

ELECTRICITY
MARKET –
CHALLENGES AND
NEW REALITY

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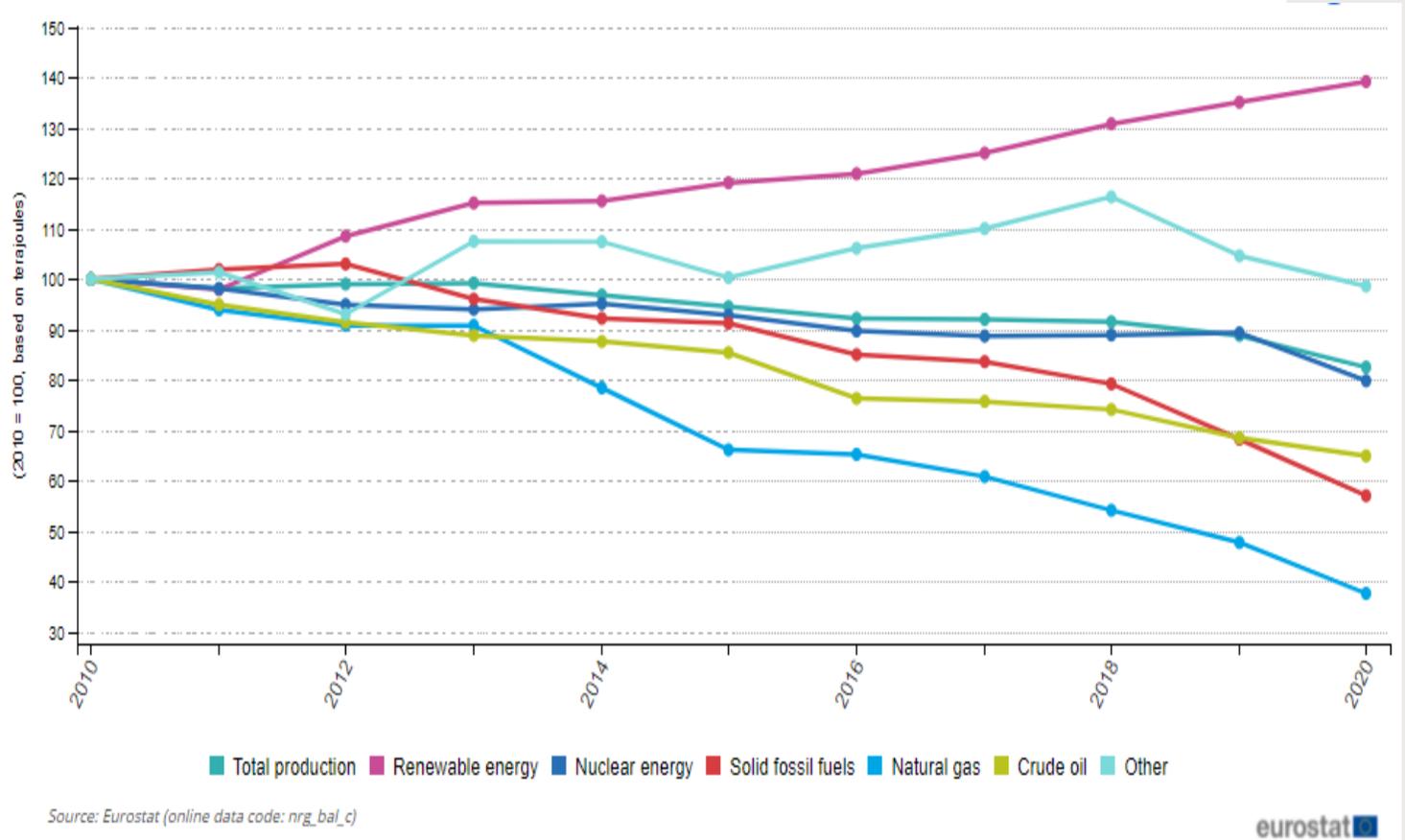


Electricity market is a key market of the world economy.

The European electricity system undergoes significant changes driven by a strong climate action agenda and related development of renewable energies.

Europe's energy sector is shifting from a fossil fuel dominated and supply-centric model to a clean, digitalized and electrified consumer centric system with many distributed resources.

The modernization of the grid faces significant challenges as the production of renewable power drives nodal imbalances, requiring utilities to invest in new transmission and distribution assets.



Production of primary energy by fuel type, EU, 2010-2020



The power prices touched its highs!

Energy commodity prices have reached unprecedented high levels across Europe and they are topping the EU political agenda.

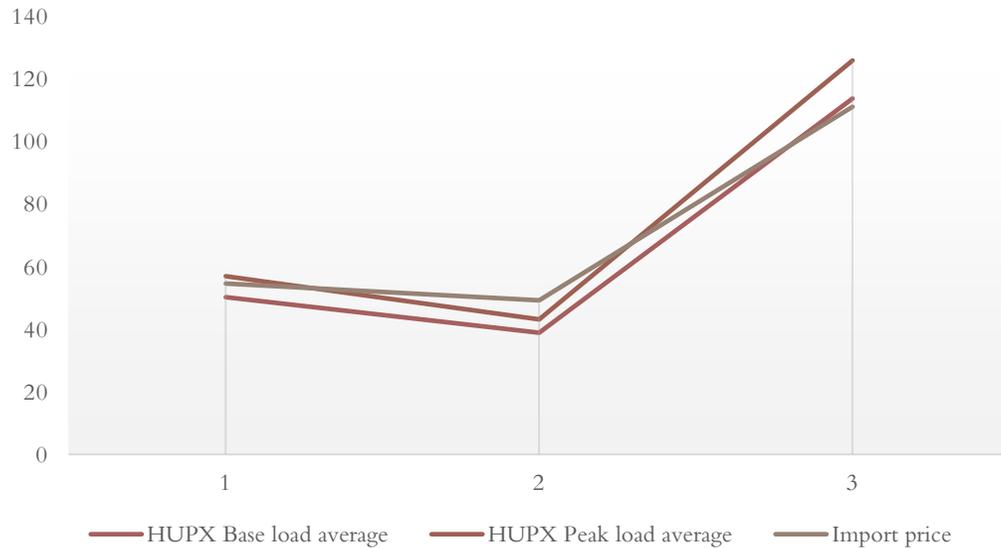
Why are energy prices so high and how long will it last?

- the price of natural gas, coal and carbon price increased (the effect of the gas price increase on the electricity price is nine times bigger than the effect of the carbon price increase. The carbon price rose by around EUR 30 per tonne of CO₂ this year, to the current level of around EUR 60 per tonne of CO₂. Natural gas still plays an important role in the EU energy mix. It currently represents around a quarter of the EU's overall energy consumption. Today, about 26% of that gas is used in the power generation sector (including in combined heat and power plants) and around 23% in industry),
- high demand (triggered by the economic recovery after Covid - 19),
- weather patterns (cold winter, unusually hot summer),
- low renewable generation (renewable sources of power, such as wind, are generating less energy than expected and networks are burning more fossil fuels which are rapidly rising in price and hydro impacted by drought).

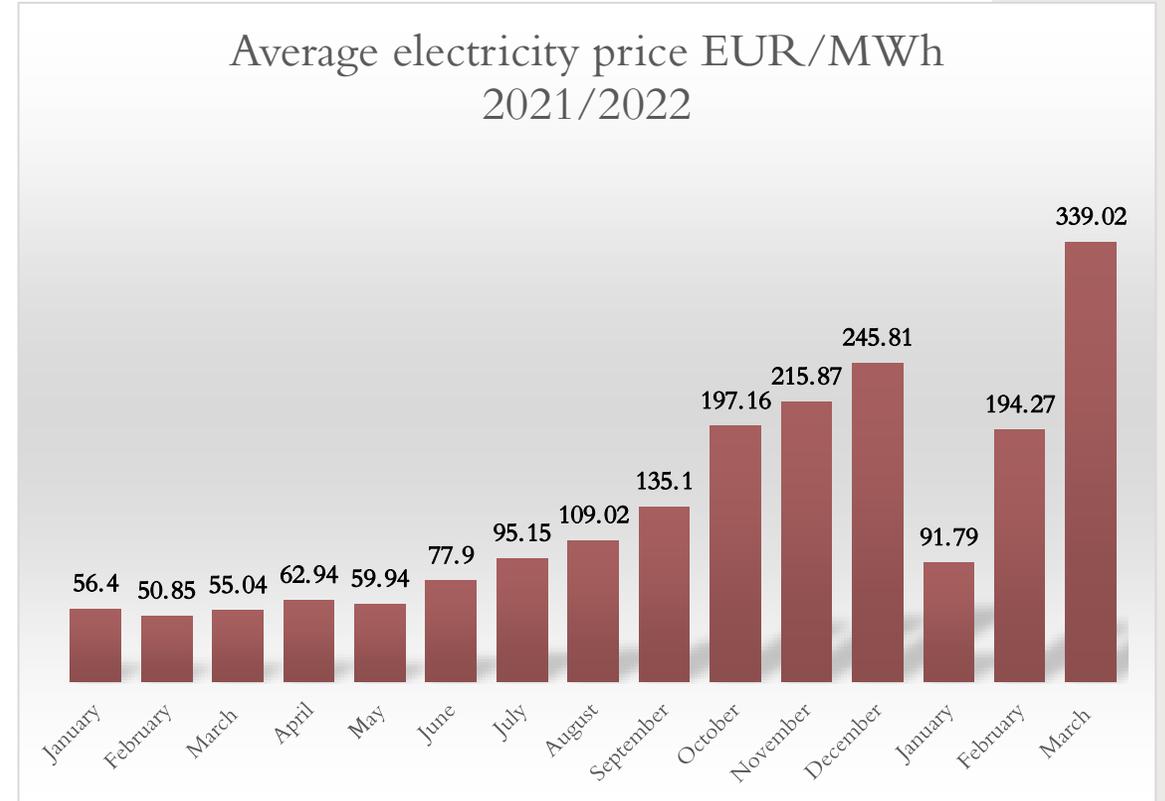
Review of average HUPX DAM prices on Base and Peak energy, and the average import price on electricity in 2019, 2020 and 2021 (in € / MWh)

Average annual prices	2019 €/MWh	2020 €/MWh	2021 €/MWh
HUPX Base load average	50,36	39,00	113,86
HUPX Peak load average	57,01	43,25	126,03
Import price	54,70	49,33	111,27

In 2021 compared to 2020 the average price increased for 90%.



Review of HUPX DAM monthly mean prices for base and peak Trimmed energy and average import electricity prices in 2021



The impact of high energy prices

Where gas plays a greater role in the energy mix, retail prices were affected the most.

While the recent price hikes affect everyone, the energy poor and the low and lower-middle-income households are most impacted.

Repercussions on production, employment and prices, energy-intensive industries.

The sharp increase in energy prices has added to higher inflation.

Trends and expectations

Current market expectations on energy commodities¹² indicate that the current price increases are likely to be temporary.

The prices would remain, however, higher than the average of the past years.



Electricity price forecast

HUDEX HUN Baseload Power - Quarter Futures

Contract	Contract size (MWh)	Daily best bid (EUR/MWh)	Daily best ask (EUR/MWh)	Best Bid at Market Closure (EUR/MWh)	Best Ask at Market Closure (EUR/MWh)	Number of trades	Exchange volume (MW)	OTC volume (MW)	Last trade price (EUR/MWh)	Settlement price (EUR/MWh)	Relative change (%)	Open interest (MW)	
BL Q2-22	2184	-	-	-	-	0	0	3	-	245.91	-4.47 %	1,116	
BL Q3-22	2208	-	-	-	-	0	0	2	-	251.36	-1.00 %	967	
BL Q4-22	2209	-	-	-	-	0	0	13	-	253.21	0.11 %	1,052	
BL Q1-23	2159	-	-	-	-	0	0	0	-	218.27	-0.04 %	0	
BL Q2-23	2184	-	-	-	-	0	0	0	-	-	-	0	
BL Q3-23	2208	-	-	-	-	0	0	0	-	-	-	0	
BL Q4-23	2209	-	-	-	-	0	0	0	-	-	-	0	



Mitigation measures in EU

- Temporary reduction of energy taxes for specific categories of consumers or vouchers and subsidies for consumers and businesses.
- Emergency income support and preventing disconnections.
- Provisions for vulnerable consumers.
- Under certain conditions, provide State aids.
- Investigate possible anti-competitive behavior in the energy market.
- Step up investments in renewable energy, renovations and energy efficiency and speed up renewables auctions and permitting processes.



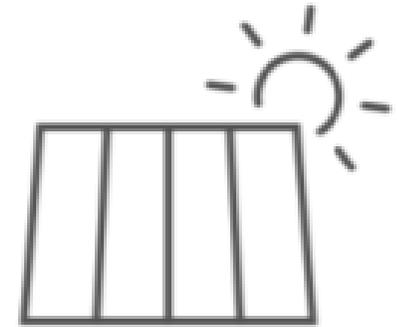
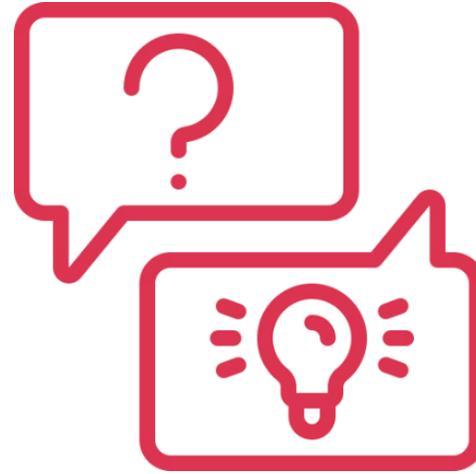
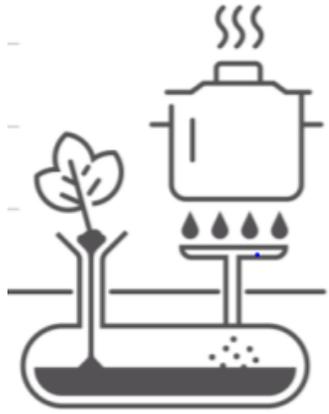
Recently undertaken measures in the Republic of North Macedonia

- Increased the range of vulnerable consumers.
- Simplification of prosumers criteria – ongoing.
- Block tariff introducing – ongoing.
- The obligation for the universal supplier to buy energy from preferential producers has been removed.
- All the available generation capacities in the country were activated properly.
- Actively working on providing new generation capacities.
- State aid

Future Electricity Market challenges!

- The necessity to upgrade and modernize the aging energy infrastructure.
- The need to increase security of supply and avoid disturbances that affect large areas.
- The necessity to handle grid congestion using market-based methods.
- Development and implementation of market-oriented policies with a view to creating a more favorable business environment and fostering competition and sustainable growth of the private sector.
- Review of electricity market design.
- Review commitment for low-carbon economy.
- Regulation review which will enable rapid and coordinated response.
- Support consumer empowerment, providing consumers with information and offering options on how they can participate in the energy market, be better protected and in a stronger position in the energy supply chain.





THANK YOU
FOR YOUR ATTENTION!