Policy brief

The energy prices crisis and the EU's answers

IndustriAll Europe's perspective

Brussels, 10 March 2022

The current high energy prices are among the deepest concerns of industriAll European trade union. This is even more true now that Russia has launched a military aggression against Ukraine and inaugurated a new era of violence and uncertainty. High energy prices firstly have a strong impact on workers' power purchase, especially for low- and middle-income households. Among those income categories, the price shock has particularly hit consumers with flexible contracts, allowing energy suppliers to immediately pass the energy price increases on to their customers.

This mix of extreme price volatility and individual contract schemes is exposing millions of EU citizens to the risk of poverty and exacerbating the already pervasive precariousness. Moreover, the increasing energy prices represent a challenge for the European industries and their workers. Soaring energy prices lead to short-term competitiveness challenges, both on European and international markets. Energy intensive industries, which employ almost 8 million workers in the EU, are obviously at the front line, but all sectors of the EU economy are impacted. The current energy price crisis is therefore a double problem for workers, since it threatens their income and might threaten their jobs.

Energy prices are influenced by a wide series of factors, some conjunctural, others more structural. On the policy side, several pieces of European legislation have an impact on energy prices. Energy market design directives and regulations frame the way EU electricity and gas markets currently work. The EU climate legislation, and notably the EU Emissions Trading System (ETS), sets a price on carbon, which is captured in energy tariffs. But many aspects of energy prices are still in the hands of Member States, mainly when it comes to taxation. In the same way, many national governments have implemented a state aid scheme to support electro-intensive industries. Energy prices are the result of a complex spindle of interacting factors and there is no quick and easy answer to the current problems.

The aim of this policy brief is fourfold. First, taking stock of the issue and the main factors driving the current energy price increase. Secondly, looking at the structural transformations that have shaped the EU energy system. Thirdly, making a state of play of European political answers to the current situation. Fourthly, listing key demands of industriAll Europe to deal with current and future energy price increases.

1. Energy prices crisis: what is happening

A commodity crisis…

The observed increase of energy prices in the EU in 2021 is mainly driven by price developments on EU and international commodity markets. Gas, coal and oil prices were up, while the gas price on wholesale markets has reached unprecedented levels. Spot prices on European gas hubs were six times higher in Q3 2021 than they were in Q3 2020. Unprecedented price increases in European gas hub prices over the summer and autumn months of 2021 were mainly linked to supply contraction, low storage levels and by global demand factors as well[1].

The economic recovery has boosted global energy demand and exacerbated global competition for LNG supply, leading to fewer LNG arrivals in Europe. With similar demand compared to 2019, the EU in 2021 had approx. 10% net less gas supplied at its disposal. So far, the gap has been picked up by gas storage. In addition, the weather conditions observed last summer, lower renewable generation, higher carbon price, pipeline outages, maintenance operations, and lessening investment in new production, have influenced the gas price developments observed in the EU during the second half of 2021.

The geopolitical tensions related to the situation in Ukraine has and might dramatically exacerbate the energy price crisis. Russia is by far the main EU supplier of crude oil, natural gas and solid fossil fuels, and replacing its energy supply to the EU would be a major challenge in the short-term. In 2019, 27% of the EU's crude oil imports came from Russia (Iraq being the second largest supplier, with 9%), 41% of the EU's imports of natural gas came from Russia (Norway being the second largest supplier, with 16%), while 47% of the imported solid fuels originated from Russia (the USA being the second supplier, with 18%)[2].

At this stage, it is impossible to know to what extent the current military operations might impact Europe's energy prices, but the high concentration of EU energy imports makes the EU's energy supply extremely dependent on Russia's supply. In early March, after a week of conflict, the gas price was nearing €125 /MWh (TTF spot -2022 03 02), with peaks at €194/MWh, whereas oil prices were beyond USD 110/barrel (Brent USD 113/Barrel, WTI USD 111/Barrel) against circa USD 80/Barrel at the start of 2022.

… but also an electricity price crisis

The energy price crisis is not limited to gas and energy commodities. Prices of electricity in European markets also soared last year, with "the European Power Benchmark, which averaged €105/MWh in Q3 2021 , equivalent to 211% higher than Q3 2020, and 164% up on the same period in 2019"[3]. The price

[1] European Commission, *Quarterly Report on European Gas Market,* vol.14, 2022. https://energy.ec.europa.eu/system/files/2022-01/Quarterly%20report%20on%20European%20gas%20markets%20Q3_2021_FINAL.pdf ,
[2] https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html
[3] https://energy.ec.europa.eu/system/files/2022-01/Quarterly%20Report%20on%20European%20Electricity%20markets%20Q3%202021_v1.2_1.pdf

increase has materialised with varying intensity between Member States, with the largest year-on-year price increases registered in Ireland (+323%), Portugal (+215%) and Spain (+214%)[3].

The price increase on the electricity wholesale market is mainly the direct consequence of the commodity price increase, since fossil fuels remain important sources of power generation in the EU with 38.3% of power generation in 2019[4] and 35% in Q3 2021[3]. It is worth stressing that the impact of the commodity price increase on electricity goes beyond the share of the related commodities in the power generation since the price setting mechanism based on merit order and marginal cost lead to the use of the last generation source, needed as the price setter[5]. This means that an electricity mix made of a majority of decarbonised sources, but requiring fossil based sources to ensure part of its supply, is also exposed to the price increase of fossil-based electricity[6].

The carbon price of the EU Emissions Trading System (ETS) is also playing a role here, albeit more limited. Under the EU ETS, the wide majority of power stations must pay for the CO_2 they emit. Due to a series of factors – mainly the anticipation of future compliance needs of companies under the EU ETS – the carbon price also dramatically increased in 2021, with emission allowances being 169% more expensive in Q3 2021 compared to Q3 2020. Higher carbon prices have also contributed to make electricity more expensive, even though the impact of the gas price is nine times bigger[7]. This is especially the case in countries with an electricity mix dependent on fossil sources. But the carbon price is also impacting the electricity price on the wholesale market, since it is part of the marginal cost price setting mechanism.

It is worth noting here that the EU has experienced a significant increase in the share of coal in its power generation, despite a carbon price at a historical high at the end of 2021[8]. Actually, the gas price increase has reversed the coal to gas switch and, as a result, lignite-based generation in Q3 2021 rose by 12% year-on-year (more than 5 TWh), while hard coal-fired generation increased by 34% year-on-year (or 12 TWh).

It is hard to foresee how commodity prices and carbon prices will interact in the future. But, since the EU will massively depend on electricity to reach carbon neutrality, securing synergies between the EU ETS and the EU wholesale market will be of strategic importance. Keeping fossil-based electricity as a price setter would not make sense in an EU widely relying on decarbonised electricity to cover its energy needs, since it would generate irrelevant extra costs and disproportionate profits for power plants with low marginal costs (see below).

2. Energy prices crisis: structural challenges

The historical sequence we are in explains in many ways the main factors behind the current energy price increase. Post-pandemic recovery and geopolitical tensions are obviously responsible for many of the current price developments. However, what is happening, added to the EU exposure to price

[4] https://op.europa.eu/en/publication-detail/-/publication/41488d59-2032-11ec-bd8e-01aa75ed71a1/language-en
[5] See Box 1 for further explanations
[6] See ACER infographic in annex
[7] European Commission, *Quarterly Report on European Electricity Market*, vol14, 2022, p.10
[8] The military agression against Ukraine has led to a significant decrease of the EU ETS carbon price with allowances nearing € 55 after a week of conflict. At this stage, it is impossible to know if that impact will last.

developments on global commodity markets, is also the consequence of long-term factors and past policy choices.

A structural dependence on imported energy

The EU is highly dependent on energy imports to meet its energy needs. In 2019, 61% of its gross energy consumption relied on imported energy products[9]. It is worth noting that the energy dependency rate has increased in the last two decades. In 2000, the EU imported 56% of its energy needs. That proportion is even more important when fossil fuels are considered. In 2019, 95% of crude oil and petroleum consumption was imported, and 70% of hard coal came from abroad. Import dependency has been increasing during the last decade.

Available data also show that the share of gas in EU energy consumption is increasing, whereas its domestic production is decreasing. Gas represents an important energy source for the EU. It covered 23% of the EU's primary energy needs in 2018 (against 20% in 2000)[10]. The increase of the gas share in the EU energy mix is partly due to the climate agenda and the related push to phase down/out coal consumption that has taken place for some years now. With 90% of its gas consumption being imported in 2019 (against 65% in 2000), the EU is becoming more and more dependent on imported gas. As a result, the EU is particularly vulnerable to price volatility on global markets. As a price taker, the EU can only in the short term mitigate the impact of that volatility through storage, supply diversification and purchasing policy.

Rising decarbonised electricity needs

The EU will massively need decarbonised electricity to reach carbon neutrality. Direct electrification of certain energy intensive industries, production of hydrogen and other e-fuels and e-gas, decarbonisation of road transport, as well as heating and cooling of buildings, are options that will require important volumes of clean electricity. These additional needs will also come on top of the additional electricity needs entailed by the digital transition and the related infrastructure. According to the estimates of the European Commission, electricity will become the dominant energy carrier and its share in final energy consumption will be brought from 22% in 2015 to 29% in 2030, and then in 2050, ranging from 41% to 53%, depending on the scenarios used[11].

The first challenge here will be to secure enough generation to supply an increasing demand, keeping in mind that the supply will have to be decarbonised. The European Commission expects an increase in the final demand for electricity of 11% to 13% between 2015 and 2030, and around 40% between 2015 and 2050.[12] According to Eurelectric, the strong electricity uptake in all sectors will bring the EU electricity

[9] https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html
[10] European Commission, *EU Energy in figures*, 2021.
[11] https://ec.europa.eu/clima/system/files/2018-11/com_2018_733_analysis_in_support_en.pdf (p.72)
[12] European Commission, « *Stepping up Europe's 2030 climate ambition ; Investing in a climate-neutral future for the benefit of our people* » https://eur-lex.europa.eu/resource.html?uri=cellar:749e04bb-f8c5-11ea-991b-01aa75ed71a1.0001.02/DOC_2&format=PDF

consumption from 2.9 k TWh in 2015 to 4.8-6,0 k TWh in 2050, depending on the scenario considered[13]. ENTSOE, the association representing electricity transport system operators, foresees a global electricity demand equivalent to 4.3 k TWh in 2050 for the EU (+UK)[14]. Even though the size of the range invites us to further clarify what the EU's electricity needs will be in the coming years, all available studies indicate a significant increase in the demand for electricity in the coming decades.

A significant part of these additional electricity needs will be provided by renewable energy sources[15]. In its Fit for 55% package, the European Commission has proposed to increase the share of renewable energy in the EU's final energy consumption to 40% by 2030 (against 19% in 2019). In the European Commission Impact Assessment accompanying the proposal, to increase the 2030 emission reduction target to -55%, reaching 40% of renewables in final energy consumption would mean producing 60-70% of the EU electricity from renewable sources[16]. According to industry groups, this entails that EU wind energy capacity would need to be 452 GW by 2030 (374 GW onshore and 79 GW offshore). This is equivalent to almost tripling the 179 GW installed today and 90 GW above what the EU-27 pledged in their 2030 National Energy & Climate Plans[17].

In the same way, the proposed target for renewables would lead to 660 GW of solar power installed by the end of this decade – representing 58 GW installed each year – whereas the total solar installed capacity was 137.2 GW in 2020[18]. Such a boom will generate employment opportunities along the supply chains, but the challenge of finding the skilled workforce should not be underestimated[19]. Making these goals a reality will require solutions to overcome significant financial, regulatory, technical challenges, while local acceptance of renewable projects should not be taken for granted. Securing the affordable supply of the critical raw materials, such as lithium, cobalt and rare earth elements, that are crucial components of many clean energy technologies, will also be a considerable task. The war in Ukraine has had an immediate impact on prices of many raw materials, with Reuters reporting unprecedented price hikes[20].

The size of the challenge ahead when it comes to the electricity system appears even bigger if we consider recent announcements by several Member States that have programmed the decommissioning of important production capacities, notably in the context of national coal or nuclear phase-out plans. By

[13] https://cdn.eurelectric.org/media/3172/decarbonisation-pathways-electrificatino-part-study-results-h-AD171CCC.pdf
[14] https://2020.entsos-tyndp-scenarios.eu/scenario-results/
[15] According to European Commission estimates, the share of nuclear energy in the electricity mix is relatively stable until 2035 but the nuclear capacity increase somewhat beyond 2035 (see 2030 Impact assessment, p. 58)
[16] European Commission, « *Stepping up Europe's 2030 climate ambition ; Investing in a climate-neutral future for the benefit of our people* » https://eur-lex.europa.eu/resource.html?uri=cellar:749e04bb-f8c5-11ea-991b-01aa75ed71a1.0001.02/DOC_1&format=PDF
[17] Wind Europe, *Securing the course towards climate neutrality*, September 2021. https://windeurope.org/wp-content/uploads/files/policy/position-papers/20210930-WindEurope-Setting-the-course-towards-climate-neutrality-fit-for-55-position-paper.pdf
[18] https://electrification-alliance.eu/articles/solar-will-emerge-from-the-fit-for-55-as-one-of-the-eus-primary-energy-sources/
[19] https://www.etui.org/publications/employment-effects-renewable-energy-transition-electricity-sector
[20] https://www.reuters.com/markets/europe/commodities-gold-above-2000-safe-haven-appeal-nickel-up-over-20-2022-03-07/

2030-35, 110 GW of controllable power will be decommissioned from the grid[21]. On that basis, France Stratégie has processed available plans published by national energy regulators and this exercise shows that from 2030, and maybe before, controllable installations will not be able to supply average peak demand[22]. What is looming here is a European electricity system made of national mixes, unable to supply their own needs and relying more and more on imported electricity and interconnexions, storage, as well as on demand-response, especially in peak periods.

Towards a decentralised electricity system based on intermittent sources

This deep and rapid transformation goes hand-in-hand with a revision of what "security of supply" means. With electricity systems relying more and more on intermittent sources, the balance between supply and demand requires a mobilisation of additional, flexible capacities that can fill the power deficit when renewable production is too low to supply the demand. There is also a need to use storage options, both in case of a surplus, or of a shortage of electricity production. Large-scale storage options (power to X, or hydro) and smaller decentralised installations (batteries) have a role to play to balance the system. Demand-response measures also involve consumers who adapt their consumption to electricity supply. Through smart counters, households and SMEs can, to some extent, adapt their consumption to intra-day electricity production variations, whereas large-scale industrial consumers benefit from contracts organising the possibility of power interruption against financial compensation.

New renewable sources, flexible generation sources, new storage installations, development of demand-response measures, power to gas, and the need to increase cross border energy flows across Europe, are developments that require massive investment in the electricity infrastructures. According to ENTSOE, "In addition to the 35 GW of cross-border transmission capacity reinforcements by 2025 that are already well-advanced, the "system needs study" finds that 50 GW would be cost efficient between 2025 and 2030, and 43 additional GW by 2040. Investing €1.3 bn /year between 2025 and 2030 translates into a decrease of generation costs of €4 bn /year, while investing €3.4 bn /year between 2025 and 2040 decreases generation costs by €10 bn /year"[23].

Beyond the electricity grid investment needs, it is worth reminding ourselves here that reaching the EU 2030 emission reduction target will also be an investment challenge. According to the European Commission estimates, reaching -55% would require €438 bn of additional annual investment, equivalent to 2.7-3% of GDP[24]. In the same way, the International Energy Agency has recently warned that the "clean energy investment […] remains far short of what is required to meet rising demand for energy services in

[21] Elia, *Adequacy and flexibility study for Belgium 2020-2030,* June 2019.
[22] France Stratégie, *Quelle sécurité d'approvisionnement électrique en Europe à l'horizon 2030 ?*, Note d'analyse n°99, Janvier 2021.
[23] See ENTSOE, *Completing the Map. Power Systems needs in 2030 and 2040*, https://eepublicdownloads.blob.core.windows.net/public-cdn-container/tyndp-documents/TYNDP2020/FINAL/entso-e_TYNDP2020_IoSN_Main-Report_2108.pdf
[24] European Commission, *In-depth Impact assessment accompanying the* Communication *Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people* https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020SC0176

a sustainable way. It would need to triple by 2030 to get the world on track for a pathway consistent with limiting global warming to 1.5 °C"[25].

A single EU energy market with 27 energy mixes

The achievement of the EU single energy market is the key objective of the various gas and electricity packages adopted by the EU since 1996 to harmonise and liberalise the energy sector. Moreover, several policies have led to the development of European energy infrastructures. For instance, Trans-European Networks for Energy (TEN-E) is a policy linking the energy infrastructure of the Member States through the financing of projects of common interest (PCIs) and priority projects among trans-European electricity and gas networks. As a result, European gas and electricity markets are now deeply interconnected. Molecules of gas and electrons flow across borders through networks of infrastructures that connect European regions and countries, making them deeply interdependent when it comes to energy, although a lack of interconnectors is one of the challenges in periphery countries e.g. the Iberian Peninsula.

To cope with the risk of regulatory fragmentation within the European energy system, the EU set up the EU Agency for the Cooperation of Energy Regulators (ACER). ACER is responsible for ensuring cooperation between national regulatory authorities and for monitoring development of the network and the internal electricity and gas markets. ACER's role was strengthened in 2019 in the field of wholesale market supervision and cross-border infrastructure management. In addition, two structures of cooperation for European Network Transmission Systems Operators (ENTSOs) have been created: one for gas (ENTSO-G) and one for electricity (ENTSO-E). Regional cooperation centres were also put in place by the 2019 regulation for the electricity market in order to facilitate cross-border systems at a regional level.

Despite the obvious deep interdependence of Member States when it comes to energy and the development of common infrastructures and market rules, the EU Treaty still considers the energy mix as a matter of national competence. Art. 194 clearly states that EU energy *"measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply".* This leads to a situation where Member States can decide on their own energy policy strategy, provided that they comply with the EU legislation. It might also lead some Member States to rely on imports which, if not well coordinated, enhance the exposure to supply risk.

Market-driven price setting mechanisms

The liberalisation of the EU gas and electricity systems has led to entrusting markets with the price setting on the wholesale markets. According to the 2019 EU Regulation on the internal electricity market, the promotion of short-term and scarcity pricing on the wholesale market seems to be even more necessary, with an electricity system where the share of variable sources will be necessary: "*Effective scarcity pricing will encourage market participants to react to market signals and to be available when the market most needs them and ensures that they can recover their costs in the wholesale market. It is therefore critical to*

[25] https://www.iea.org/commentaries/europe-and-the-world-need-to-draw-the-right-lessons-from-today-s-natural-gas-crisis

ensure that administrative and implicit price caps are removed in order to allow for scarcity pricing. When fully embedded in the market structure, short-term markets and scarcity pricing contribute to the removal of other market distortive measures, such as capacity mechanisms, in order to ensure security of supply"[26]. Having EU energy wholesale energy markets exposed to the random supply and demand balance is really at the core of the EU energy strategy.

In the 2019 Electricity Regulation, the only specific instrument to deal with price volatility and its consequences is long-term hedging: " *in order to allow market participants to be protected against price volatility risks on a market basis, and mitigate uncertainty on future returns on investment, long-term hedging products shall be tradable on exchanges in a transparent manner and long-term electricity supply contracts shall be negotiable over the counter, subject to compliance with Union competition law"*[27].

The 2019 Directive on common rules for the internal market for electricity, reiterates that Member States are allowed to impose public service obligations on electricity undertakings when pursuing objectives of general economic interest[28]. This includes public interventions in price setting for the supply of electricity, which nevertheless are subject to specific conditions defined by the Directive[29]. Price setting for the supply of electricity can only take place in clearly defined circumstances, such as supply constraints leading to significant price increases, and to target well identified beneficiaries, and it should be limited in duration. Even on the retail market, market-based price setting is the rule and regulated prices can only be a temporary, targeted and proportionate exception. In its Art 28, the Directive also sets an obligation for Member States to protect vulnerable consumers through "appropriate measures", whereas Art. 29 imposes Member States to assess and monitor energy poverty.

Final consumers buy energy to suppliers (that can produce or import energy) based on purchasing contracts. For electro intensive industries, long-term contracts are usual practice in the form of Power Purchase Agreements (PPAs) that secure a volume of energy provision at a fixed price, usually for 10 to 15 years[30]. For smaller consumers, suppliers offer fixed price contracts (2-3 years) or "dynamic electricity price contracts". If the 2019 Directive imposes Member States to ensure that final consumers have access to "dynamic price contracts", it does not contain any obligation to secure access to fixcontracts. As a result, in the current context of volatility on the wholesale market, some energy suppliers only offer flexible contracts to their small consumers[31]. Due to the prevalence of short-term and flexible contract arrangements for small consumers, households and SMEs are therefore more exposed than large consumers to energy price volatility.

[26] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0943&from=EN (Recital 24)
[27] *Idem,* Art 3 (o).
[28] DIRECTIVE (EU) 2019/944 of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Art 9. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0944&from=EN
[29] *Idem,* Art 5 §3-5.
[30] PPAs are also a means supported by the EU to mobilise investment to develop further renewable energy in Europe.
[31] As an example, in Belgium, ENECO, third energy supplier, has announced the end of fixed contracts https://www.lesoir.be/416222/article/2022-01-05/energie-eneco-arrete-les-contrats-fixes-en-belgique

Energy bills also depend on taxation schemes that are, to a large extent, determined at national level. Bills include energy used, but also amounts due to the other players of the energy supply chain, i.e. the costs of using the networks and various taxes. The share of network costs and taxation in the final energy bills mitigates the impact of wholesale energy markets' price developments on the bill paid by the final consumers. It also makes the situation different across Member States, despite efforts to harmonise energy taxation regimes (through the Energy Taxation Directive). It also means that certain levers to cushion the current energy price crisis are in the hands of Member States rather than in those of EU institutions.

A fragmented energy supply chain where risk is borne by final consumers

The liberalisation of the EU energy market has led to a separation of the tasks among the energy supply chain and to a breaking of its vertical integration. To quote the third EU energy package, the "unbundling" must lead to the separation of energy supply and generation from the operation of transmission networks.

Keeping in mind that commodity price developments depend on global markets and that a series of competences remains in the hands of Member States (e.g. universal service, public service obligations, taxation, network cost charging), ensuring the coherence and consistency of rules defined at various political levels is of strategic importance. Incoherence and inconsistencies between these rules can expose part of the energy value chains to unfair financial constraints that impact employees or even lead to risk of insolvencies. This is especially true for companies that transport, store or distribute energy which might be squeezed between electron or molecule prices they do not control, while their revenues are influenced – and sometimes imposed – by national authorities.

Energy suppliers are also exposed to a series of important risks, such as the non-payment of final consumers, the need to cover part of their supply obligations by purchasing on the spot market, at prices much higher than expected, or the need to use the balancing market, which is also experiencing a price hike. The fragmentation of the energy supply chain makes it impossible for the parts making profits to absorb the financial risks of other parts. In case of liquidity problems, either suppliers must pass on these problems to final consumers by changing contracts or tariffs – while respecting the consumers' protection rules – or they end up in insolvency[32], and final customers must negotiate a contract with another supplier at conditions set by the market.

For the time being, market conditions are often worse than what fixed contracts offered. This higher exposure of final consumers might be seen as the consequence of an economic model based on deregulated competition, where suppliers can lure consumers with low-cost conditions that might be a highway to unbearable energy bills when prices are soaring on the wholesale market.

[32] In the UK, 19 energy suppliers went bust between August and November 2021, impacting 2 million customers https://www.bbc.co.uk/news/business-59137440

A fragmented energy supply chain with concentrated profits

If some parts of the energy supply chain have been driven into difficult situations, other parts have experienced large profits, raising the question of possible windfall profits, where companies have benefited from much higher sales prices whereas their costs have remained the same. Due to the complexity of the energy supply chain and because of the diversity among Member States, assessing the situation is extremely complex, and getting a clear picture at EU level will take time (see below). However, existing assessments made by national regulators allow us to identify where the potential windfall profits are located. The Belgian regulator – CREG – has recently published a report assessing the excess profits made along the energy supply chain[33]. It clearly shows that the main beneficiaries of the current energy price crisis have been gas producers, such as Gazprom[34], Equinor[35], Total Energies[36] and BP[37].

Excess profits might also exist in other parts of the supply chain (traders, gas-fired power stations, nuclear power stations, CO_2 markets), but to a much lower extent, and keeping in mind that situations differ across Member States. When it comes to energy transport infrastructures, the financial situation of Transport System Operators (TSOs) is closely monitored by national energy regulators, and excess profits will be taken into account when calculating network costs in future contracts. More recently, some experts have pointed out the possible windfall profits made by electricity producers using renewable energy sources[38].

3. Energy prices crisis: taking stock of what is done

Member States' initiatives: a sample

As a starting point, it is worth remembering that on average, the energy bill is made up of three components: taxes and levies (35%), network (30%), energy (35%). If national governments have little influence on energy prices, taxes and network costs can be influenced by the policies they implement. At this stage, a full list of measures implemented by the EU 27 Member States to cushion the energy price crisis is still missing, but the EU toolbox (see below) has already identified a series of measures that national governments can adopt.

[33] https://www.creg.be/sites/default/files/assets/Publications/Studies/F2336FR.pdf
[34] Gazprom performance for « FY2021 was at an all-time high, with revenue reaching ₽3.068 trillion in FY2021, up 53.5% y-o-y. Adjusted EBITDA1 (earnings before interest, taxes, depreciation, and amortisation) reached ₽986.1 billion, demonstrating a two-fold increase year-on-year » https://ir.gazprom-neft.com/news-and-events/news/2022/gazprom_neft_s_2021_net_profit_reaches_an_all_time_high_5748758/
[35] Equinor reported adjusted earnings after tax of USD 10.0 billion for the full year 2021. https://www.equinor.com/en/news/fourth-quarter-2021-results-and-capital-markets-update-2022.html
[36] In 2021, the Company generated cash flow of USD 30.7 billion, up USD 13 billion compared to 2020, and adjusted EBITDA of USD 42.3 billion https://totalenergies.com/system/files/documents/2022-02/4Q21-Results.pdf
[37] In 2021, BP reports an EBIDA of USD 30.8 billion (vs 19 in 2020) https://www.bp.com/en/global/corporate/news-and-insights/press-releases/fourth-quarter-2021-results.html
[38] https://www.euractiv.com/section/electricity/opinion/high-electricity-prices-renewables-and-windfall-profits-all-paid-for-by-eu-citizens/

National governments can take measures to directly support final consumers. Temporary VAT reductions on electricity have been decided in countries like Belgium or Spain. In Germany, the previous government haddecided to lower the renewable electricity surcharge by almost 43%. In France, the "*taxe intérieure sur la consommation finale d'électricité*" (TICFE) will be lowered from €22.5/MWh to €1/MWh for households and to 0.50ct/MWh for enterprises[39]. The Italian government has suspended the levy for energy infrastructure costs until the end of 2021. Greece decided to allow a premium of €30/MWh for the first 300 kWh consumed. Belgium will offer a one-off energy cheque of €100 for households. France took a similar decision in December, targeting vulnerable households, that has benefited 5.8 million households[40].

National governments have implemented another set of measures by targeting specifically vulnerable households. In Belgium, the energy social tariffs have been extended until the end of Q2 2022. Both Portugal and Greece have considered similar measures.

National governments have also used the possibility to regulate prices. Spain has limited the increase of the last resort tariffs to 5% against an initial increase of 40%. France has put in place a "tariff shelter" for energy to limit the price increase of regulated prices to 4% in 2022, based on the TICFE reduction mentioned above, and on an obligation for EDF to increase the volume of electricity sold to its competitors below the market price [41].

Portugal and Luxemburg have invested in measures aiming to reduce the final energy consumption of consumers, notably through a better financing of building renovations.

Greece has also envisaged a regulatory reform aiming at providing a better protection to consumers.

The Spanish government has also implemented measures to capture excessive profits made by electricity producers using hydro and nuclear generation, and has decided to cap gas price increases.

Additional carbon pricing revenues from the ETS or from domestic schemes will also allow Member States to finance additional measures to mitigate the impact of the energy price crisis on households' energy bills.

It is hard to draw meaningful conclusions from such a fragmented overview, but it shows the portfolio of measures Member States are currently using to provide solutions to the social urgency related to the energy price increase. If tax reductions, energy vouchers, or regulated prices might have an important role to play in the short run, more structural measures will obviously be needed to tackle the main roots of the current energy price crisis.

[39] A similar measure has been implemented for gas taxation
[40] https://www.gouvernement.fr/actualite/hausse-du-gaz-et-de-l-electricite-une-aide-de-100-eu-pour-aider-les-menages-modestes
[41] https://www.service-public.fr/particuliers/actualites/A15480

EU actions to mitigate the energy prices crisis

The EU has recently published a toolbox to tackle energy prices. This document lists the initiatives that Member States can implement within the framework of the EU Energy and Single Market rules. Compensation measures and direct support for poor end-users, safeguards against disconnections, tax reductions, reform of the renewable support schemes, and the provision of state aids to companies and industries, are among the most important recommendations to Member States.

The European Commission is also investigating possible "anti-competitive behaviour" of companies operating on the EU Market.

The Commission also asked European energy regulators (ACER) to assess the wholesale electricity market design in comparison to alternative market models, and to propose recommendations to the Commission where relevant. A preliminary report[42] has been published by ACER, but the final one is expected in April 2022. The key messages of the ACER preliminary report are:

1. Gas and electricity prices are correlated in the EU
2. High gas dependency and low electricity interconnectivity increases a country's exposure to high electricity prices
3. Hub-based pricing and the shift away from oil-indexed long-term gas contracts has yielded significant benefits
4. Gas supply will need to become more flexible to accommodate a combination of lower average demand with shorter periods of higher peak consumption
5. High gas and electricity prices are transitory and should fall significantly in 2022
6. No obvious market manipulation so far

The European Commission has also entrusted the European Securities and Market Authorities (ESMA) with the task of enhancing its monitoring of the EU carbon market[43]. This preliminary report, which concludes with the absence of major problems in the way the EU ETS is working shows that more than 50% of open positions are held by investment firms or funds and other financial actors, i.e. entities having no compliance obligations under the EU ETS.

Enhancing solidarity among Member States through cross-border initiatives, joint procurements, and energy storage is also part of the necessary initiatives expected from the European Commission. The Commission also announced an enhancement of international energy outreach to ensure the "transparency, liquidity and flexibility of international markets". In that context, and to try to adapt to the

42 https://extranet.acer.europa.eu//Official_documents/Acts_of_the_Agency/Publication/ACER's%20Preliminary%20Assessment%20of%20Europe's%20high%20energy%20prices%20and%20the%20current%20wholesale%20electricity%20market%20design.pdf

43 https://www.esma.europa.eu/sites/default/files/library/esma70-445-7_preliminary_report_on_emission_allowances.pdf

geopolitical tensions with Russia, the EU external action service intensified its contact with the US, Qatar and Azerbaijan in January 2022 to explore a possible increase of LNG delivery to Europe[44].

The revised Guidelines on State aid for climate, environmental protection and energy, published at the end of 2021[45], will make it easier for Member States to financially support projects and initiatives in line with the climate objectives of the European Green Deal, and that will have an impact on the EU energy bill. These new state aid rules should boost the deployment of renewable energy and energy efficiency measures, including through improving the energy performance of buildings in Europe, but electricity supply security or energy infrastructures should be better supported too. Public aid aiming to provide reductions from electricity levies for energy-intensive users are also in the scope of the Guidelines' revision. However, there is no mention of specific aid for vulnerable consumers exposed to a risk of energy poverty, even though some of the measures mentioned might benefit them too.

On 8 March 2022, the European Commission published a new Communication called 'REPowerEU: Joint European Action for more affordable, secure and sustainable energy' to adapt the EU's energy price crisis in response to the aggression against Ukraine and continued price volatility[46]. This new policy document "sets out new actions to ramp up the production of green energy, diversify supplies and reduce demand, focusing primarily on gas, which significantly influences the electricity market and where the global market is less liquid". For oil and coal, the EU has a broader range of potential suppliers.

Among the specific initiatives proposed by the Communication, diversifying gas supplies should be a priority. Enhancing LNG and non-Russian gas pipeline imports, boosting domestic biomethane production, and accelerating clean hydrogen deployment, are foreseen to help to reduce EU gas dependence on Russian gas by two thirds by the end of this year, alongside increased efforts on renewable energies and energy efficiency. It should be here stressed that these elements might improve the EU's energy security of supply but that the impact on price might be rather limited since the EU is a price taker when it comes to imported gas. Moreover, alternatives to fossil gas will only provide a very limited alternative to Russian gas in the short term and their production costs remain relatively high[47].

The Commission also proposes a series of measures to mitigate the price impact on the retail market. Regulated prices (using Art. 5 of the EU Electricity Directive) and state aids can be used to provide the necessary support for final consumers, including companies facing liquidity issues because of the energy prices. Taxes on windfall profits, the use of the extraordinary ETS revenues generated in recent months, and the 'general escape clause' of the Stability and Growth Pact, are seen as financial sources for Member States to deliver these measures.

[44] https://eeas.europa.eu/headquarters/headquarters-homepage/110293/tensions-rising-our-eastern-borders-unity-remains-our-strength_en
[45] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC0218(03)&from=EN
[46] https://energy.ec.europa.eu/repowereu-joint-european-action-more-affordable-secure-and-sustainable-energy_en
[47] Whereas the EU has imported 165.4 bcm of Russian gas in 2019, biomethane could replace 3.5 bcm at the end of 2022 according to EC estimates. Biomethane production cost is currently in the range of €90-95/MWh. Clean hydrogen costs depend on low-carbon electricity price and its uptake will take a few years.

A legislative proposal establishing obligations for gas storage will be published in spring 2022, while initiatives will be launched to coordinate the refilling operations of gas storage units based on solidarity principles.

This set of initiatives from the EU is clearly not the end of the discussion about the possible answers to the complex energy crisis we are in and facing. Fixing the problems identified above will require a wider set of measures, enshrined in a long-term and coordinated strategy. The ACER Final Report on wholesale energy markets, as well as the ESMA final report on the ETS, will extend and complement the already existing initiatives to cope with the energy price crisis. At this stage, we cannot foresee what the overall impact of the Russian aggression against Ukraine will have on the EU energy system, but what is certain is that its impact will be strong and deep.

4. Energy prices crisis: urgent action remains necessary to protect purchasing power and industrial jobs!

IndustriAll European Trade Union has been following European energy policy debates for many years and has adopted detailed policy papers and analysis on the topic. Building on these positions and analysis, we believe the following elements should be taken into account when designing policies to tackle the current energy prices crisis, keeping in mind that the military aggression against Ukraine is creating a web of uncertainty surrounding these crucial questions.

The EU must implement urgent measures to secure affordable energy supply in the short-term

Even if reaching the climate neutrality objective must remain the EU's objective, the current geopolitical situation and its impact on energy supplies and costs demand the mobilisation of all available means to secure affordable energy for all in the coming months. Energy is a key condition of our prosperity and Europe cannot replace fuels and electricity imported from Russia overnight. Energy efficiency, reinforced efforts for supply diversification, the acceleration of renewable energy deployment, the use of existing low-carbon power generation units, mandatory storage obligations, as well as the use of available domestic energy resources, must be among the priorities of the EU to prepare Europe ahead of next winter. For this to happen, the necessary framework conditions providing investors with certainty and predictability - e.g. swiftly accelerating permitting procedures and swiftly agreeing on the criteria to certify low-carbon and renewable hydrogen and gas – are urgently needed.

At the same time, the EU should learn the lessons from the energy crisis and avoid slipping from one form of dependency (Russian natural gas) to another dependency on hydrogen imports from another set of countries. Any strategy chosen should be based on a sound impact assessment and be subject to the social, environmental and economic sustainability criteria.

The European Green Deal is part of the answer, not the primary problem

The "energy efficiency first" principle must be the cornerstone of the EU energy policy. The Energy Efficiency Directive, the Energy Performance of Buildings Directive, the renovation wave, and circular economy strategy, must deliver quick and significant outcomes as well as long-term investments.

In the same way, aggressively accelerating the deployment of renewable energies and other decarbonised sources of electricity, such as nuclear (where they enjoy public support), will also allow the EU to produce the volume of decarbonised electricity needed to move away from fossil fuels and reach carbon neutrality. This must go hand in hand with the development of the electricity network (interconnections, demand-response solutions, storage, capacity mechanism). Where fossil fuels will be needed to balance the system, it should be borne in mind that the IEA has been clear that there is no space for new oil and gas fields, or new coal mines or mine extensions, beyond the projects already committed, established by 2021, in the energy pathways which are compatible with the Paris Agreement[48].

Shifting the European energy system to carbon neutrality must be based on an industrial strategy that will promote European industries and their know-how in the energy supply chain, and provide adequate support for the transformation of energy-intensive industries. It will also require a strong Just Transition Framework that truly leaves no one or region behind[49].

EU energy market design must be fit for purpose

More than 20 years after the start of the energy liberalisation in the EU, it is time to make an open and independent assessment of the way energy markets are working. Without pre-judging what ACER's final report will recommend, industriAll Europe would like to see proposals to revise the current price setting mechanism which is based on marginal pricing. In an energy system where electricity will be the main energy carrier and where electricity will be more and more decarbonised, fossil fuels cannot be electricity price setters. This is especially true if commodity and carbon prices continue to soar. Tariffs of decarbonised electricity must be detached from fossil fuels and carbon pricing. Articles 5 and 9 of the Electricity Directive should be amended to ensure that final consumers pay electricity prices that reflect the costs of the generation mix used to serve their consumption. They should also allow national governments to enforce services of general economic interest designed to ensure that final consumers have access to a zero emission and competitive electricity supply that reflects underlying generation costs.

The reform of the EU energy market must also provide more certainty to small consumers when it comes to energy prices. The reform should introduce in the Electricity Directive a right for household consumers to receive a supply offer that protects them from short-term electricity price variations. This is not the case in the current Directive.

[48] https://iea.blob.core.windows.net/assets/7ebafc81-74ed-412b-9c60-5cc32c8396e4/NetZeroby2050-ARoadmapfortheGlobalEnergySector-SummaryforPolicyMakers_CORR.pdf
[49] See industriAll Europe Just Transition Manifesto

Finally, the assessment of the EU energy system should explore possibilities to allow Member States to make a larger use of Public Service Obligation provisions to ensure that energy is dealt with as a common good, and not purely as a commodity.

Increase solidarity between Member States

All Member States are exposed to the current energy price crisis, but not always in the same way. It is of the utmost importance for the countries within the internal market states to act in a coordinated and solidaristic way, in terms of infrastructure developments and use (storage capacity, gas terminals, energy transport infrastructures), or when it comes to diversification of supply and joint purchase contracts. Tackling the energy crisis must be the absolute political priority of the EU, and the EU must make its main policy instruments fit for purpose: Recovery Strategy, EU Budget, Macro-Economic Governance, state aids. The EIB and ECB must target and coordinate their efforts to fix the current energy price crisis.

A transparent EU Emissions Trading System

Carbon pricing through the Emissions Trading System (EU ETS) is an important part of the EU climate policy jigsaw, and it must drive investments towards low-carbon technologies. The volatility seen last year on the EU ETS is, to a large extent, the result of the anticipation of future compliance requirements due to the revised 2030 emission reduction target, scope and to the provisions of the Fit for 55 package. However, this volatility raises a series of issues. First, it might undermine the competitiveness of industrial sites that are not fully protected against carbon leakage. Second, since carbon price is passed on to consumers through electricity costs, the EU ETS is generating regressive impacts at the expense of low- and middle-income households, especially in countries with an electricity mix relying on fossil fuels.

The European Commission must therefore properly investigate how the EU ETS is currently working and limit undue speculation and hedging. If preventing hedging and speculation is not feasible, the EU should explore how to tax excess profits that these activities generate. In the same way, the EU and Member States should mobilise extraordinary auctioning revenues to finance energy efficiency programmes and the energy system decarbonisation with a focus on compensation of the consequences of the energy price crisis for small and industrial consumers.

Annex

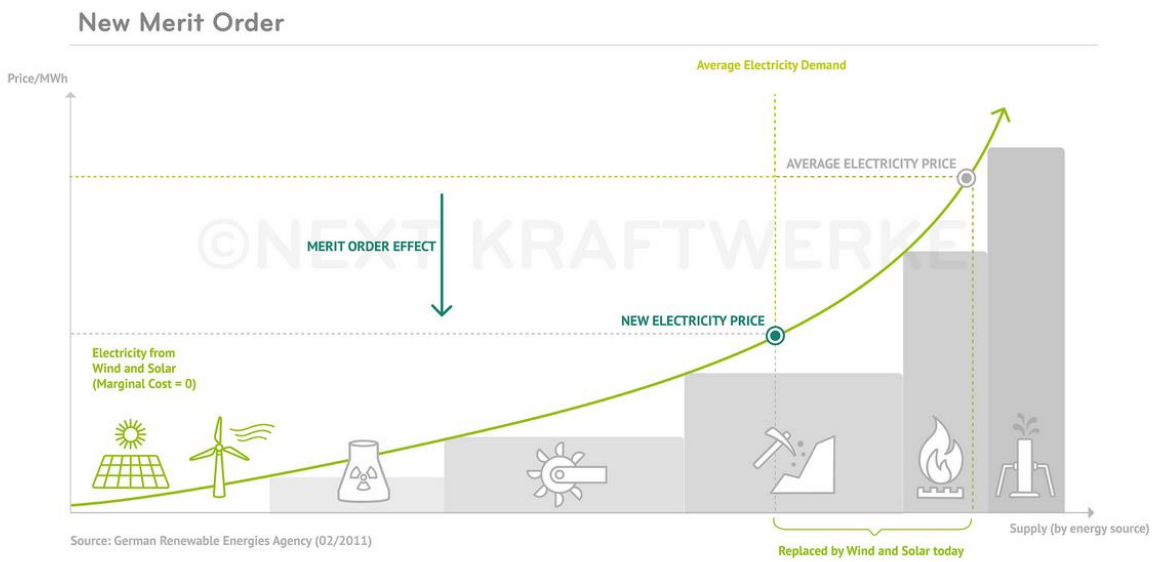
EU electricity wholesale market – key concepts

Merit order

According to Next- Kraftwerk[50]:

In the energy industry, 'merit order' is the sequence in which power plants are designated to deliver power, with the aim of economically optimizing the electricity supply. The merit order is based on the lowest marginal costs. These are incurred by a power plant and refer to the cost of producing a single megawatt hour under recent conditions. The merit order is separate from the fixed costs associated with a power generation technology. According to the merit order, power plants that continuously produce electricity at very low prices are the first to be called upon to supply power. Power plants with higher marginal costs are subsequently added until demand is met.

The merit order is just one possible model for creating a functional electricity market. It assumes that power plant operators are always trying to cover the cost of the next megawatt hour produced; they would not produce it otherwise. Power plants with low marginal costs can therefore offer a lower price for their electricity, and they are in turn called upon more often than power plants with higher marginal costs. The merit order is designed to shed light on how pricing works on the electricity market; it is not a fixed "law" that coordinates the use of power plants.

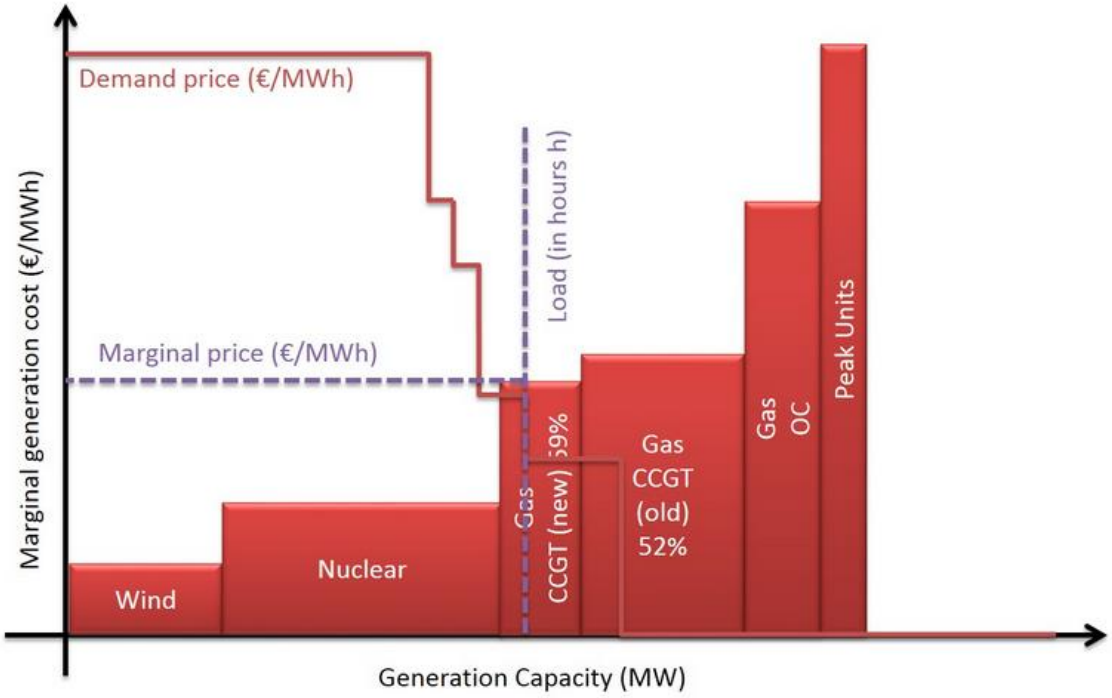


Marginal pricing /pay as clear

On the EU wholesale electricity market, the price formation mechanism is based on "uniform pricing", where all the plants involved receive the same price for the power they deliver to the system. The power

[50] https://www.next-kraftwerke.com/knowledge/what-does-merit-order-mean

plant with the most expensive marginal costs sets the price on the exchange for all power plants involved. The power plants offering a lower price than the marginal power plant get a surplus which offsets their own fixed costs.



Source : https://www.febeg.be/fr/merit-order