

Status operational monitoring

November 2014

Users' Group

02/12/2014

Introduction

Elia has produced statistical analyses and ran simulations on informing the authorities, the market and the general public as three nuclear reactors are unavailable.

Since the Doel 4 power station became unavailable, various operational measures have been deployed to prepare for and to be ready to cope with this risk:

- The weather remains a critical factor. While Belgium is moving slowly into winter, no significant cold wave has been forecast for the next two weeks.
- Operational monitoring during these last weeks (without significant cold wave) confirm that some margins where still available.

Elia operational teams closely monitor the situation

About this presentation

A user guide explains where an ARP or any other market party can find on the Elia website the necessary information related to the strategic reserve (SR) mechanism:

http://www.elia.be/~media/files/Elia/Grid-data/Strategic-Reserve_UserGuide.pdf

A.o. the reference to the technical trigger is made:

The Technical Trigger (see §6.4.2 of the Functioning Rules) is activated in day ahead or in real-time when Elia identifies, based on its own analyses, a risk of structural shortage on the system. The indicators regarding the status of the system that are used for the detection of a risk of structural shortage as well as how an alarm of a risk of structural shortage is triggered are described in the Functioning Rules.

This presentation is meant to give a short operational status of said technical trigger, **not to alarm in any case**, but only to create some awareness of where we are this time of year.

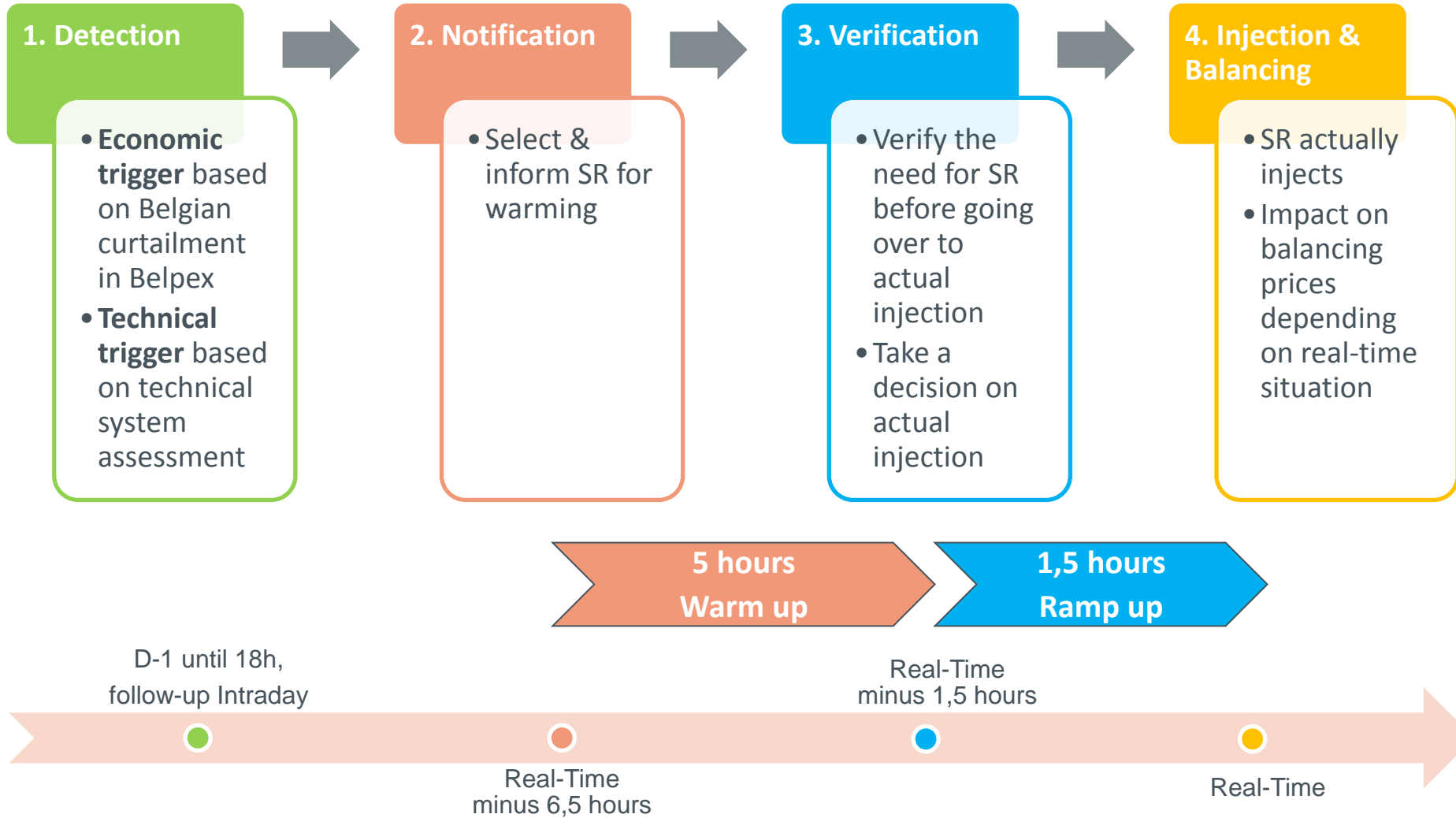
This presentation is not meant to (re)explain the concepts of strategic reserve (see taskforces for implementation of strategic reserve).

Reminder

Strategic Reserve

How do Strategic Reserve work?

↳ High Level market Design



THE MARKET IS INFORMED ON ALL IMPORTANT STEPS DURING THIS PROCESS.

↳ Technical Trigger in DA

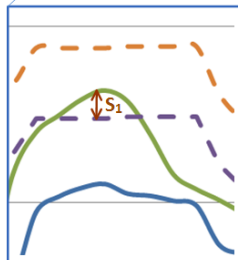
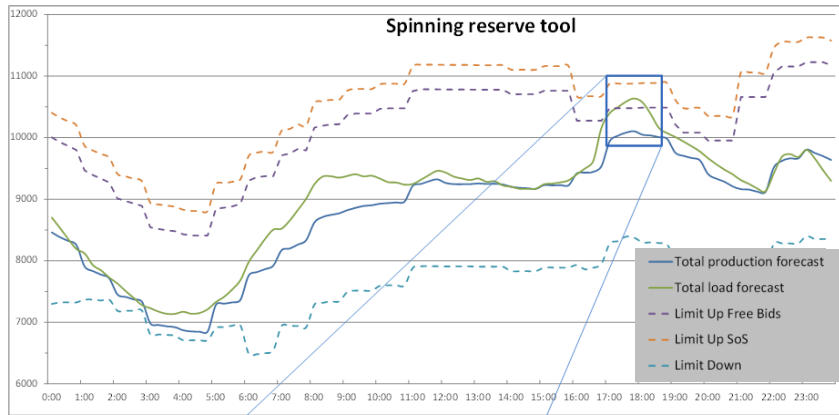
- The alarming system for the technical trigger is primarily **based on a “spinning reserve” forecast**. Spinning Reserve monitors and forecasts the system flexibility for the Elia Control Area. In case upward margin becoming too small/negative, alarms can be launched by the system and Elia considers all relevant information needed about the situation in order to complete the analysis and to confirm that the startup of strategic reserves will be triggered/necessary (technical trigger).
 - **When the alarming system is launched, Elia assesses the following information to the extent available:**
 - Measured and forecasted weather conditions (temperature, wind, solar,...) in BE, FR, NL & GE
 - Production situation (measured and forecasted) in Elia control area
 - Load situation (measured and forecasted) in Elia control area
 - Availability of slow start units
 - Availability of X-border capacities
 - North Border flow situation (measured and forecasted, N-1, PST, ..)
 - South Border flow situation (measured and forecasted, N-1, PST, ...)
 - Potential dynamic stability issues
 - Net position in BE, FR, NL & GE
 - Production situation in FR, NL & GE (renewable production, classical production, FO, maintenance,...)
 - Load situation in FR, NL, GE
 - Prices in BE, FR, NL & GE
-

How do Strategic Reserves work?

↳ Technical Trigger in DA

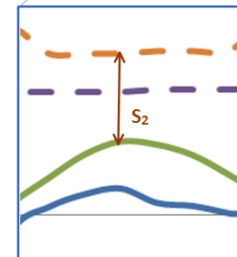
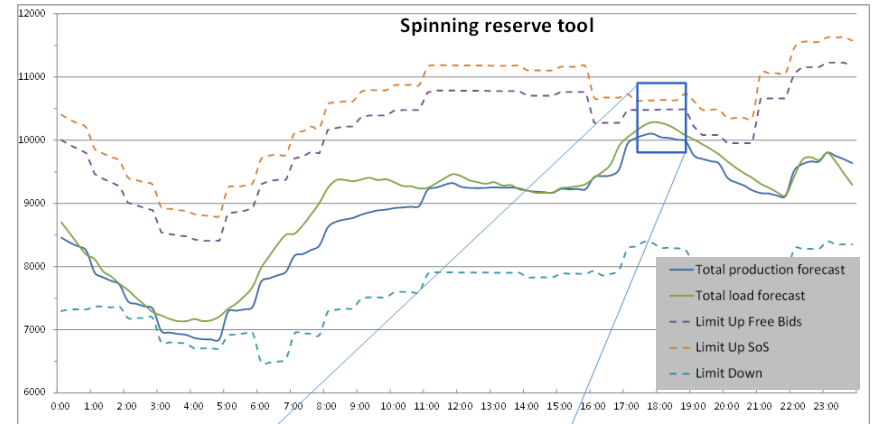
S1 : Total Load forecast > Limit Up Free Bids

There is a risk not to have enough flexibility to compensate residual imbalances



S2 : Limit SoS – Total Load Forecast < N-1 criterion

There is a risk not to have enough margin to ensure the N-1 criterion

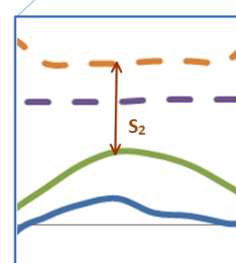
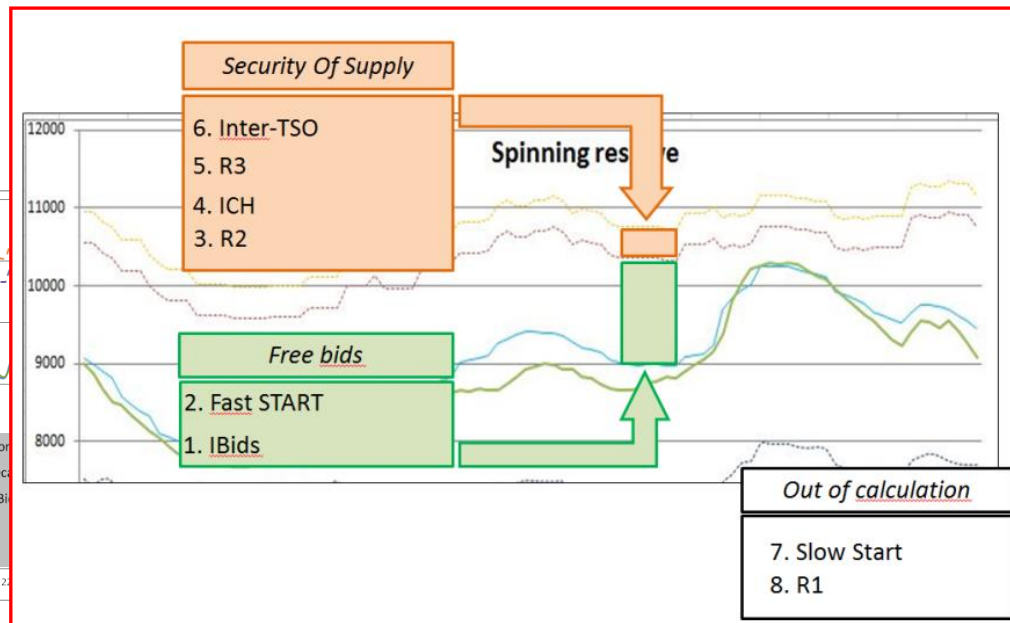
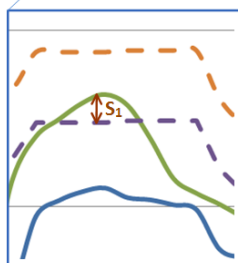
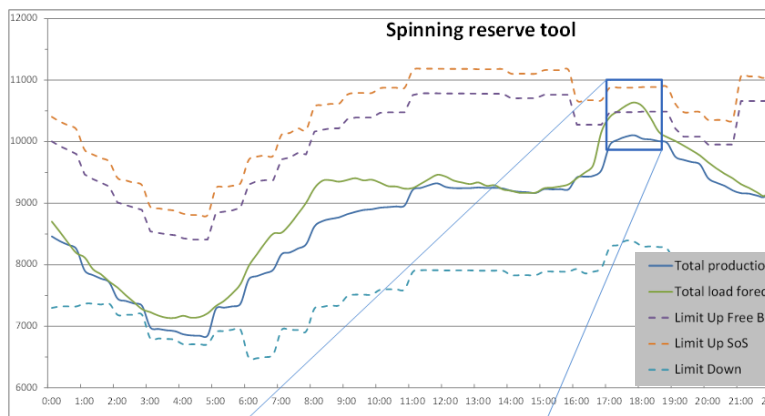


How do Strategic Reserves work?

Technical Trigger in DA

S1 : Total Load forecast > Limit Up Free Bids

There is a risk not to have enough flexibility to compensate residual imbalances



e.g too small forecasting from the ARP's nominations at the evening peak

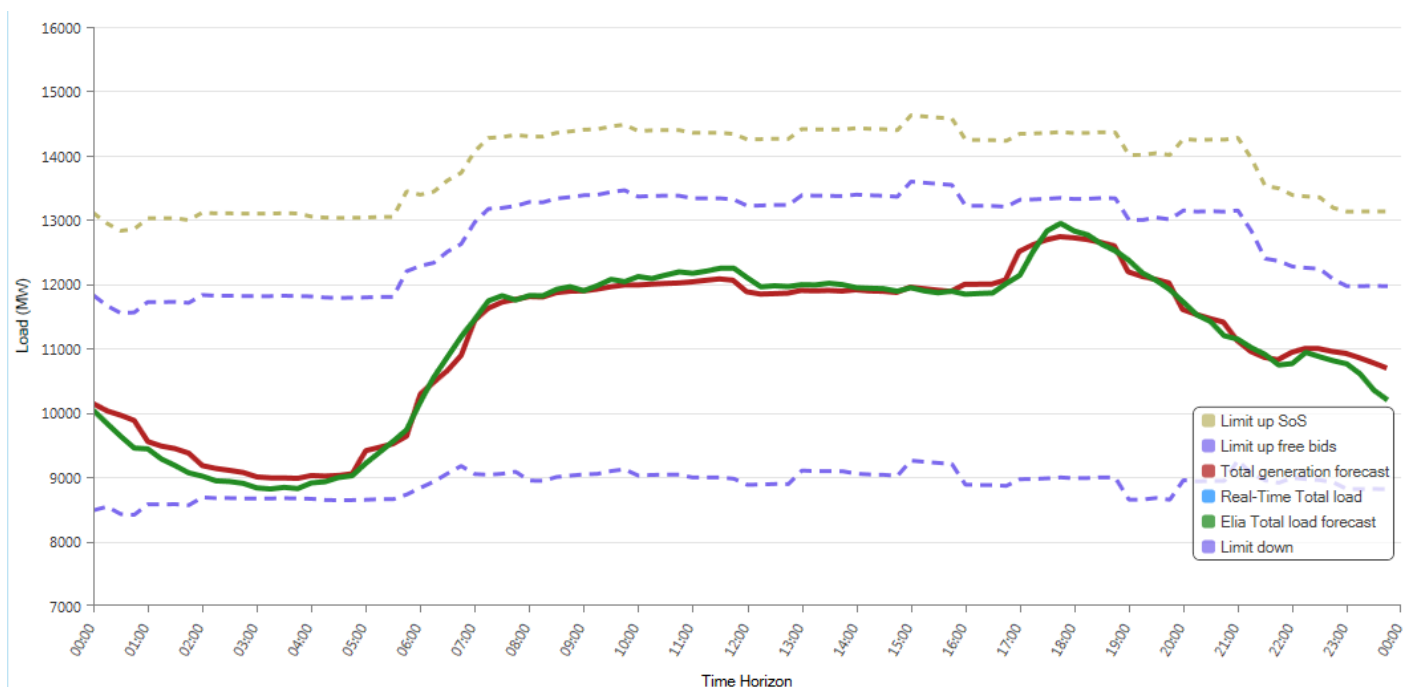
e.g inter-TSO reserve unavailable, interruptible clients unavailable, ...

*Result of Short Term Adequacy Tool for
business day 19/11/2014*

(randomly chosen)

Business day 19/11/2014

- For business day 19/11 : total load (during evening peak) of +/- 13.000MW
- Smallest remaining margin (@17h45) towards the trigger level for strategic reserve is +/- 350MW



This trigger level doesn't consider slow starting units + remaining import capacity:

- Imports between 17:00-18:00 was +/- 3000MW => enough margin remaining for the market
- Several large power plants (considered as slow starting) => enough margin remaining for the market

Elia permanently monitors the situation, indicating that these last weeks margins remained available. The weather is a critical factor. While Belgium is moving slowly into winter, no significant cold wave has been forecasted for the next weeks.