



ENTSO-E and ENTSOG

WINTER OUTLOOKS

16 December 2015 – Webinar

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Presenters: Daniel Huertas Hernando (ENTSO-E), Stefan Greulich (ENTSOG)



- 1. Introduction**
- 2. Electricity Winter Outlook**
- 3. Questions**
- 4. Gas Winter Outlook**
- 5. Questions**
- 6. Conclusion**

Setting the scene...

- **The ENTSOs**



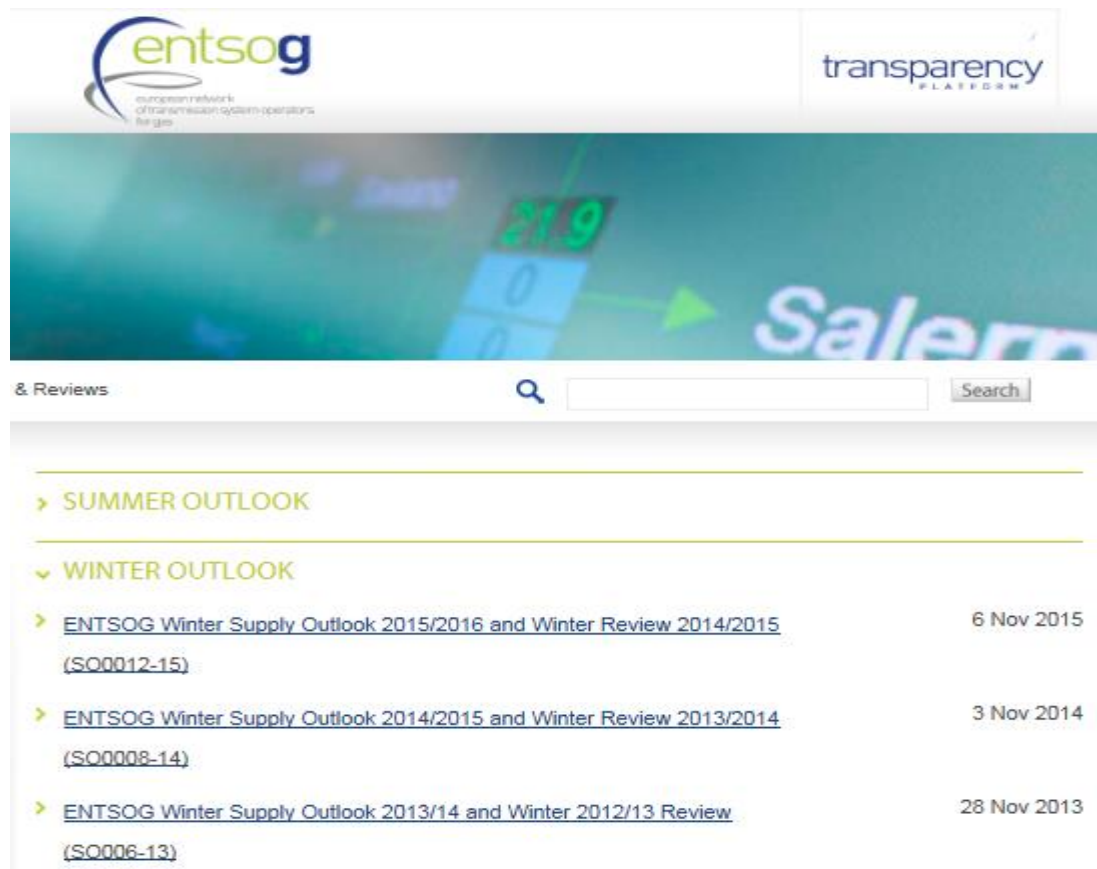
- **Winter and Summer Outlooks**

- EU legal obligation
- Analyse the main adequacy risk within a season
- Subject to an ACER opinion

What can you find in the Outlooks?

- **Role of cross-border capacity in adequacy for upcoming season**
- **Influence of external factors**
 - ✓ weather, market conditions, consumer behaviour...
- **Sensitivity analysis**
 - ✓ look for worst case scenario, see how network reacts incl. under severe conditions
- **Review: deeper understanding of the previous season**

Outlooks and Reviews – where to find them?



The screenshot shows the entsog website header with the logo and 'transparency PLATFORM' text. Below the header is a search bar with the text '& Reviews' and a search button. The main content area lists three items under 'WINTER OUTLOOK':

- > [SUMMER OUTLOOK](#)
- ▼ [WINTER OUTLOOK](#)
- > [ENTSOG Winter Supply Outlook 2015/2016 and Winter Review 2014/2015 \(SO0012-15\)](#) 6 Nov 2015
- > [ENTSOG Winter Supply Outlook 2014/2015 and Winter Review 2013/2014 \(SO0008-14\)](#) 3 Nov 2014
- > [ENTSOG Winter Supply Outlook 2013/14 and Winter 2012/13 Review \(SO006-13\)](#) 28 Nov 2013



The screenshot shows the entsoe website header with the logo and 'european network of transmission system operators for electricity' text. Below the header is a navigation menu with the following items: ABOUT ENTSO-E, MAJOR PROJECTS, PUBLICATIONS. Below the navigation menu is a banner image of power lines.

[ENTSO-E WEBSITE](#) > [PUBLICATIONS](#) > [SYSTEM DEVELOPMENT REPORTS](#) > [OUTLOOK REPORTS](#)

Outlook Reports

Introduction



Electricity: approach and results

Gas: approach and results

Gas disruption sensitivity

WHAT?

Raising awareness on potential adequacy issues

HOW?

Transparent and reproducible methodology
Linking effects to causes
Locating issues in space and time
Identifying short term operational solutions

ENTSO-E Seasonal Outlooks – Stepwise approach

1. Collect inputs from TSOs

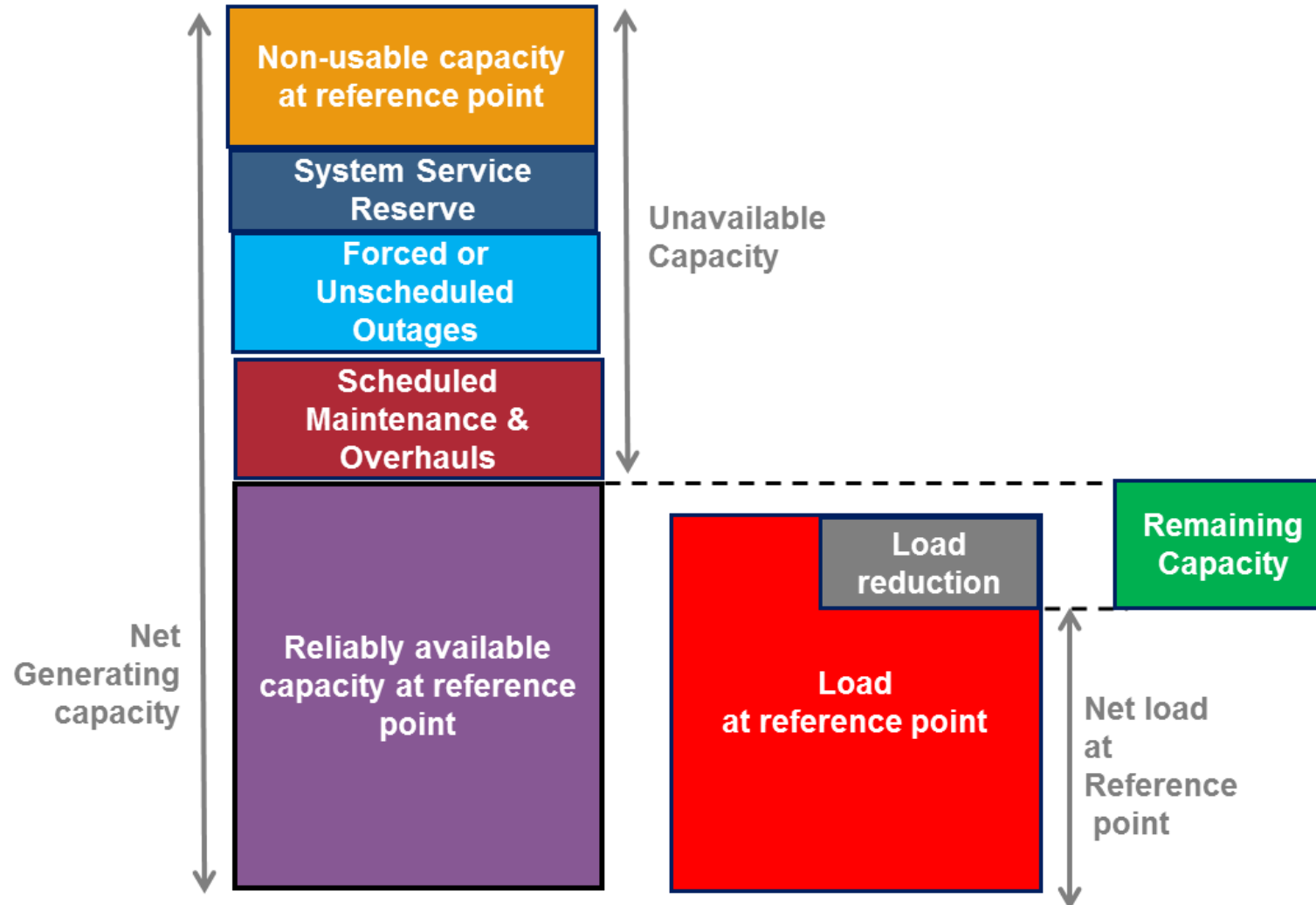
2. Build a pan-European worst-case scenario

- Using TSO data and Pan-European Climatic Database

3. Focused analysis of regions potentially at risk

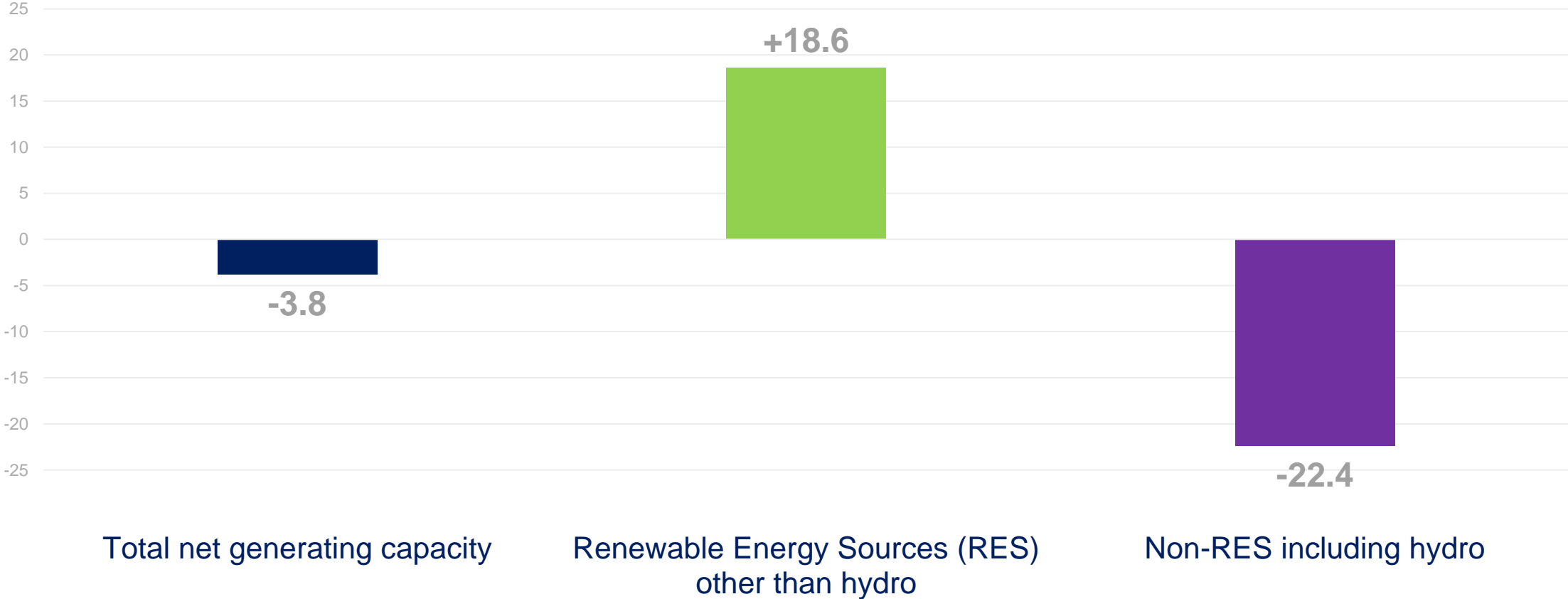
- Probabilistic approach using a lot of possibilities. Aim is to be able to say with how much probability an issue can occur.
- The parameters driving the issues are identified

ENTSO-E Seasonal Outlooks - Methodology



ENTSO-E Winter Outlook 2015/16 - Findings

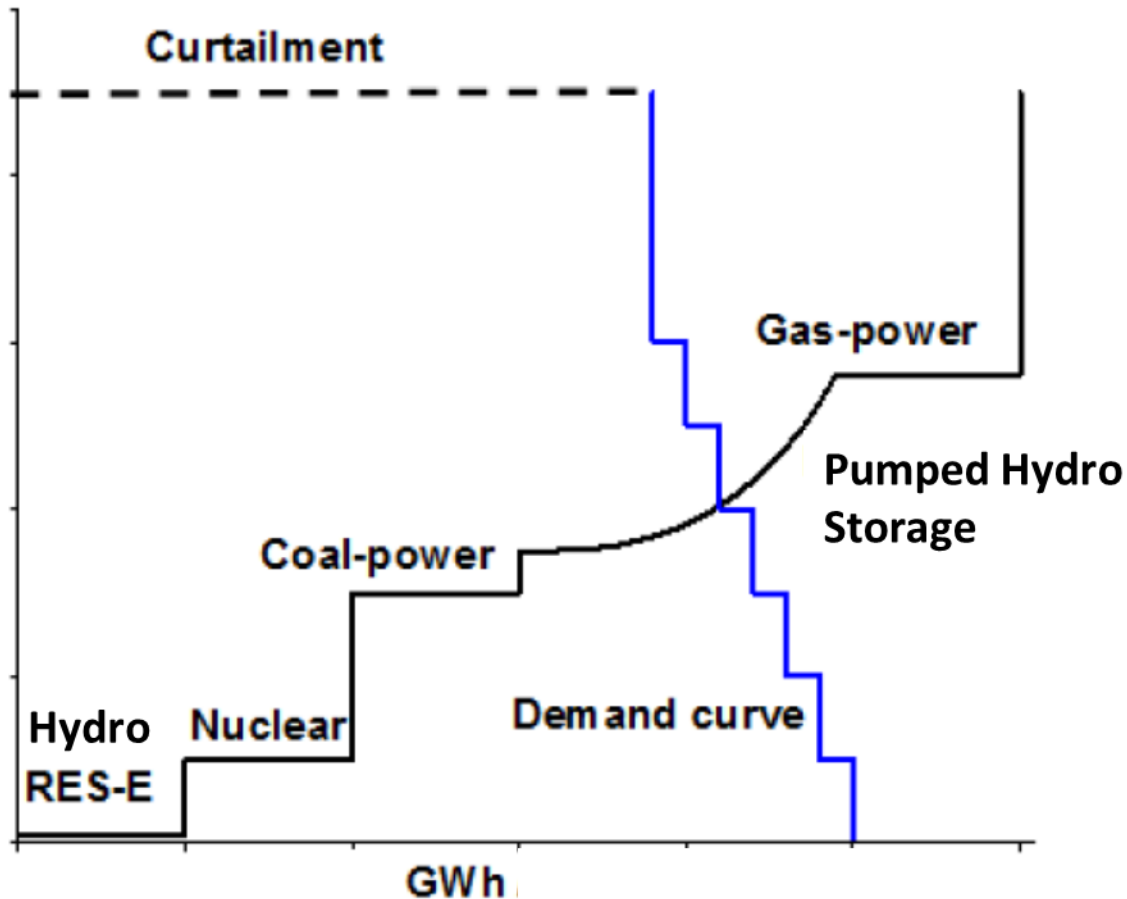
Difference between Winter Outlook 2014/15 and Winter Outlook 2015/16



ENTSO-E Winter Outlook– Normal Conditions & Merit Order

Cross-border exchanges

- market driven
- contributions to adequacy



Week	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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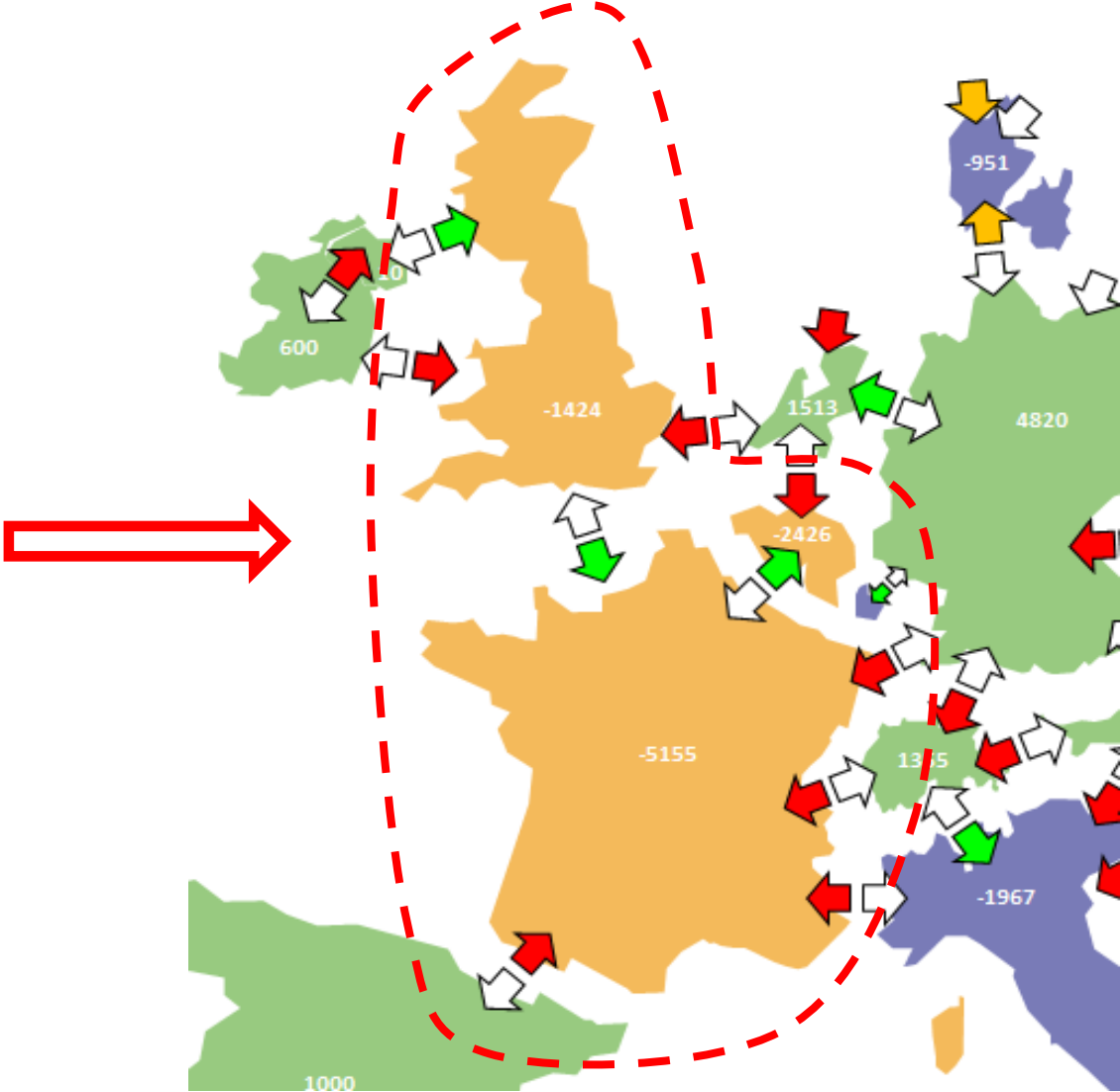
Excess capacity
 Import driven by market
 Import needed for adequacy

ENTSO-E Winter Outlook– Severe Conditions (Sensitivity)

Cross-border contributions to adequacy

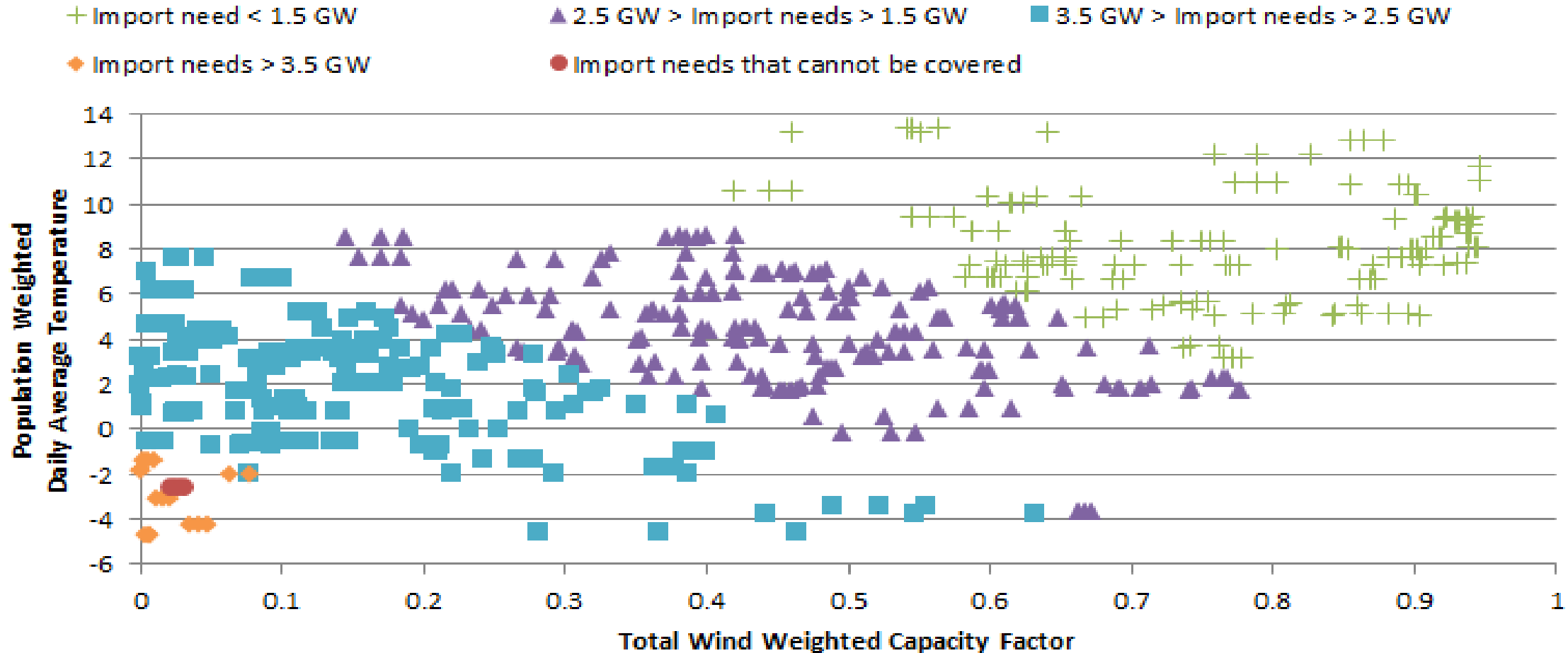
Week 4

Week	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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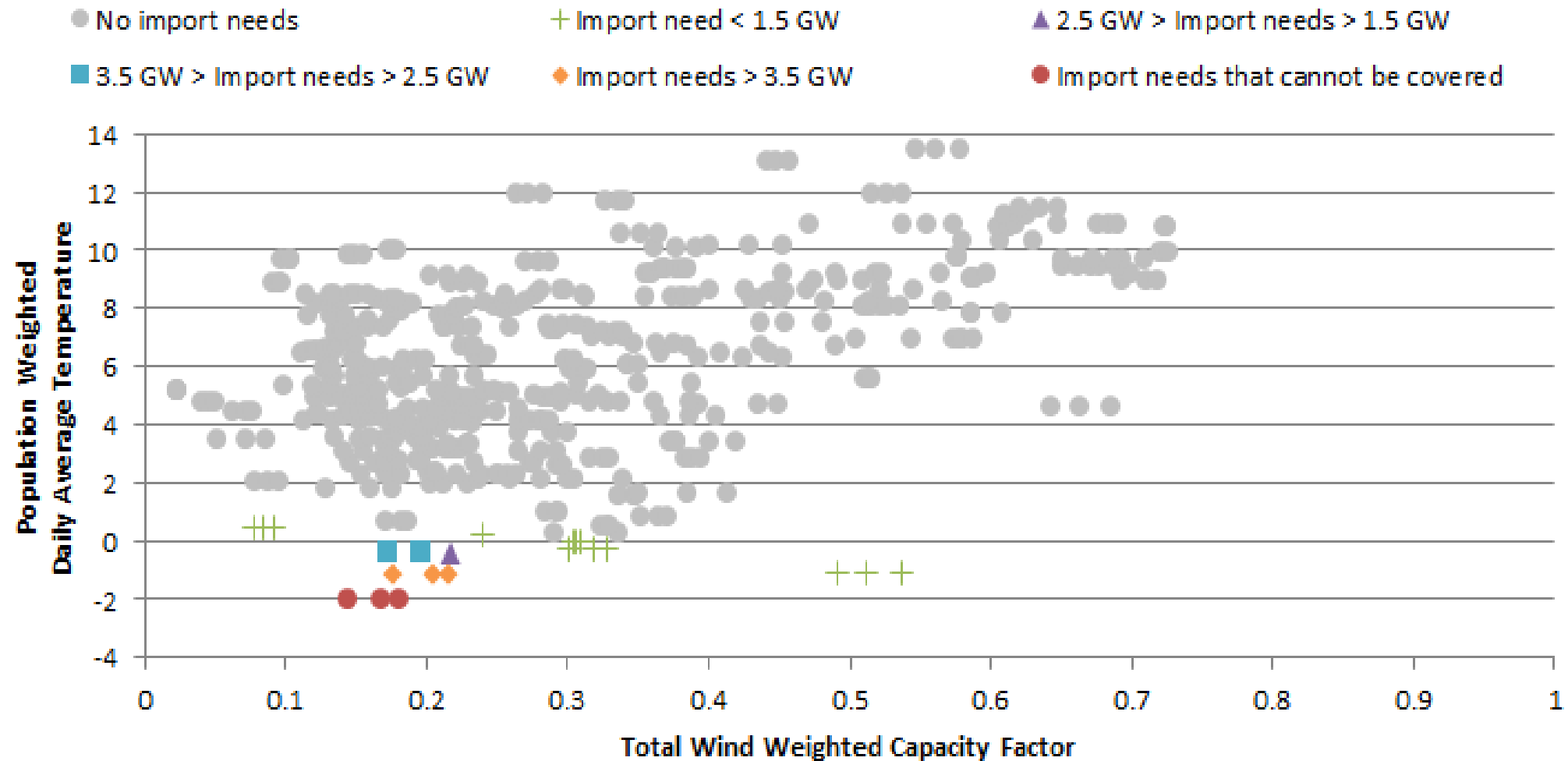
ENTSO-E Winter Outlook– Situation for Belgium (Week 4)

Belgium



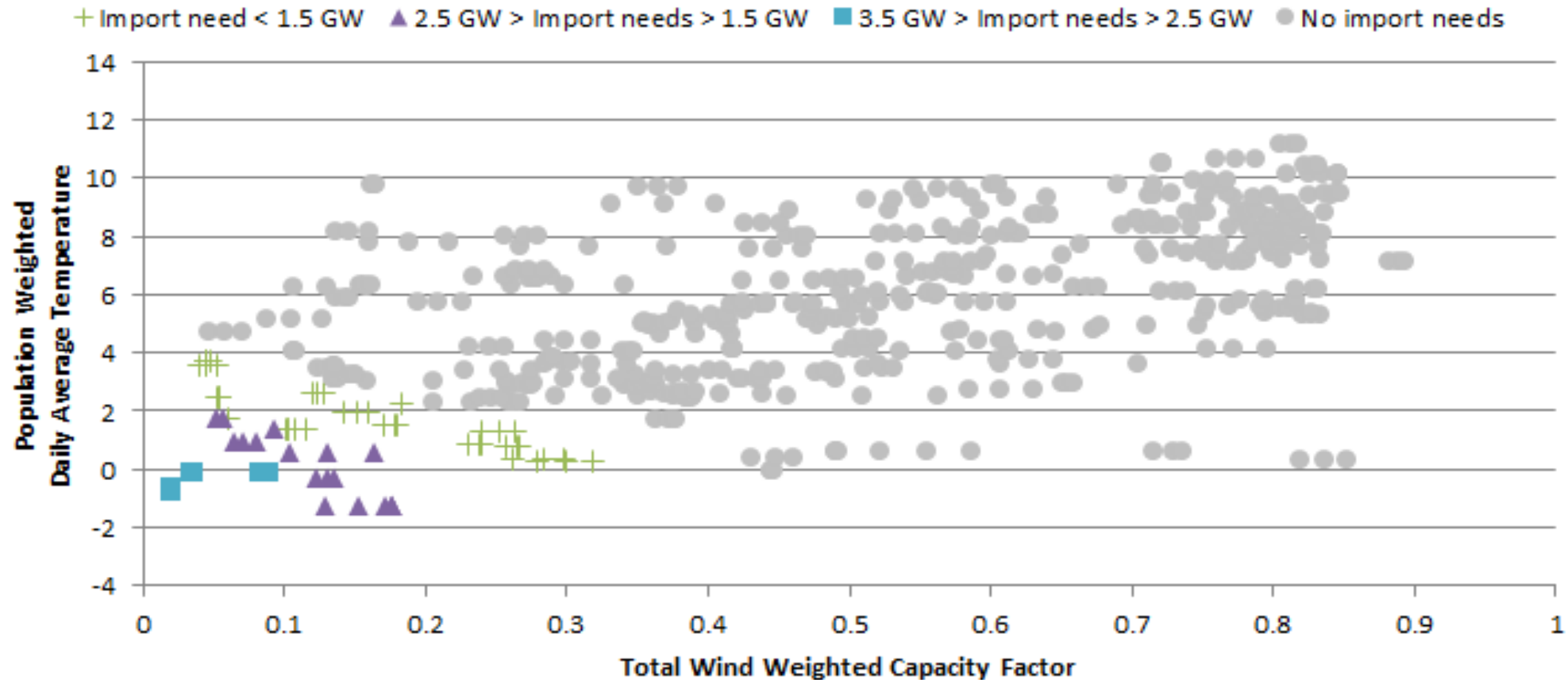
ENTSO-E Winter Outlook– Situation for France (Week 4)

France



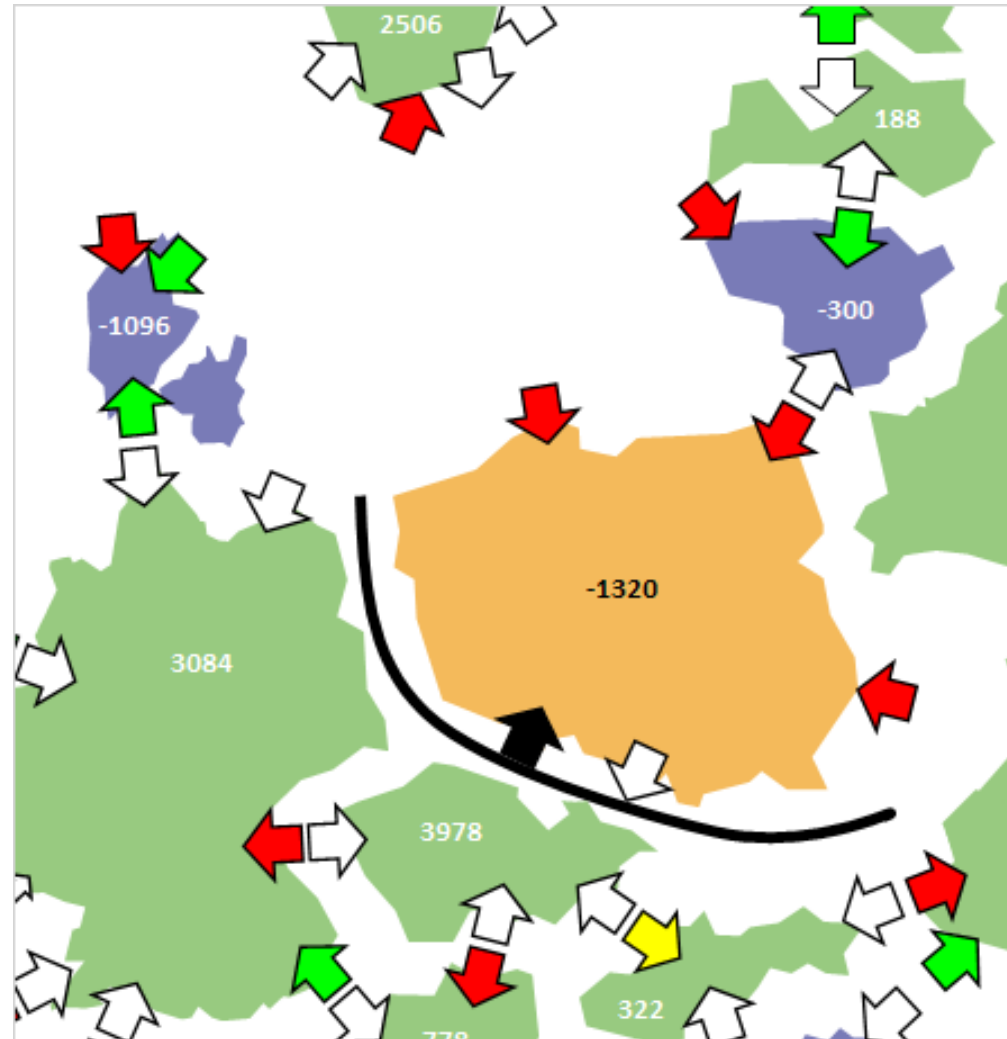
ENTSO-E Winter Outlook– Situation for Great Britain (Week 4)

Great-Britain



ENTSO-E Winter Outlook– Situation for Poland

- A potential risk is identified for Poland
- Simulation of the Polish situation for **Week 5** (merit order approach)
- **All available cross-border capacities into Poland are saturated** (all import arrows entering Poland are red)
- **No import capacity is available** on the common synchronous profile (with DE+CZ+SK shown as coupled black arrows).





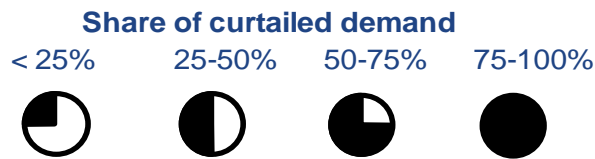
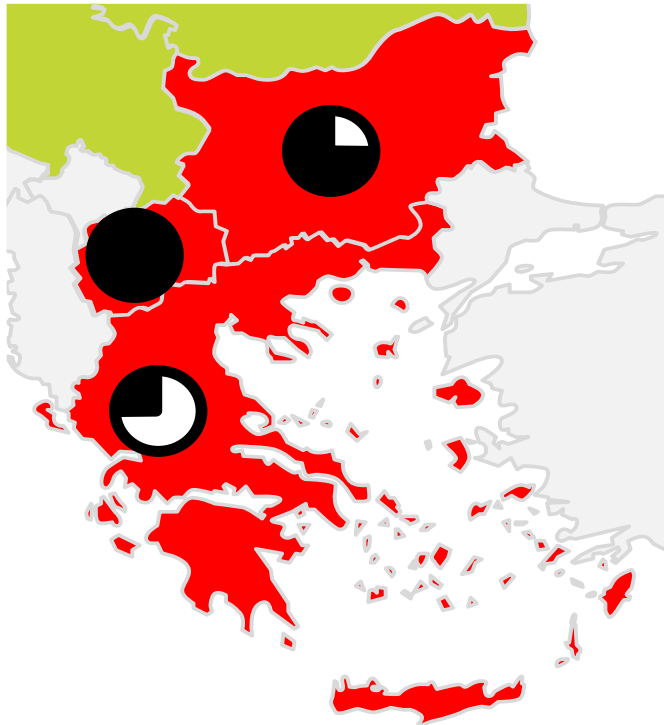
ENTSO-E Winter Outlook Report

Questions/ Answers



Gas disruption sensitivity

Impact on Electricity of a gas disruption



- Focus on countries with gas curtailment risk: Bulgaria, FYROM and Greece
- Gas results (ENTSO-G) translated into qualitative impact on the electric system (ENTSO-E):
 - Risk of reduction of gas fired electricity power units;
 - Risk of increase in electricity demand from households, industry and district heating.
- Electrical system adequacy and security is expected to be maintained, as these 3 countries can rely on:
 - other fuels for electricity generation,
 - further electricity generation margin and/or import,
 - moderate electricity load impact as only a limited part of households use gas for heating

European Electricity System remains robust, even in case of 2-week Cold Spell with simultaneously interruption of gas transit through Ukraine.

Gas disruption sensitivity: ENTSOE and ENTSOG inputs

COUNTRY	Inputs from ENTSG WSO15/16 report		Inputs from ENTSGE WOR15/16 report			
	2-week cold spell (GWh/day)	2-week cold spell average power (GW)	Electricity Net Generating Capacity from Gas (GW)	Peak demand under severe conditions (GW)	Lowest remaining capacity under severe conditions (GW)	Lowest simultaneous import capacity at peak load (GW)
Bulgaria: 50% to 75% gas curtailment	145	6.04	0.83	6.9	+2.09	1.12 (reduced to 0.62 GW without GR+MK imports)
Greece: less than 25% gas curtailment	156	6.5	4.95	9.2	+ 0.35	1.82 (reduced at 0.92 GW without BG+MK imports)
Macedonia: 75% to 100% gas curtailment	14	0.58	0.23	1.34	-0.40	1.1 (reduced at 0.6 GW without GR+BG imports)



CONCLUSIONS

Key takeaways

- Winter outlooks are not only a legal mandate
- They inform
 - TSOs, markets, policy makers, publicand **contribute to right decisions being taken for security of supply!**
- They are continuously improving
- They illustrate cooperation between gas and electricity

What about the future?

- Revision of the EU directive on security of supply expected in 2016
- Regional coordination initiatives to take a greater role in security analysis
- ENTSO-E launched Winter Outlook updates

=> More security to come yet!

Thank you for your attention

