

ENTSO-e Seasonal Outlook Reports

Summer Outlook 2015

17/06/2015

Kristof Sleurs

Agenda



1. Seasonal Outlook reports: Context & Objectives
2. Summer Outlook 2015: results
3. Future evolutions of the methodology

Context & Objectives

ENTSO-E Seasonal Outlook Reports

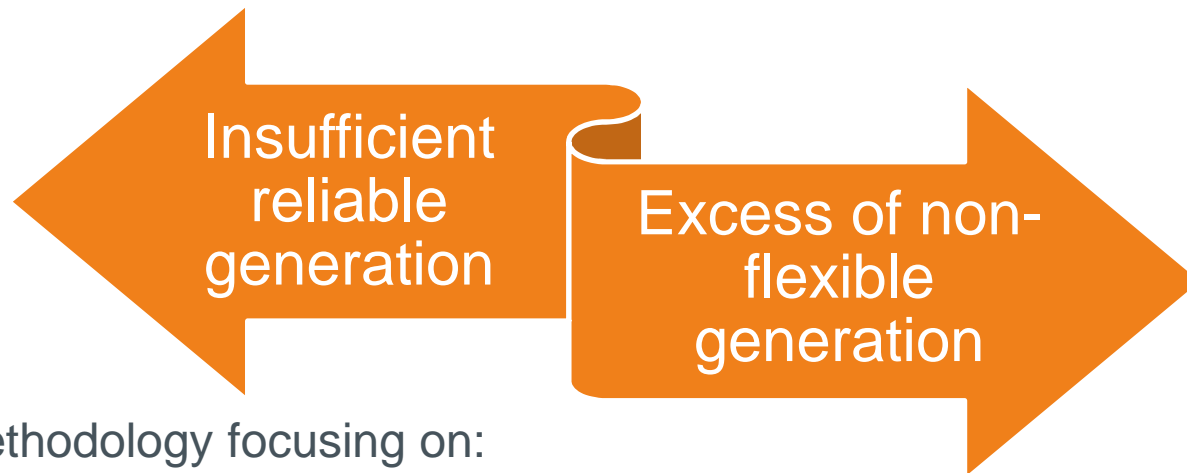


Context

- ENTSO-E adopts and publishes on an annual basis both the “Winter Outlook and Summer Review” and the „Summer Outlook and Winter Review“ as required by **Article 8 of the EC Regulation n. 714/2009**;
- Seasonal Outlooks reflect **a pan-European assessment**, using input from all member states collected through the TSOs and combining those inputs into a consistent pan-European analysis, focused on **system adequacy**;
- **Twice a year**, alternating between Summer and Winter Outlooks, focusing on both seasons respectively;
- Systematically reviewed by **ACER** followed by their written opinion.

ENTSO-E Seasonal Outlook Reports

Objectives



through a methodology focusing on:

- **Transparency** (of inputs used, methods and results) and **reproducibility**;
- Allowing to **link effects/results** and their **causes**;
- Allowing to **locate** potential **issues** in space and time;
- **Operational** solutions on the **short term**

with the goal of

**creating awareness towards TSOs and the public
on potential adequacy issues**

ENTSO-E Methodology

High-level overview

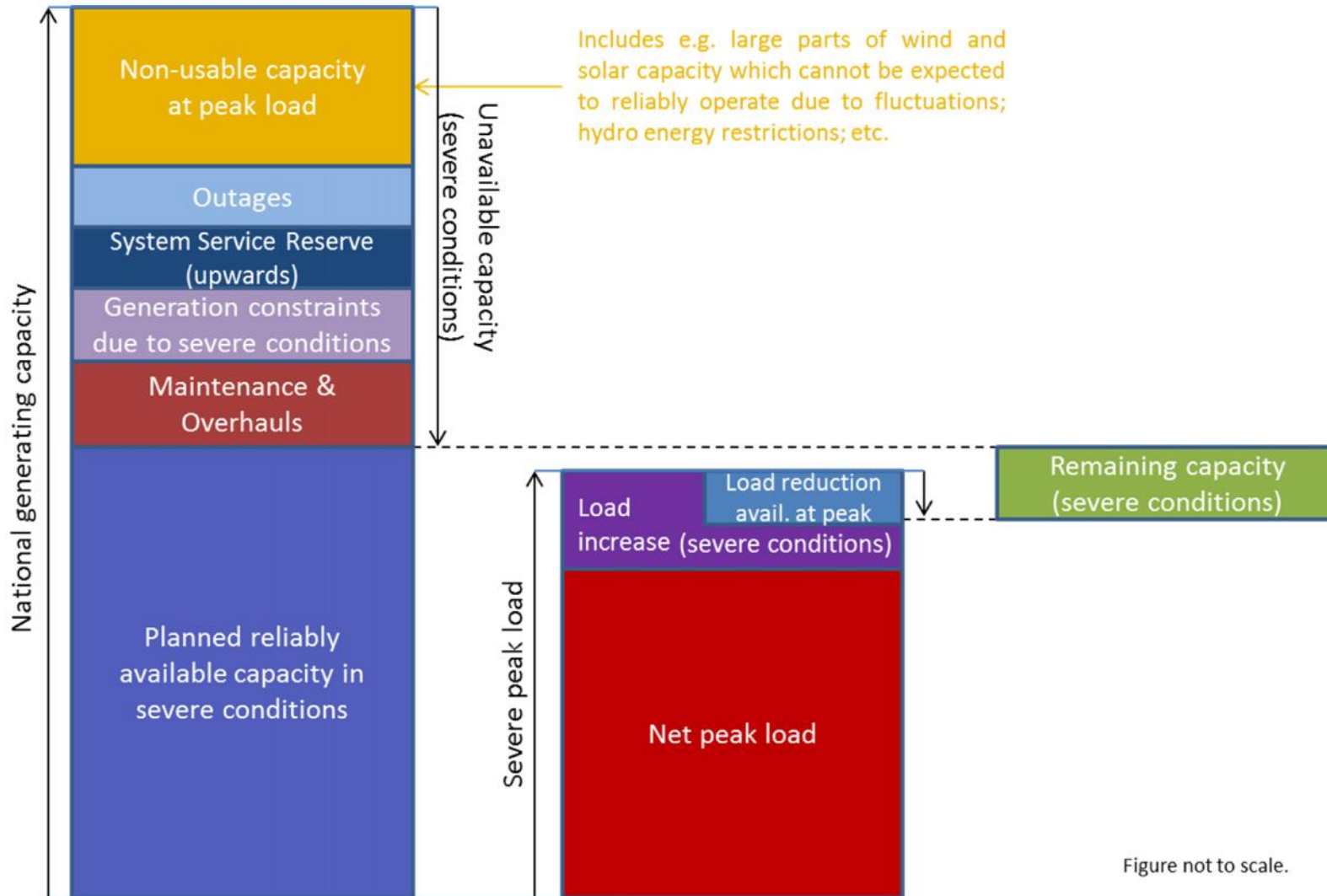


Figure not to scale.

ENTSO-E Methodology



Stepwise approach

Phase 0: Collect inputs from TSOs

- **Inputs from all TSOs** are collected using standardized templates and a general definition of the assumptions to follow

Phase 1: Build a pan-European Worst-Case scenario

- **Consistent scenario's** on temperatures and renewables are created by combining the TSOs' inputs with the **Pan-European Climatic Database**
- A general **worst-case (P95)** approach is taken, without accounting for mitigating effects of (de-)correlation between regions
- Objective is to identify those **regions that might be at risk**

Phase 2: Focused analysis of regions potentially at risk

- Further analysis is focused on the regions that are potentially at risk in the worst-case scenario
- A **probabilistic approach** is taken, simulating a large amount of renewables/temperature scenarios
- This allows to connect an indication of **probability** to the issues identified
- Parameters that are mainly driving the issues are sought for and reported

Summer Outlook 2015

Summer Outlook 2015

Overview

- In general, Europe has **sufficient generation** in both normal and severe conditions
- The methodology includes a **regional analysis** (taking into account cross-border exchanges)
- **Consistent input scenarios** are used for the renewables infeed and temperatures (influencing demand) (Pan-European Climate Database)

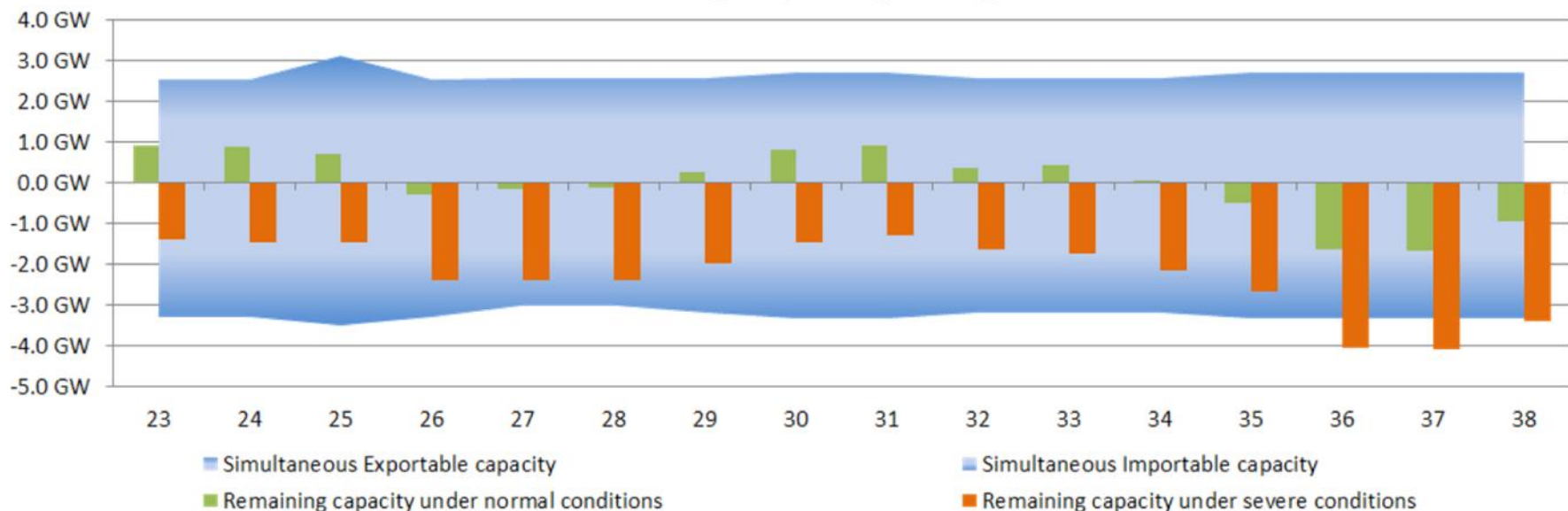


Summer Outlook 2015

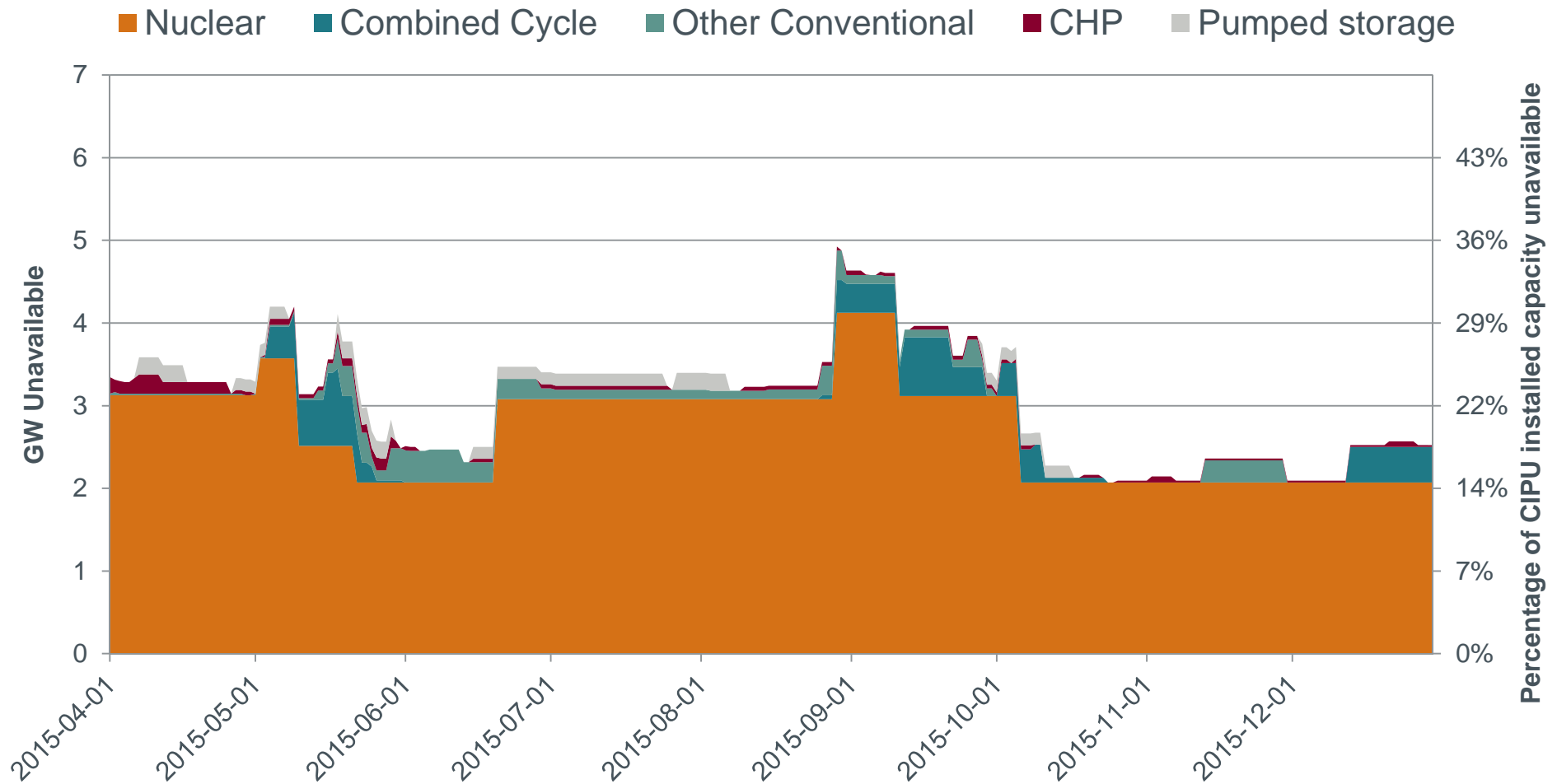
Situation for Belgium

- For the **first time** a **potentially increased risk** of encountering adequacy issues might occur at the end of the summer period;
- This situation is mainly due to **high maintenance levels** of conventional generation and could arise when situations of low renewables infeed coincide with a significant number of conventional units that are unplanned unavailable;
- The graph below depicts the Belgian situation at **noon** under **normal** and **severe conditions**: the latter reflects increased demand, Forced Outages of generation, low renewable infeed.

Remaining Capacity: Belgium



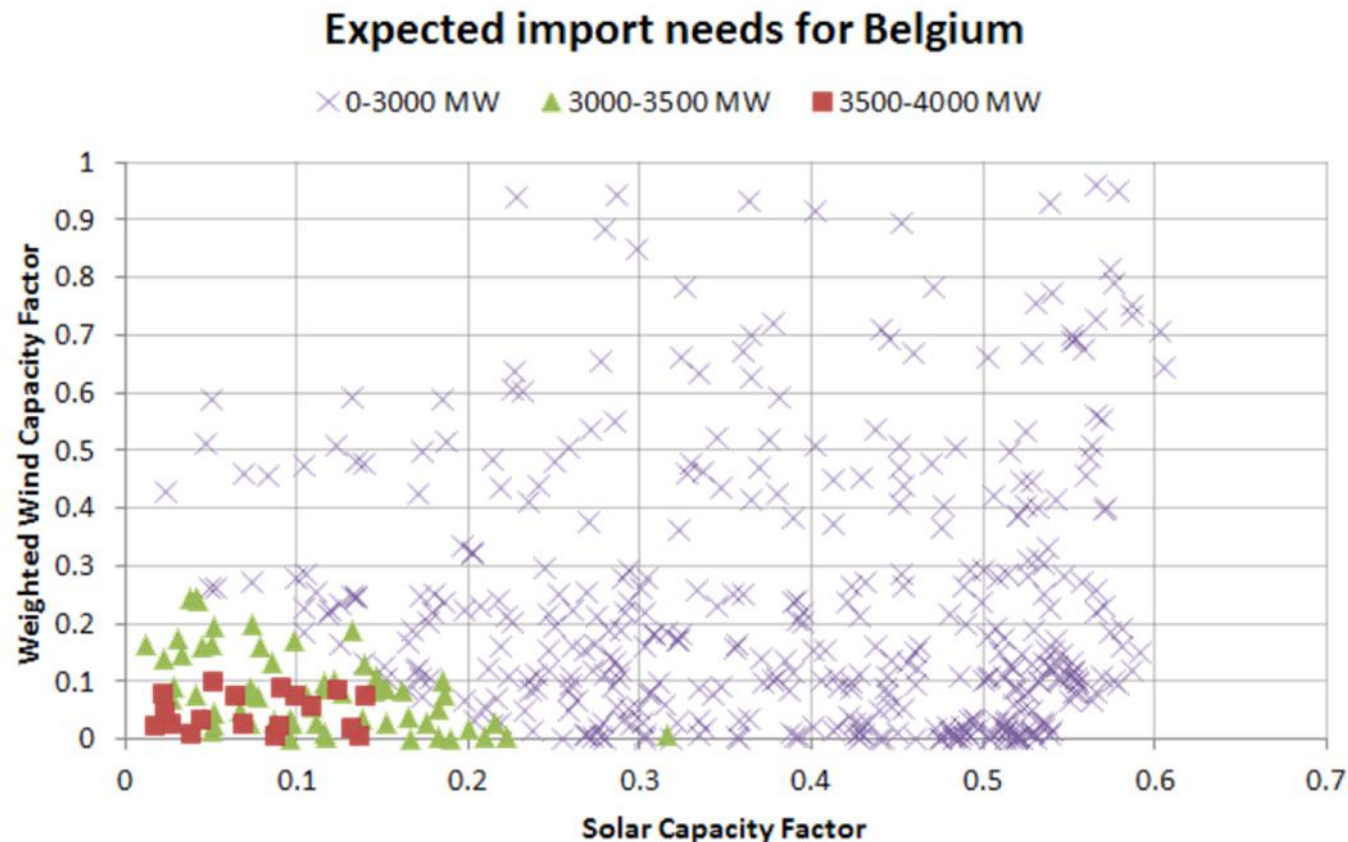
Conventional Generation planned unavailability for Belgium, per generation type



Summer Outlook 2015

Situation for Belgium: probabilistic analysis

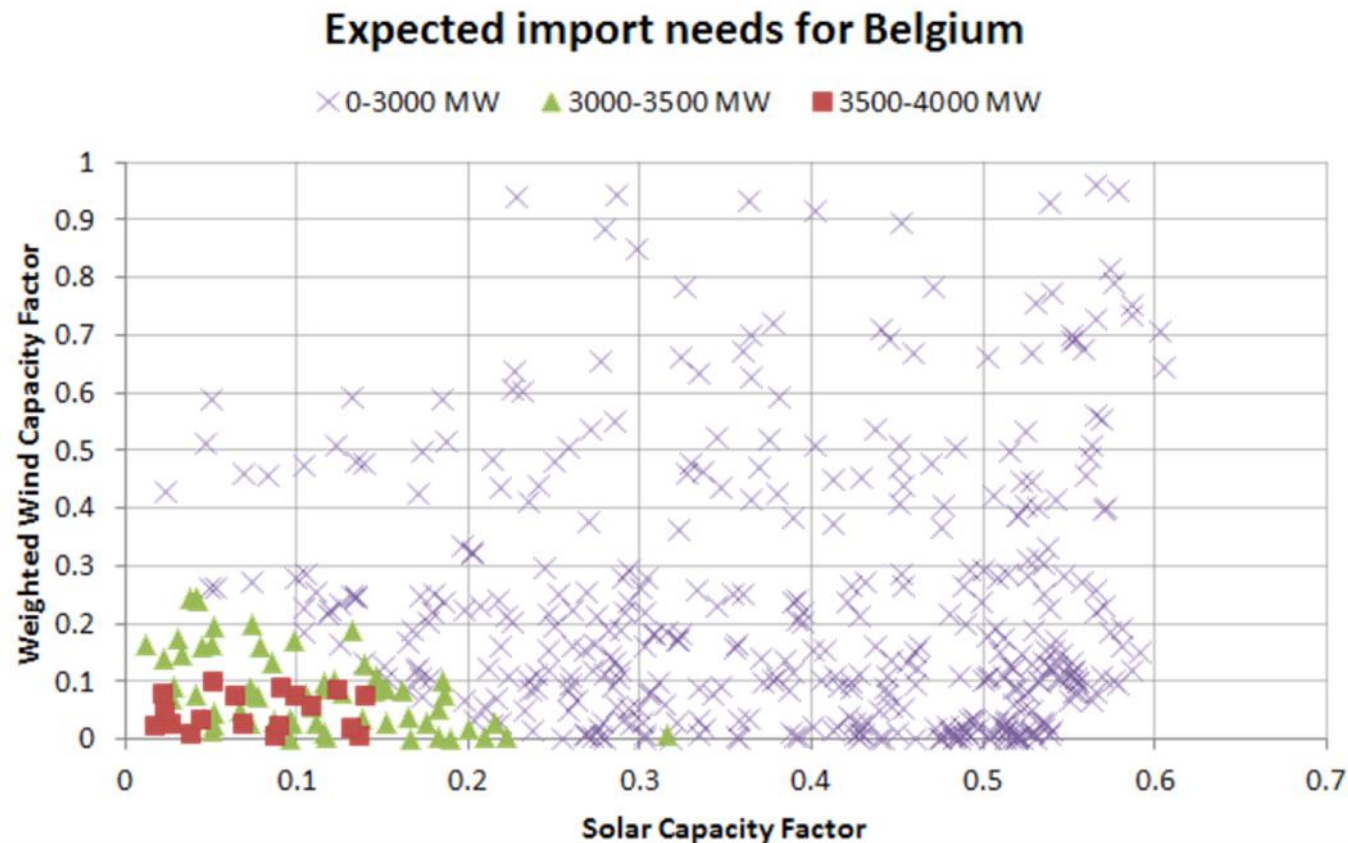
- A more detailed analysis to analyse **the probability of occurrence** was conducted
- A rough estimation of the probability of encountering at least one day with an import need of above 3500 MW yielded a **4-6 percent** chance. However larger than in the past, this risk is **still limited**.



Summer Outlook 2015

Situation for Belgium: risk-mitigating effects

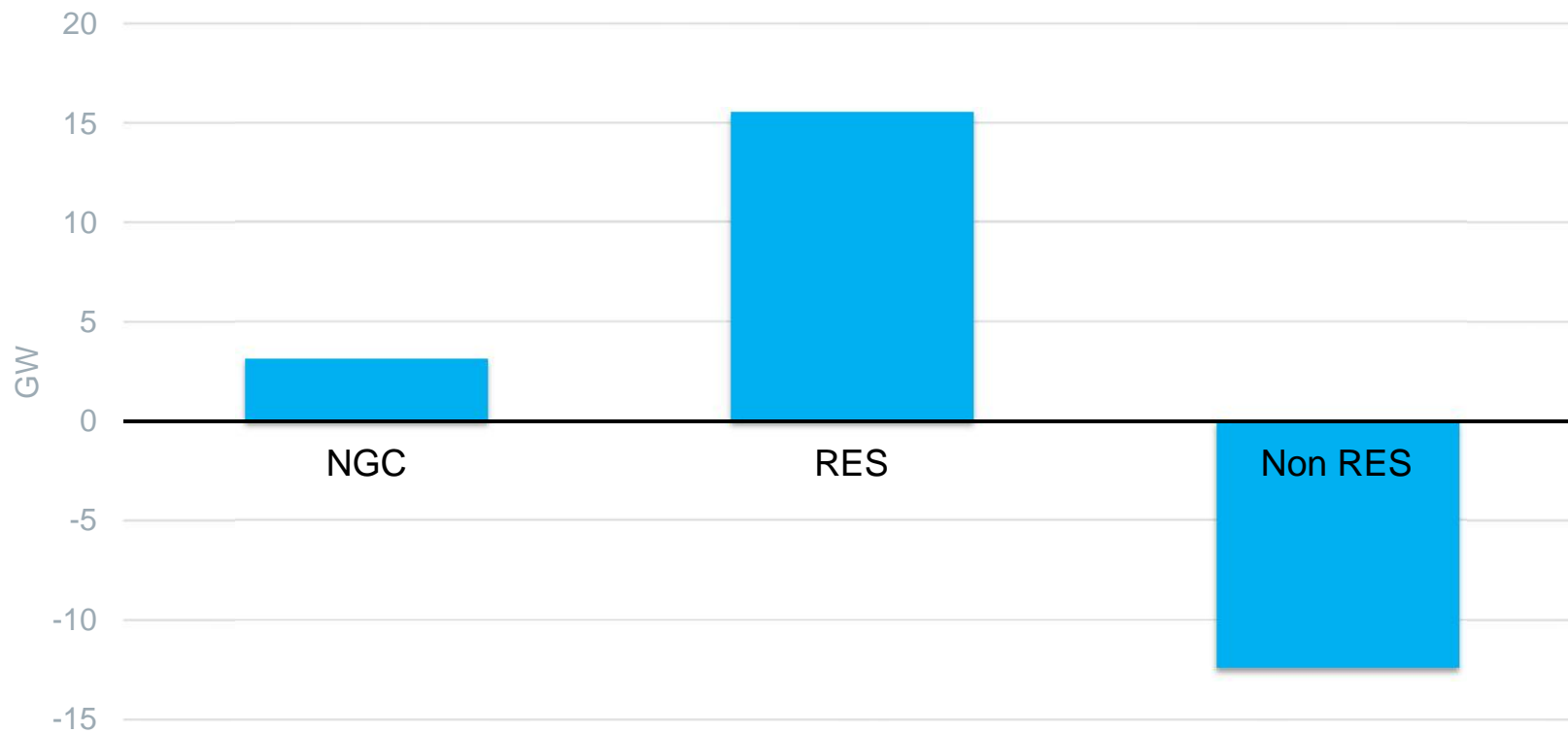
- Expected importing capacity for BE under the **Flow-Based** mechanism is still difficult to predict;
- Decisions on **keeping conventional generation capacity in the market** are being taken by producers, and can significantly impact the situation



On-going evolutions on installed capacity

Net Generating capacity evolution (2014 vs 2015)

- Globally, net installed net generating capacity in Europe keeps increasing, however the net increase has become very limited
- Most of the increase of installed renewable capacity is countered by decommissioning conventional generation



Future evolutions

Future Evolutions

- Increased consistency through maximal use of central data, especially the new EMFIP transparency data;
- Further improvement of the data collection;
- Evolutions of the PECD;
- Introduction of a merit-order based simulation;
- Further improvement of the probabilistic regional analysis, but keeping the balance with deterministic (easy to interpret) approach;
- Further improvement of the cross-border concepts (Flow-Based like approach)



Many thanks for your attention!

Kristof Sleurs

ELIA SYSTEM OPERATOR
Boulevard de l'Empereur 20
1000 Brussels

+32 2 546 70 11
info@ elia.be

www.elia.be
An Elia Group company