy assessments (see recitals (86)(d) and (86)(e) below).

[http://www.elia.be/~media/files/Elia/publications-2/studies/160421\\_ELIA\\_AdequacyReport\\_2017-2027\\_FR.pdf](http://www.elia.be/~media/files/Elia/publications-2/studies/160421_ELIA_AdequacyReport_2017-2027_FR.pdf) (in FR).

<sup>19</sup> *Ibid.*

- (46) The tender is pay-as-bid. Because of the mechanism described in the following recitals, bidders have to bid their actual costs that need to be covered in order to perform the reserve service.
- (47) At the end of the tendering procedure, the TSO draws up a report of the auction with a proposed ranking of the offers to be contracted, which it provides to the NRA for a review of the reasonability of the bids.
- (48) The NRA considers as reasonable only the costs which the plants or demand response operators would not have to bear if they were not participating in the reserve. In case some investments are needed to participate in the reserve – e.g. in case of refurbishments – and the power plant returns to the market subsequently to its participation in the reserve, it will have to refund at least partially the remuneration associated to those investments.
- (49) If the NRA considers that any offers are manifestly unreasonable, it will adopt a detailed report of its assessment and recommend a price and/or volume review of those bids. On the basis of this report, the government may impose on bidders both price and/or volumes as are deemed reasonable and necessary for the purposes of security of supply. The Belgian authorities committed in addition to modify the legal basis to ensure that the prices are reduced by the government on the basis of the recommendation of the NRA, when the tender does not bring forward competitive bids, and that the contracted volume can be adjusted to reflect changes in market circumstances occurring in the period between the definition of the strategic reserve size by the Minister and the eventual contracting of capacities by the TSO (see recitals (86)(b) and (86)(c) below).

### *2.3.2. Capacity products and conditions for competition between capacity providers*

- (50) In the single tender procedure described above, two different types of products are bought, in order to allow direct competition between generation and demand response by taking each resource's specificities into account. Those two products, namely Strategic Generation Reserve ("SGR") and Strategic Demand Reserve ("SDR") therefore have specific availability requirements. The SDR is subject to maximum amount of activations per winter period (100 hours), and two possible availability durations (4-hour duration or 12-hour duration); by contrast, there is nearly no limit regarding the maximum number of hours the TSO may activate an SGR unit.
- (51) Bids may include, if applicable, fixed reservation costs (availability remuneration), variable activation costs (cost-based remuneration of activation costs, including fuel costs, CO<sub>2</sub> costs, operation and maintenance costs), warm-up, start-up costs and prolongation costs (costs for each prolonged hour of activation), all subject to the general principle that those costs need to be directly linked to the performance of the strategic reserve service.
- (52) For SGR bids, an important distinction is made between plants that applied for temporary closure and those that applied for definitive closure for the consideration of reimbursable strategic reserve costs. In the latter case, all costs related to the strategic reserve service are reimbursable, since there is a presumption that performance of the reserve service only leads to a postponement of dismantling costs. In the case of power plants that announced for temporary closure, estimated

mothballing costs are deducted from the accepted strategic reserve costs, since there is a presumption that such plants would mothball were it not for their participation to the strategic reserve.

- (53) Once the tender is concluded, the TSO simultaneously examines techno-economic bids offered by SGR and SDR units and ranks them accordingly. The selection of bids is conducted through an optimisation which takes into account reservation and activation conditions of each of the bids, with all eligible costs being defined *ex-ante*.
- (54) To that end, a total cost is calculated for each of the bids based on a predefined formula, which includes reservation and activation costs as well as the technical constraints' costs for generation units (linked to start-up, ramp-up, ramp-down and minimum load). The computation is done under a scenario of strategic reserve activation during the next winter period based on the TSO's latest adequacy assessment. Bids are subsequently selected in order to minimise the sum of total costs of the strategic reserve for the winter period concerned by the tender process, within the limitations set by the strategic reserve volume requirement set by the Minister for the relevant period.
- (55) An equivalence (or de-rating) factor is applied to SDR bids to properly reflect the fact that the activation limitations<sup>20</sup> create a need to contract more SDR services for a given volume requirement in order to meet the security of supply target than what would be needed with unconstrained SGR units.

### 2.3.3. Testing and penalties

- (56) The Functioning rules of the strategic reserve require at least one activation test per asset per winter, subject to penalties. The penalties contain a "start and control criterion" testing that the activation matches with the technical requirements. An "energy criterion" will also be applicable, testing the exact injected electricity which is requested by the TSO.
- (57) In addition to the tests during the winter period, the TSO tests all contracted capacities prior to the start of the contract. By doing so, it is ensured that only capacities that can actually contribute to security of supply are contracted. As long as no successful test has taken place, the capacity provider cannot receive any remuneration.
- (58) In order to ensure the availability of the strategic reserve service once contracted, the Functioning rules of the strategic reserve foresee two types of penalties :
  - (a) "availability penalties", in case of unavailability (MW-based penalties); and
  - (b) "activation penalties", when participants fail to activate or fail to follow the precise activation instructions when called upon by the TSO (MWh-based penalties).

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<sup>20</sup> As mentioned at recital (50) above, SDR units cannot be activated more than 100 hours during each winter period and the activation duration cannot exceed 4 to 12 hours, depending on the SDR contract.

- (59) Different penalties apply for SGR and SDR units, to take account of their specificities. In particular, if SDR units consistently fail to activate despite being asked to do so by the TSO, they can be excluded from the next strategic reserve tender, which is not the case for SGR units which are only subject to financial penalties.
- (60) Penalties are paid to the TSO. The revenues from penalties are subsequently used to reduce the overall strategic reserve tariffs for consumers.
- (61) The sum of activation and availability penalties cannot exceed the total reservation remuneration for a winter period. Exemptions from penalties are provided for in case of force majeure for both SGR and SDR units.

#### **2.4. Eligibility**

- (62) The eligibility of different types of capacity providers to participate in the strategic reserve is defined by article 7 *quinquies* of the Federal Electricity Law. As such, any capacity operator located in the control area of the Belgian TSO<sup>21</sup> can participate if it corresponds to one of the following categories:
  - (a) any transmission or distribution grid user (individually or at an aggregate level) through load products (i.e. demand response operators); or
  - (b) any operator of a generation unit (but for nuclear capacity), which has notified its intention to close temporarily or definitely to the Minister, to the CREG and to the TSO by 31 July of the year preceding the entry into force of the closure as per art. 4bis §1 of the Federal Electricity Law, or which has already closed.
- (63) Technologies that do not respect the technical characteristics expressed in the Federal Electricity Law are *de facto* excluded from participation. Nuclear is excluded explicitly since the technical characteristics of nuclear power generation make it incompatible with the strategic reserve's main characteristics.<sup>22</sup>
- (64) Storage is not considered explicitly in the Federal Electricity Law but is integrated implicitly. Storage assets connected in the transmission network (mostly pump storage) are considered as generation assets. Decentralised storage, therefore mostly connected in distribution grids, can be aggregated and participate in the strategic demand reserve (SDR). Consequently, storage can participate in the tenders for strategic reserve.
- (65) Only capacity located in the Belgian TSO's control area may participate. Nevertheless, even if foreign capacities and interconnectors are not allowed to participate explicitly, the Federal Electricity Law prescribes that they should be taken into consideration implicitly, in the process of identifying the required volume of strategic reserves.

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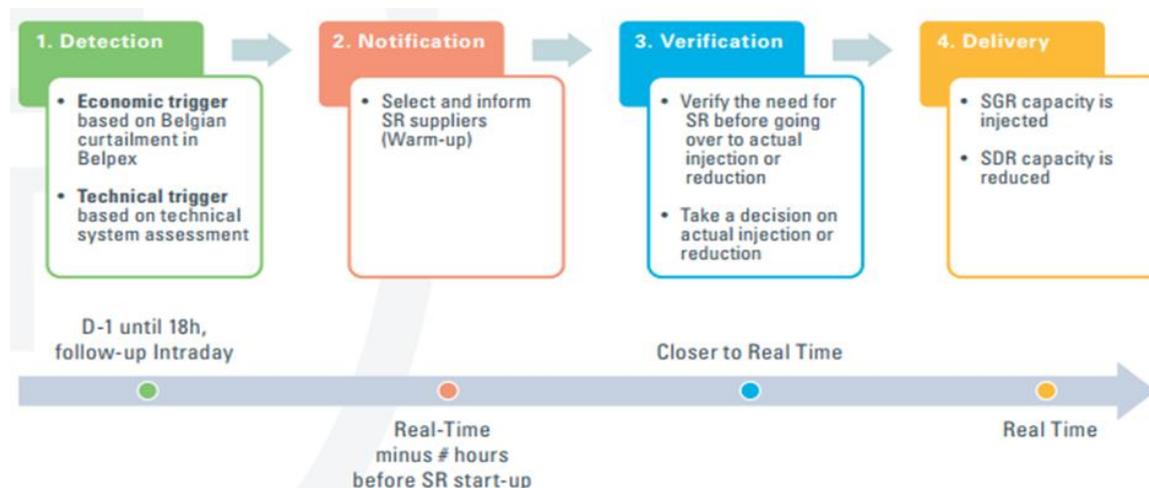
<sup>21</sup> The Belgian control area refers to the electricity network operated by the TSO and geographically situated in Belgium plus a part of Luxembourg. As the Belgian transmission system operator, the TSO is legally entrusted with the task of establishing the necessary conditions for ensuring the balance in its control area.

<sup>22</sup> Nuclear is a non-flexible technology, since it cannot be mothballed and re-activated in the short to very short term for a limited number of running hours.

## 2.5. Strategic reserve activation and operation

- (66) The Belgian reserve can be activated by the TSO if the market does not clear, defined as when either of two situations occurs.
- (67) Firstly, the reserve can be activated if the day-ahead market fails to clear (so-called ‘economic trigger’). The day-ahead market is deemed not to have cleared when at the last auction of the day-ahead market, bids to buy electricity at the technical price limit, which in Belgium is currently set at 3,000 EUR/MWh, remain unmet by offers to provide electricity.
- (68) Secondly, the reserve can be activated in case the TSO identifies a structural shortage risk after the day-ahead market for a given period or in the course of the day (a few hours before the given period) based on an adequacy analysis performed at 6 pm in day-ahead and continuously monitored until four hours before real time (i.e. when the available generation capacities – excluding balancing and strategic reserves – are likely not sufficient to cover demand, taking into account imports and electricity available in the market; so-called ‘technical trigger’). A structural shortage corresponds to a situation in which the total generation<sup>23</sup> is not sufficient to cover the total consumption in the Belgian control area.
- (69) More precisely, the activation of the strategic reserve follows a four-step process, presented in Figure 6: four-step process for activation of the strategic reserve below.

**Figure 6: four-step process for activation of the strategic reserve**



Source: Notification

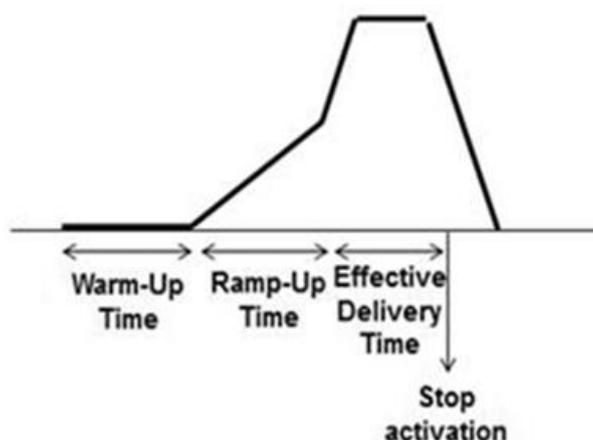
- (70) The SGR and SDR products, as well as the activation procedure, have been designed in order to reduce as much as possible any unnecessary injection of electricity and minimise market impact when the reserve is pre-activated (power plants asked to ramp-up). In particular, the duration of the periods within the activation during

<sup>23</sup> Including planned net imports, generation of centralized units, generation forecasts for solar/wind energy facilities and decentralized units but excluding contracted balancing reserves and strategic reserves. Contracted balancing reserves are excluded from this assessment since these are kept available to solve shortages in real-time. Such shortages may be caused by generation plants' forced outages but also other types of system imbalance such as forecast errors, volatile load, ramp rates, etc. Such capacities need to be available at any time in case of balancing shortage in real-time (which may come in addition to structural shortage identified by the technical trigger).

which unnecessary injection could occur (ramp-up for SGR or ramp-down for SDR: see Figure 7: activation phases of an SGR Unit), are subject to pre-defined limitations:

- (a) the warm-up phase should be as short as possible and may not exceed 5 hours. There should be no injection during the warm-up phase;
- (b) the ramp-up phase is limited to maximum 1.5 hours.

**Figure 7: activation phases of an SGR Unit<sup>24</sup>**



*Source: Notification*

- (71) In order to allow market response to the expected shortage as much as possible, the TSO enjoys flexibility regarding the activation conditions: in particular, the TSO will confirm, cancel or postpone the activation at the end of the warm-up and before the ramp-up, and can also cancel or modify the activation requirements during the ramp-up and effective delivery.
- (72) In addition, the TSO applies penalties to SGR and SDR units not only if the amount of capacity provided is lower than requested, but also if the capacity exceeds the requested volume. This should incentivise strategic reserve providers to avoid any surplus of injected electricity.
- (73) Besides the preventive measures explained in the previous paragraphs, if the strategic reserve units inject more electricity into the system than is needed, these volumes are absorbed by the balancing system, meaning that this electricity is integrated in the net regulated volume (i.e. the sum of all actions taken by the TSO to balance the control area).
- (74) Finally, during the quarter hours during which there is an injection of strategic reserve electricity, but no confirmation of structural shortage in the control area (which is the case when the reserve is ramped up but the shortage ultimately does not take place and in case of activation tests), the imbalance price (or imbalance penalty) is simulated to reflect the price which would have been applied if there would not have been any injection of electricity from the strategic reserve (3,000 EUR/MWh). In doing so, the TSO limits or even excludes the impact of strategic

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The same phases and principles apply to SDR units, where activation is divided into a warm-up, a ramp-down (as opposed to ramp-up) and an effective delivery period.

reserve activation tests and of (pre-) activation of the strategic reserve (in case of unconfirmed real structural shortage) on electricity market price formation.

- (75) If the reserve is however activated and the structural shortage is confirmed in real time, the applicable imbalance price is administratively set at 4,500 EUR/MWh. The specific imbalance price of 4,500 EUR/MWh requires two conditions to be fulfilled: the activation of the strategic reserve (i.e. through the technical or economic trigger) and a confirmation of the structural shortage in real time. In order to test this second condition, the TSO applies a “structural shortage indicator” (SSI), approved by the NRA, which monitors the area’s security of supply condition in real time. In practice, this means that when the economic or technical trigger is activated, there is a risk for market players that imbalance prices will be administratively set at 4,500 EUR/MWh in the period of effective delivery of the strategic reserve, provided that the structural shortage is subsequently confirmed in real-time by the SSI. Therefore, from the moment of activation of the reserve (i.e. through the technical or economic trigger) throughout the entire period of warm-up, market players have the possibility to find electricity in the intra-day market in order to solve the risk of structural shortage and avoid the triggering of the specific imbalance price of 4,500 EUR/MWh. According to the Belgian authorities, this incentivises market participants to search market-based solutions for expected shortages up until real time. Therefore, the potential contribution of energy markets will be fully exhausted before effective delivery of the strategic reserve.
- (76) According to Belgium, four elements have been taken into account to fix the administrative imbalance price at 4,500 EUR/MWh:
- (a) This level is considered to be sufficiently higher than the day-ahead market price cap of 3,000 EUR/MWh in order to avoid a situation in which market parties await the real-time timeframe to expose their individual inadequacy and rely on the balancing market. The imbalance price would thereby provide an incentive for market-parties to be in balance already day-ahead, which is considered consistent with the general obligation in Belgium for market parties to have balanced portfolio's day-ahead.
  - (b) The higher imbalance price could be used to partially finance the reserve, since the imbalance income would be taken into account in the calculation of the charge related to the strategic reserve.
  - (c) The level is lower than public estimations of the VOLL in Belgium<sup>25</sup>, as it has been considered that effective strategic reserve delivery corresponds to the stage before load shedding (which is valued at VOLL).
  - (d) Lastly, it was a widely accepted compromise to avoid unreasonable balancing risks for smaller companies, for which an outage or a slight deviation in their demand forecast during such periods could have irreversible consequences.
- (77) However, following discussions with the Commission's services, Belgium committed, for the future and in any case before launching another reserve tender, to increase the administrative imbalance price referred to in recital (75) above to above

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<sup>25</sup> According to the Notification, VOLL is estimated at 16,750 EUR/MWh in Belgium.

the Intraday (ID) price cap (of 9,999 EUR/MWh) to limit market distortions (see recital (86)(f) below).

- (78) Finally, Belgium has confirmed that the reserve capacities will be held outside of the market, i.e. that they cannot sell electricity (or reduced consumption) in the market nor receive any payments for in-the-market frequency ancillary services. An exception is made with respect to performance of the black-start service<sup>26</sup>, but only if a market tender does not lead to the selection of a successful candidate to perform such service (plants participating in the strategic reserve can only perform the black-start service as a last resort measure).

## **2.6. Financing of the measure**

- (79) According to article 7 *octies* of the Federal Electricity Law, the cost of the Strategic reserve will be financed through a tariff levy, according to a methodology set in Article 12 of the Federal Electricity Law and collected by the TSO.
- (80) Each year, the TSO makes a proposal for this levy to be approved by the NRA. The levy is uniformly applied on a EUR/MWh basis to all consumers. Any revenues linked to the imbalance settlement when the reserve is activated and the revenues resulting from selling the strategic reserve in the dedicated market directly following the day-ahead market (i.e. economic trigger) or any revenues via penalties for the suppliers are deducted from the costs included in the tariff levy.

## **2.7. Budget**

- (81) There is no fixed budget for the strategic reserve, because its costs depend to a large extent on the results of the tender and the actual activation of the reserve during the winter period (activation costs). By way of example, Belgium indicated that the reservation costs related to the capacities contracted for winter 2017-2018 amounted to an estimated total of [...] million EUR (based on an activation of the reserve during three hours).

## **2.8. Duration**

- (82) Belgium indicated it is seeking an approval of the strategic reserve for five delivery periods, i.e. until winter 2021-2022 (31 March 2022).

## **2.9. Beneficiaries**

- (83) The beneficiaries of the scheme are those capacity providers that are successful in the strategic reserve tender and acquire a reserve contract.

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<sup>26</sup> The black-start service is a service procured by the TSO from generation units that can start-up autonomously (i.e. without external power supply) and can therefore gradually help the electricity system recover from a total black-out event. See: [http://www.elia.be/nl/producten-en-diensten/~media/files/Elia/Products-and-services/ProductSheets/S-Ondersteuning-net/S7\\_F\\_BLACK\\_START.pdf](http://www.elia.be/nl/producten-en-diensten/~media/files/Elia/Products-and-services/ProductSheets/S-Ondersteuning-net/S7_F_BLACK_START.pdf) (NL) or [http://www.elia.be/fr/producten-en-diensten/~media/files/Elia/Products-and-services/ProductSheets/S-Ondersteuning-net/S7\\_F\\_BLACK\\_START.pdf](http://www.elia.be/fr/producten-en-diensten/~media/files/Elia/Products-and-services/ProductSheets/S-Ondersteuning-net/S7_F_BLACK_START.pdf) (FR).

## **2.10. Cumulation**

- (84) Belgium confirmed that capacities contracted for the reserve cannot accumulate any revenues for the provision of the same availability service.

## **2.11. Transparency**

- (85) The announcement of the strategic reserve tender is published on the TSO's website. A special webpage is made with specific information regarding the prices paid to the reserve participants (averaged for confidentiality reasons).

## **2.12. Commitments**

- (86) By letter of 13 October 2017, Belgium provided the following commitments:

- (a) Belgium commits to reduce the volume sought for winter 2017/2018 from 900 MW to 700 MW on the basis of the TSO's revised assessment in order to reflect that some power plants that had initially announced their closure returned to the market after the reserve volume was fixed by the Minister.
- (b) In order to avoid legal uncertainty in this respect for further strategic reserve tenders, Belgium commits to amend the relevant legal basis in order to ensure that the volume contracted can be adjusted not only upwards but also downwards to reflect changes in market circumstances occurring in the period between the definition of the strategic reserve size by the Minister and the eventual contracting of capacities by the TSO.
- (c) Belgium commits to modify the legal basis to ensure that, when the tender does not bring forward competitive bids, prices are reduced by the Government on the basis of the recommendation of the Regulator.
- (d) Belgium commits only to award one (1) year contracts following conclusion of the ongoing tender, i.e. only for winter 2017/2018.
- (e) For the future and in any case before launching another reserve tender, Belgium commits to align the duration of reserve contracts with the frequency and time horizon of (annual) adequacy assessments, i.e. only 1 year contracts.
- (f) For the future and in any case before launching another reserve tender, Belgium commits to increase the specific imbalance penalty in case of structural shortage following an economic or technical trigger (currently at 4,500 EUR/MWh) to above the Intraday (ID) price cap (of 9,999 EUR/MWh) to limit market distortions.
- (g) Before launching another reserve tender, Belgium commits that it will enshrine in the legal basis a prohibition for capacities to return to participate in the market during the term of their reserve contracts.
- (h) Before launching another reserve tender, Belgium commits that it will enshrine in the legal basis a prohibition for power plants that announced "definitive closure" to return to the market at any point in time thereafter.

### 3. ASSESSMENT OF THE MEASURE

#### 3.1. Existence of aid

- (87) Article 107(1) TFEU provides that any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market.
- (88) In order to conclude whether State aid is present in this case, the Commission must assess whether all cumulative criteria of Article 107(1) TFEU are met for the measure under assessment.
- (89) The Commission notes that Belgium does not contest that the measure involves State aid within the meaning of Article 107(1) TFEU and submitted grounds for a compatibility assessment of the measure under Section 3.9 of the Guidelines on State aid for environmental protection and energy 2014-2020 (“EEAG”)<sup>27</sup>.

##### 3.1.1. Imputability to the State and involvement of State resources

- (90) According to settled case-law, only advantages which are granted directly or indirectly through State resources are to be regarded as aid within the meaning of Article 107(1) TFEU.
- (91) The Commission notes that in order for a measure to be imputable to the State and financed from State resources, the Court of Justice has held that it is not necessary to establish that there has been a transfer of money from the State budget or from a public entity.<sup>28</sup> This has been confirmed in the *Vent de Colère* judgment<sup>29</sup>, where the Court held that a mechanism, developed by the State, for offsetting in full the additional costs imposed on undertakings because of an obligation to purchase wind-generated electricity at a price higher than the market price, by passing on those costs to all final consumers of electricity in the national territory, constitutes an intervention through State resources. In other words, the Court found State resources where funds for a measure were financed through compulsory contributions imposed by domestic legislation and managed or allocated in accordance with the provisions of that legislation.
- (92) In this case, the TSO is instructed to contract a certain amount of capacity for the strategic reserve by a Decree from the Energy Minister. Charges for the financing of the measure are imposed by the Federal Electricity law on final consumers (see article 7 *octies*) and are transferred to the TSO, which has been given the task of collecting those charges by the Belgian State. Each year, the TSO makes a proposal for this levy for approval by the NRA. The resources are thus under State control and qualify as State resources.

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<sup>27</sup> European Commission, Guidelines on State aid for environmental protection and energy 2014-2020 (2014/C 200/01), available here:

[http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628(01)&from=EN).

<sup>28</sup> *Doux Elevage*, EU:C:2013:348, paragraph 34, *France v Commission*, EU:T:2012:496, paragraph 36; Judgment in *Bouygues Telecom v Commission*, C-399/10 P et C-401/10 P, EU:C:2013:175, paragraph 100; *Vent de Colère*, C-262/12, EU:C:2013:851, paragraph 19.

<sup>29</sup> *Vent de Colère*, EU:C:2013:851.

### *3.1.2. Selective advantage*

- (93) An advantage, within the meaning of Article 107(1) TFEU is any economic benefit which an undertaking would not have obtained under normal market conditions, i.e. in the absence of State intervention.
- (94) The Belgian authorities have by law set up a mechanism through which the TSO is mandated to procure a sufficient volume of reserve capacity to meet the Belgian reliability standard, in case of a ‘high impact, low probability’ scenario. Through this mechanism, SGR capacities can obtain payments for remaining at the disposal of the TSO whilst having left the energy market. Without this mechanism, beneficiary SGR capacities would not receive any remuneration when they have left the energy market. The measure thus confers upon them an economic advantage that they would not have received otherwise.
- (95) SDR units participating to the strategic reserve also receive remuneration for their commitment to reduce electricity consumption at the request of the TSO. In the absence of the strategic reserve, they would not receive such remuneration. The notified measure therefore confers an economic advantage upon these undertakings.
- (96) The advantage is conferred only on certain undertakings, namely those active in one specific sector of the economy (electricity production/re-active electricity consumption). Therefore this advantage is selective.

### *3.1.3. Distortion of competition and effects on intra-EU trade*

- (97) The notified measure risks distorting competition and affecting trade within the internal market. Electricity generation as well as electricity wholesale and retail markets are activities open to competition throughout the EU. Therefore any advantage from State resources to any undertaking in that sector has the potential to affect intra-Union trade and to distort competition.

### *3.1.4. Conclusion on the assessment of existence of aid*

- (98) In view of the above, the Commission finds that the measure constitutes State aid within the meaning of Article 107(1) TFEU.

## **3.2. Lawfulness of the aid**

- (99) By proceeding with the contracting of strategic reserve capacities for winter 2017-2018 in the absence of a Commission State aid decision approving the measure, the Belgian authorities have put the aid measure for that period into effect in breach of the stand-still obligation of Article 108(3) TFEU.

## **3.3. Compatibility with the internal market**

- (100) The objective of the Belgian strategic reserve is to ensure generation adequacy and security of electricity supply in Belgium.
- (101) The Commission has therefore assessed the measure in the light of Section 3.9 of the EEAG, which sets the specific framework for assessing aid for generation adequacy measures.

### 3.3.1. Objective of common interest and necessity

- (102) A measure contributes to an objective of common interest and is necessary as required by Sections 3.2.1 and 3.2.2 EEAG in conjunction with Sections 3.9.1 and 3.9.2 EEAG if the following conditions are met: i) the measure must pursue a well-defined objective (paragraph (221) EEAG); ii) the generation adequacy concerns must be identified through a quantifiable indicator (paragraph (222) EEAG); iii) the methodology used to identify a generation adequacy problem must be consistent with the analysis carried out by ENTSO-E (paragraph (221) EEAG); iv) the Member States should clearly demonstrate the reasons why the market cannot be expected to deliver adequate capacity in the absence of intervention, by taking account of ongoing market and technology developments (paragraph (223) EEAG); and iv) the Member State must have considered alternative options to address the problem to avoid contradicting the objective of phasing out environmentally harmful subsidies (paragraph (220) EEAG).
- (103) As stated in paragraph (30) EEAG, the primary objective of aid in the energy sector is to ensure a competitive, sustainable and secure energy system in a well-functioning Union energy market. Paragraphs (219) to (221) EEAG define more specific criteria for interpreting the common interest objective in relation to generation adequacy measures.
- (104) Regarding the first requirement, that the measure must pursue a well-defined objective according to paragraph (221) EEAG, the Commission notes that the Belgian strategic reserve is an aid scheme that rewards generators and demand side response units for being available to the TSO to generate power or reduce load when the market fails to bring forward the required amount of capacity. The measure therefore pursues the objective of security of supply.
- (105) Regarding the second requirement, that the generation adequacy concerns must be identified through a quantifiable indicator according to paragraph (222) EEAG, the Commission notes that the volume of strategic reserve capacity required to maintain adequacy and security of supply is calculated annually, in accordance with a two-tier reliability standard set in the Federal Electricity Law, as explained at recital (20). The Commission already accepted the use of such a LOLE-based standard *inter alia* in its decisions on the market wide capacity mechanisms of France and the United Kingdom.<sup>30</sup> The Commission therefore considers that the generation adequacy concern is precisely identified on the basis of a quantifiable indicator (the two-tier LOLE-based reliability standard).
- (106) In particular, the Belgian TSO performs a probabilistic adequacy assessment each year, taking into account the variability of demand and renewable outputs, as well as the risk of outages in Belgium and in neighbouring countries (see Section 2.2.5 of this decision), against this reliability standard. The decision to contract strategic reserve capacity is therefore based on up-to-date information, assessed relatively close to the delivery period.

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<sup>30</sup> SA.39621, French country-wide capacity mechanism (2015/C) (decision to initiate the formal investigation, available here: [http://ec.europa.eu/competition/state\\_aid/cases/261326/261326\\_1711140\\_20\\_2.pdf](http://ec.europa.eu/competition/state_aid/cases/261326/261326_1711140_20_2.pdf), see recital (152) and SA.35980, GB capacity mechanism (2014/N-2), available here: [http://ec.europa.eu/competition/state\\_aid/cases/253240/253240\\_1579271\\_165\\_2.pdf](http://ec.europa.eu/competition/state_aid/cases/253240/253240_1579271_165_2.pdf), see recital (119).

- (107) Regarding the third requirement, that according to paragraph (221) EEAG the methodology used to identify a generation adequacy problem must be consistent with the analysis carried out by ENTSO-E, the Commission notes that the adequacy assessment performed by the TSO is based on the best practices developed at Belgian and European level, in collaboration with other TSOs and with ENTSO-E. The methodology used by the TSO to assess the Belgian adequacy situation, explained in Section 2.2.5 of this decision above, is largely consistent with the methodology proposed by ENTSO-E, since the TSO performs a probabilistic assessment and tests the adequacy situation in different plausible scenarios, including a most likely ‘base case’ scenario. As indicated at recital (41), ENTSO-E’s adequacy assessment does not forecast any security of supply issues for Belgium on the 2020 horizon. It must however be noted that (i) ENTSO-E’s analysis is forward looking to 2020 and not specifically related to winter 2017-2018, and (ii) ENTSO-E does not perform an assessment specifically related to a ‘high impact, low probability’ event, which is particularly relevant in Belgium’s case, also in view of the recent history.
- (108) Regarding the fourth requirement, that Member States should clearly demonstrate the reasons why the market cannot be expected to deliver adequate capacity in the absence of intervention, by taking account of on-going market and technology developments (paragraph (223) EEAG), Belgium explained, as summarised at recitals (13) and (14), that an energy-only market may fail to send the correct market signals to ensure an optimal security of supply, which is particularly problematic in case the ‘high impact, low probability’ scenario identified by Belgium and described at recital (35) above were to occur. In other words, the market fails to bring forward the required amount of capacity for Belgium to attain the legally determined reliability standard in case of this ‘high impact, low probability event’.
- (109) Belgium argued, as explained at recitals (31) to (38), that it is precisely this ‘high impact, low probability’ event against which the strategic reserve capacity intends to ensure Belgian consumers. The yardstick should therefore not be the ‘base case’ scenario, which did not identify a need to contract strategic reserve capacities for winter 2017-2018, but the ‘high impact, low probability scenario’ which initially (i.e. before the changes described at recital (111) below) identified a need of 900 MW. It is on this basis that the TSO end 2016 advised the Belgian Energy Minister to procure 900 MW of reserve capacities for winter 2017-2018. The Commission also takes note that Belgium intends to apply this ‘high impact, low probability’ event, as described in the TSO’s study referenced at recital (35) (albeit with updated reference parameters to take account of the most recent market developments), as the basis for determining the need for the strategic reserve in the future.
- (110) The Commission assessed the plausibility of the ‘high impact, low probability’ scenario chosen by Belgium as a basis for determining the size of the strategic reserve. The Commission took into account the increasing unavailability of Belgium’s nuclear fleet, as described at recital (34), and the continuing safety inspections on, and resulting decreased reliability of France’s nuclear fleet, described at recital (33), on which Belgium is highly dependent, as equally explained at recital (33). The Commission also took account of the fact that the ‘high impact, low probability’ scenario already occurred during winter 2016. On this basis, the Commission considers that this scenario is reasonable and not purely theoretical, since it could in principle re-occur in the future. Moreover, on that same

basis, the Commission considers that the measure is based on an appropriate quantification of the adequacy problem in Belgium.

- (111) The Commission however considers that the return to the market of three power plants prior to the conclusion of the strategic reserve tender should lead to a reduction in the volume of reserve capacity to be contracted for winter 2017-2018, in order to reflect the changed market circumstances. Indeed, these power plants were considered unavailable by the TSO in its ‘high impact, low probability’ adequacy assessment, which therefore concluded on a higher need of strategic reserve capacity than would be warranted in reality given their subsequent return to the market. Since this return to the market occurred prior to the conclusion of the strategic reserve tender, the Commission considers that the TSO should take this change in market circumstances into account when finally contracting the reserve, thus revising the volume downwards in order to limit public expenditure to the maximum needed.
- (112) In this respect, the Commission takes note of Belgium’s commitments to:
- (a) reduce the volume sought for winter 2017-2018 from 900 MW to 700 MW on the basis of the TSO's revised assessment in order to reflect that some power plants that had initially announced their closure returned to the market after the reserve volume was fixed by the Minister,
  - (b) amend the legal basis to allow the TSO to adjust the strategic reserve volume both upwards and downwards at its own initiative, to reflect relevant changes in market circumstances occurring in the period between the definition of the strategic reserve size by the Minister and the eventual contracting of capacities by the TSO.
- (113) Moreover, Belgium has committed to reduce the length of the contracts offered to strategic reserve bidders, not only for the winter 2017-2018 tender, but more generally for any future tenders, as explained at recital (86)(d). In this way the contract duration is aligned with the frequency of the adequacy assessment performed by the TSO.
- (114) Additionally, Belgium indicated it seeks approval of the measure for 5 years, i.e. until winter 2021-2022. The Commission notes that the proposed duration of the scheme is in line with the forecasts for the Belgian generation fleet, as expressed in the TSO's study referenced at recital (41) above. In particular, **Error! Reference source not found.** illustrates a decreasing need, for the purposes of generation adequacy, of the Structural Block, mainly composed of flexible gas-fired power plants, up to 2022, from which point onwards the need will gradually increase again in view of the nuclear phase-out. It can therefore be expected that the economic viability of those gas-fired power plants will decrease gradually up to 2022, only to improve again once the first nuclear reactors are taken offline. This decreasing economic viability can be expected to go hand in hand with an increasing risk for security of supply, in particular in case of ‘high impact, low probability’ events.
- (115) On this basis, the Commission finds, on the one hand, that in the short term, capacity is only contracted for a duration that corresponds to an identified need and, on the other hand, that the duration of the scheme corresponds to an identified longer term need.

- (116) With respect to the fifth requirement (paragraph (220) EEAG), that the Member State must have considered alternative options to address the problem to avoid contradicting the objective of phasing out environmentally harmful subsidies, the Commission notes that Belgium has explained, at recital (18), that it is rolling out smart meters to make demand more flexible and responsive to price spikes reflecting shortages in real time, which should gradually reduce the use of more polluting plants. Moreover, Belgium plans to commission several large offshore wind projects in the coming years (see recital (21)), which should increase its installed capacity of environmentally friendly generation while at the same time reducing its dependence on older, more polluting plants.<sup>31</sup>
- (117) The strategic reserve serves as a last resort measure, which is only activated in case the market fails to clear. Interconnection capacity is taken into account in the probabilistic analysis of the security of supply of the country, reducing the need for contracting strategic reserves (see recital (65)). Power plants in the strategic reserve will be activated only in extreme situations when security of supply in Belgium is endangered and the market fails to clear, which is expected to be very limited, in particular to ‘high impact, low probability’ events. The environmental impact of such a measure is therefore very low as the emissions of these plants will be limited to the few hours in which they are activated. New capacities are not considered as relevant participants to the reserve, as the measure does not aim at new investments but rather tries to keep power plants that would otherwise close at the availability of the TSO, so that they can be called upon as last resort solution in case of scarcity in the power system. The measure however fully integrates demand response, and creates the conditions for competition between those SGR units and SDR units. A balance is therefore struck between the need to contract a few capacities that are necessary for security of supply with the objective of phasing-out environmentally harmful subsidies.
- (118) On this basis, the Commission finds that the measure both serves a well-defined objective of common interest, as required by Section 3.9.1 EEAG, and is necessary, as required by Section 3.9.2 EEAG.

### 3.3.2. *Appropriateness of the aid*

- (119) According to Section 3.2.3 in conjunction with Section 3.9.3 EEAG, the measure should meet several conditions to be considered appropriate: i) the aid measure should not counteract other measures aimed at addressing the same market failure, in particular market-based mechanisms (paragraphs (41) and (42) EEAG), ii) the aid is awarded in the form that is likely to generate the least distortions of trade and competition (paragraph (45) EEAG), iii) the choice of the instrument must be coherent with the market failure that the aid measure aims at addressing (paragraph (46) EEAG); iv) aid must only compensate the service of availability of capacity (paragraph (225) EEAG); v) the measure should be open to all relevant capacity providers, allow sufficient lead times for new investments and take into account the

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<sup>31</sup> The Commission underlines that this decision needs and will need to be interpreted in the light of relevant secondary legislation, including legislation that has not been adopted yet at the time of this decision. In this regard, the Commission would like to point to the proposal for a Regulation on the internal market for electricity (recast), COM (2016) 861, and in particular to the principles (such as the requirements regarding CO2 emission limits) which capacity mechanisms need to incorporate and apply, even if they are already in force and have been deemed as compliant with Union state aid rules, in line with the final text of the Regulation when it becomes effective.

extent to which interconnected capacity can contribute to remedy the generation adequacy concerns (paragraph (226) EEAG).

- (120) With respect to the requirement in paragraphs (41) and (42) EEAG that the aid measure should not counteract other measures aimed at addressing the same market failure, in particular market-based mechanisms, the Commission notes that generation adequacy concerns should first and foremost be addressed by reforming the market so as to provide the incentives for capacity providers to become or remain active on the energy-only market and deliver security of supply at lowest possible costs.
- (121) Belgium has put in place several measures aiming at solving the adequacy problem in the longer term. Those measures are described in detail in Section 2.2.4 of this decision and include the further development of an active demand side (in particular through the rolling out of smart meters), the implementation of flow-based market coupling, certain reforms of the balancing market, the increased development of RES and the reinforcement of interconnections. However, those measures only partially address the missing money problem and will moreover only provide effects in the mid to long term, therefore not guaranteeing sufficient investments or maintaining sufficient capacity in the short term.
- (122) Consequently, the introduction of a strategic reserve mechanism is necessary and appropriate in addition to these market improvements, given the specific nature of the adequacy problem in Belgium. In particular, the strategic reserve allows addressing the adequacy concerns in the short to medium term while other improvements of the market and of the regulatory framework are being implemented and while longer-term solutions, if needed, will be contemplated in the context of Belgium's "Energy pact".<sup>32</sup>
- (123) Therefore, the Commission concludes that the notified measure is complementary and coherent with other measures aimed at the same market failure.
- (124) In the Final Report of the Sector Inquiry on capacity mechanisms (the 'Sector Inquiry'), the Commission moreover concluded that the strategic reserve mechanism is, amongst the different types of capacity mechanisms, likely to be the most appropriate response to address a situation where long-term investments are not immediately needed but there might be a need to ensure that existing capacity does not close prematurely, while in parallel market improvements are being implemented so that the market can be expected to deliver security of supply in the longer term, or, alternatively, a market wide capacity mechanism is being implemented.<sup>33</sup> The Commission is of the opinion that, given the specific adequacy problems faced by Belgium and in particular a decreasing economic profitability in the short to medium term of certain power plants which may however be needed to address the security of supply problem (as explained at recital (114)), the strategic reserve mechanism is, amongst the different types of capacity mechanisms, the most appropriate mechanism to address Belgium's security of supply problems.

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<sup>32</sup> The Belgian Energy Ministers from the Federal and Regional level are working together towards a common energy vision for the future. The Belgian authorities indicated that the so called "Energy pact" is expected by the end of 2017 and will *inter alia* include elements related to the future energy mix and generation adequacy of Belgium.

<sup>33</sup> Report from the Commission (COM (2016) 752 final), Final Report on the Sector Inquiry into capacity mechanisms, Section 5.2, p. 8 under "Temporary adequacy concern".

- (125) With respect to the requirement in paragraph (45) EEAG, that the aid is awarded in the form that is likely to generate the least distortions of trade and competition, the Commission is of the opinion that the design of the aid measure as a grant awarded through a competitive auction, combined with the fact that the reserve is kept out of the market and therefore does not interfere with the price formation, ensures that distortions of competition and trade are kept to the minimum.
- (126) The Commission already concluded, at recitals (113) and (117) above, that the choice of the instrument (strategic reserve) is coherent with the market failure that the aid measure aims at addressing, for which reason the measure is compliant with paragraph (46) EEAG.
- (127) With regard to paragraph (225) EEAG, the Commission recalls that the main reason for the need for capacity mechanisms to remunerate availability only and not the actual electricity produced, is to limit distortions of the electricity wholesale price on the market.
- (128) As explained in recital (46) all bidders have to bid a reservation fee, an activation fee, start-up costs and prolongation costs. The reservation fee is meant to cover the fixed costs strictly required for remaining (SGR units) or becoming (for SDR units) available to the TSO as part of the strategic reserve. The remuneration of these costs therefore constitutes availability remuneration in the strict sense. The other costs that bidders may include in their bids are meant to cover the costs SGR and SDR units necessarily incur for actually producing power/reducing load when instructed by the TSO. Although these costs relate to the generation of electricity, they are not remuneration for the electricity that is generated by the SGR units while performing the strategic reserve service.
- (129) In addition, the Commission notes that, in light of the commitment put forward by Belgium, the participants of the strategic reserve will be out of the market, meaning that they will not be able to earn money on the different markets, including ancillary services.
- (130) The Commission therefore concludes that the aid only compensates the service of availability of capacity.
- (131) With respect to the requirements of paragraph (226) EEAG, the Commission notes that all types of capacity that can contribute to addressing the generation adequacy problem by means of a strategic reserve, described at Section 2.4 of this decision, can in fact participate in the strategic reserve tender. This notably includes demand response and storage. Some technology cannot participate in the strategic reserve if they do not respect the technical requirements of the strategic reserve, such as nuclear. Indeed, since nuclear is not a flexible technology and since some nuclear reactors have already received aid for security of supply via other measures of the Belgian government<sup>34</sup>, they are not appropriate to address the adequacy issues identified by Belgium in the context of a strategic reserve. In particular, nuclear power plants cannot be activated in the short to very short term for a limited number

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<sup>34</sup> SA.39487, Belgian NPP lifetime extensions (2016/NN), available here in FR: [http://ec.europa.eu/competition/state\\_aid/cases/267496/267496\\_1888299\\_66\\_4.pdf](http://ec.europa.eu/competition/state_aid/cases/267496/267496_1888299_66_4.pdf) and here in NL: [http://ec.europa.eu/competition/state\\_aid/cases/267496/267496\\_1888299\\_65\\_4.pdf](http://ec.europa.eu/competition/state_aid/cases/267496/267496_1888299_65_4.pdf)

of running hours and therefore cannot address the peak demand winter problems that may occur in case a ‘high impact, low probability’ event would occur.

- (132) Only capacity located in the Belgian control area may participate, effectively excluding foreign capacities and interconnectors. As explained at recital (65), these are nevertheless taken into consideration implicitly by the TSO in the process of identifying the required volume of strategic reserves. Moreover, the Sector Inquiry concluded that if a strategic reserve is activated only after the market has failed to clear, despite market actors having access to scarcity pricing, the Member State with the reserve cannot rely on additional foreign capacities and/or interconnectors within the reserve for security of supply since the interconnectors would already be fully saturated.<sup>35</sup>
- (133) The measure is primarily addressed to existing capacity and by definition does not aim at new investments in generation capacity to ensure resource adequacy. This is also in line with the conclusions on strategic reserves in Section 5.2 of the Final Report on the Sector Inquiry into capacity mechanisms<sup>36</sup>. The measure however fully integrates (potentially new) demand response, and has created specific products, including different lead times (see recital (50) *et seq.* above), to attract different demand response operators to the strategic reserve.
- (134) The Commission also considers that the measure takes into account to what extent interconnectors can help remedy the generation adequacy problem identified. Indeed, the contribution of interconnectors to Belgian security of supply is taken into consideration both at the stage of determining the required volume of strategic reserve capacities (as explained at recital (65) above) as well as in the functioning of the strategic reserve in practice, since the design of the reserve leaves room for all possible market-based solutions to respond to the scarcity event up until real time (see recital (75)).
- (135) The Commission therefore concludes that the measure is appropriate to attain the identified common objective.

### 3.3.3. *Incentive effect*

- (136) The Commission finds that the measure has an incentive effect, as required by Section 3.2.4 EEAG, with cross-reference to paragraphs (49) to (52) EEAG, when an aid measure induces the beneficiaries to change their behaviour, which they would not undertake without the aid.
- (137) The strategic reserve maintains certain power plants, that would otherwise mothball or close, at the disposal of the TSO to provide security of supply. It also induces demand response operators to commit reducing their load if requested at times of scarcity. In both cases the aid incentivises the beneficiaries to change their behaviour as compared to a situation without the aid measure.
- (138) The Commission therefore concludes that the aid measure has the required incentive effect.

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<sup>35</sup> Commission, Report from the Commission, Final report of the Sector Inquiry on Capacity mechanism, SWD(2016) 385 final, p.200

<sup>36</sup> European Commission, Final report of the Sector Inquiry on Capacity mechanism, SWD(2016) 385 final, p.82

#### 3.3.4. Proportionality

- (139) A measure is proportionate as required by Section 3.2.5 EEAG in conjunction with Section 3.9.5 EEAG when it meets the following conditions: i) the compensation allows beneficiaries to earn a reasonable rate of return (paragraph (228) EEAG); when the measure is designed as a competitive bidding process on the basis of clear, transparent and non-discriminatory criteria, it will be considered as leading to reasonable rates of return under normal circumstances (paragraph (229) EEAG); ii) the measure should also have built-in mechanisms to ensure that windfall profits cannot arise (paragraph (230) EEAG); and iii) the measure should be constructed so as to ensure that the price paid for availability automatically tends to zero when the level of capacity supplied is expected to be adequate to meet the level of capacity demanded (paragraph (231) EEAG).
- (140) With respect to the requirement in paragraph (228) EEAG, first, the strategic reserve is procured through a competitive tender, in which participants have to bid their expected costs and are selected on a paid-as-bid basis. The functioning rules of the strategic reserve describe clearly and transparently the process, which is non-discriminatory. The tender aims at selecting bids in order to minimise total costs: it takes into account the reservation price, supposed to cover fixed Operation and Maintenance (O&M) costs and the activation cost, as well as the technical constraints' costs for generation units (linked to start-up costs, ramp-up and down and minimum load). Also, eligible costs are defined *ex ante*.
- (141) Second, the strategic reserve is accessible not only to generators which formally announced their closure, but also to demand response, which creates the conditions for competition. To create a level-playing field between different types of capacity providers, products are designed to adapt to the specificities of generation and of various forms of demand response (which depend on the industrial processes and load patterns of consumers) in order to maximise potential participants in the tender. As explained at recital (62)(a), the participation of demand response is equally open for individual grid users or via aggregation, for load connected to any voltage level. Demand response and generation offers are made comparable thanks to equivalence factors and a total cost evaluation (in general demand response has a lower reservation cost, which outweighs the higher activation costs, and therefore reduces overall costs of strategic reserves).
- (142) The strategic reserve furthermore has a built-in mechanism to ensure that windfall profits cannot arise, as required by paragraph (230) EEAG. The results of the tender are scrutinised by CREG, which has to check whether the bids of the market participants are not manifestly unreasonable with regard to the costs of the bidders. As explained at recital (48) above, CREG considers as reasonable only the costs which the plants or demand response operators would not have to bear if they were not participating in the reserve. The TSO can only award a contract if CREG has judged that the offered price is not manifestly unreasonable. If CREG deems that the offered prices are manifestly unreasonable, it may recommend measures to address this, in which case the government may impose to such bidder(s) the prices and volumes deemed necessary (see recital (49)).
- (143) Although currently the law does not yet stipulate that the Belgian government has to follow CREG's recommendations relating to the reasonableness of bids, Belgium has committed, as explained at recital (86)(c) above, to modify the Federal Electricity Law (Article 7 *sexies* (3)) to ensure that, when the tender does not bring

forward reasonable bids<sup>37</sup>, the prices will be reduced by the Ministry in accordance with the recommendations of CREG.

- (144) The Belgian authorities have moreover committed to address another potential risk for overcompensation. As explained at recital (52), an important distinction is made between SGR plants that applied for temporary and those that applied for definitive closure for the consideration of reimbursable strategic reserve costs. In particular, those reimbursable strategic reserve costs are lower in case of temporary closures since estimated mothballing costs are deducted. However, as there was initially no binding consequence in applying either for temporary or definitive closure, most if not all potential strategic reserve participants applied for definitive closure.
- (145) Belgium has committed to modify the legal basis so that power plants that announced "definitive closure" (and were therefore eligible for compensation of all costs linked to performance of the strategic reserve services) can no longer return to the market after such announcement has been made. This modification of the Belgian legal basis ensures that power plants that announced definitive closure (and had their strategic reserve costs reimbursed on this presumption) but subsequently returned to the market do not receive overcompensation.
- (146) With respect to the requirement of paragraph (231) EEAG, that the measure should be constructed so as to ensure that the price paid for availability automatically tends to zero when the level of capacity supplied is expected to be adequate to meet the level of capacity demanded, the Commission notes that the annual generation adequacy assessment by the TSO ensures that no capacity will be contracted if there is no need for capacity under the 'high impact, low probability' scenario. In other words, there will be no payments for availability when the level of capacity supplied by the market is expected to be adequate to meet the level of capacity needed in that given scenario.
- (147) In view of the above, the Commission concludes that the measure is proportionate under Section 3.2.5 EEAG in conjunction with Section 3.9.5 EEAG.

### *3.3.5. Avoidance of negative effects on competition and trade*

- (148) The measure does not result in undue distortion of competition and trade if it meets the conditions in Section 3.2.6 EEAG in conjunction with Section 3.9.6 EEAG. Generally, the negative effects of the aid measure in terms of distortions of competition and impact on trade between Member States must be limited and outweighed by the positive effects in terms of contribution to the objective of common interest (paragraph (88) EEAG). This general requirement is described particularly for generation adequacy measures in paragraphs (232) and (233) EEAG, where the need for broad participation in the scheme and the avoidance of market undermining effects of the measure, for instance by strengthening dominance or affecting investment decisions, are underlined.
- (149) In particular, generation adequacy measures must meet the following conditions: i) when technically and physically possible, the measure must be open to all capacity providers while meeting the proportionality principle (paragraph (232) (a) to (c) EEAG); ii) avoid negative effects on the internal market, such as

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<sup>37</sup> The reasonability of bids is assessed by CREG, as explained at recitals (48) to (50) above.

indirectly setting wholesale price caps or undermining intraday and balancing markets (paragraph (232) (d) EEAG), iii) not reduce the incentives to invest in interconnectors and not undermine market coupling (paragraph (233) (a) and (b) EEAG), iv) not undermine investment decisions that preceded the introduction of the measure (paragraph (233) (c) EEAG); v) not unduly strengthen market dominance (paragraph (233) (d) EEAG) and vi) give preference to low-carbon technologies in case of equivalent technical and economic parameters (paragraph (233) (e) EEAG).

- (150) With respect to the requirements in paragraph (232) (a) to (c) EEAG, the Commission notes that the measure is open to all capacities that can help address the identified generation adequacy problem, as assessed and concluded at recitals (131) to (134) above. Eligibility is only limited based on objective grounds, related to technical performance requirements. For instance, nuclear energy cannot participate in the strategic reserve because this technology does not provide the flexibility necessary to be (re-)activated at short notice.
- (151) With respect to the requirement that the measure should avoid negative effects on the internal market (paragraph (232) (d) EEAG), the Commission recalls that capacity mechanisms can generally have a distortive effect on the market when they i) unnecessarily increase capacity in the wholesale market, reducing wholesale prices; ii) exchange high electricity scarcity prices for capacity remuneration, further reducing electricity wholesale prices; and iii) remunerate some market participants but not all. This not only distorts the playing field on the wholesale market, but also the long term investment signals. Strategic reserves should however not have these distortive impacts if they are truly outside of the market. In such case, the wholesale market prices should not be affected nor the investment signals they provide. Market coupling should therefore not be affected, nor should incentives to invest in interconnectors or capacity in neighbouring markets.
- (152) The strategic reserve is activated only in case the market does not clear day-ahead, or the TSO identifies a shortage event intraday. Moreover, the design of the reserve leaves room for all possible market-based solutions to respond to the scarcity event up until real time (see recital (75)).
- (153) As explained at recital (84), Belgium moreover confirmed that capacities contracted for the reserve cannot receive any revenues from the performance of services in the electricity market, neither from selling in the wholesale markets, nor from providing ancillary services. An exception is made with respect to the performance of the black-start service, which can be performed by SGR units as a ‘last resort’ measure, i.e. only after a market tender failed to select a successful candidate to perform such service.
- (154) The Commission takes note that the objective of the black start service, which is to help the electricity system start up again after a blackout, is not incompatible with the strategic reserve service and the two services can, in any case, never be performed simultaneously. Moreover, since the SGR units cannot participate to the market tender for black-start services, and since such market tender always precedes the eventual selection of an SGR unit to perform the service, the Commission finds that such cumulation of the black start service with the strategic reserve service neither leads to double compensation for the same service or unjustifiable cumulation of aid, nor to an undue distortion of the electricity market.

- (155) In addition, the Belgian authorities have made a number of commitments to ensure that the strategic reserve does not interfere with the price formation or investment signals in the electricity market.
- (156) Firstly, Belgium committed, for the future and in any case before launching another reserve tender, to increase the current administrative imbalance price applicable in real time in case of effective delivery of the reserve (of 4,500 EUR/MWh) to above the Intraday (ID) price cap (of 9,999 EUR/MWh) to allow the intraday market to respond to an arising scarcity situation as much as possible. Such increased price signal incentivises market parties to undertake all efforts, including making fully use of the possibilities offered by the intraday market, to contribute to system balance at times of scarcity.
- (157) Secondly, the reserve is in practice activated in such a way (described at recital (69) *et seq.*) that, even while the strategic reserve units are ramping up, the distortions to the market are kept to a minimum, including through the absorption of reserve electricity by the balancing system, meaning that this electricity is integrated in the net regulated volume as explained at recital (73).
- (158) Thirdly, Belgium committed to include in the legal basis the following clauses to avoid market distortions:
- (a) firstly, a prohibition for all capacities to terminate their contracts early and sell their services in the market during the term of their reserve contracts; and
  - (b) secondly, a prohibition for power plants that announced "definitive closure" to return to the market at any point in time thereafter.
- (159) The Commission notes that these rules remove the uncertainty that potential investors in the electricity market may experience as to whether or not the plants in the strategic reserve will move back into the market at any point in the future, thereby affecting their profitability margins.
- (160) The Commission considers that such a non-return clause can minimise distortions to the market, and in particular safeguard market signals for new investments. If capacities can enter and exit the reserve every year depending on the market circumstances, they cause uncertainties and increased risk for new in-the-market investments.
- (161) Additionally, such non-return provisions limit market power and gaming. Indeed, in particular, larger operators (with a diverse portfolio of power plants) may use the possibility to enter and exit the reserve deliberately to create uncertainty for new investments while at the same time ensuring higher prices in the market in the absence of new investments.
- (162) Furthermore, the non-return clause can discourage participation to the strategic reserve and thereby ensure that the reserve serves as a "last resort" option, only for plants that are anyway near the end of their lifetime. It thereby creates an incentive for capacities to stay in the market as long as possible, potentially even at losses, insofar as there is still expectation that market circumstances may change for the better.

- (163) Although power plants that announced temporary closure can still return to the market at the end of their reserve contracts (or after having failed to secure a reserve contract), the Commission considers that they are in a different factual and legal situation, since such plants could in any case un-mothball and return to the market at relatively short notice irrespective of having been selected for the reserve. Together with their different cost treatment by CREG, as explained at recital (52), this clearly distinguishes those plants from the plants that have applied for definitive closure.
- (164) In view of the above, the Commission considers that the design of the mechanism, as amended in view of the commitments made by Belgium, ensures the effective separation between the capacities in the reserve and the capacities in the market. The strategic reserve is thus outside the market.
- (165) It follows that the reserve does not reduce incentives to invest in interconnectors and does not undermine market coupling (paragraph (233) (a) and (b) EEAG), since it has no impact on market price formation.
- (166) For the same reason, the measure does not undermine investment decisions that preceded the introduction of the measure (paragraph (233) (c) EEAG).
- (167) Additionally, the measure does not unduly strengthen market dominance (as required by paragraph (233) (d) EEAG) because it is based on a competitive tender, including different types of capacity providers. In addition, participants can only obtain a reimbursement of their actual costs incurred in performance of the strategic reserve service, which is thoroughly scrutinised by the NRA, as explained at recital (48). Moreover, Belgium has committed to include in the reserve a partial non-return clause to reduce the risk of gaming (see recitals (157) to (163) above).
- (168) With respect to the requirement of paragraph (233) (e) EEAG, Belgium designed its measure in a way allowing full participation of demand response in the strategic reserve as explained at recital (131).
- (169) In conclusion, the Commission considers that the design of the measure ensures that the measure does not result in undue negative effects on competition and trade between Member States.

### *3.3.6. Transparency of the aid*

- (170) Under Section 3.2.7 EEAG, for individual aid awards of 500,000 EUR or more, Member States must publish on a comprehensive State aid website the full text of the aid scheme and its implementing provisions (or a link to it), the identity of the granting authority, the identity of the individual beneficiaries, the form and amount of aid granted to each beneficiary, the date of the granting, the type of undertaking, the region in which the beneficiary is located and the principal economic sector in which the beneficiary has its activities.
- (171) The Belgian authorities will apply those transparency conditions. Currently all general information is published on a dedicated website managed by the TSO.<sup>38</sup> Also strategic reserve prices (averaged for confidentiality reasons) are published on

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<http://www.elia.be/en/products-and-services/Strategic-Reserve>

a sub-page of this website.<sup>39</sup> All State aid measures implemented by the Belgian government are moreover generally announced on a dedicated State aid website created by the Belgian government.<sup>40</sup>

### 3.3.7. Conclusion

(172) In light of the above, the Commission finds that the aid scheme is compatible with the internal market.

## 4. CONCLUSION

(173) The Commission regrets that Belgium put the aid for winter 2017-2018 into effect, in breach of Article 108(3) of the Treaty on the Functioning of the European Union.

(174) However, it has decided, on the basis of the foregoing assessment not to raise objections to the aid scheme, notified for five (5) consecutive delivery periods, starting with winter 2017-2018 until winter 2021-2022 (ending on 31 March 2022), on the grounds that it is compatible with the internal market pursuant to Article 107(3) of the Treaty on the Functioning of the European Union.

(175) If this letter contains confidential information which should not be disclosed to third parties, please inform the Commission within fifteen working days of the date of receipt. If the Commission does not receive a reasoned request by that deadline, you will be deemed to agree to the disclosure to third parties and to the publication of the full text of the letter in the authentic language on the Internet site:

<http://ec.europa.eu/competition/elojade/isef/index.cfm>.

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<sup>39</sup> <http://www.elia.be/en/suppliers/purchasing-categories/energy-purchases/Strategic-Reserve-Volumes-Prices>

<sup>40</sup> <http://economie.fgov.be/nl/ondernemingen/mededinging1/staatssteun/>

(176) Your request should be sent electronically to the following address:

European Commission,  
Directorate-General Competition  
State Aid Greffe  
B-1049 Brussels  
[Stateaidgreffe@ec.europa.eu](mailto:Stateaidgreffe@ec.europa.eu)

Yours faithfully  
For the Commission

Margrethe VESTAGER  
Member of the Commission