

Winter Outlook 2020/2021

Web conference – 1 December 2020



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Winter Supply Outlook (ENTSOG)

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Summary and coming events

Purpose of Seasonal Outlooks

ENTSO-E Winter Outlook and ENTSG Winter Supply Outlook:

- Assess adequacy situation to prevent and mitigate risks to security of supply during the winter period
- Inform all interested parties about the adequacy situation for gas and electricity at a pan-European level
- Allow ENTSO-E & ENTSG to exchange information about the situation in their respective systems

ENTSOG Winter Outlook

WSO concept and assumptions

Goal

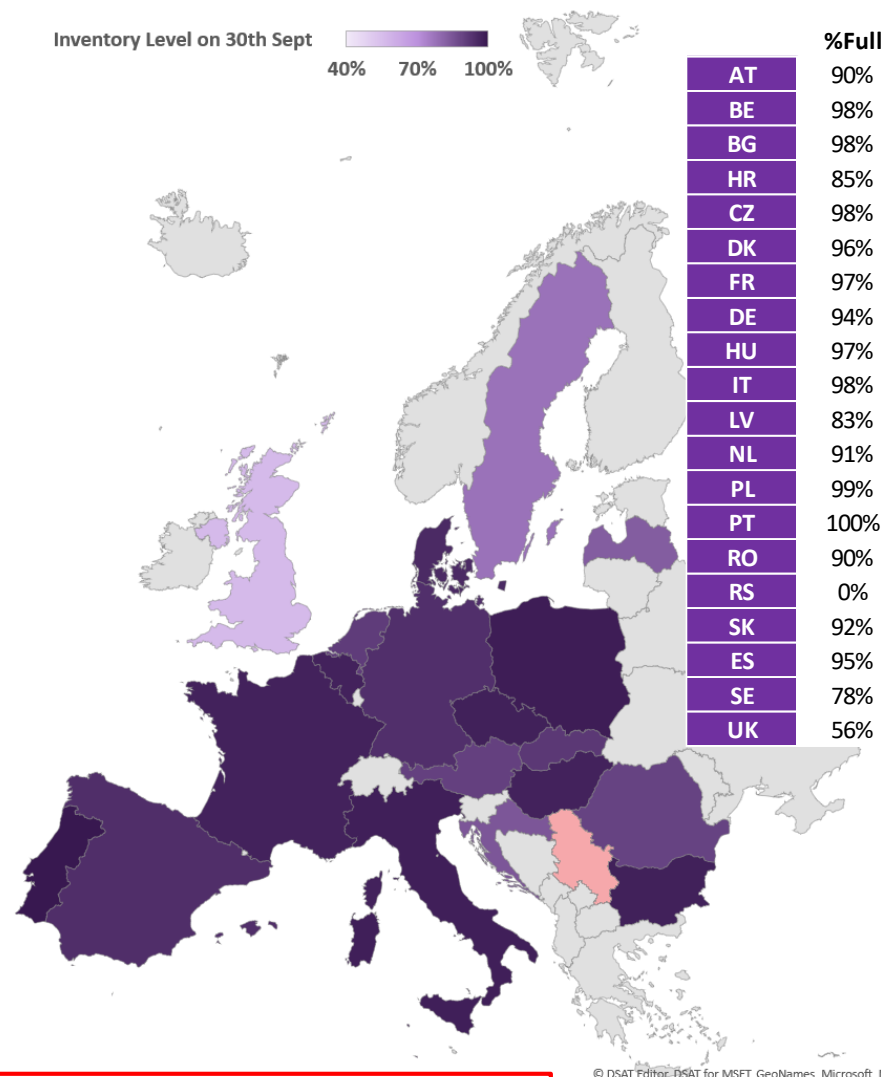
Assessment of the European gas network for the upcoming winter (October 2020 to March 2021). The analysis investigates the possible evolution of the supplies and the UGS inventory along the season as well as the ability of the gas infrastructure to meet the demand (inc. high demand situations)

Assumptions

- Sensitivity analysis under different demand conditions: Reference Winter and Cold Winter (highest demand since 2009/10),
- Peak day (1-in-20 years) and 2-Week Cold Spell (1-in-20 years),
- Import Potentials based on 9 years of historical data,

Supply situation

The storage inventory level on 1st October 2020 (1053TWh) is one of the the highest of the last 9 years, due to a high storage level (600TWh) at the beginning of the injection season and relatively high seasonal price spread during the injection season.

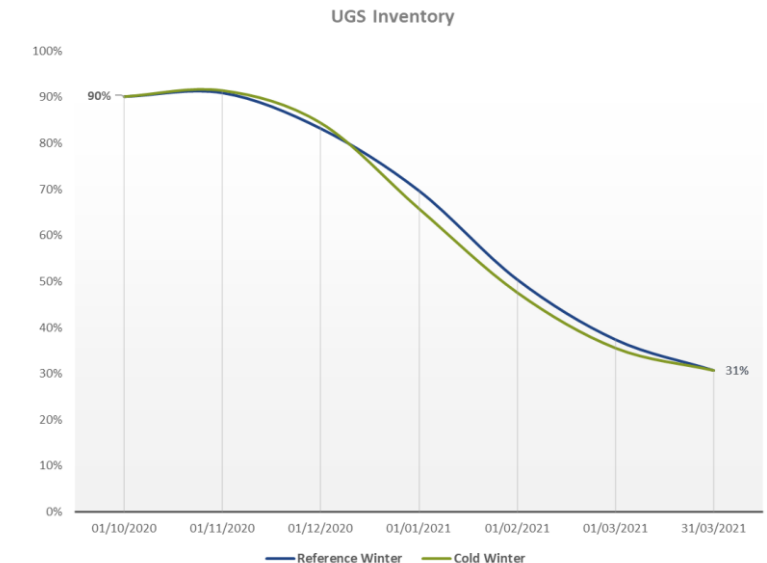
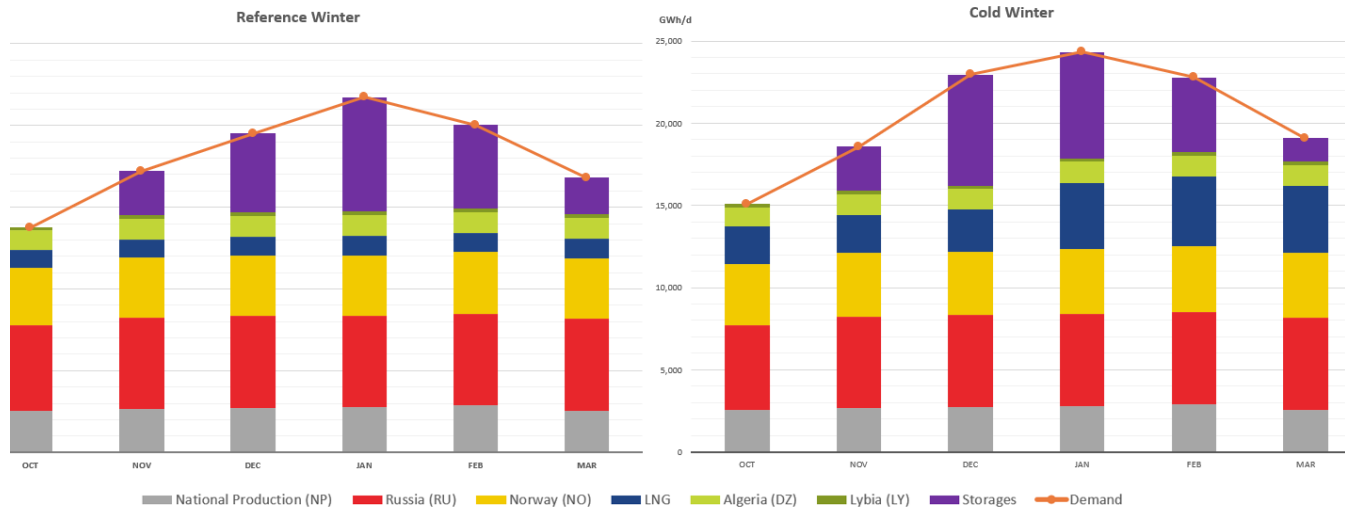
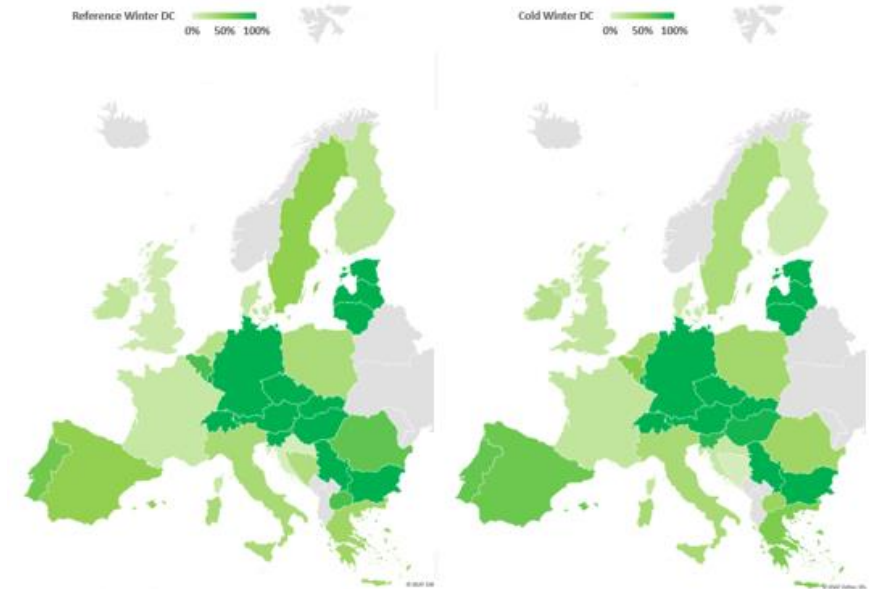


TSOs for gas were encouraged to include COVID-19 impacts in their estimations regarding forecasted demand data and capacity assumptions (including possible maintenance) provided for simulations

Reference and Cold winter – normal and high demand

- 30% UGS level can be achieved in case of an average and cold winter in all demand situations (whole season, Peak Day and 2-week cold spell)
- UGS can provide the necessary flexibility for the winter
- Remaining flexibility in imports (pipeline and LNG)
- Indigenous production keeps on decreasing
- LNG play an important role in terms of flexibility
- No risk of demand curtailment

Results for 1-day Peak Day during Reference Winter vs. Cold Winter



Route disruption cases

— Ukrainian transit disruption

Significant improvement with the commissioning of TurkStream and other investments in the region

In case of a Peak Day or a 2-week cold spell, Romania is exposed up to 9% of demand curtailment due to infrastructure limitations with Hungary and Bulgaria

All exports to Ukraine can be maintained

— Disruption of the imports to Baltic States and Finland

In case of a Peak Day, the Baltics States and Finland are exposed to a significant level of demand curtailment (42% to 81%)

Those countries are facing infrastructure limitations since their alternative LNG import capacities are fully used and they are not connected to other European countries

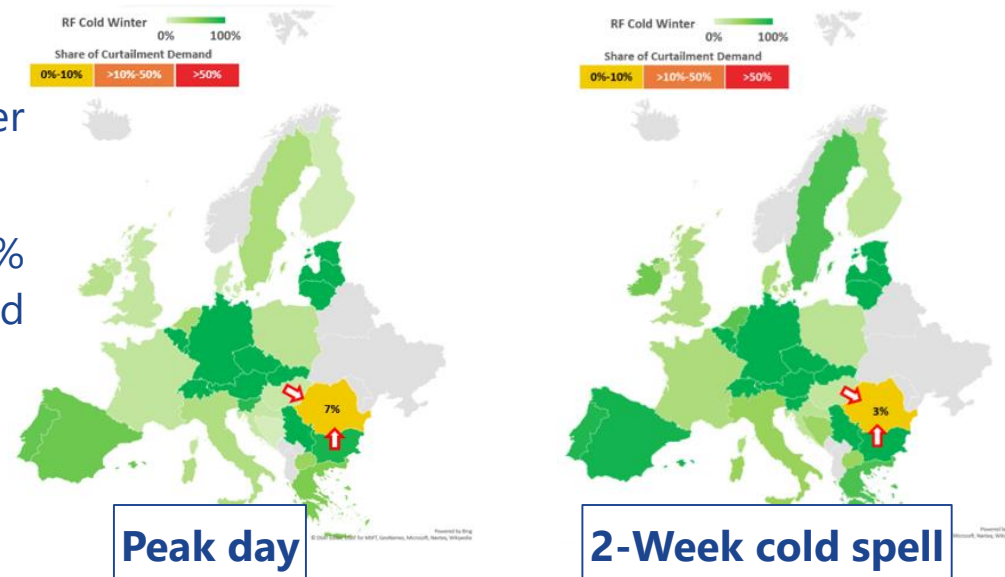
— Belarus transit disruption

No risk of demand curtailment.

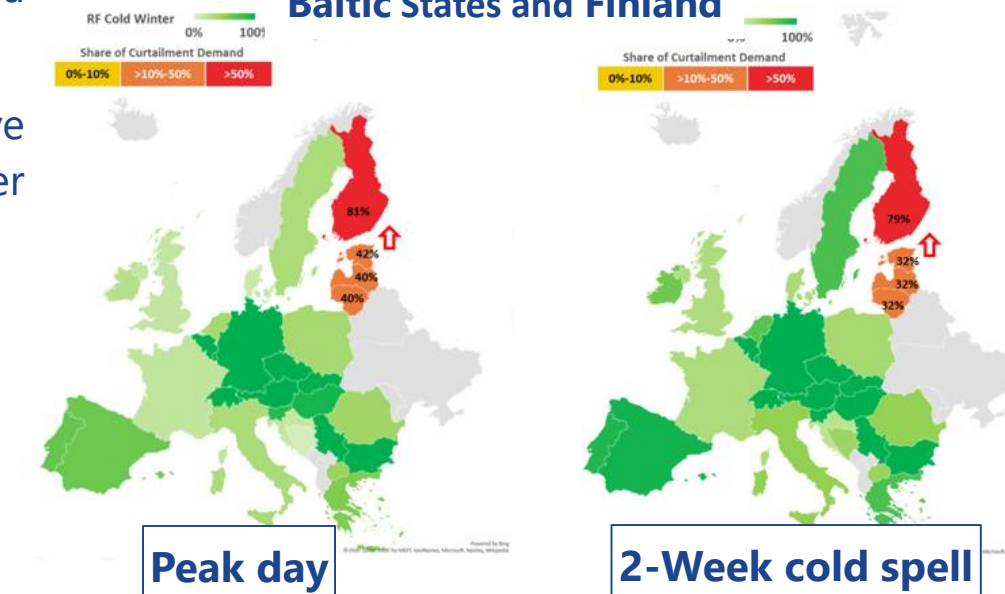
— Algerian Pipes and LNG Disruption

No risk of demand curtailment.

Ukraine disruption

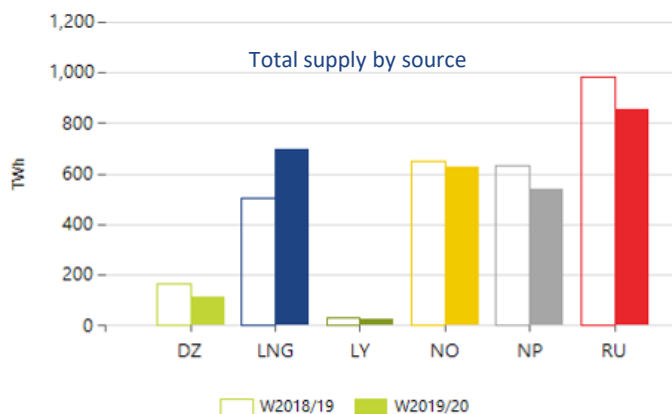


Baltic States and Finland



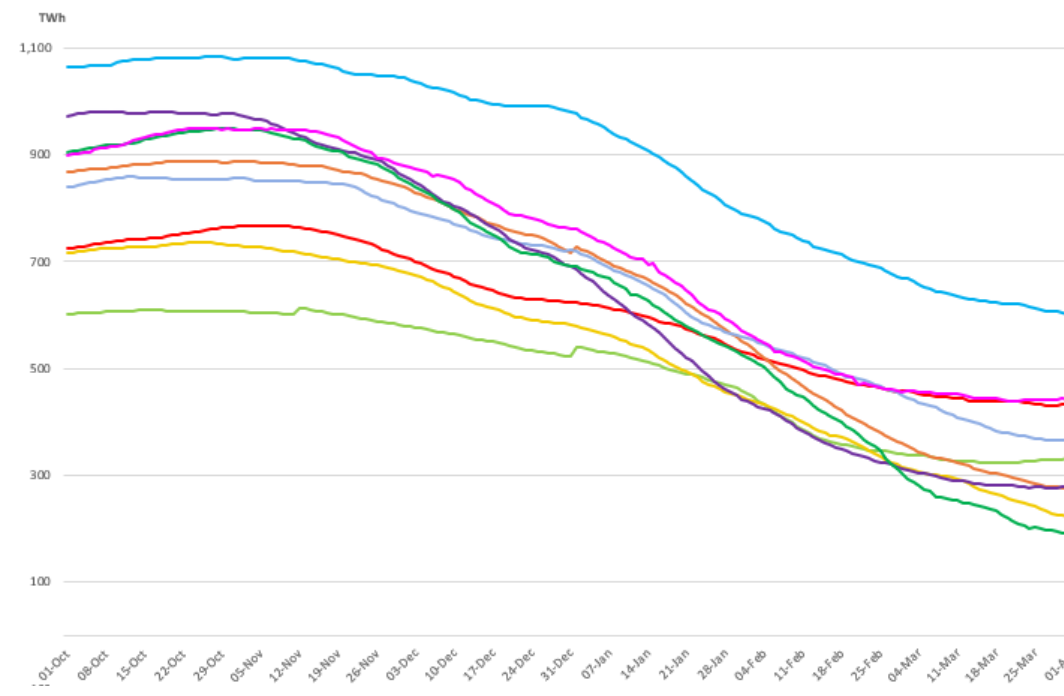
Winter Review 2019/2020

- During the winter 2019/2020 LNG supply increased from 507 TWh to 697 TWh, following the increasing trend of LNG regasification observed during the previous season.
- European gas prices reached the minimum values of the last 8 winters season mainly driven by a weak demand across Europe subdued by mild winter weather, oversupplied market, and some declines in consumption by industry during March due to the COVID-19.
- The storage level at end of the winter season reached 598 TWh, the highest seen in last eight winters, due to the highest UGS level in October in the last eight years and a relatively low UGS utilization.



	1-Oct (TWh)	31- Mar (TWh)	UGS Utilisation (TWh)
W11-12	601.7	331.3	270.5
W12-13	716.2	222.8	493.5
W13-14	724.1	433.4	290.7
W14-15	867.4	274.6	592.9
W15-16	838.6	364.1	474.5
W16-17	972.9	278.1	694.8
W17-18	903.8	191.1	712.7
W18-19	898.8	441.4	457.4
W19-20	1063.2	598.4	464.8

UGS Utilisation (TWh) Winter 2011/2012 – 2019/2020. (Source: AGSI)



Evolution of UGS stock level. Winters 2011/2012 – 2019/2020 (Source: AGSI)

Conclusions

- Safety measures implemented in Europe and other continents, as a response of the **COVID-19 pandemic**, led to a decline in consumption by industry, an oversupplied market and a drop in the European gas prices.
- **European gas network is resilient to high demand situations and supply route disruptions** in most parts of Europe. The gas system offers sufficient flexibility across the season and can secure at least 30% stock level of the gas storages at the end of upcoming Winter.
- European indigenous production keeps on following a decreasing trend.
- **LNG plays an important role in supply flexibility**; LNG terminals utilization has been the highest in the last 9 years.
- European gas system can supply Energy Community Contracting Parties and other EU neighboring countries with significant volumes of gas.
- **Infrastructure development in South-Eastern Europe has significantly mitigated the risk of demand curtailment in the region.** Exposure to demand curtailment is significantly reduced and is limited to Romania in case of Ukraine supply route disruption under high demand situations.
- Storages across Europe significantly contribute to the system flexibility and efficiently participates to the cooperation between Member States.

ENTSO-E Winter Outlook

Winter outlook context – uncertainty in light of pandemics

COVID-19 impact on demand overview (winter expectations seen from September 2020)

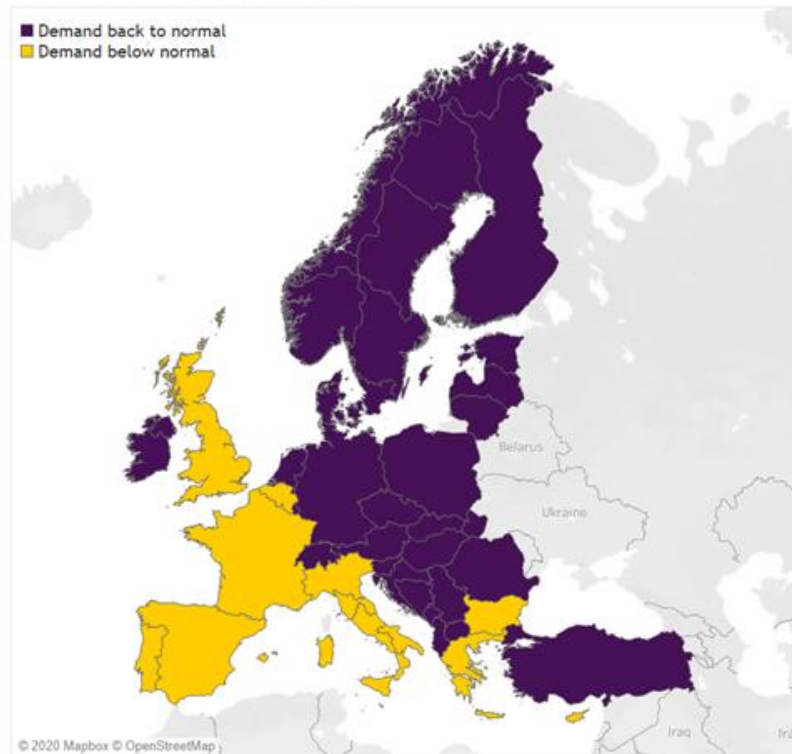
Residual impact of pandemics from spring/summer:

- Demand has not recovered everywhere
- Planned outages were rescheduled into winter

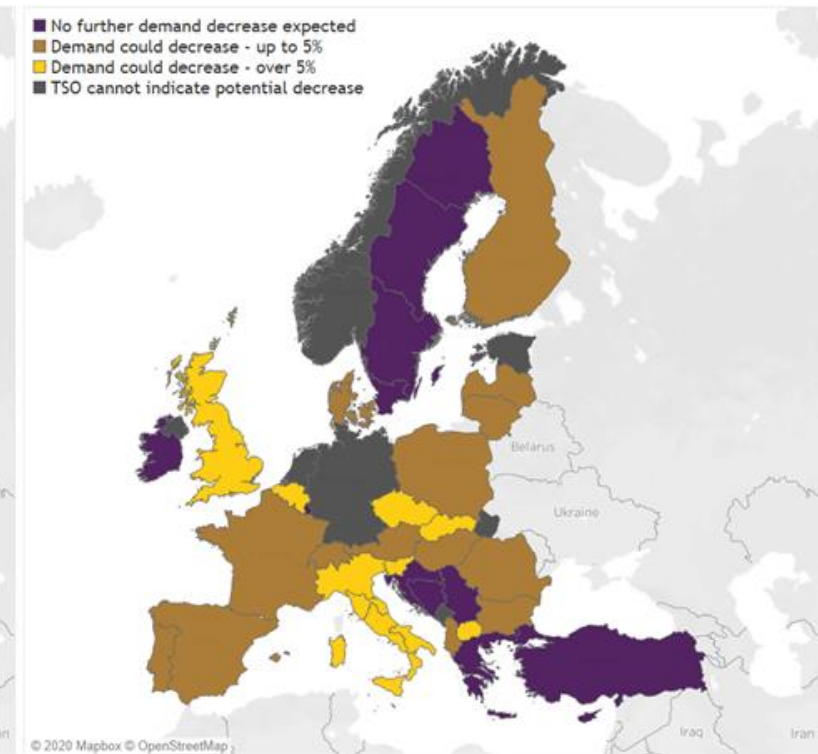
The pandemic in winter is expected to:

- reduce demand; but
- considerable uncertainty on generation planned outage might outweigh the demand decrease and then worsen adequacy.

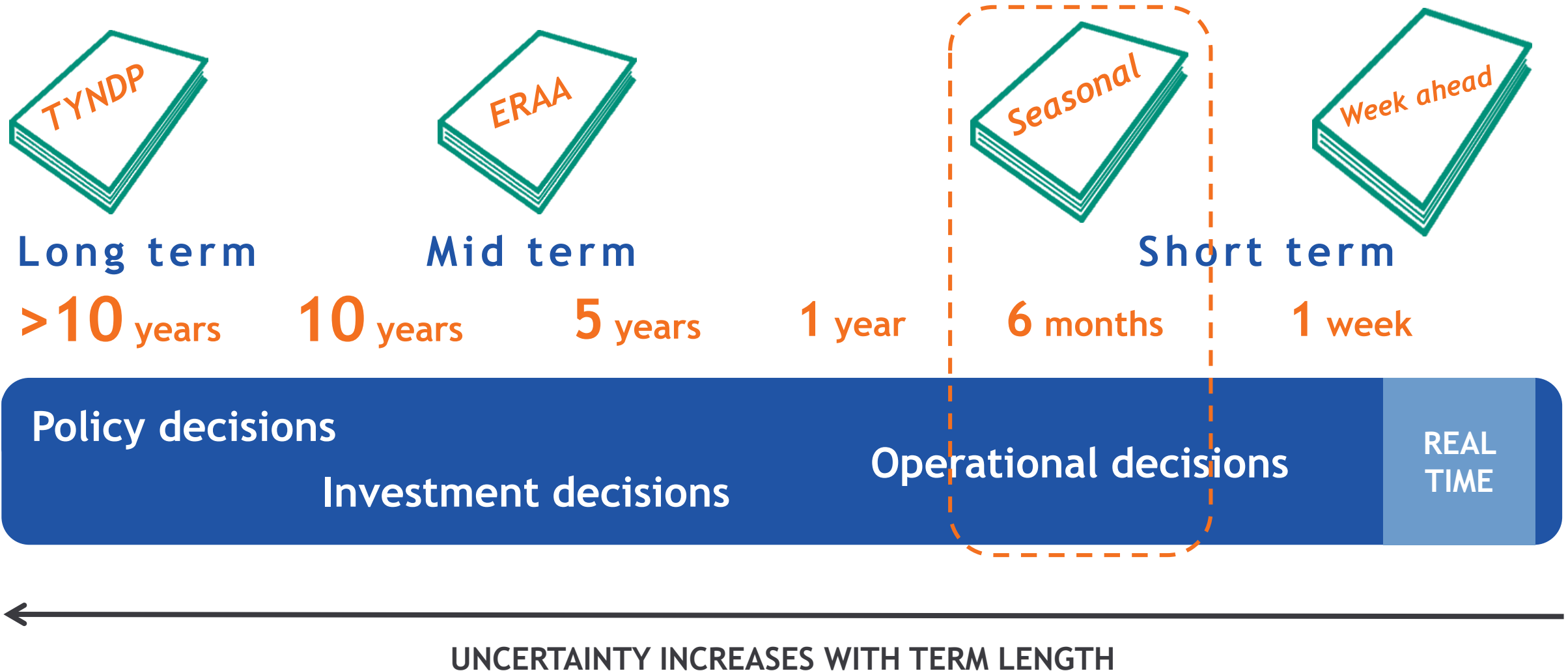
In case no second wave of COVID is expected
Considered in Winter Outlook simulations



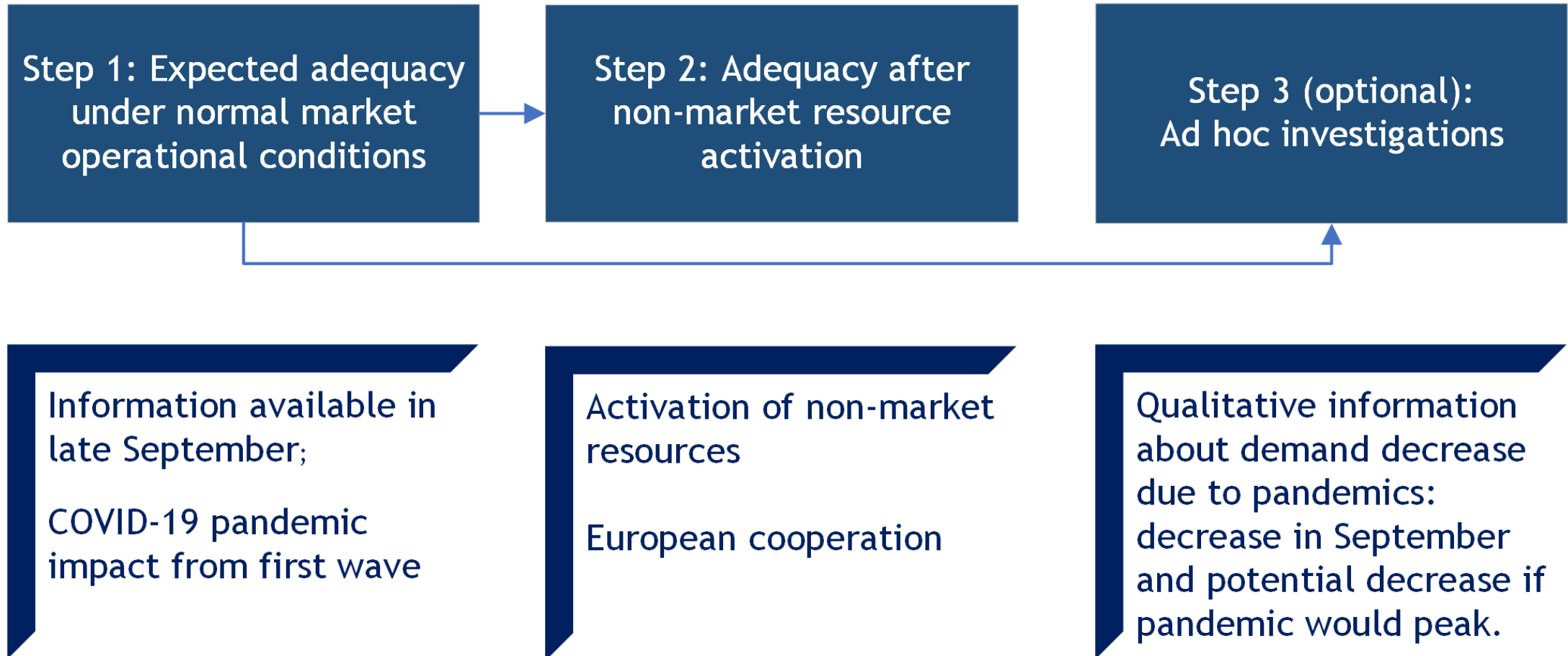
Potential pandemic impact on demand during winter season



Different risks addressed with different timeframes



Winter outlook approach



Winter trends in European

Thermal capacity during winter decreases by 6.9 GW, which represents around ~1.4% of European thermal fleet.

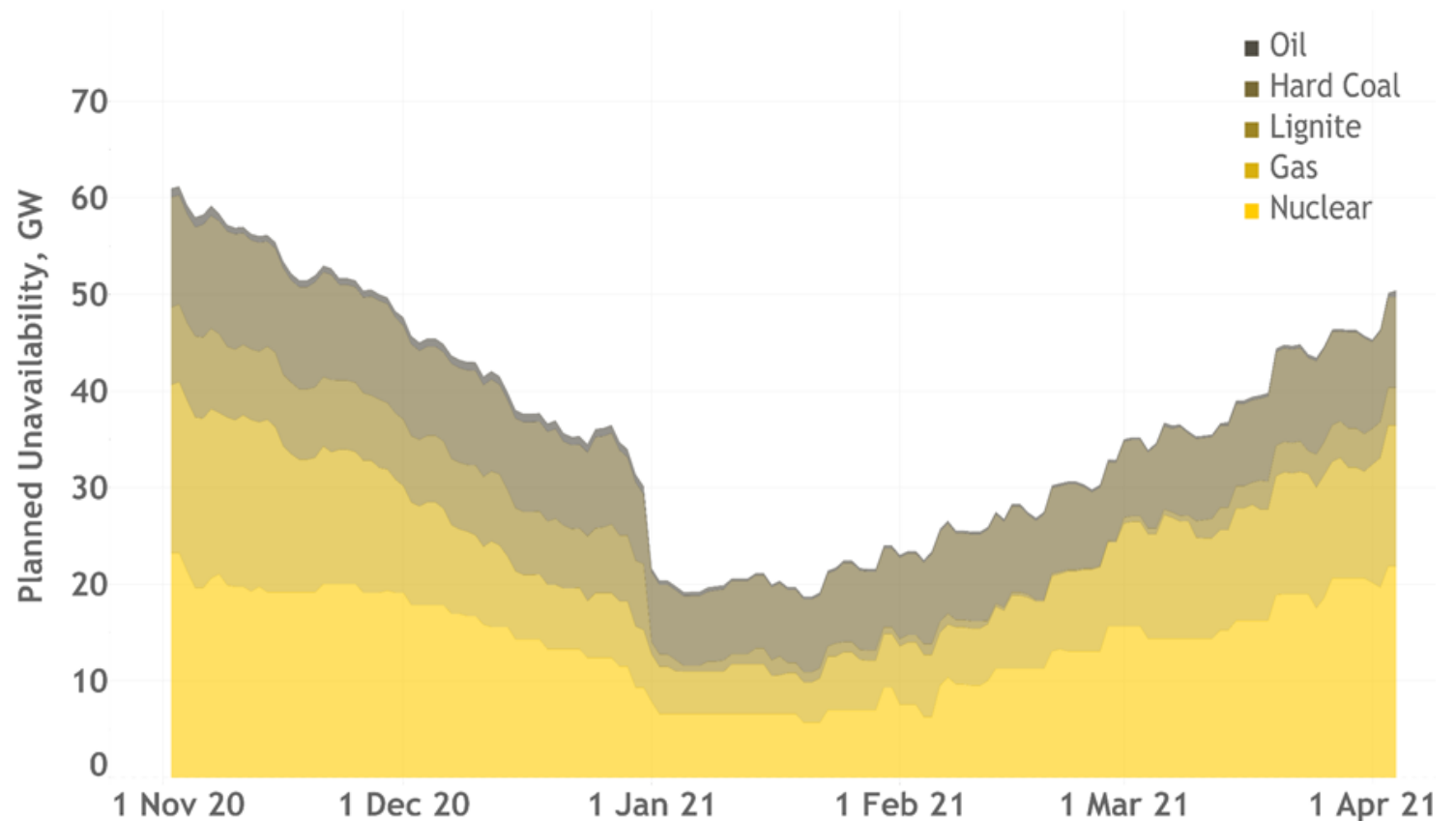
Net thermal capacity change



Total decrease:
6.9 GW

Large **planned outages** are scheduled to be finished by end of year when supply margins are tight in Europe (esp. in Central Europe) therefore any delays should be carefully monitored

Planned unavailability of thermal units (late September)

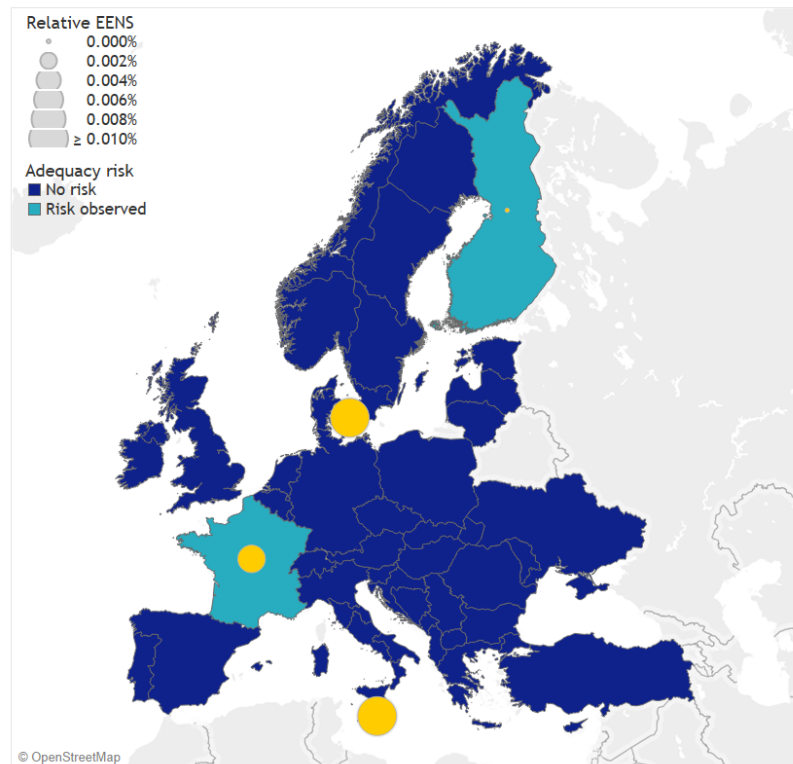


Adequacy overview

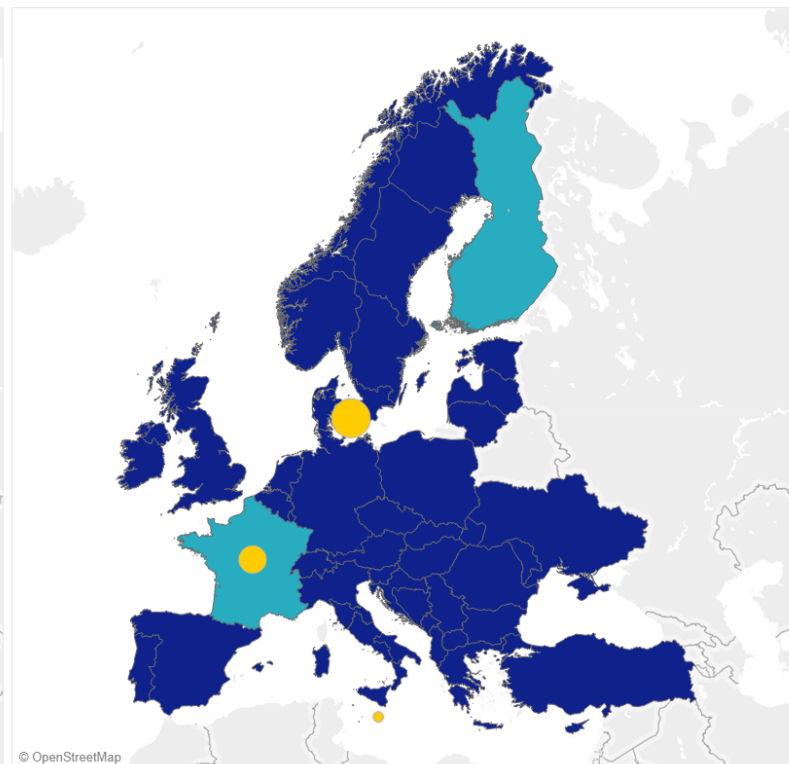
Adequacy concerns are identified in Denmark, Finland, France and Malta. Adequacy risks are expected to be addressed by out-of-market measures in Finland and Malta. All TSOs are closely monitoring adequacy concerns together with RSCs.

Adequacy overview (considering late September information)

Normal market operations



Considering non-market resources



EENS = Expected Energy Not Served, RSC = Regional Security Coordinator

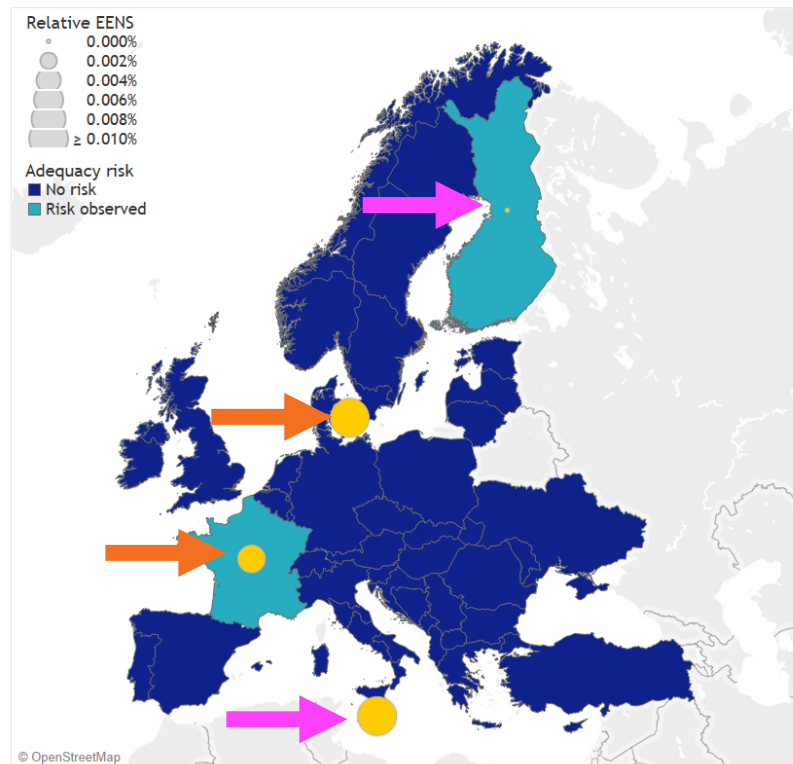
Relative EENS - EENS representation considering power system size (i.e. design to compare EENS on pan-European scale)

Adequacy overview

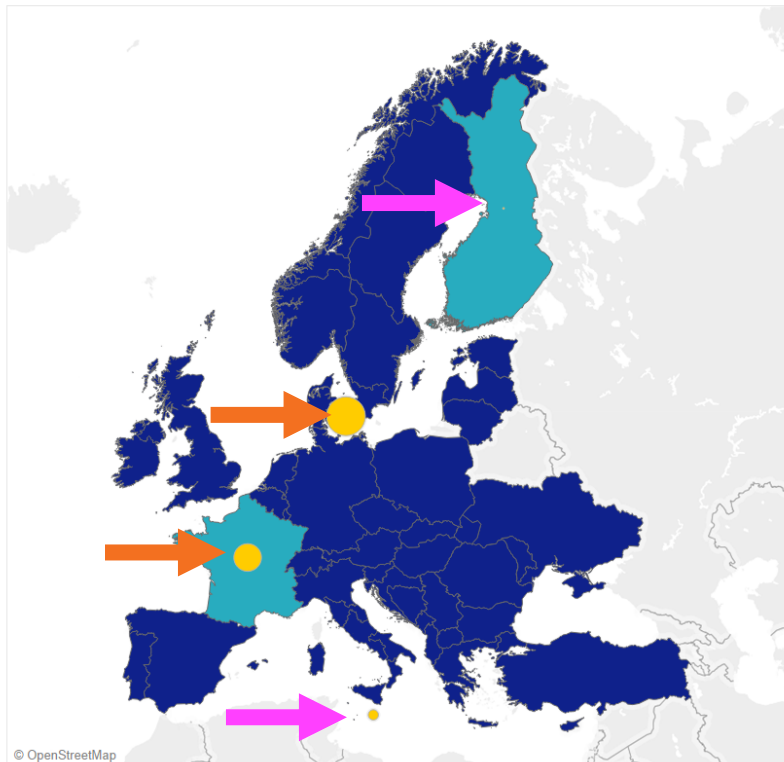
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→ Risks do not change

→ Risks decrease

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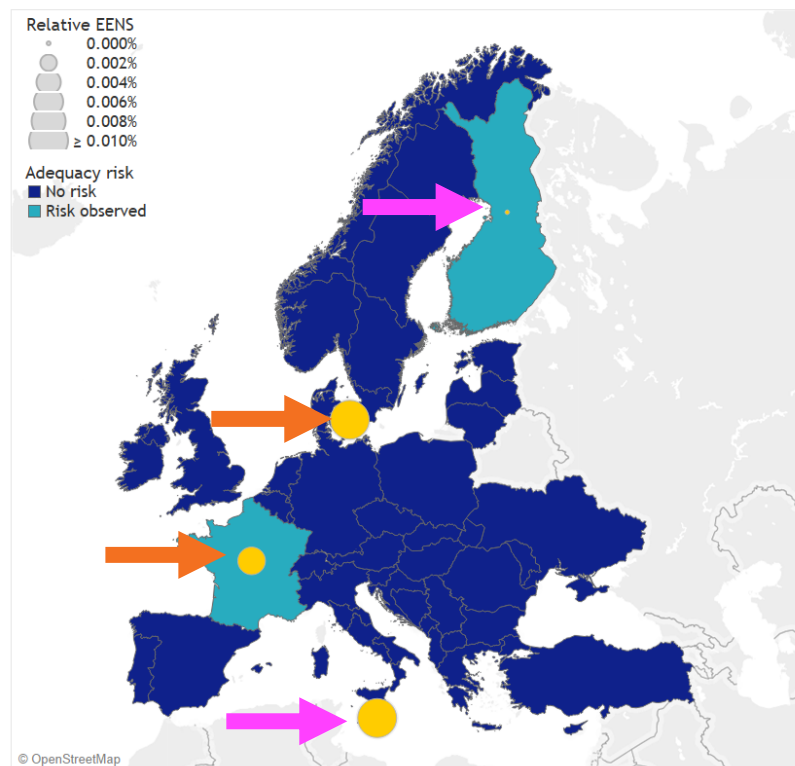
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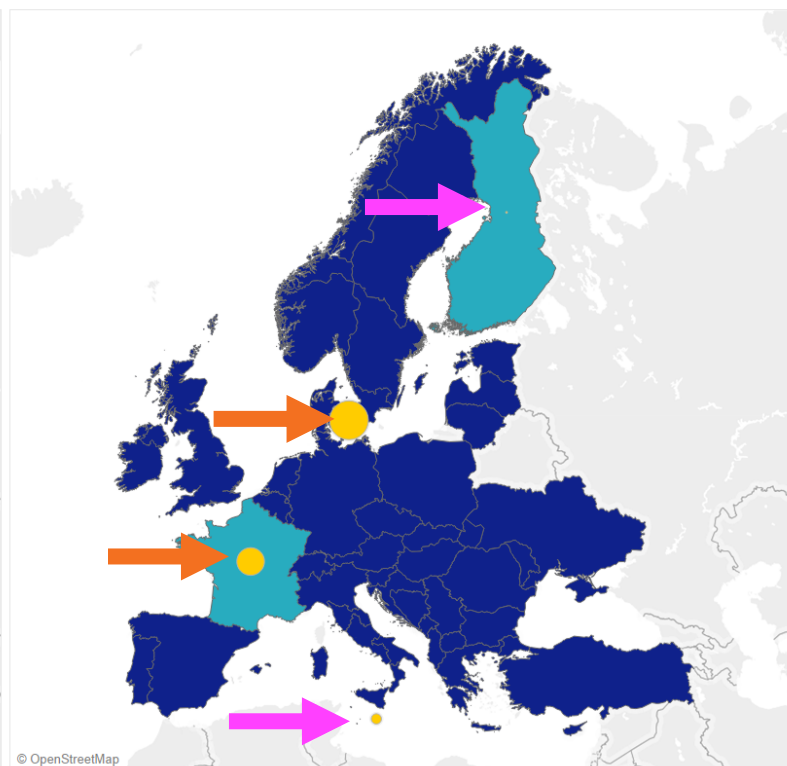
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Adequacy overview (considering late September information)

Normal market operations



Considering non-market resources



Updates after September:

1. Energinet revised outages in network - risks decreased
2. Nuclear outages in France were rescheduled. Risks in November decreased, but remained in January and February

→ Risks do not change

→ Risks decrease

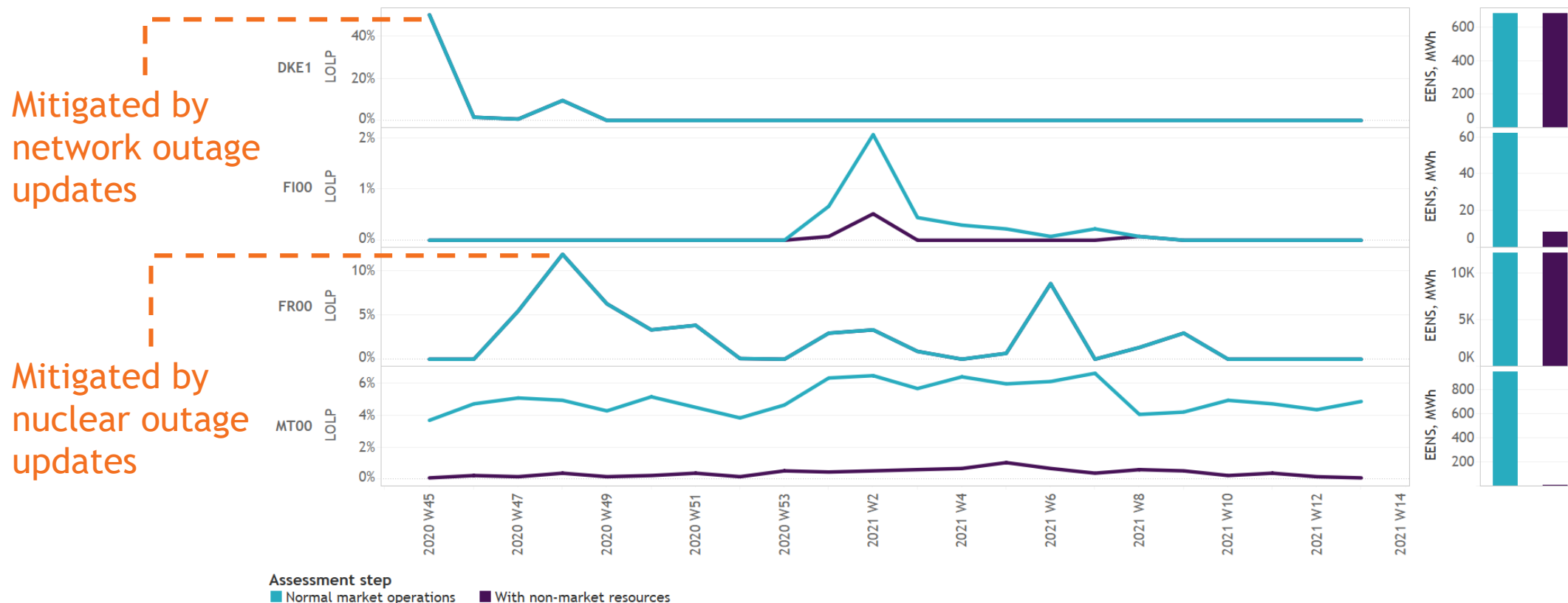
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Adequacy details

Loss of Load Probability (LOLP) in Finland and Malta is reduced considering contribution of the non-market resources during the first months of 2021. Malta and Finland are able to reduce EENS by 99% and 87% respectively. However, total European EENS remains significant.

Detailed adequacy overview - weekly LOLP and EENS



EENS = Expected Energy Not Served, LOLP = Loss of Load Probability (probability that at least 1 consumer could lose electricity supply)

5 minute break

Q&A

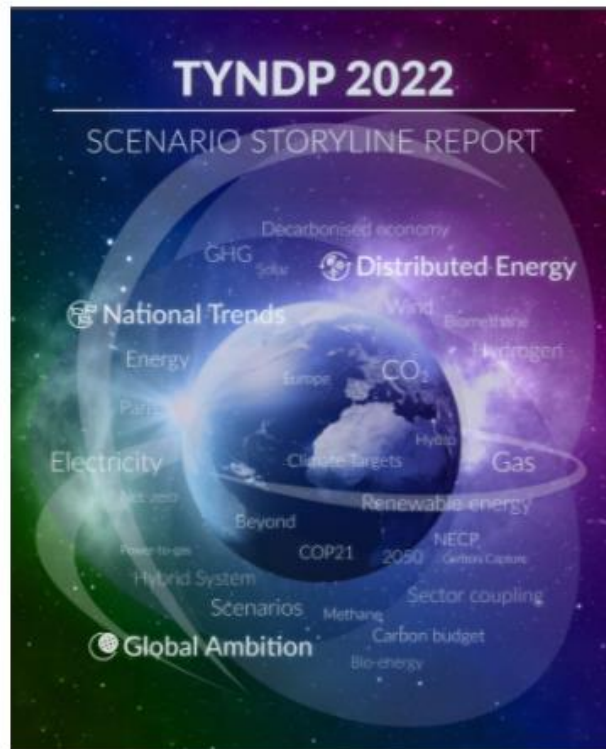
Summary

- ENTSOs seasonal outlooks are unique pan-European & system wide analysis of security of supply
- Adequacy assessed in:
 - Electricity system under various conditions
 - Gas system under extreme cold events or in case of supply route disruptions
- The unprecedented circumstances of Covid-19 leads to high uncertainties. Adequacy situation needs to be closely monitored, especially in case of cold spell
- Methodologies used for the analysis are continuously improving

Upcoming events

Tomorrow 2 December at 10 pm CET

ENTSO-E & ENTSG TYNDP 2022 Scenarios Draft Storyline Report Stakeholder Consultation Workshop



TYNDP 2022 Scenarios Storyline Report (Draft for consultation)

This draft storyline report proposes the scenario framework for TYNDP 2022, consisting of one national policy scenario and the storyline development of two top-down scenarios.

Register on entsoe.eu or entsog.eu

Thank you for your attention

For questions:

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