



Picture courtesy of Bayernets

# Summer Supply Outlook 2023 with Winter Overview 2023/24

## Gas Market Council

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# Our Members: From Across Europe



43 TSO Members

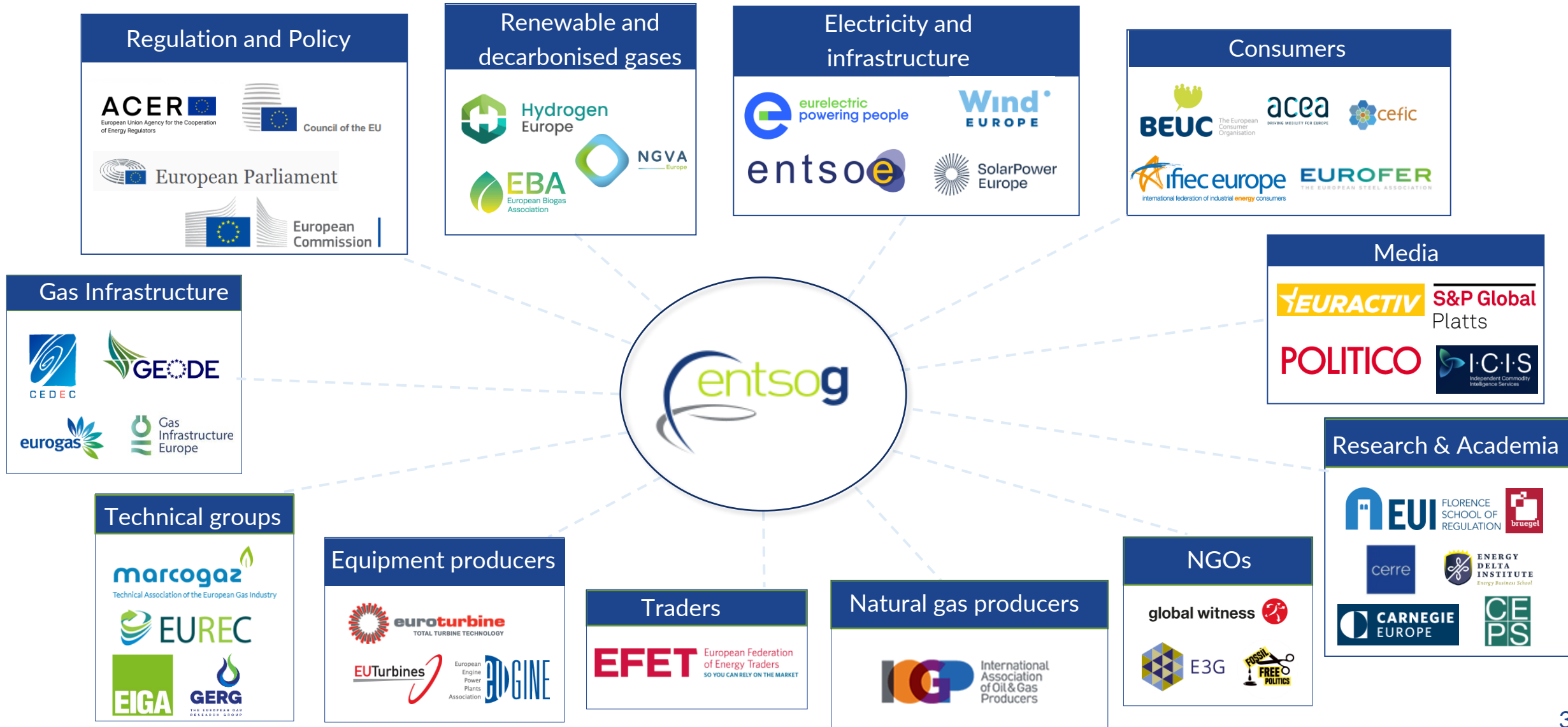


2 Associated Partners



10 Observers

# Promoting dialogue: Selection of our stakeholders





# A selection of our activities

## TYNDP

## Outlooks

## Network Codes

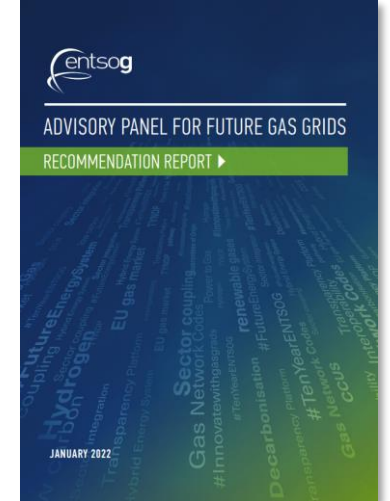
## Monitoring

## Platforms

## Future Energy System



BAL NC  
TAR NC  
CAM NC  
INT NC



Assessing the functionality  
and operation of European  
gas markets

Development of TYNDP and  
Scenarios

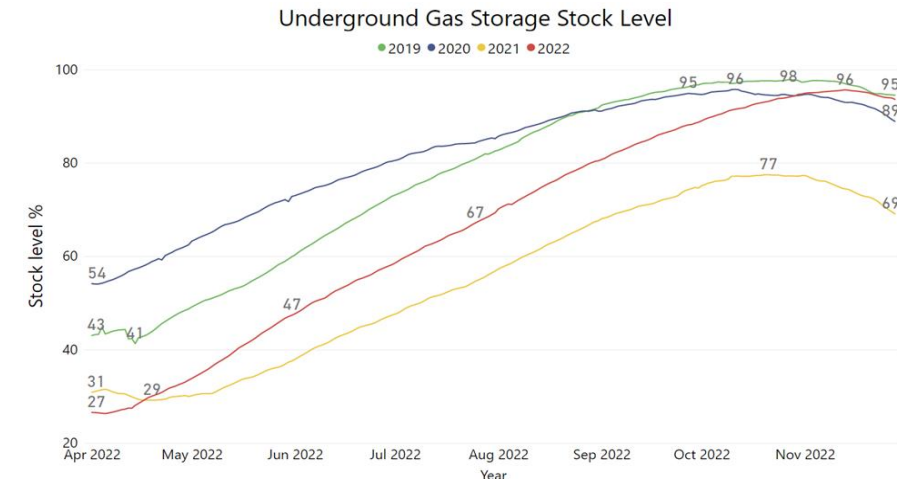
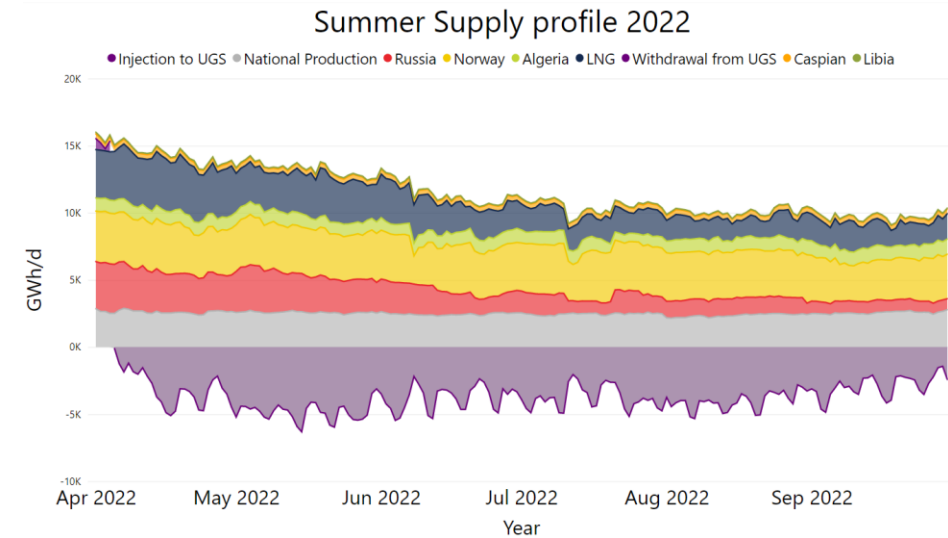
Delivering operational tools  
to ensure network security  
and reliability

Decarbonising gas grids

# Summer Supply Outlook 23 & Winter Overview 23/24

# Summer Review 2022

- A significant number of new gas infrastructure projects have been commissioned in 2022\*.
- Total gas demand values dropped in the EU by 15.5%.
- The European gas hubs reached the highest gas prices compared to all historical data registered at ENTSG, reaching 234 €/MWh on the TTF in August 2022.
- Pipeline gas supplied by Russia dropped by around 50% in comparison with the summer 2021.
- LNG and National Production experienced the most notable increase from all supply sources to Europe and accounted for 75% and 26% of increase, respectively.
- The storage level at the beginning of the summer 2022 (1 April) was 27%, the lowest storage level of the last 4 summers. The storage facilities were well-filled and reached a peak of 95% on the 13 November 2022.



\*The new infrastructures have been commissioned - new interconnectors between PL and LT, PL and SK, GR and BG, as well as NO to DK and from DK to PL. The new LNG and FSRU terminals in DE, FI and NL were also commissioned in the second half of 2022.

# Assumptions

## Demand

### Summer season (APR 2023 – SEP 2023)

- Forecast demand provided by TSOs

### Winter season (OCT 2023 – MAR 2024)

- Reference winter (5-year average\*)
- Reference winter with 15% reduction (5-year average -15%)
- Cold winter (considered in SoS simulations report)
- Cold winter with 15% reduction (considered in SoS simulations report -15%)

## Capacities

Capacities collected from TSOs (+ enhanced capacities for full RU disruption)

## Storage

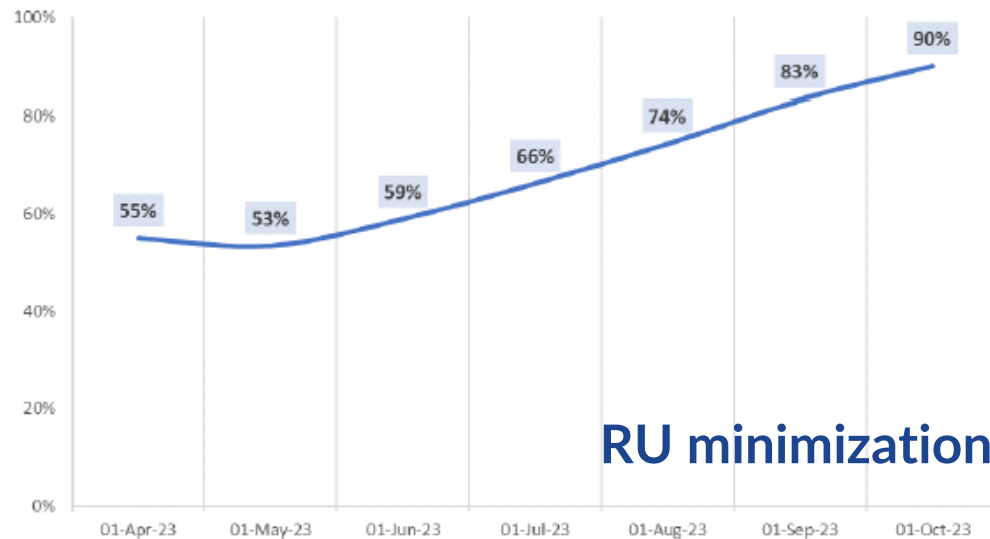


Country	Gas in storage, TWh	WGV, TWh	Full, %
Austria	62.620	96.039	65%
Belgium	2.679	9.007	30%
Bulgaria	4.499	5.803	78%
Czech Republic	24.743	43.810	56%
German (H)	145.306	223.640	65%
German (L)	11.605	22.918	51%
Denmark	7.392	9.940	74%
Spain	27.627	35.250	78%
France	37.297	133.603	28%
Croatia	3.615	4.773	76%
Hungary	30.408	67.703	45%
Italy	113.006	193.443	58%
Latvia	8.069	24.074	34%
Netherlands	82.131	138.991	59%
Poland	19.953	36.410	55%
Portugal	3.789	3.967	96%
Romania	13.794	32.794	42%
Serbia	1.360	4.532	30%
Sweden	0.097	0.101	95%
Slovakia	22.631	38.848	58%
United Kingdom	5.945	17.470	34%
TOTAL	628.565	1143.114	55%

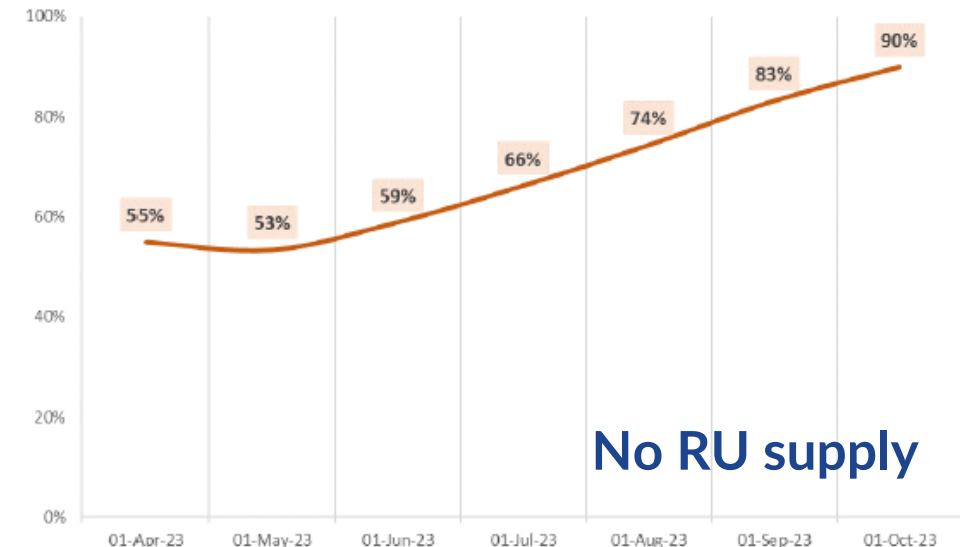
\*Some countries have provided their estimates for the winter season demand forecast, and these values are taken into account in the 5-year average.

# Summer Outlook 2023

- On 1 April 2023, the EU gas stock level is in the higher range of the past 5 years with 625 TWh.
- New gas infrastructure projects have been commissioned, boosting energy security in the EU.



1. Reference summer scenario. Evolution of the aggregated European UGS stock level, %



2. Summer supply dependence assessment. Evolution of the aggregated European UGS stock level, %



# Main findings for summer 2023

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- **General observations**
  - Non-Russian supply sources are used to a very high extent
  - Unusually high initial UGS filling level helps to achieve targets
  - 90% UGS filling level by end-September is achievable in all UGS facilities
  - Prolonged filling in October and additional LNG supply potential can further improve the situation which is tighter in SEE compared to Western Europe
- **Case 1: Minimisation of RU pipeline supply**
  - Minimal dependency on RU gas persists to satisfy demand and reach 90% UGS filling
- **Case 2: Disrupted Russian pipeline supply but enhanced capacities**
  - Enhanced capacities help to eliminate RU pipeline gas dependency

# Main findings for winter 2023/24

- All analyses start on 1 October 2023 with 90% UGS filling level and target a 30% UGS filling level on 31 March 2024

- For cases with full RU pipeline supply disruption, enhanced capacities were used

- Cold winter means once in 20 years demand

Winter demand	RU pipeline supply	Demand sensitivity	Unlimited LNG	Demand curtailment	Final UGS filling level
5-year average	Minimised	No	No	No	30%
	Disrupted	No	No	No	11%
		Minus 15%	No	No	30%
Cold winter	Minimised	No	No	No	14%
		Minus 15%	No	No	30%
		No	Yes	No	30%
	Disrupted	No	No	6% to 13%	2%
		Minus 15%	No	No	14%
		Minus 15%	Yes	No	30%

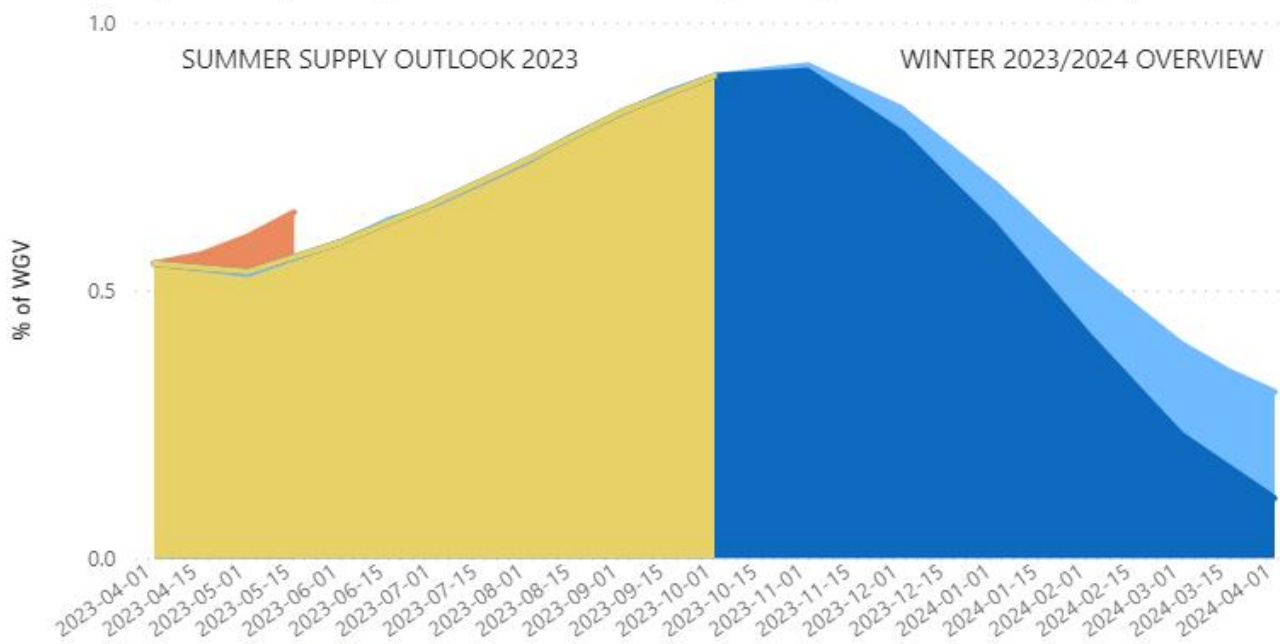
# Conclusions

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- Gas infrastructure including newly commissioned projects can reduce dependence on RU
- UGS filling targets for end-summer can be reached without RU gas
- UGSs are essential for security of supply by providing seasonal flexibility
- Adequate UGS levels until the end of winter are important to allow for flexible usage of gas infrastructure
- RU pipeline supply disruptions in winter would require additional measures to mitigate demand curtailments and ensure flexibility for the high-demand months in certain demand situations
  - Possible mitigation measures: enhanced capacities, additional supplies, decrease in gas demand by 15%

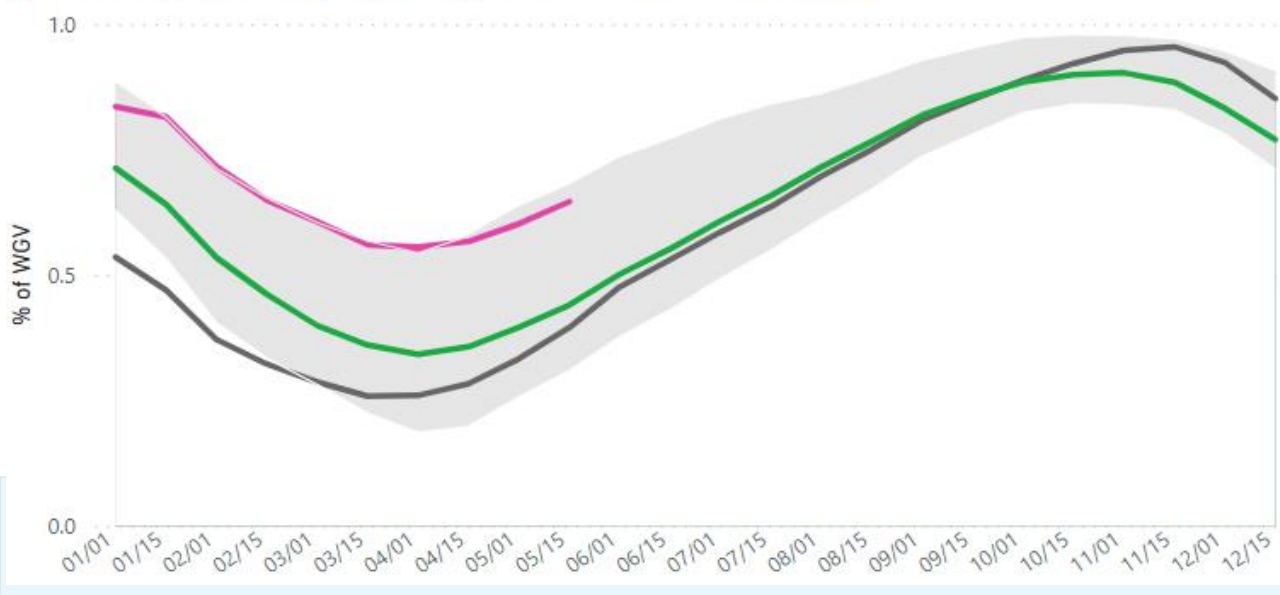
## Storage evolution vs SSO scenarios

Current storage level 5-year average with demand reduction 15% 5 year average 2017-2021 Summer Supply Outlook



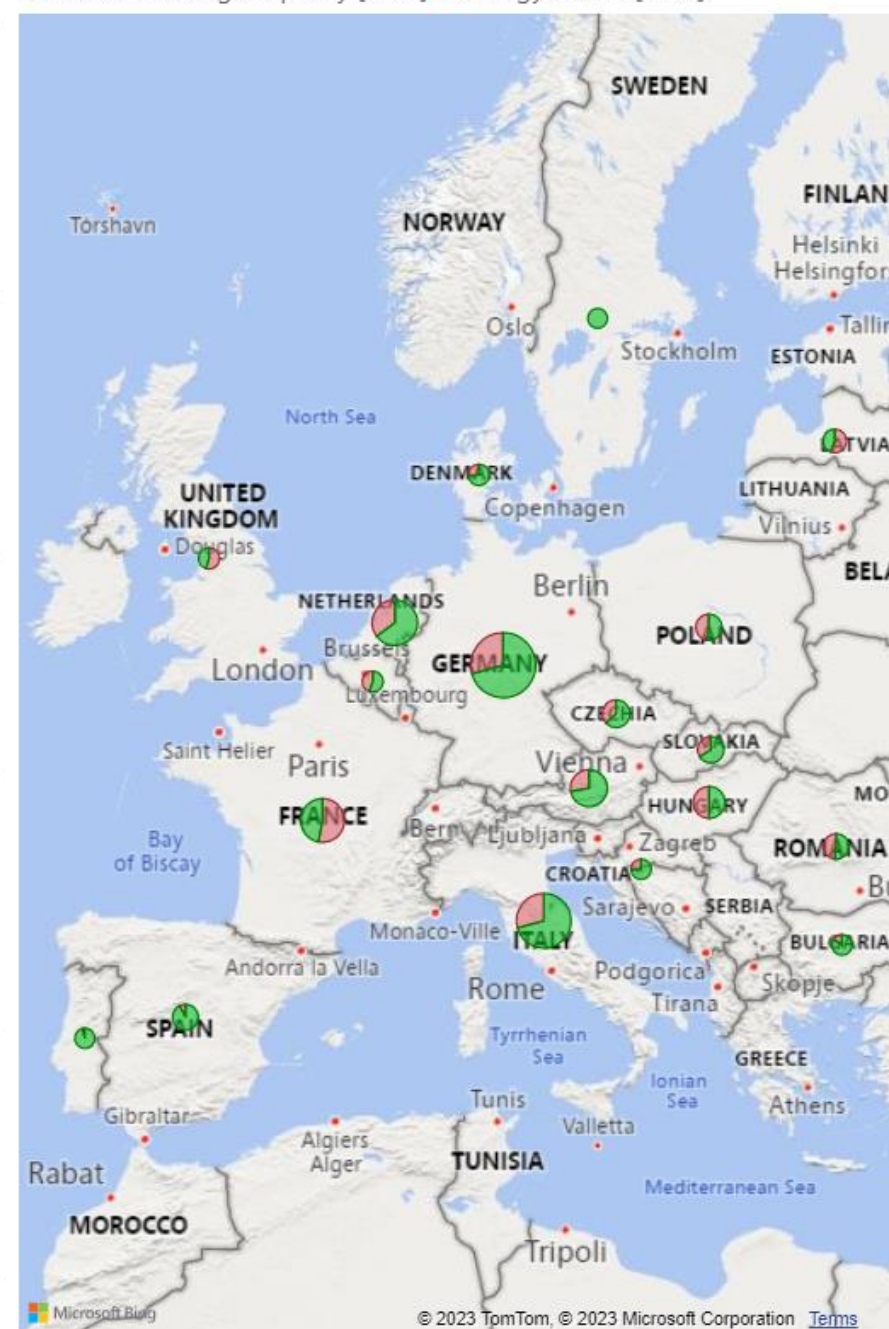
## Storage evolution vs 2015-2020

Sum of 2023 Sum of 2022 Sum of Average Sum of Maximum Sum of Minimum



## Storage levels

Available storage capacity [TWh] Energy stored [TWh]



Data source  
[ENTSOG Seasonal outlooks](#)  
 and  
<https://agsi.gie.eu/#/>

## Working Gas Volume

Country	Value [TWh]	Value [bcm]
Austria	96.74	8.8
Belgium	7.61	0.7
Bulgaria	5.80	0.5
Croatia	4.77	0.4
Czechia	44.30	4.0
Denmark	9.85	0.9
France	133.60	12.1
Germany	250.65	22.8
Hungary	69.70	6.3
Italy	193.44	17.6
Latvia	22.60	2.1
Netherlands	142.44	12.9
Poland	37.54	3.4
Portugal	3.97	0.4
Romania	33.86	3.1
Slovakia	37.14	3.4
Spain	34.09	3.1
Sweden	0.10	0.0

\*unit in bcm is indicative: value in TWh / 11





# Thank you for your attention

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