



European Union Agency for the Cooperation  
of Energy Regulators

# ACER's Preliminary Assessment of Europe's high energy prices and the current wholesale electricity market design

*Main energy price drivers, outlook and  
key market characteristics*

Council Energy Working Party  
Brussels - 16 November 2021

Christian Zinglensen, *Director at ACER &  
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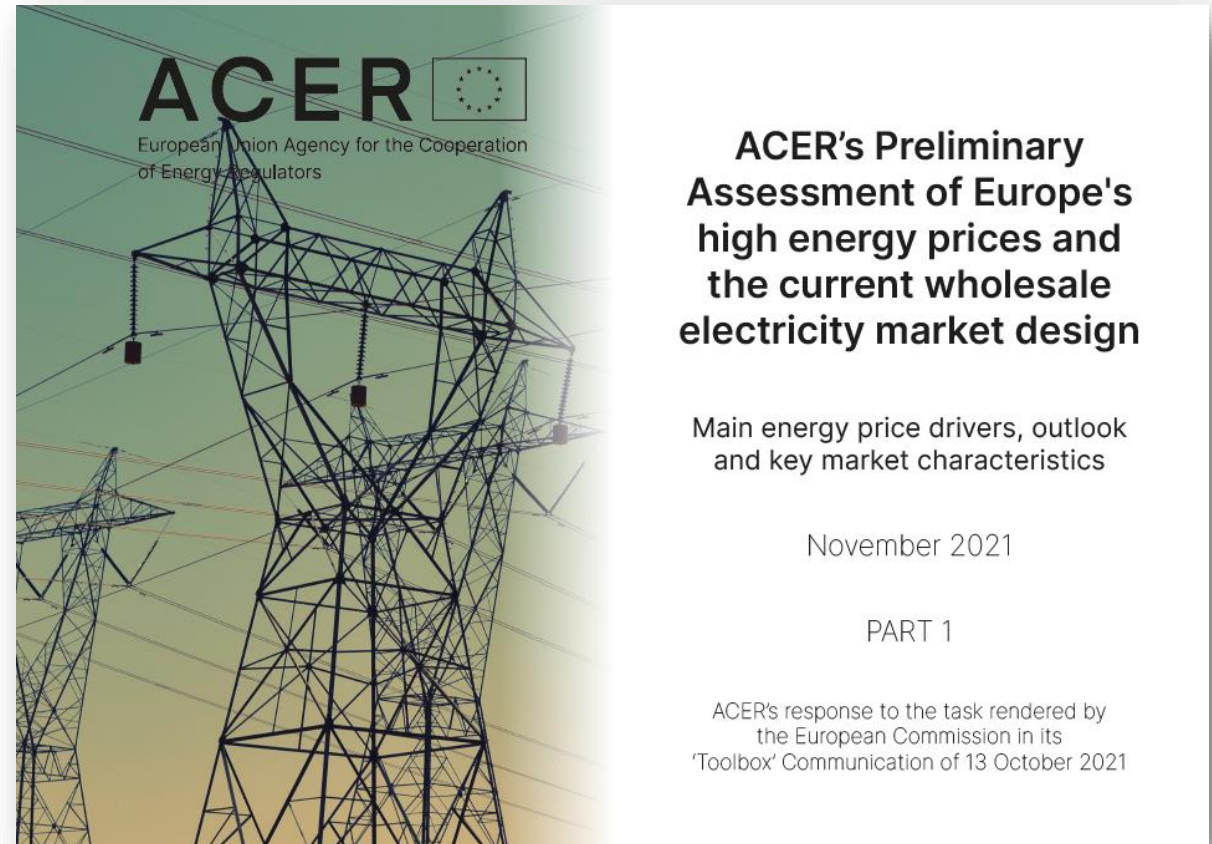
- Energy price developments: Main factors & impact across Europe
- Gas vs. electricity price differentials
- Outlook for the next six months. Winter season a key variable.
- Policy considerations:
  - Short-term relief
  - Price volatility and its effects
  - Market design considerations
  - Broader transition pathways



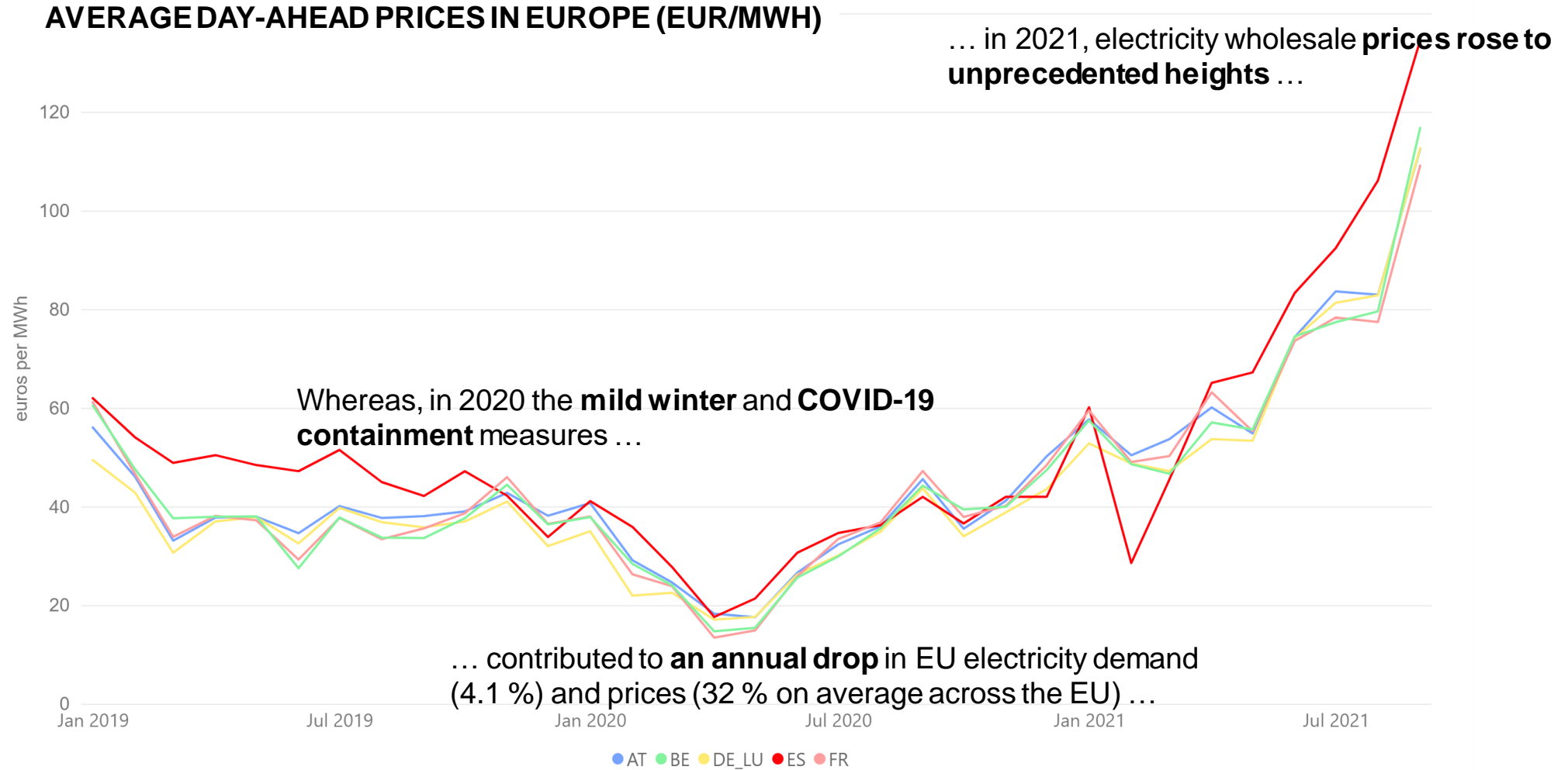
## European Commission's 'Toolbox' Communication of 13 October tasks

### ACER with:

- studying the benefits and drawbacks of the existing electricity market design & proposing recommendations for assessment by the European Commission **by April 2022**;
- undertaking a preliminary assessment of the situation in the electricity market & reporting by **mid-November**.

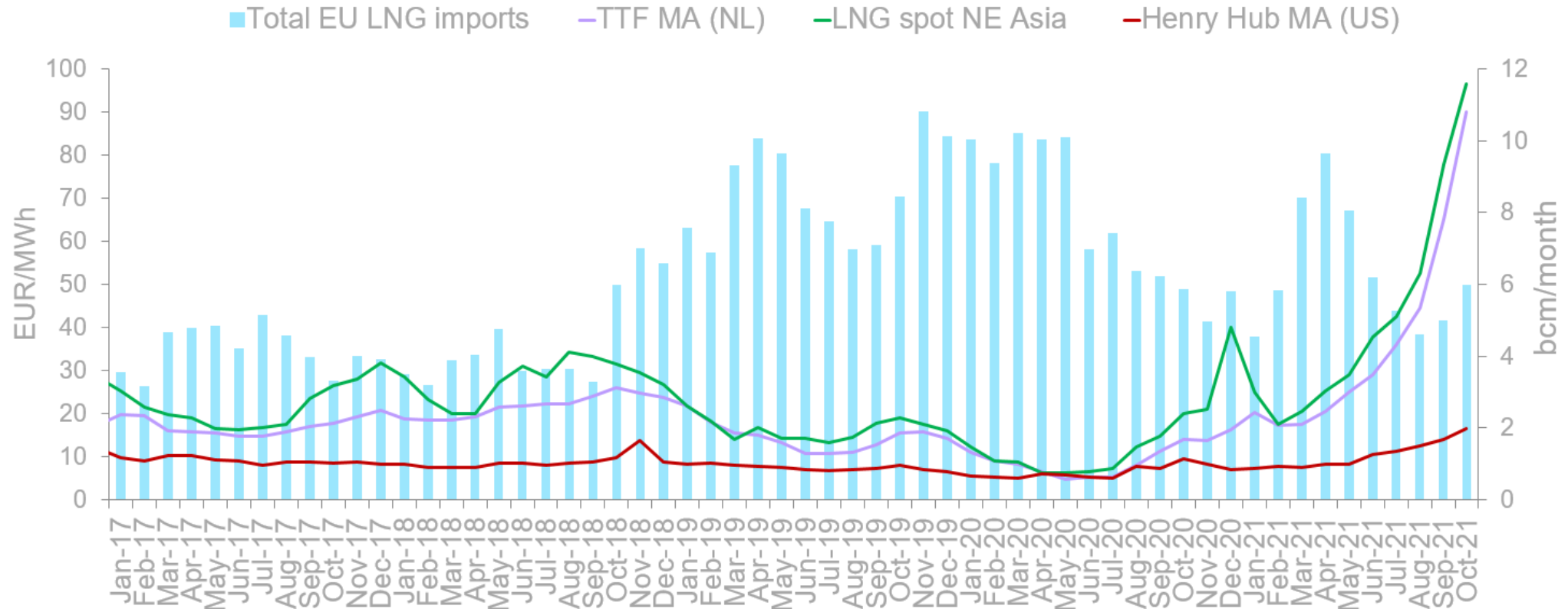


# What a difference a year makes ...



# Strong global demand for LNG. Tight supply.

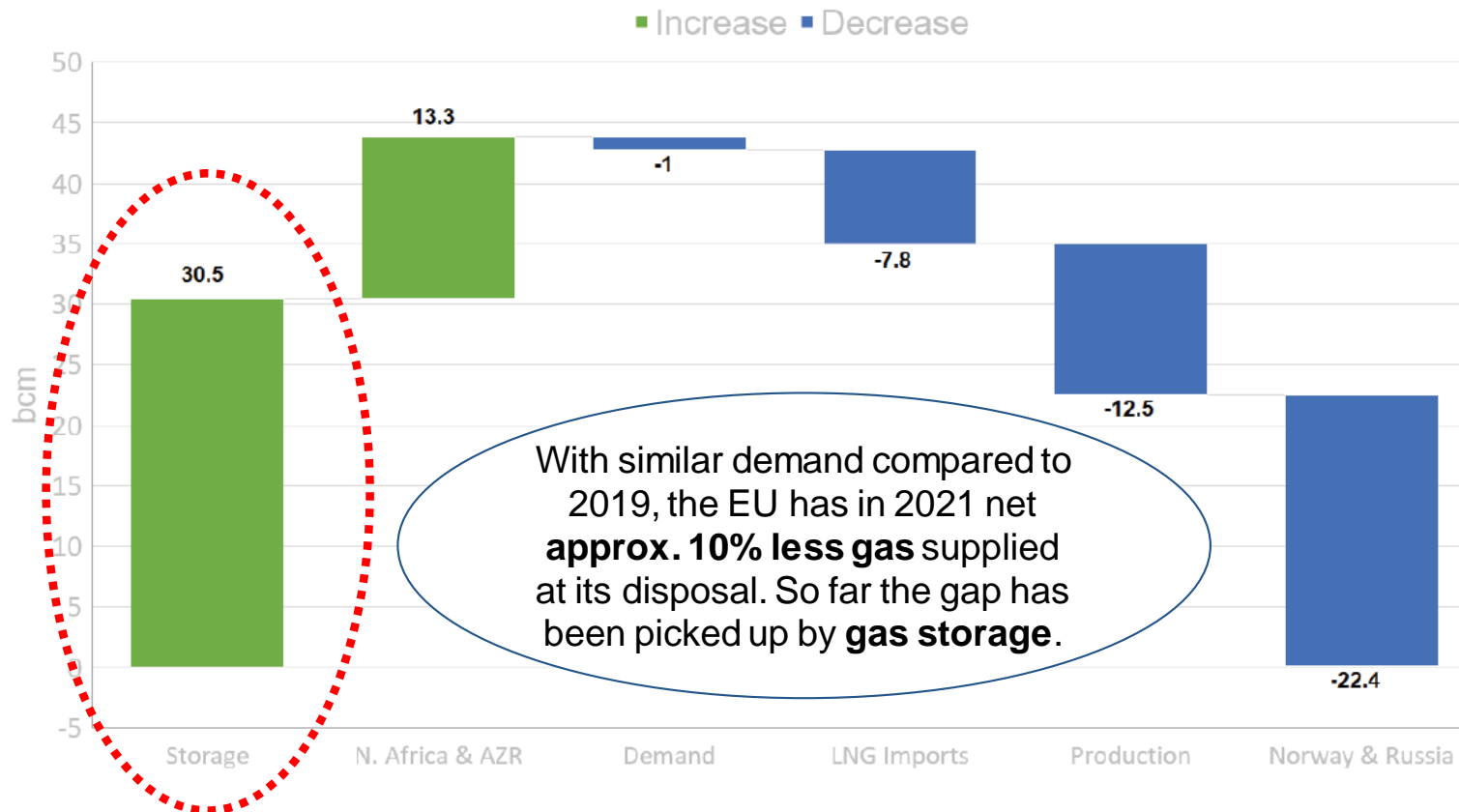
**COMPARISON OF INTERNATIONAL GAS PRICES VS EU LNG IMPORTS: 2017 – 2021**



**Global competition for LNG supplies leading to less LNG arrivals in the EU (the global ‘swing market’ for LNG).**

# Contributing factors for the EU specifically

CHANGE IN SUPPLY TO THE EU MARKET: 2019 vs 2021 in bcm

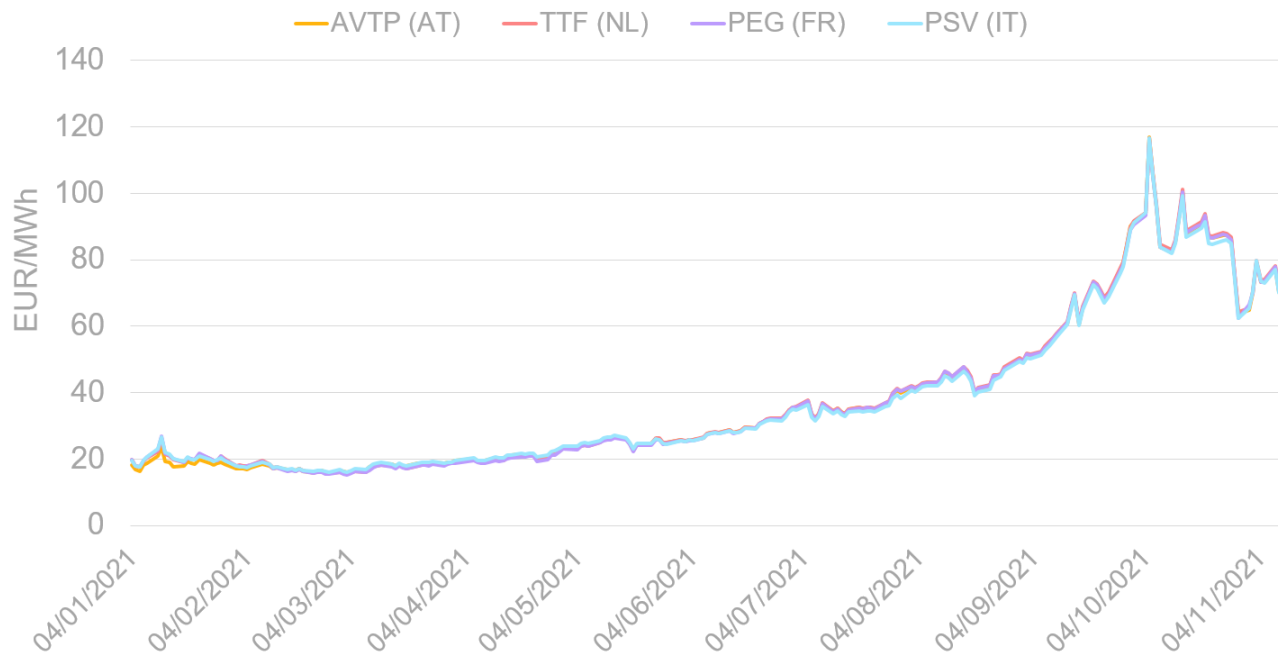


## ADDITIONAL FACTORS:

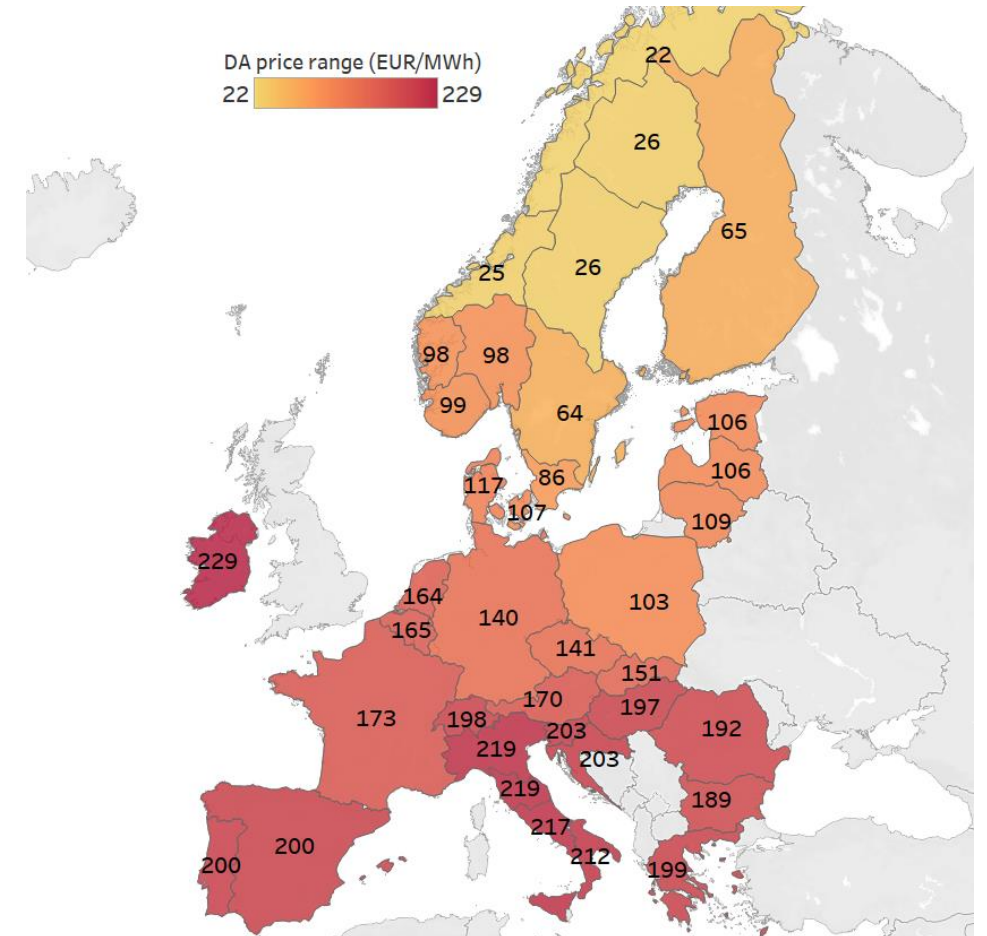
- Coal and carbon price increase
- Weather (e.g. hot summer)
- Lower renewable generation (wind, hydro)
- Steady pipeline supply affected by maintenance and lessening investment in new production

# Impacts more uniform for gas than for power

**GAS FRONT MONTH CONTRACTS  
FROM JANUARY – NOVEMBER 2021 (EUR/MWh)**

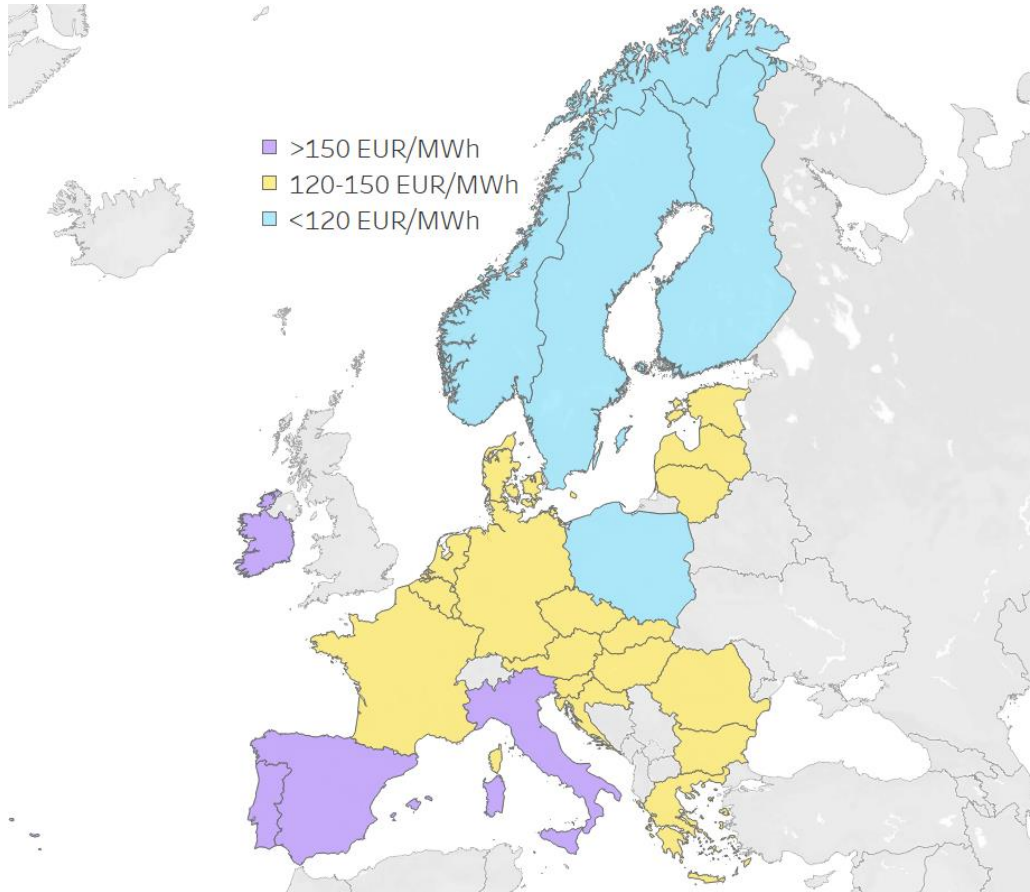


**AVERAGE ELECTRICITY PRICES FOR BIDDING ZONES  
IN EUROPE: OCTOBER 2021 (EUR/MWh)**



# Drivers of power price differentials

## COUNTRIES AND THEIR EXPOSURE TO HIGH ELECTRICITY PRICES IN SEPTEMBER 2021



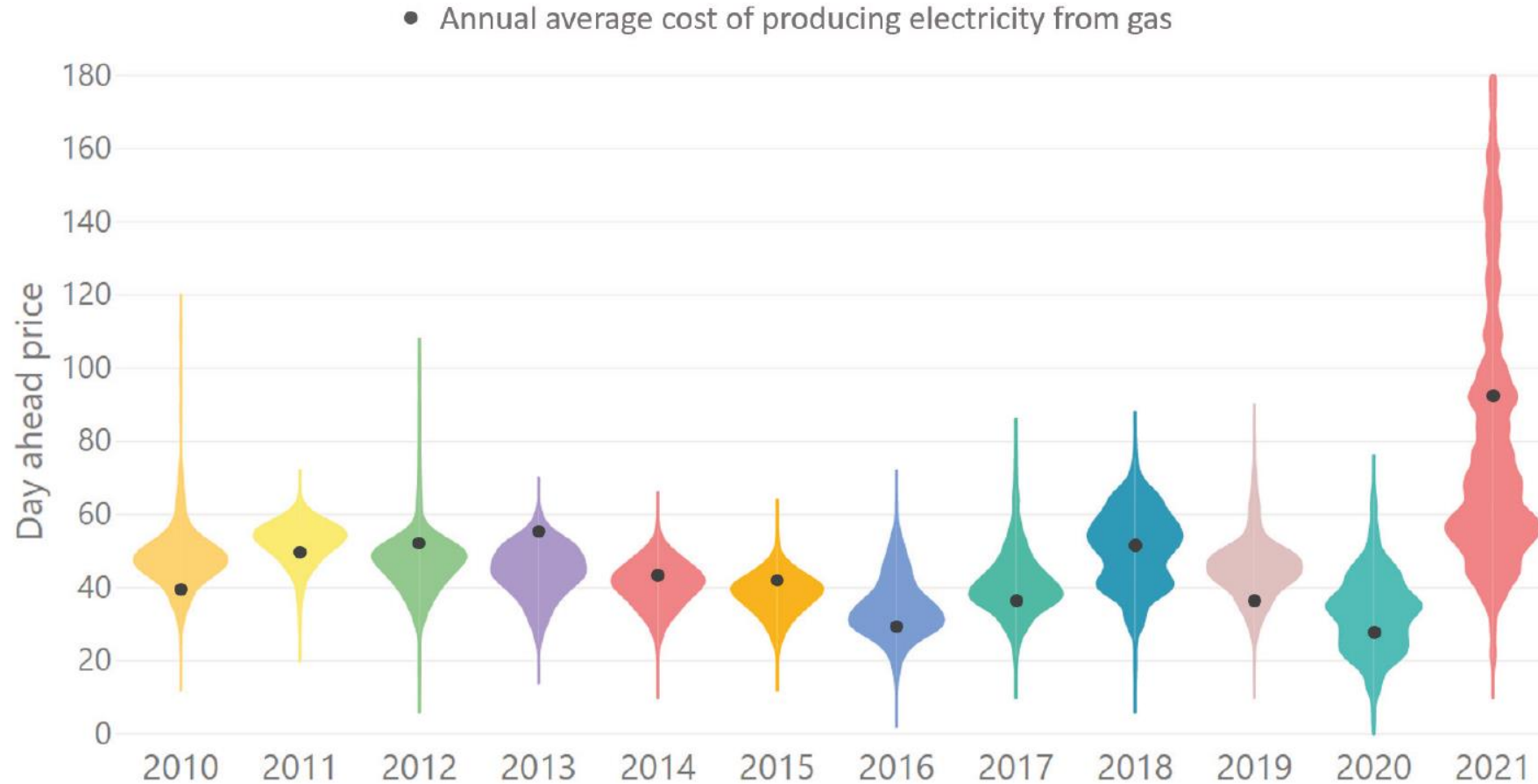
## AVERAGE DAY-AHEAD ELECTRICITY PRICES (EUR/MWh) AND AVERAGE GAS GENERATION AS A PERCENTAGE OF ELECTRICITY DEMAND IN EUROPE (%): SEPTEMBER 2021

	Main characteristics of the Member States pertaining to the group	Average day-ahead prices (EUR/MWh)	Electricity demand covered with gas (%)
Group 1	Highly gas-dependent and/or limited interconnected countries	167	34
Group 2	Moderately gas-dependent and/or well interconnected countries	132	14
Group 3	Limited gas-dependent countries	89	3

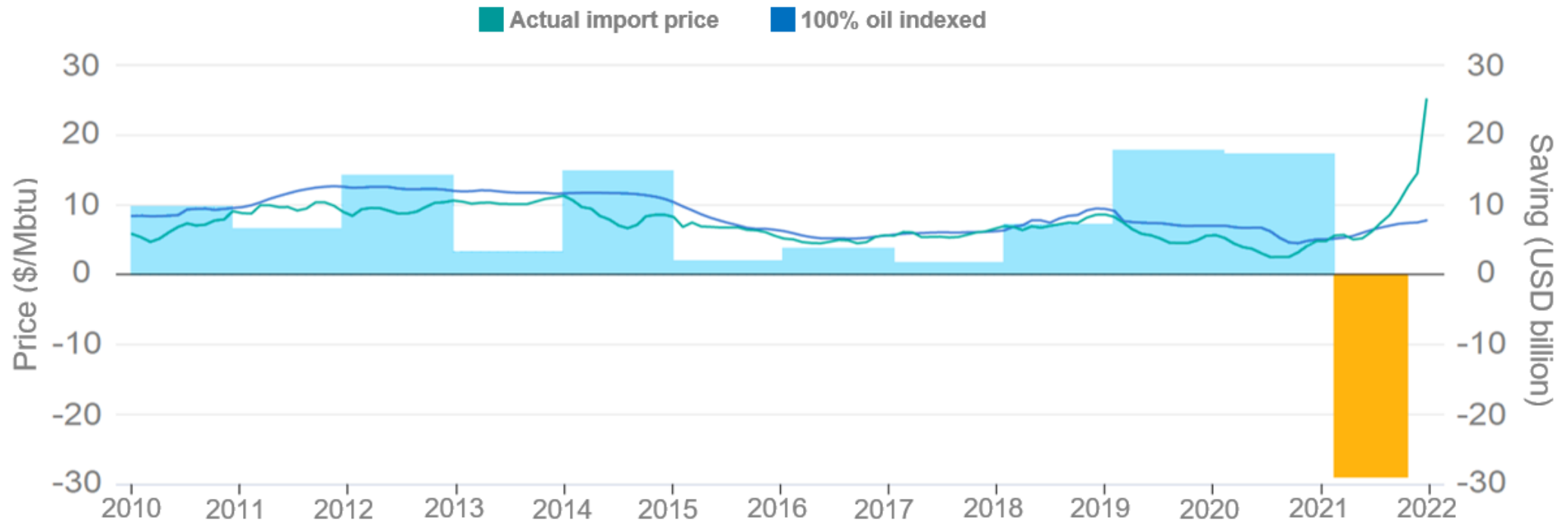


# Gas & electricity price correlation is not new

## ELECTRICITY DAY-AHEAD PRICES DISTRIBUTION COMPARED TO THE COST OF PRODUCING ELECTRICITY WITH GAS IN EUROPE (2010 – 2021) (EUR/MWh)



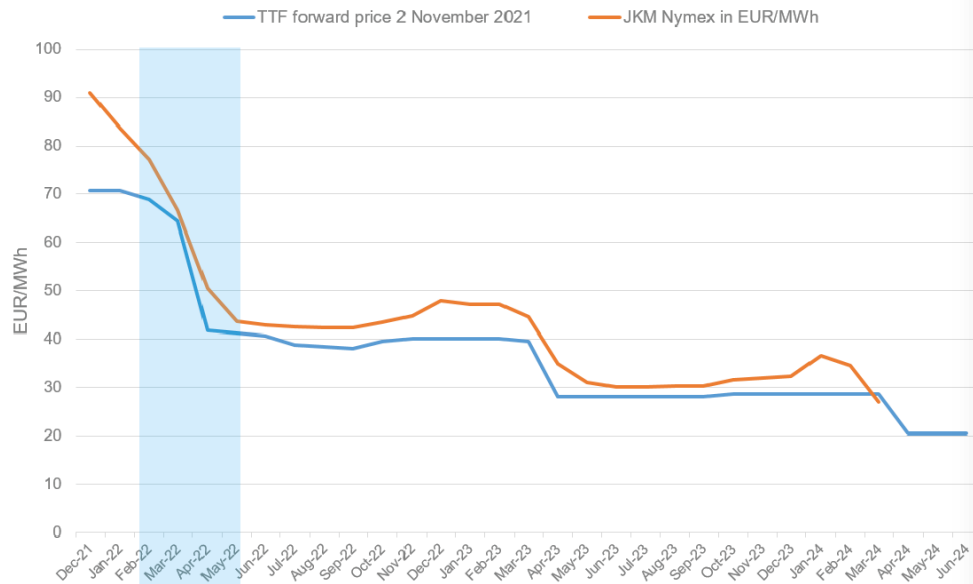
# Gas markets have evolved for the better



**The move towards more spot pricing rather than long-term contracting has yielded substantial benefits over the last decade. Going forward, hub-based pricing seems a more natural corollary of Europe's changing electricity system.**

# Tight market conditions expected to relax in spring

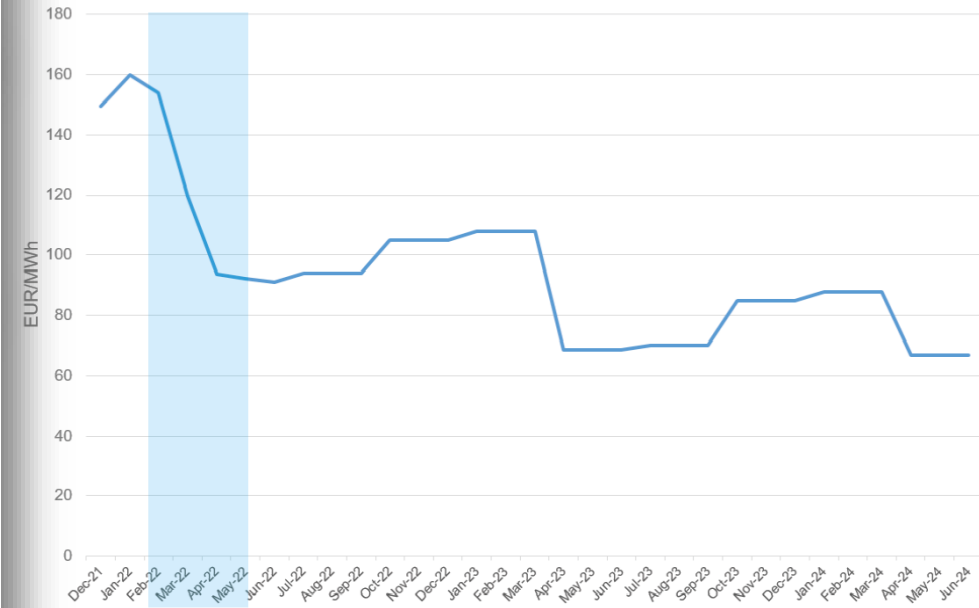
## GAS



### MARKET EXPECTATIONS MOST LIKELY DIRECTED TOWARDS:

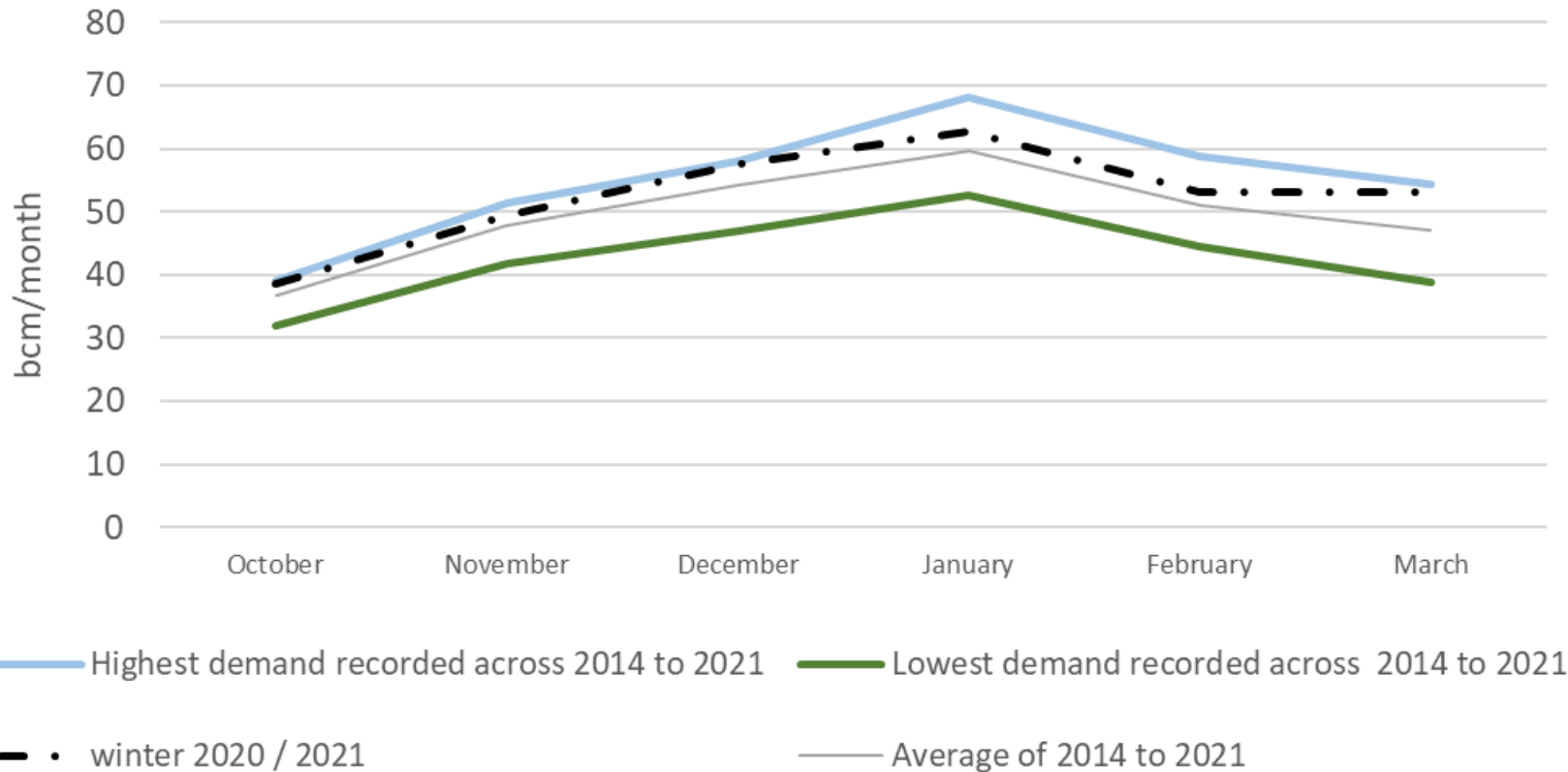
- Global LNG supply constraints easing up
- Increasing Russian flows (possibly via Nord Stream 2)
- Expected demand decrease
- Larger renewable energy production

## ELECTRICITY



# Winter season a key variable for gas demand

**COMPARISON OF HIGHEST TO LOWEST MONTHLY EU (+UK) CONSUMPTION IN WINTER SEASON: 2014 to 2021, bcm/month**



- Winter accounts for 65% of yearly demand, due to cold weather
- Storage withdrawals cover approximately 25% of winter gas consumption
- Across winter 2021, gas demand was +7% higher than for the 2014-2020 average:
  - Underground storages were depleted by 65 percentage points
  - **Today stocks are at 75%**
- If LNG and pipeline imports do not increase, current stocks are *tight*<sup>1</sup> to face a similar winter, and *short* to face the 'worst scenario'

\*Notional scenarios compare highest and lowest monthly consumption in 7 years average vs winter 2020/2021 demand

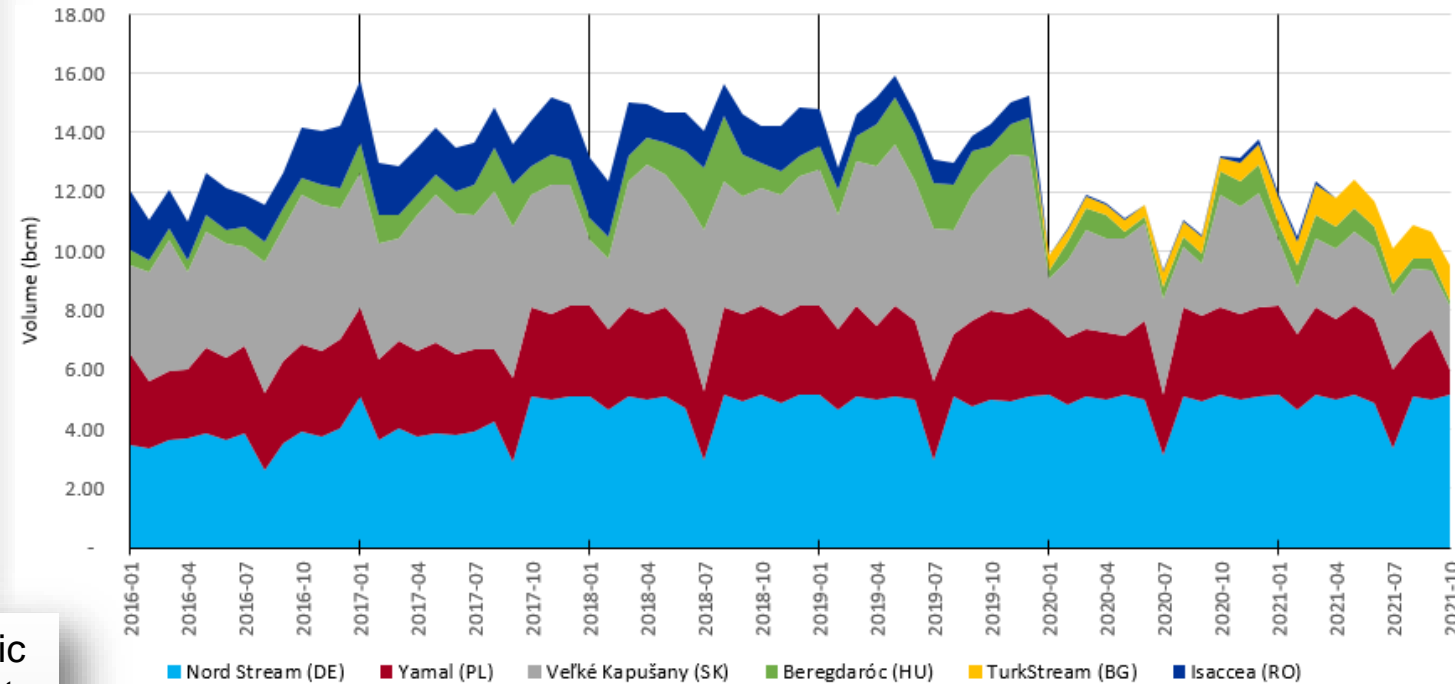
<sup>1</sup> Storages' withdrawal capacities are partly reduced as stocks lessen. See expanded considerations in the [ENTSOG Winter 2021-2022 Supply Outlook](#)



# A look at certain market behaviours



**COMPARISON OF EU NATURAL GAS IMPORT FROM RUSSIAN ORIGIN:  
 2016 – October 2021, bcm/month**



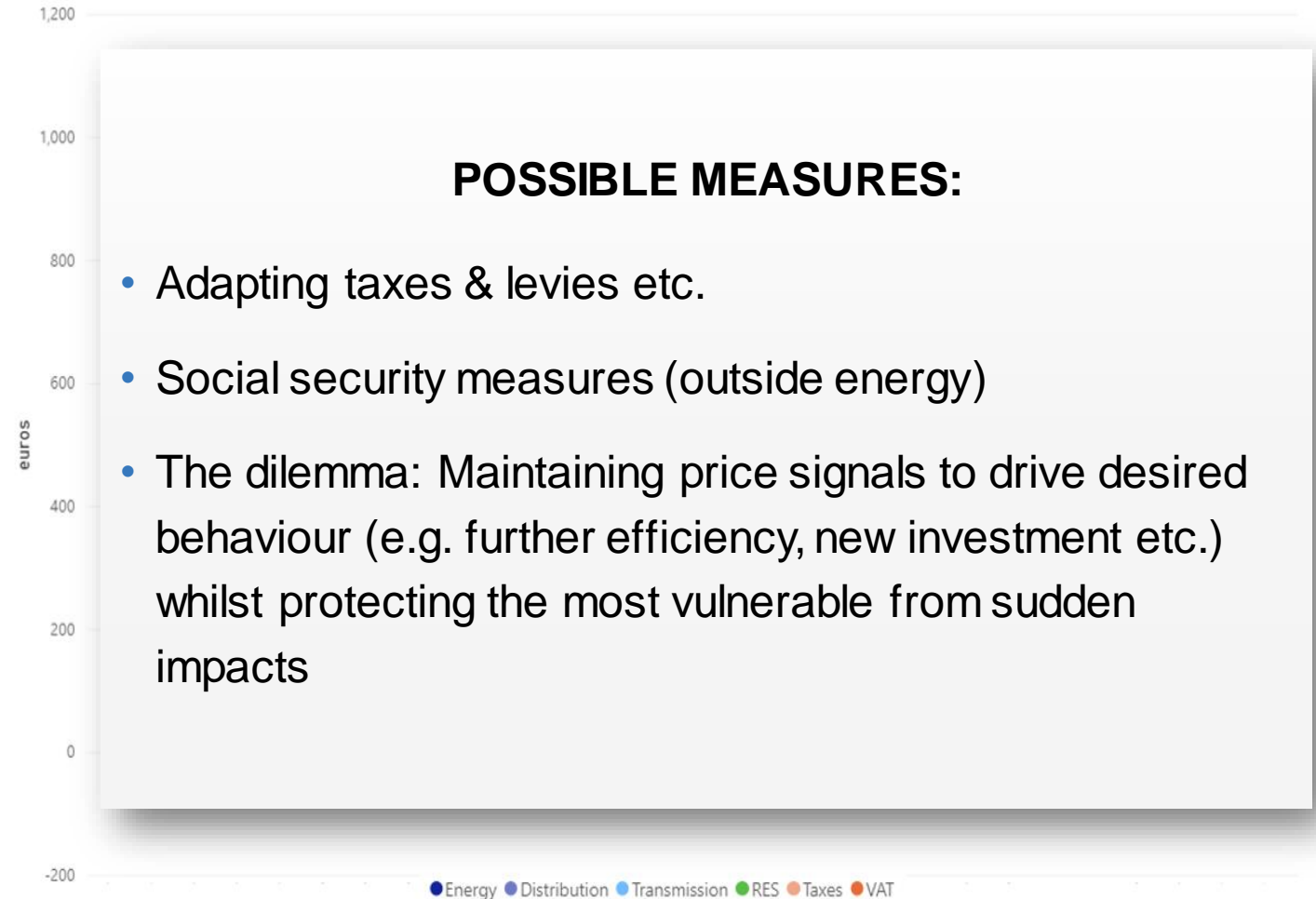
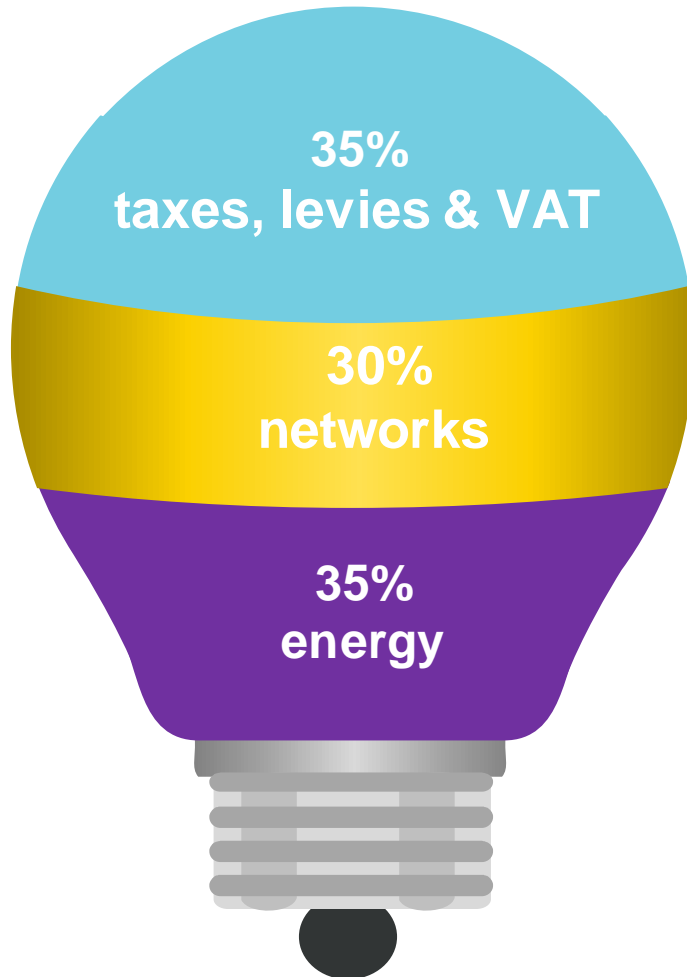
Given the global price drivers, it is unlikely that any specific market trading behaviour would be responsible for current record prices. ACER’s market surveillance efforts under REMIT, alongside those of national regulators, have so far not revealed systematic manipulative behaviour or insider trading. Surveillance is ongoing.

Pipeline imports have kept steady, not responding to surging demand. Certain physical constraints in/for Russia. Discussions on possible tactical considerations.

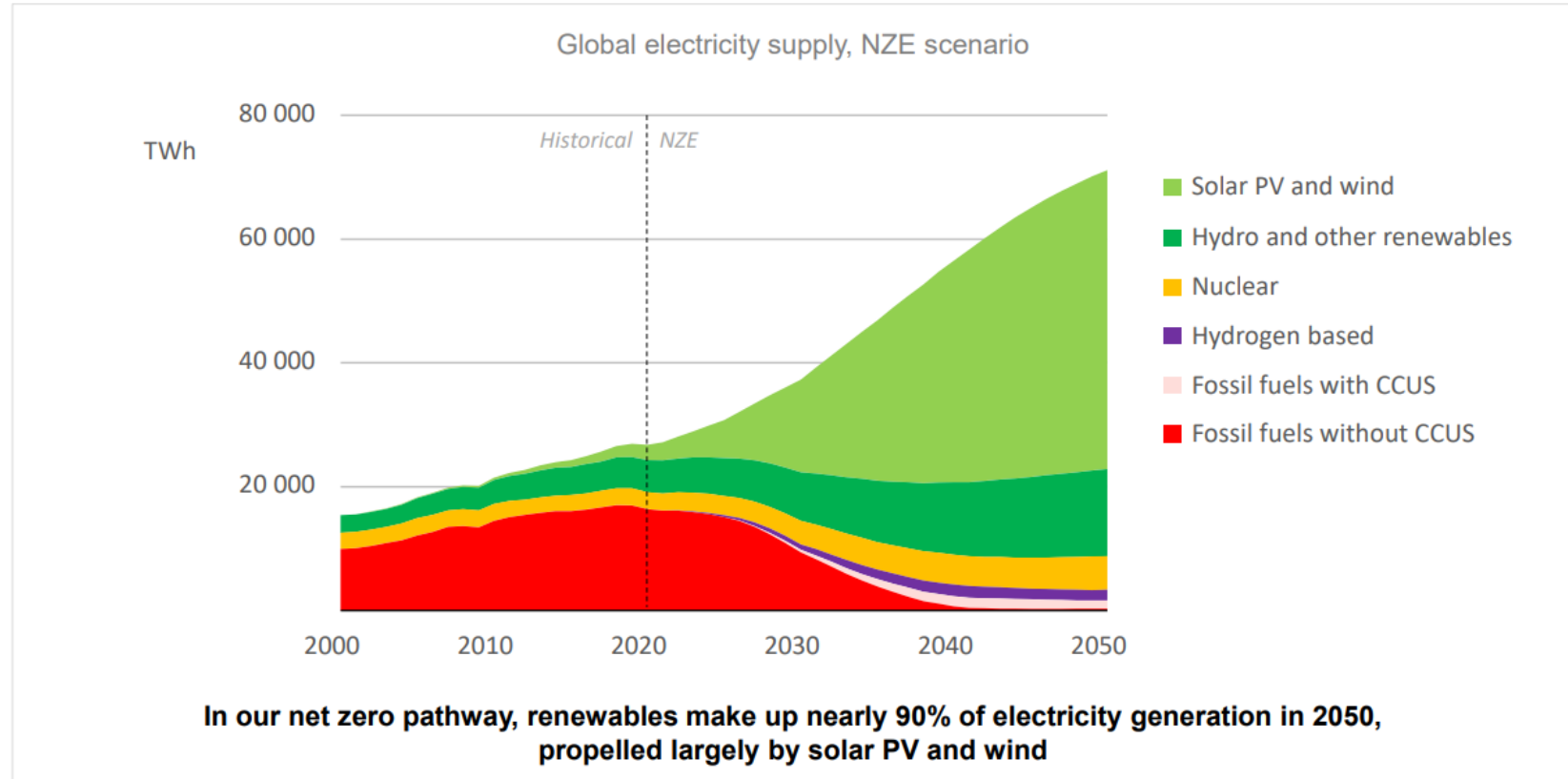
# Select policy considerations

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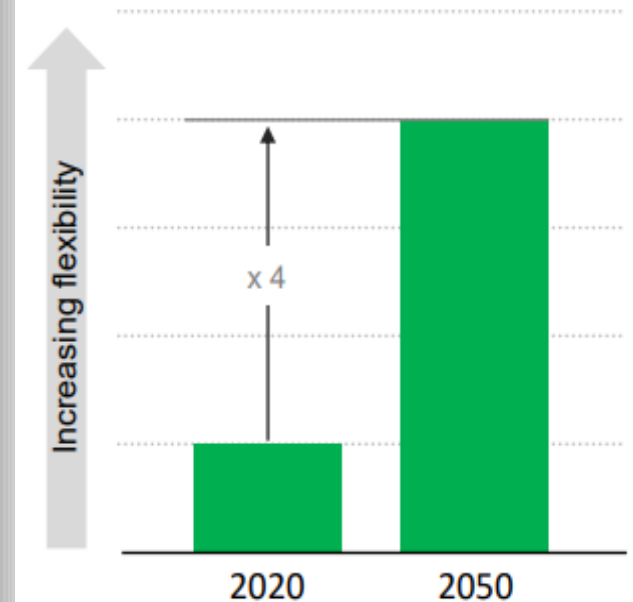
## AVERAGE ELECTRICITY BILL BREAKDOWN



## Electricity leads the way to net zero

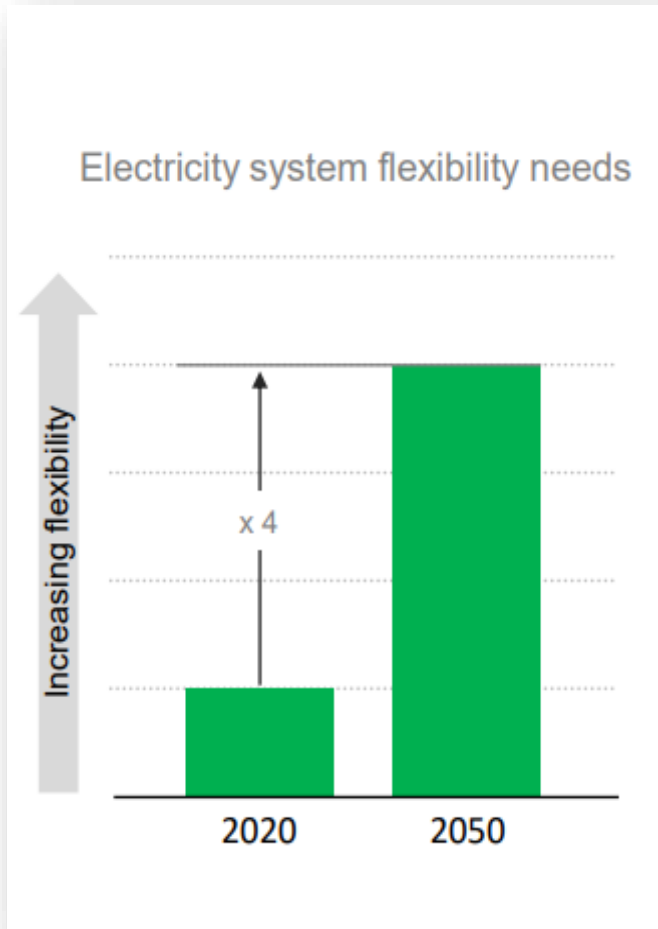



## Electricity system flexibility needs





# Policy considerations (2/4): Price volatility



**Ofgem**  
48,984 followers  
1d • 

Omni Energy, MA Energy, Zebra Power and Ampoweruk have today announced they are ceasing to trade.

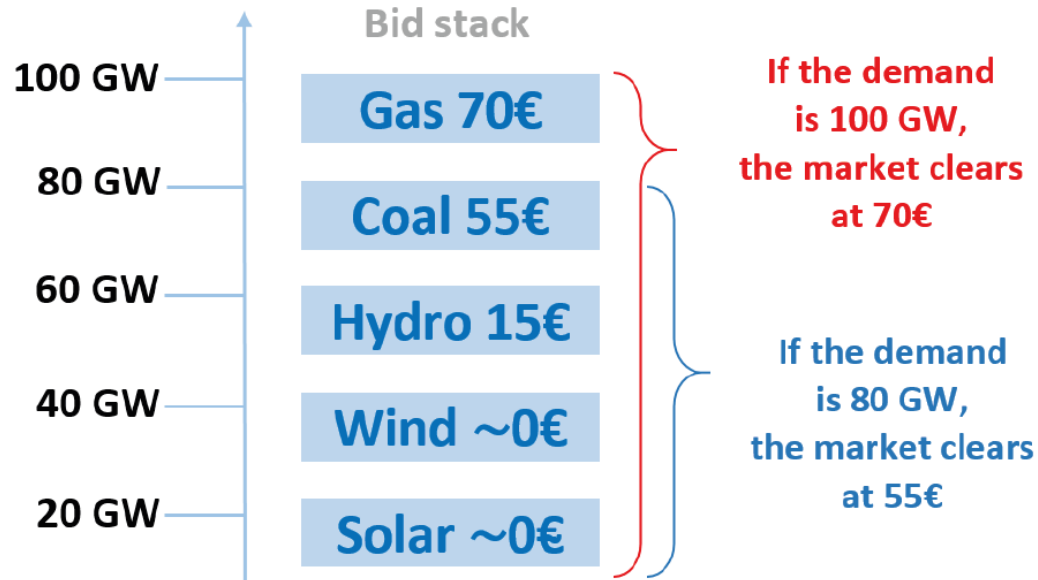
- ▶ Omni Energy supplies around 6,000 domestic pre-payment customers
- ▶ MA Energy supplies around 300 non-domestic customers
- ▶ Zebra Power supplies around 14,800 domestic customers
- ▶ Ampoweruk supplies around 600 domestic customers and around 2000 non-domestic customers.

Ofgem will now appoint a new supplier to take on these customers' supply. Learn more: <http://ow.ly/wAv350GEvOr>

**Volatility is here to stay. The 'new business model'. Cushioning impacts for vulnerable consumers.**

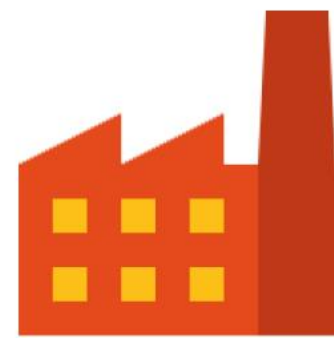
# Policy considerations (3/4): Market design

## PAY-AS-CLEAR

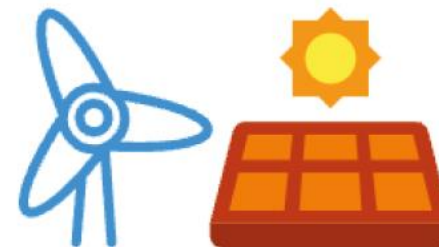


Producers bid true costs and get the market clearing price.

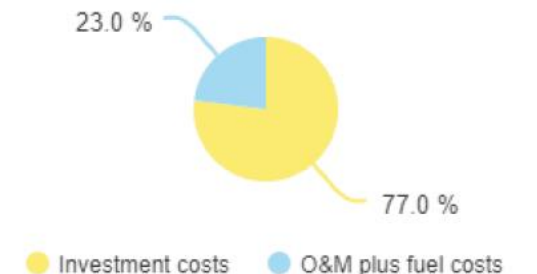
## BREAKDOWN OF COSTS FOR CONVENTIONAL AND RENEWABLE GENERATION TECHNOLOGIES



Conventional generation (coal and gas)



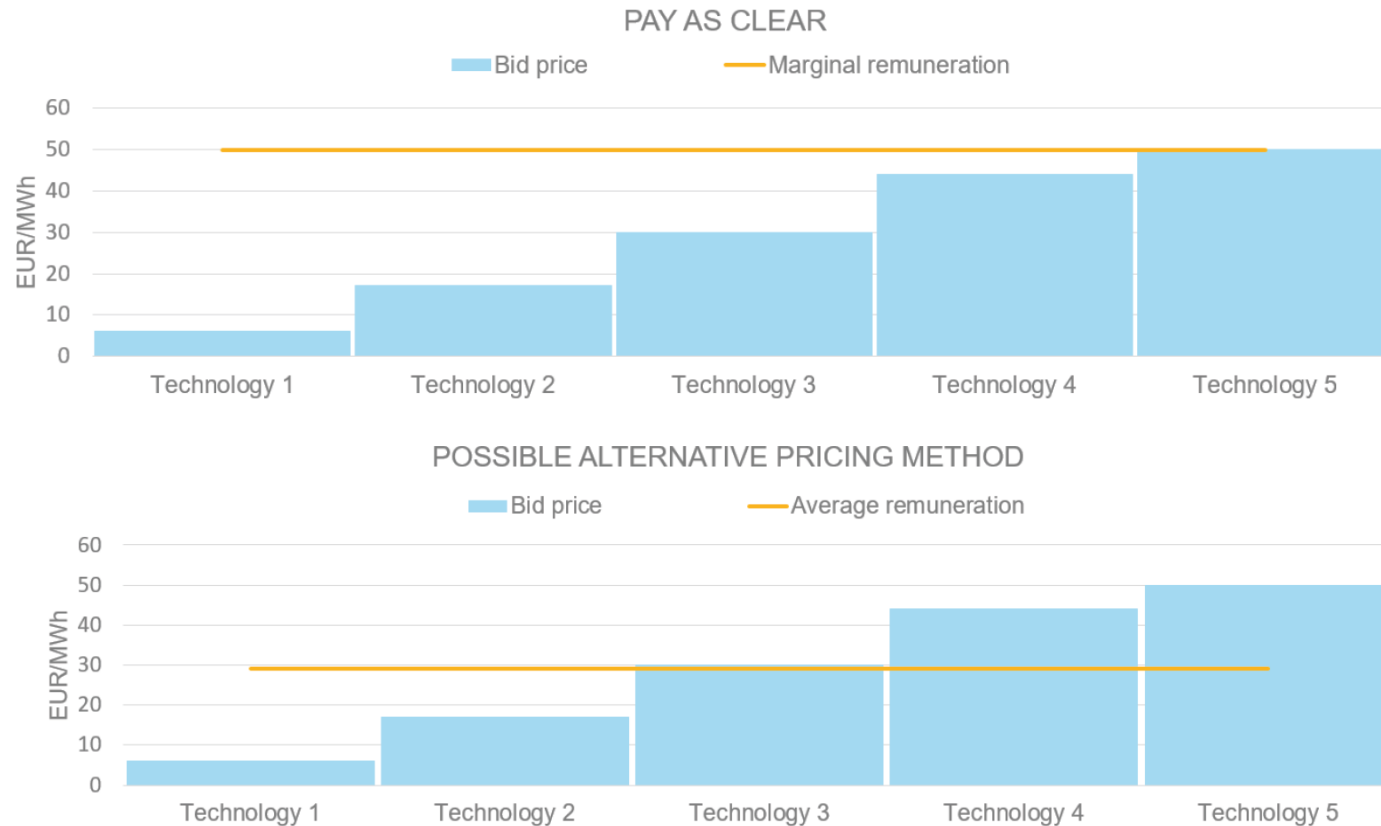
Renewables (wind & solar)



**The 'pay-as-clear' electricity market model: Incentives to bid marginal costs, not more. Designed to recuperate capitals costs above marginal costs.**

# Policy considerations (3/4): Market design

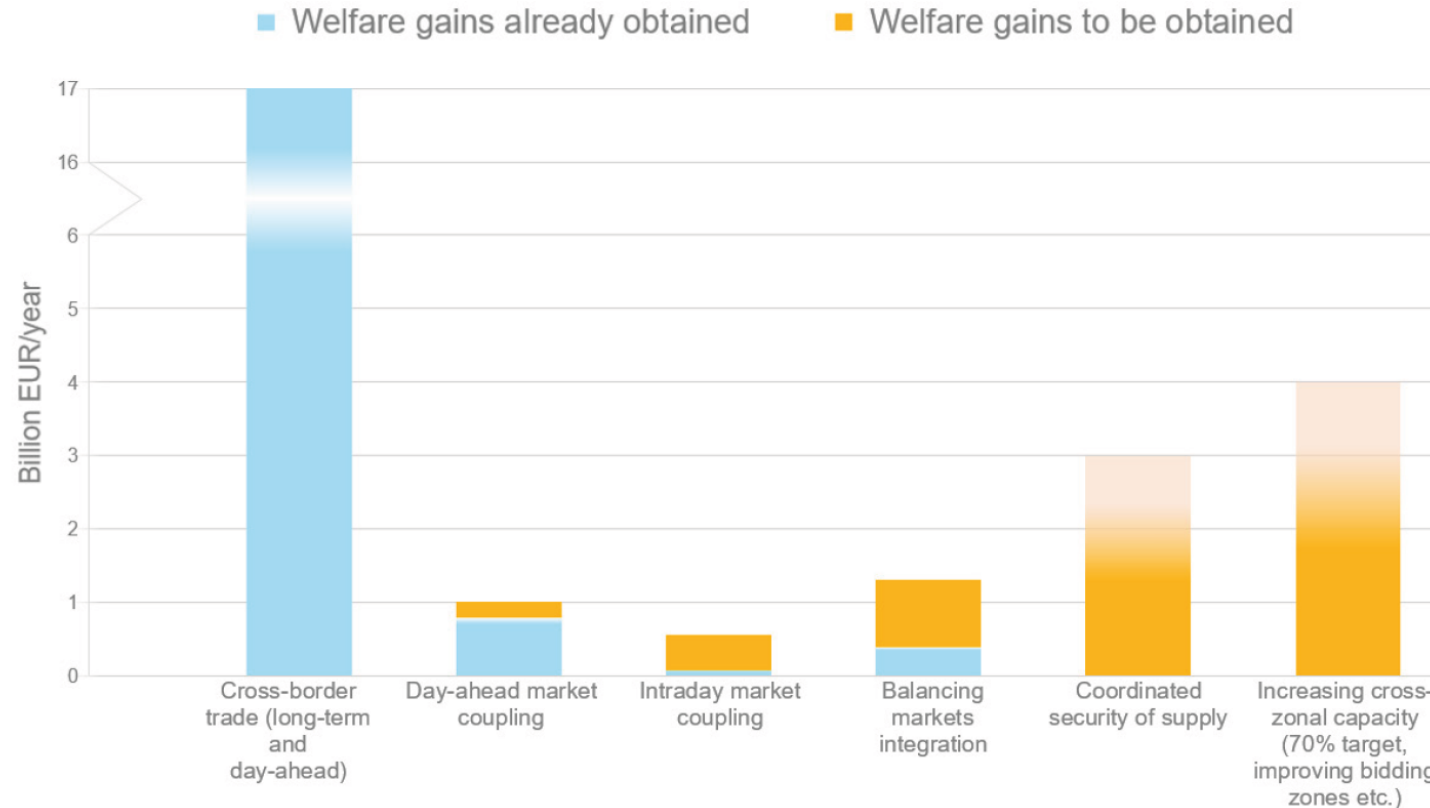
## ILLUSTRATION OF THE CURRENT ELECTRICITY WHOLESALE PRICING METHOD AND A POSSIBLE ALTERNATIVE



**Other approaches recently raised, e.g. the notion of ‘decoupling’ bids and the respective clearing price and/or introducing price ceilings per particular technologies.**

# Policy considerations (3/4): Market design

## SOCIAL WELFARE BENEFITS\* ALREADY OBTAINED AND TO BE OBTAINED FROM VARIOUS ACTIONS INTENDED TO INCREASE EU MARKETS INTEGRATION



**Current market model underpinning European energy market integration has brought significant benefit. Continued and strengthened efforts could deliver more than 300 billion euros over the next decade.**

Source: ACER Market Monitoring Report, various editions.

Note: \*Gross benefits. The faded colour for some categories indicates that the welfare gains rely on third-party estimates and/or are subject to uncertainty.





- Focus on supply *and* on demand
- Short-term *and* longer-term
- Affordability = acceptability. At the same time, cost-reflective pricing is needed to drive behaviour (e.g. greater efficiency) and incentivise new investment
- Role of government and regulatory supervision and monitoring likely to increase



- Global gas (LNG) supply/demand dynamics key factor impacting energy prices. CO2 allowances, weather etc. play secondary roles.
- Impacts all of Europe. Differences in power prices per gas exposure and level of interconnection compared to national demand.
- Next six months a bearer of high prices. Winter a key variable. Storage likely to prove key.
- Policy considerations are significant:
  - Short-term vs. longer-term
  - Relief for the most vulnerable; dealing with price volatility; electricity market design; retaining the benefits of the integrated energy market
  - Managed / orderly transitions becomes ‘the way to go’

**Thank you for the opportunity.  
Looking forward to the discussion.**



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# Back-up slides



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- **Supporting the integration of energy markets in the EU** (by common rules at EU level). Primarily directed towards transmission system operators and power exchanges.
- **Contributing to efficient trans-European energy infrastructure**, ensuring alignment with EU priorities.
- Monitoring the well-functioning and transparency of energy markets, **detering market manipulation and abusive behaviour**.
- Where necessary, **coordinating cross-national regulatory action**.
- Governance: **Regulatory oversight is shared** with national regulators. **Decision-making** within ACER is collaborative and joint (formal decisions requiring 2/3 majority of national regulators). **Decentralised enforcement** at national level.