



European  
Commission

**19-23 SEPTEMBER 2022**

## **EUROPEAN SUSTAINABLE ENERGY WEEK**

Going green and digital  
for Europe's energy transition



**EXTENDED PROGRAMME**

 [EUSEW.EU](https://eusew.eu)  
 [EUENERGYWEEK](https://www.facebook.com/EUENERGYWEEK)  
 [@EUENERGYWEEK](https://twitter.com/EUENERGYWEEK)  
[#EUSEW2022](https://twitter.com/EUENERGYWEEK)



# THE ROLE OF NATURAL GAS IN THE DANUBE REGION

MAIN CHALLENGES FOR

DECARBONISATION



#EUSEW2022



# THE DANUBE REGION STRATEGY



**50%**  
**RUSSIAN GAS DEPENDENCY**



#EUSEW2022



# GAS IN THE BUILDING AND POWER SECTOR

## GAS IN POWER SECTOR

57.2 GW GAS FIRED  
UNITS



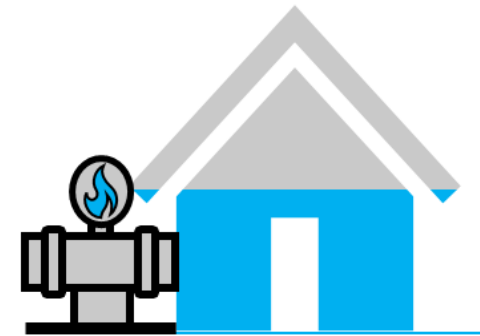
14% OF INSTALLED  
CAPACITY

135.9 TWH/YR GAS  
FIRED GENERATION



14% OF ANNUAL  
GENERATION

## GAS IN HOUSEHOLD SECTOR



43%

SHARE OF HOUSEHOLDS  
USING NATURAL GAS



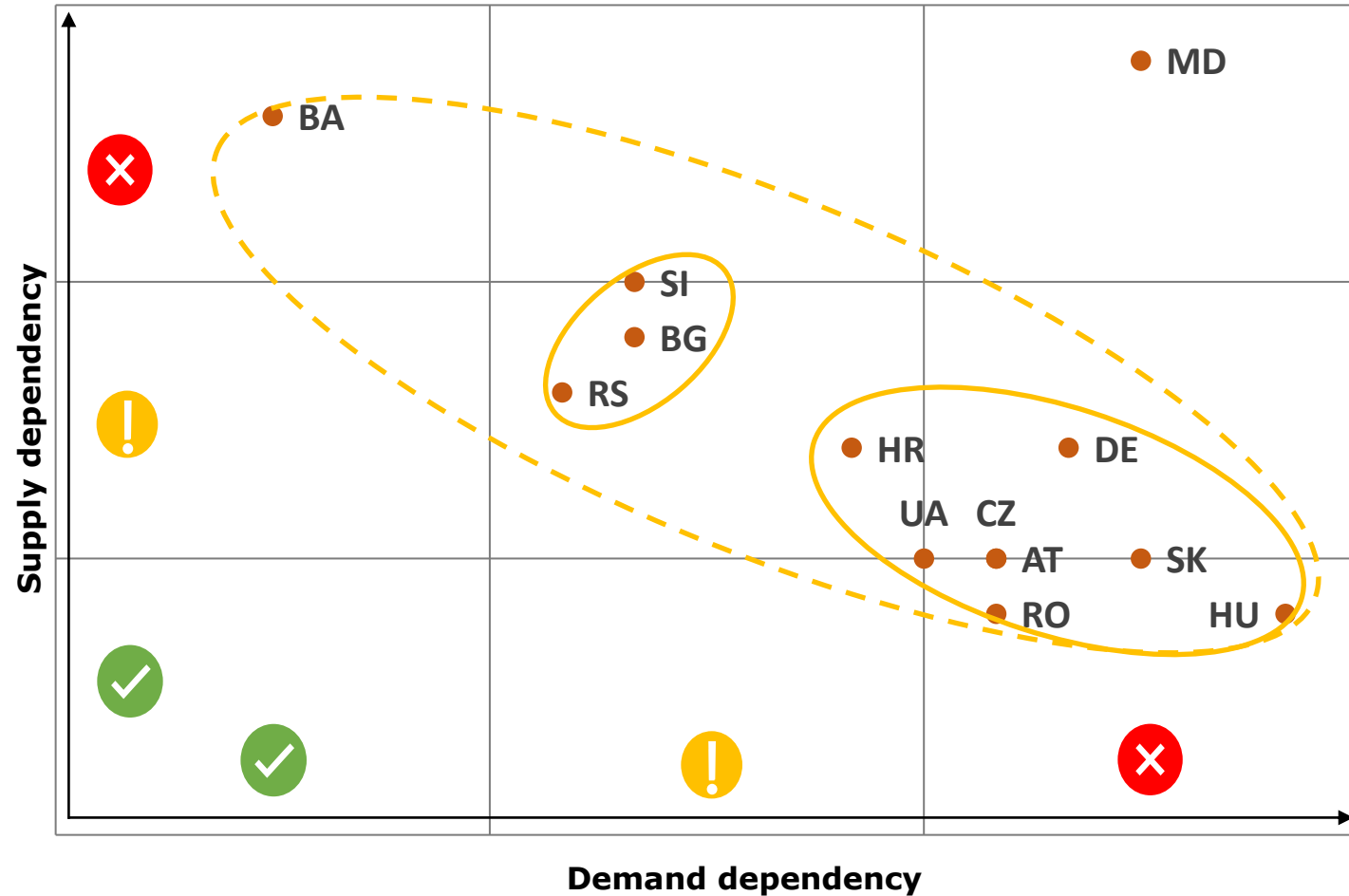
#EUSEW2022



# HIGH RUSSIAN GAS DEPENDENCY

Large differences between the countries:

- Countries with high share of gas in the primary energy mix should secure source diversification
- Countries with high import dependency tend to use less gas
- Outlier: Moldova – 100%RU gas, widely used in all sectors



REKK, upcoming DR study

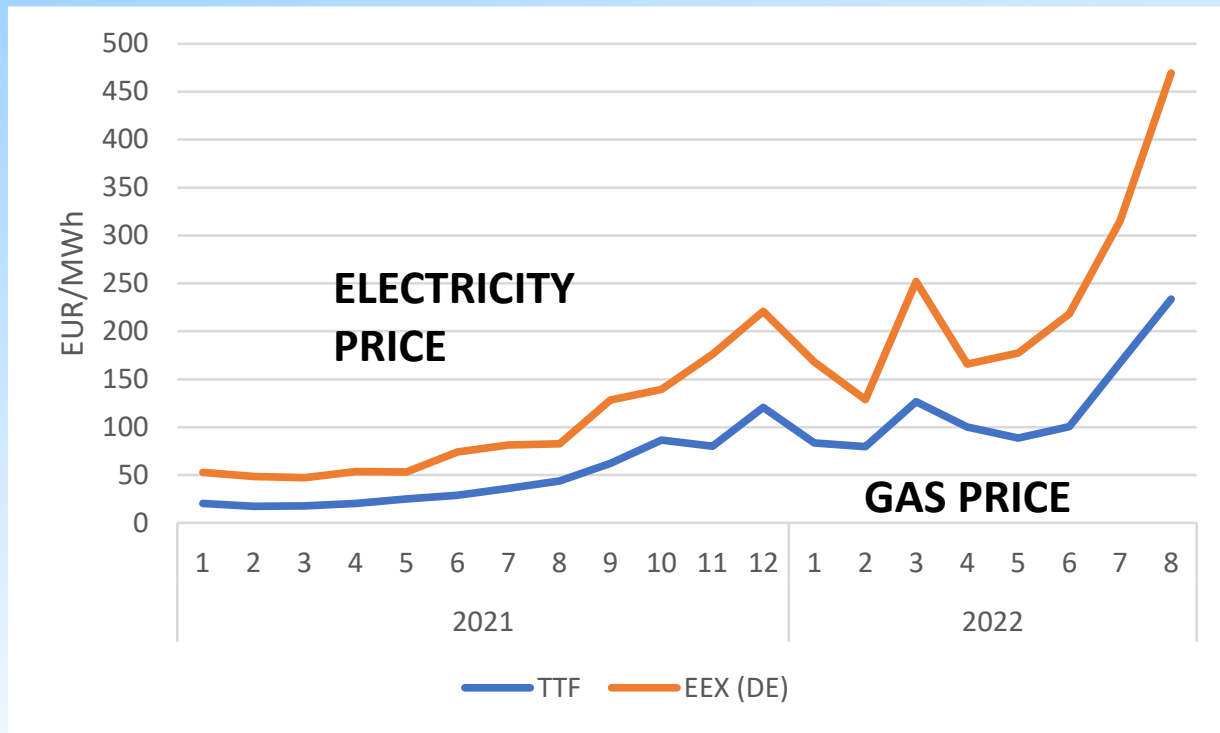


#EUSEW2022

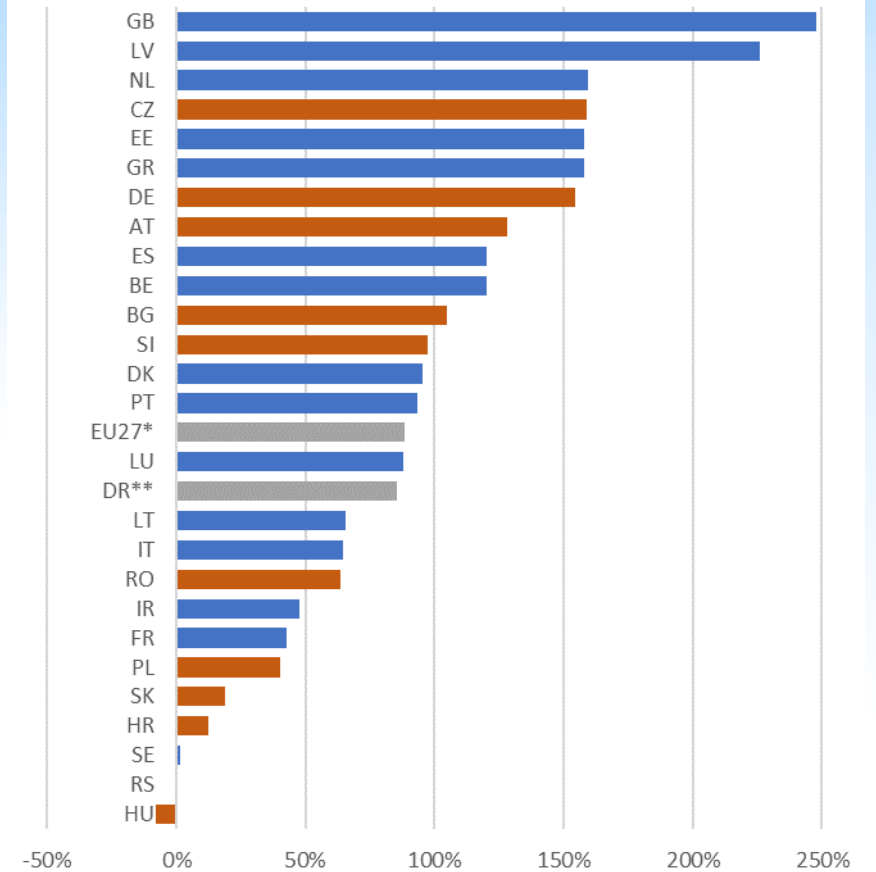


# GAS PRICE SETS ELECTRICITY PRICE

Wholesale gas and electricity prices in Europe, EUR/ MWh



Household natural gas price increase between 2021 July and 2022 July



\* not included: CY, FI, MT  
 \*\* not included: BA, ME, MD, UA

DR countries



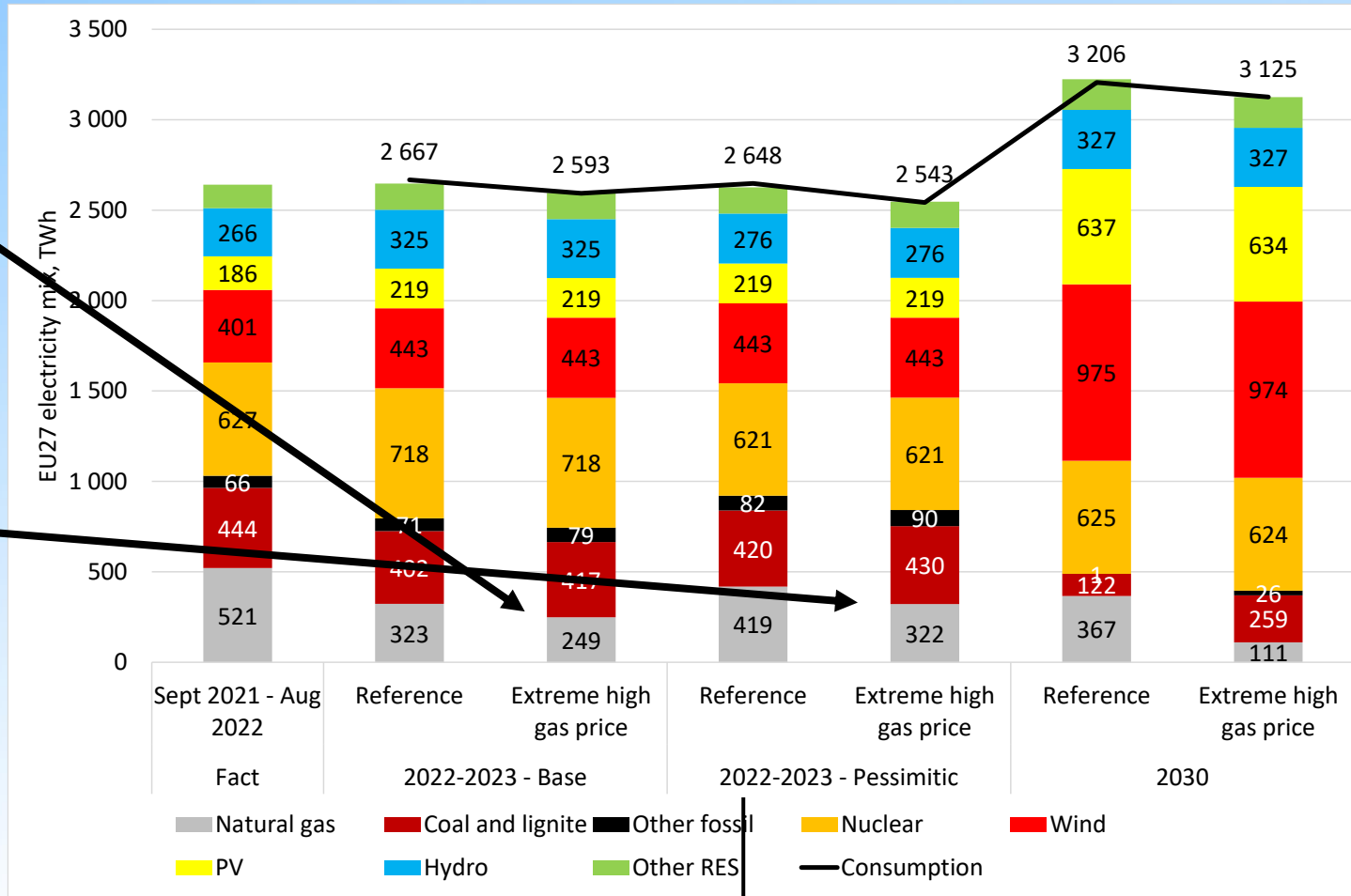
#EUSEW2022

Source: TTF, EEX

Eurostat



# GAS REDUCTION POTENTIAL IN THE POWER SECTOR – EU27



- In short-term the gas-based production can be decreased by 100-270 TWh, dependent on the i) France nuclear availability, ii) hydro conditions, iii) gas price
- In long-run increasing RES generation can substitute the NG-based electricity production

Source: REKK, EEMM

FR nuclear and hydro is back: 60 bcm gas saved

FR nuclear and hydro is out: only 44 bcm gas saved and demand response

Low utilizations in nuclear and hydro



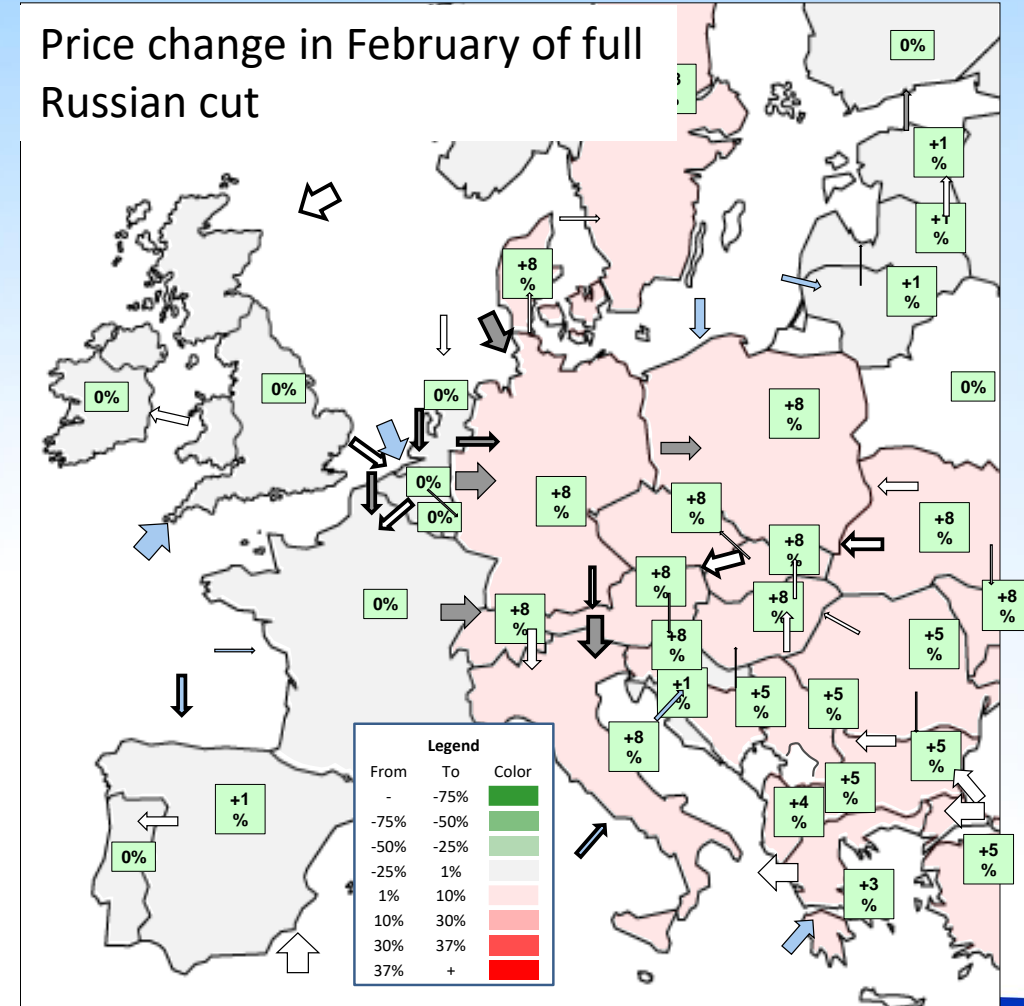
#EUSEW2022





# FULL RU SUPPLY CUT FROM SEPTEMBER 2022

- Russia is still delivering some gas to Europe via TurkStream and Ukraine (NS and Yamal flows already stopped)
- This might change in the coming winter to a full supply cut
- Storages are above 80% full
- Map shows 8 % price increase in the DR due to a full supply cut WITHOUT any measure from EU / DR side in February



#EUSEW2022

REKK, EGMM



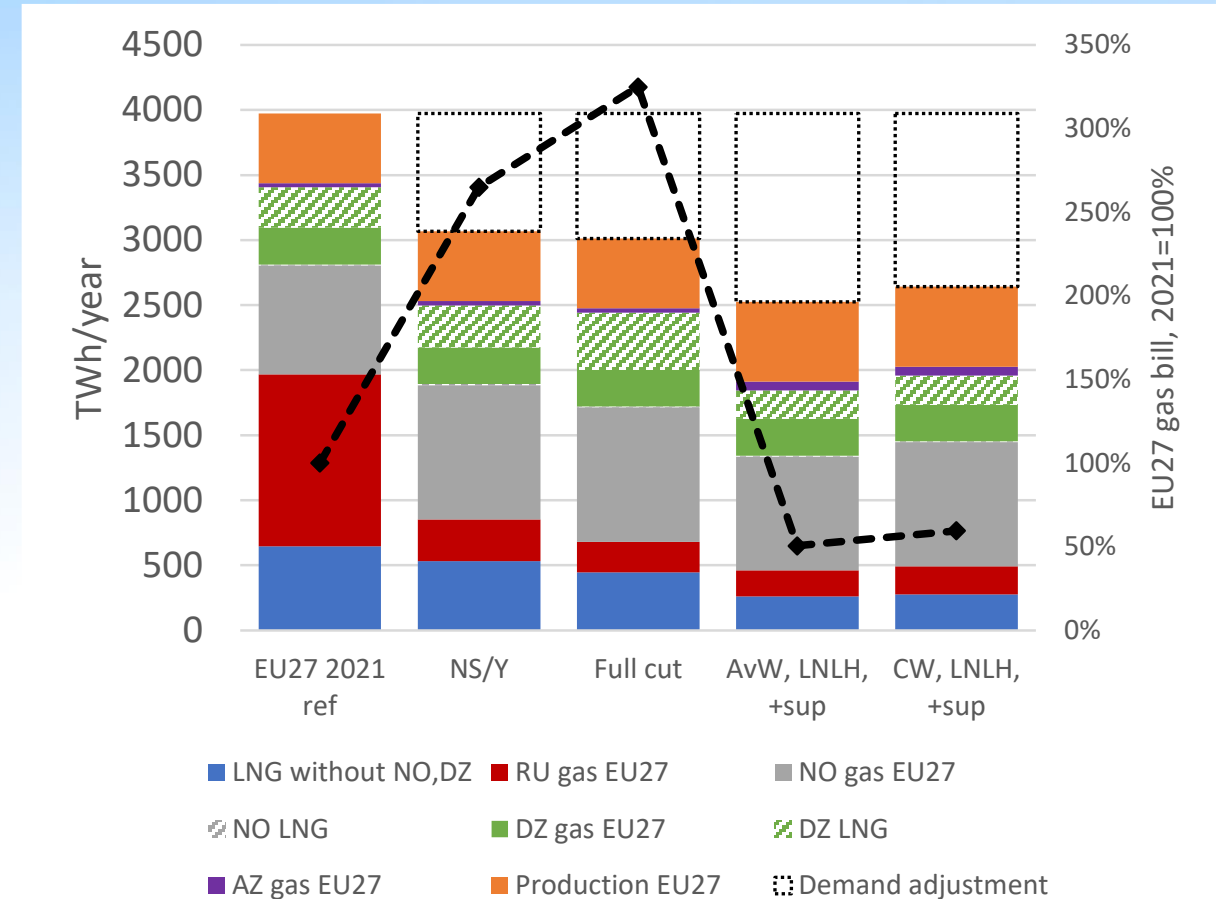


# WHAT CAN THE EU DO IN THE SHORT RUN?

- **Demand:**
  - -15% demand in industry sectors
  - -15% demand in building sector in average winter / -6% in cold winter
  - -20-35% in power&heat generation Due to high energy prices, strong switching from gas with low hydro and nuclear availability
- **Supply:**
  - +300 TWh for Q1 2023 additional LNG terminals in NL, DE, FI
  - Additional pipelines (IGB, Baltic pipe, etc.)
  - +80 TWh production in DE, DK, NL
  - Storages are used up fully by the end of the withdrawal season



#EUSEW2022



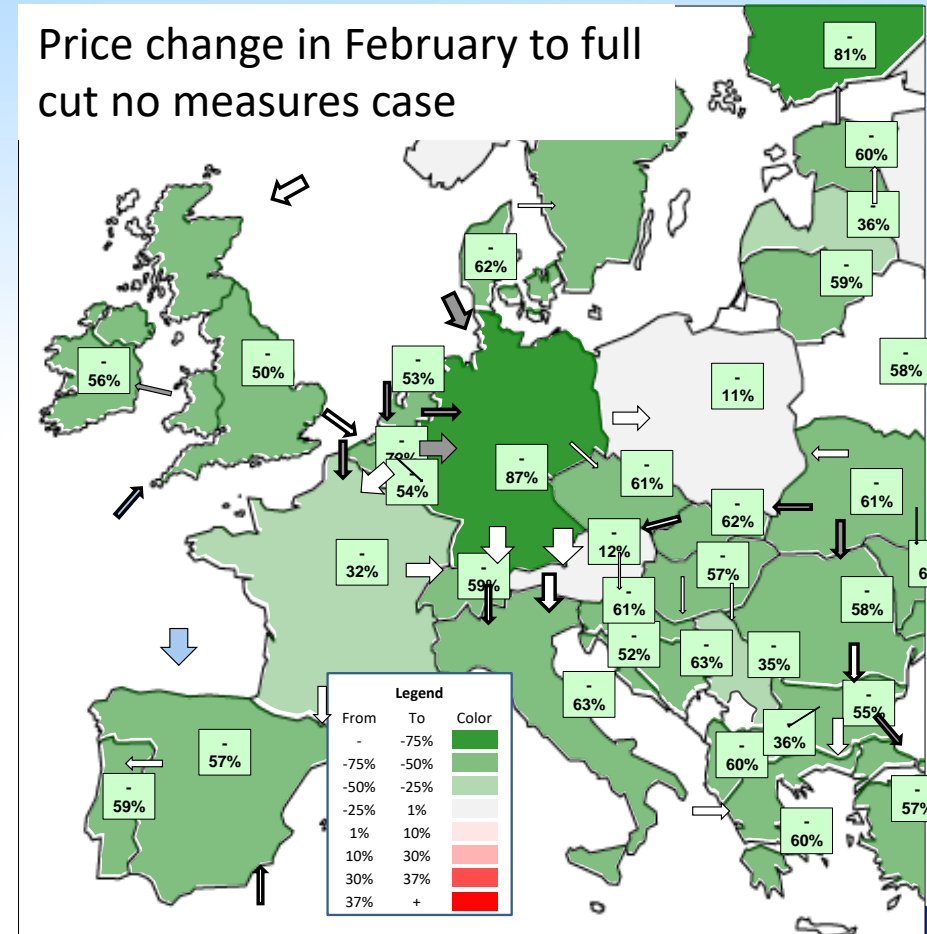
REKK, EGMM



# COMBINED MEASURES FOR THIS WINTER

- Compared to full cut without any measures, notable (50-90%) price decrease in all countries in February
- Driven by additional LNG (DE,NL,FI)
- Demand response drives other countries

Price change in February to full cut no measures case



#EUSEW2022

REKK, EGMM



# CONCLUSIONS

- DR is more vulnerable to a Russian supply cut than the EU on the whole
- Due to the price increase, industrial and HH sector reacted and curbed their demand
- Power sector's gas saving potential depends on French nuclear and hydro availability
- Residential sector was so far partially shielded, there is further potential in demand reduction – price signal is needed!
- High storage stocks help to survive the coming winter
- Demand response combined with alternative sources can compensate the full cut of Russian supplies even in the DR
- Solidarity and interconnectedness is key



#EUSEW2022

 EUSEW.EU  
 EUENERGYWEEK  
 @EUENERGYWEEK



**EXTENDED PROGRAMME**

19-23 SEPTEMBER 2022

Going green and digital for Europe's energy transition  
#EUSEW2022