



Brussels, 12/1/2024

## **Developments of energy prices in the euro area and policy responses**

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*Note to the attention of the Euro Group*

*In 2022, increased import prices sent the euro area current account into deficit for the first time in over a decade, driven by the sharp deterioration in energy balances as a result of energy prices increases. While all countries were affected, there were strong differences in the extent to which energy prices translated into external deficits, and the most affected countries also displayed stronger inflationary effects across their economies. Differences in the energy mix, in production models and remaining barriers to the functioning of the European energy markets resulted in an asymmetric impact of the energy crisis across the EU. Corporates are confronted with very different energy input costs across different Member States, and the disparities increased under the energy crisis. While energy import and wholesale prices have since fallen, they are likely to remain higher than previously, representing a loss of comparative advantage for some European producers and contributing to a weaker external position of the euro area in the short to medium term. The overall vulnerability to energy price shocks and its impact on the competitiveness of European industries underline the importance of coordinated European action to accelerate the roll out of renewable energy production, to shift to less energy intensive production models, to diversify energy supply and to make further progress with the integration of the European energy markets. These policies require investment, which may take time, and could weight on productivity of European firms in the short to medium term.*

*Members are invited to discuss the following questions:*

- To what extent do Members consider that higher energy prices will affect the competitiveness of euro area economies going forward and lead to reduced external balances?*
- Do Members consider that differences in euro area countries' exposure to external price developments merit particular attention?*
- Which policies and investments should be prioritised to increase the resilience of the EA economy against adverse energy shocks and improve long term competitiveness?*

**The large energy import dependency of the euro area makes it vulnerable to swings in energy prices, which were the main driver of the sharp deterioration of the euro area external balance in 2022.** In 2020 and 2021, the reduction and subsequent large rebound of nominal demand resulted in a brief decline followed by a swift recovery of the euro area current account (Graph 1). The tourism sector was particularly badly hit, affecting the exports of countries whose economies rely on tourism until late 2022. In 2022, however, the change was much larger, and the euro area current account fell strongly and recorded a deficit for the first time. Although both energy and non-energy goods balances show a large fall, it was the huge reduction in energy balances following the large increase in energy prices that drove this effect, reflecting the fact that the euro area is an energy importer, and was particularly exposed to gas imports (Graph 2).

**While the energy shock of 2022 had a big impact on the entire euro area, some Member States were affected more than others.** The impact of the energy price on euro area countries' external balances varied considerably, with some Member States showing deteriorations in the energy balances in excess of 5 percentage points of GDP, while others were around the 1 percentage point mark (Graph 3). The reduction in energy balances is not strongly linked to the starting balance in 2021 and some of the largest declines in energy balances took place in countries that did not have a large starting energy deficit. In those cases, the large price effects are related to their energy mix and their inability to substitute different energy sources, with gas and electricity importers having been particularly affected.

**External exposure to energy prices can have wider economic consequences, with inflation leading to competitiveness challenges.** Countries with the largest declines in their energy balances were also typically those with the highest levels of inflation, with the largest deteriorations in energy balances being among countries that displayed consumer inflation of over 10%, and in some cases over 20%, over 2022 (Graph 4). Energy prices were a very substantial factor in countries with the highest inflation rates (Graph 5), contributing over half of the increase. Although in the most exposed countries, the reduction in energy prices is now contributing to a reduction in inflation, the effect is so far only partial (Graph 6). During 2022, higher energy exposure and higher inflation were not strongly correlated with lower real growth, although some of the countries with the highest GDP growth rates did have low inflation rates and lower reductions in their energy balances (Graph 4).<sup>1</sup> Over time, however, the propagation of consumer inflation into core inflation, and possibly subsequently in increased labour costs, raises the prospect of competitiveness deteriorations. Within the euro area, this is a particular risk, due to the absence of the exchange rate as tool for realigning relative costs.<sup>2</sup> In relation to external trading partners, structurally higher energy prices, in particular for gas, have resulted in a convergence of energy prices to the higher costs faced by Asian countries that have been reliant on Liquefied Natural Gas imports (graph 9 and 10)<sup>3</sup>. This has widened the relative disadvantage of European producers with respect to the USA, which as an energy producer, benefit from cheaper and secure access to energy sources, and other gas-exporting countries. The energy price shock which

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<sup>1</sup>This can be seen by observing the size of the bubbles – which corresponds to real GDP growth – in Graph 3, which shows the changes in energy balances on the horizontal and inflation on the vertical axis.

<sup>2</sup> See Commission staff working document, Alert Mechanism Report, SWD(2023) 901

<sup>3</sup> The graphs depict wholesale prices, which are most directly affected by global energy prices. Retail prices (graph 9 and 10) in addition also reflect other factors, for example market structure, regulation, and possible subsidies.

has hit European economies disproportionately affected the export price competitiveness negatively, mainly through higher production costs.<sup>4</sup>

**Corporates across the euro area were exposed to and continue to face different energy costs with consequences for their growth.** Corporates in different countries face very different energy input costs (Graphs 7 and 8). This was already the case before the energy prices shock, reflecting differences in terms of energy mix, taxation, levies, level of competition and regulation.<sup>5</sup> The price differences are even more substantial now, with the substantial differences in starting levels dwarfed by the sharp rises. In some countries, gas prices rose particularly strongly, but have already declined substantially, while in other countries they remain at their recent peaks. As a result of these differences, some countries' corporates have faced a doubling of energy costs, while others showing much more modest changes. The differentiated impact of the hike in energy cost is partly the result of the differences in energy support packages that countries introduced in response to the crisis (see Table 1), with the national budgetary support ranging from about 2.6% to 0.10% of GDP in the Euro area. However, it also reflects differences in energy market structures and supply sources.

**Energy prices have fallen since their peak, but are likely to be higher than in the recent past, with long term economic consequences.** Although energy import and wholesale prices are currently much lower than their 2022 peak, they are not forecast to return to their pre-pandemic level in the foreseeable future. This will weigh on the euro area current account balance and have wider economic consequences (Graph 2). A structural rise in production prices due to an elevated energy price level may result in a loss of competitiveness with non-EU partners, in particular with the US. The higher prices in the near future may also have a negative impact on future productivity growth, as firms need to invest to shift to less energy intensive production processes. Empirical analysis from the OECD finds that energy price increases reduce productivity in the short-term, but that in the longer term higher energy prices are associated with productivity increases.<sup>6</sup> Higher prices of energy may also increase the incentives for firms and households to invest in energy saving changes, contributing to increased energy efficiency and an acceleration of the green transition. While encouraging, the OECD analysis finds however that productivity gains are less likely in energy intensive sectors and following large shocks. At present, there is little tangible evidence about how the current increases will affect firms over time. Evidence from the European Investment Bank Investment Survey<sup>7</sup> shows a strong increase in the share of firms stating that energy costs constitute a major obstacle to their long-term investment decision, rising from 28% to 59% of EU firms in one year. Between countries, the differences are substantial, ranging from 24% of firms to 81%, across different euro area Member States.

**Structural policies can help reduce the euro area countries' exposure to global price fluctuations and mitigate energy prices.**

**First, supporting the energy transition and diversifying the sources of energy supply can increase the resilience of the euro area against external shocks, and mitigate energy prices in the**

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<sup>4</sup> See ECB Economic Bulletin, Issue 3/2023. [https://www.ecb.europa.eu/pub/economic-bulletin/focus/2023/html/ecb.ebbox202303\\_03~23c48fe595.en.html](https://www.ecb.europa.eu/pub/economic-bulletin/focus/2023/html/ecb.ebbox202303_03~23c48fe595.en.html)

<sup>5</sup> See Quarterly Report of the Euro area, vol 22, no 2, 2023.

<sup>6</sup> See, e.g., André, Ch., Costa, H., Demmou, L. and Franco, G. (2023): Rising energy prices and productivity: short-run pain, long-term gain? OECD Economics Department Working Papers 1755.

<sup>7</sup> [EIB Investment Survey](#).

**long run.** Efforts to reduce energy consumption, to accelerate the roll out of renewables and to diversify energy imports (notably away from Russia) have already effectively reduced energy imports of the euro area. The REPowerEU strategy is being implemented and by now the addition of 23 REPowerEU chapters to national recovery and resilience plans have been approved by the Commission which contribute more than €60 billion to saving energy, substituting fossil fuels and addressing immediate security of supply, while reducing dependency on Russian fossil fuels. In December 2023, Council and Parliament reached a provisional agreement to reform the EU's electricity market design aiming to make consumer electricity prices less dependent on volatile fossil fuel prices, better protect consumers from price spikes and to accelerate the deployment of renewable energies. The EU accomplished a gas demand reduction of 18% in the past year <sup>(8)</sup>, with the change being partly attributable to higher energy efficiency, while also reflecting the (temporary) decrease in production. Overall, the volume of energy imports is now at its lowest level since the inception of the euro area. Based on long-term Commission's projections<sup>9</sup>, the consumption of energy will gradually fall, with a full implementation of the green transition helping to eliminate the euro area energy trade deficit by 2035.<sup>10</sup> The advancement on the deployment of renewable energy is on-going. In 2022 and 2023, 57 GW and 69 GW new wind and solar capacity have been installed, representing together a 36% increase from 2021 installed capacity. In terms of generation, there was an increase of the share of renewable energy in the electricity mix from 37% to 45% when comparing the last 12 months with 2021. However, the build up of a sufficient renewables capacity will require significant investments and will take time. In the short-term, the higher energy prices, due to the loss of direct gas import from Russia, will continue to hurt the competitiveness of European companies.

**Second, shifting to a less energy-dependent production model could enhance the resilience of euro area economies.** The high carbon intensity of some countries' production model resulted in them being particularly exposed to the energy price shock in 2022. This, in turn, led some countries to resort to large subsidies to energy-intensive industries. While it helped these companies compete internationally, it also weakened the role of carbon price signals and hence the incentives to accelerate the efforts towards the energy transition. Adopting a less energy and carbon dependent economic model may be beneficial, though it comes with challenges: during the shift, changes in production would involve job losses, albeit in a situation of tight labour markets. A structural reduction of the energy intensity of production may also weigh on productivity as explained above, while requiring a rapid increase in renewable capacity, and invest in training to enhance the acquisition of the required skills, including digital skills.

**Third, further integration of the European energy markets can help reduce price differences and price volatility.** The European wholesale electricity and gas markets are already well integrated,

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<sup>8</sup> The period August 2022 to September 2023 compared to the reference period, which is defined as the average of the previous 5 years for the period August 2022 to May 2023 (as laid out in the demand reduction regulation)..

<sup>9</sup> The estimations are based on the «EU Reference Scenario 2020» [https://energy.ec.europa.eu/data-and-analysis/energy-modelling/eu-reference-scenario-2020\\_en](https://energy.ec.europa.eu/data-and-analysis/energy-modelling/eu-reference-scenario-2020_en), on the impact assessment of the «2030 Climate Target Plan», section 6.4.1 [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12265-2030-Climate-Target-Plan\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12265-2030-Climate-Target-Plan_en) and the main results on energy, transport and GHG emissions of the EU Reference Scenario 2020 [https://energy.ec.europa.eu/document/download/1485062e-2d65-47cb-887a-a755edc2ec36\\_en?filename=ref2020\\_energy-transport-ghg.xlsx](https://energy.ec.europa.eu/document/download/1485062e-2d65-47cb-887a-a755edc2ec36_en?filename=ref2020_energy-transport-ghg.xlsx)

<sup>10</sup> Based on the JRC GECO 2022 1.5 degree scenario, the energy trade deficit of the EU and euro area is projected to decline to a value smaller than 0.5% of GDP by 2030, and to further halve over the subsequent 5 years. Source: Kerarnidas, K et al.: Global Energy and Climate Outlook 2022: Energy trade in a decarbonised world. JRC Science for Policy Report, 2022.

exhibiting common price developments. The wholesale electricity markets are coupled<sup>11</sup> and prices on the various gas hubs have converged. However, structural price differences remain in particular on the electricity markets and have increased during the crisis<sup>12</sup>, reflecting differences in energy resources and energy mixes, which have an impact on the different wholesale markets, and consequently on retail prices and competitiveness. A further expansion of the interconnection capacity is needed to better balance the system, and thus help to reduce price volatility in a system with more renewable, weather dependent, power capacity. However, investments in new interconnectors are complex and take long time due to coordination, permitting, and social acceptability issues. Such investments are also not necessarily in the interest of all, as some areas gain from relatively lower prices due to the transmission constraints that result in price differences. However, the recent supply shock (e.g. gas supply limitations, nuclear outages) point to the value of continuing the work to better integrate the European energy markets to enhance resilience, efficiency and competitiveness.

**Some policies aiming at increasing the resilience of the euro area to external price shocks may entail trade-offs between their goals and maintaining competitiveness of firms in the euro area.**

The EU adopted the Communication on a European Economic Security Strategy on 20 June 2023 to outline an overall policy framework to ensure that our economic and security interests reinforce each other, by promoting our own competitiveness, protecting ourselves from economic security risks; and partnering with the broadest possible range of countries who share our concerns or interests on economic security. The re-shoring or friend-shoring of economic production is a policy dimension that has gained in interest – including in the United States of America. However, if euro area firms are currently tied into a narrow range of trade partners, this is because it is – at least in the short-term – economically advantageous for them. Diversifying, near-shoring or re-shoring may hence entail higher costs of production, which could weigh on their competitiveness. Furthermore, there are trade-offs between a speedy delivery on the climate and energy transition and pursuing an accelerated policy of re-shoring due to the dominance of China in some key inputs and products necessary for the green transition (such as solar panels, rare earths, and magnesium)<sup>13</sup>.

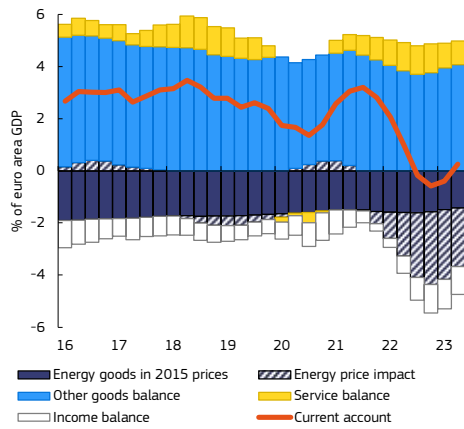
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<sup>11</sup> According to ENTSO-E, the European networks of transmission system operators, 98.6% of EU electricity consumption is coupled

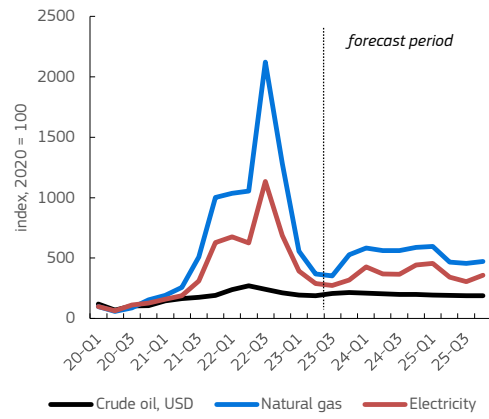
<sup>12</sup> European Commission, Quartely Report on European Electricity Markets, vol 16, issue 2.

<sup>13</sup> European Commission (2022): EU strategic dependencies and capacities: second stage of in-depth reviews, SWD(2022) 41.

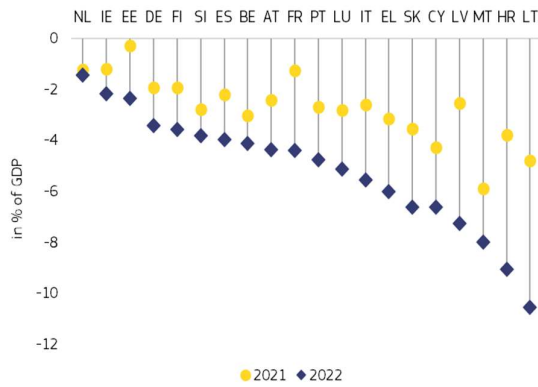
**Graph 1: Current account, euro area, % of GDP**



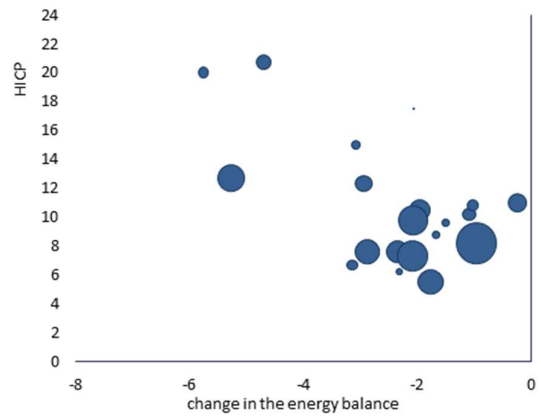
**Graph 2: Energy prices**



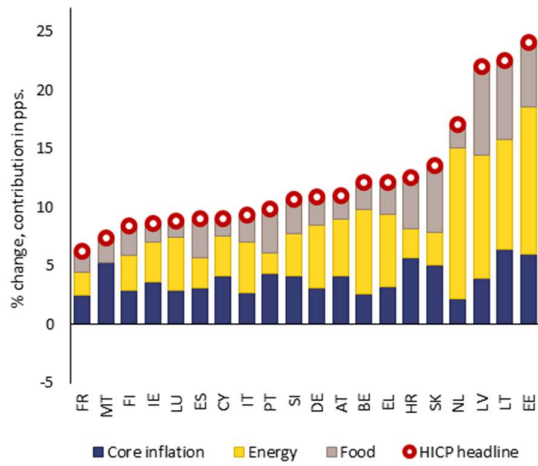
**Graph 3: Energy trade balances 2021 and 2022, % GDP**



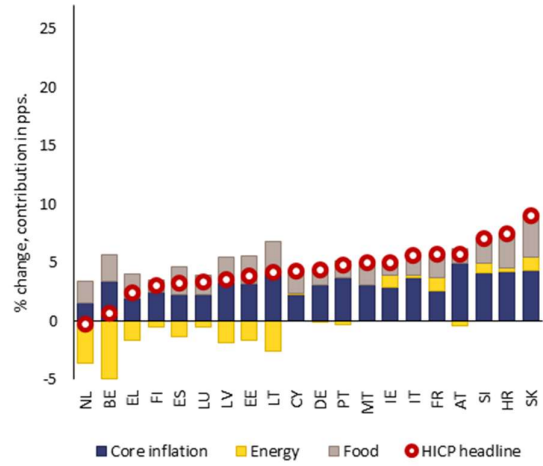
**Graph 4: Consumer inflation versus the change in the energy balance, bubble size GDP growth**



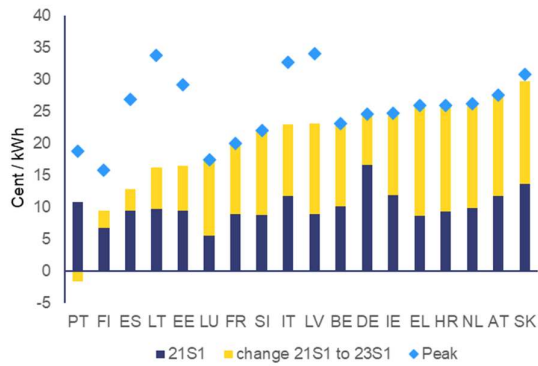
**Graph 5: Inflation rate and its drivers, year to September 2022**



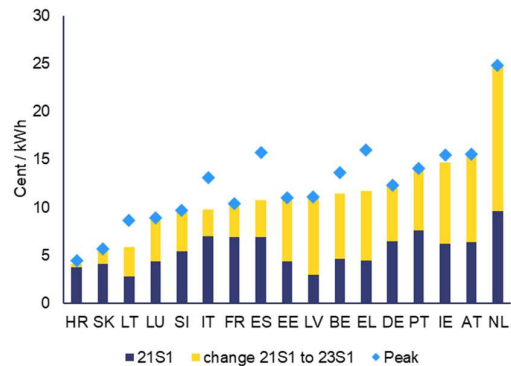
**Graph 6: Inflation rate and its drivers, year to September 2023**



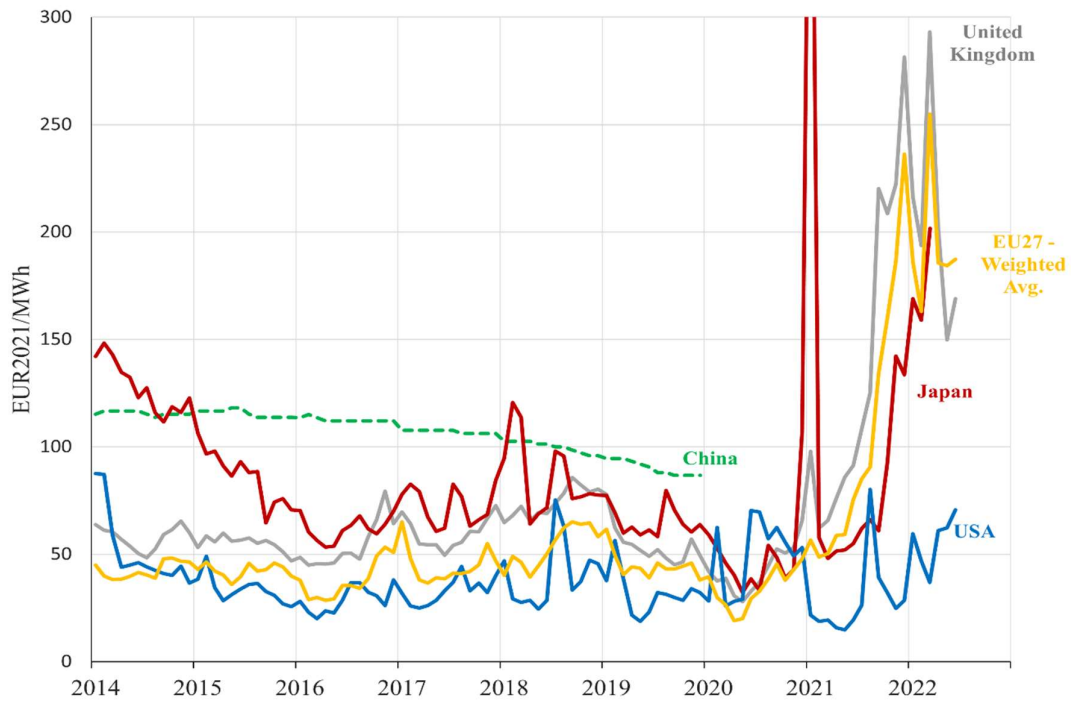
**Graph 7: Electricity prices for corporate users of intermediate size, cents/Kwh**



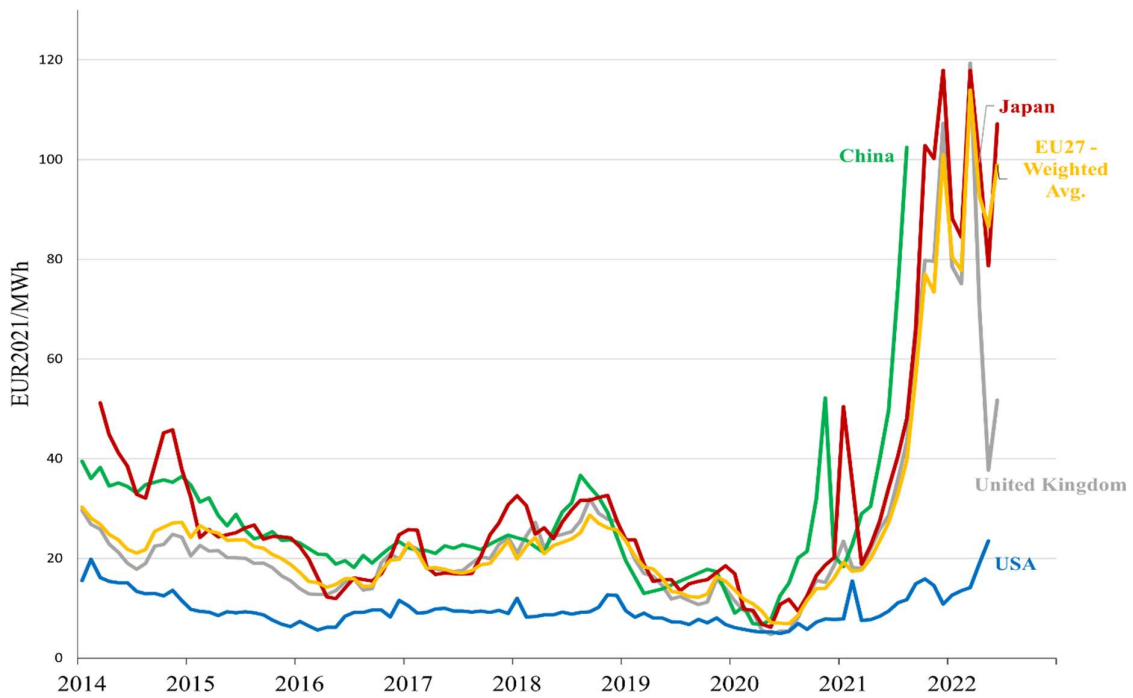
**Graph 8: Gas prices for corporate users of intermediate size, cents/Kwh**



**Graph 9: Average day-ahead wholesale electricity prices for EU and major trading partners, EUR 2021/MWh**



**Graph 10: Average day-ahead wholesale gas prices for EU and major trading partners, EUR2021/MWh**



Source: Draft 2023 Report on Energy Prices and Costs in Europe, based on a study prepared by Trinomics et al., using data from S&P Platts, ENTSO-E, JEPX, EIA, CEIC



**Table 1: Net budgetary cost of support measures to mitigate the impact of high energy prices on households and firms (% of GDP)**

<b>MS</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>BE</b>	0.01	0.81	0.39
<b>BG</b>	0.63	0.72	0.78
<b>CZ</b>	0.09	0.71	1.18
<b>DK</b>	0.00	0.09	0.45
<b>DE</b>	0.00	1.22	1.45
<b>EE</b>	0.10	0.85	0.29
<b>IE</b>	0.00	0.48	0.37
<b>EL</b>	0.50	2.64	0.01
<b>ES</b>	0.13	1.54	0.93
<b>FR</b>	0.11	0.95	0.81
<b>HR</b>	0.00	1.54	1.77
<b>IT</b>	0.30	2.43	1.04
<b>CY</b>	0.06	0.64	0.51
<b>LV</b>	0.07	1.46	0.95
<b>LT</b>	0.00	1.31	0.38
<b>LU</b>	0.00	0.62	0.94
<b>HU</b>	0.38	0.96	1.34
<b>MT</b>	0.45	2.34	1.60
<b>NL</b>	0.00	0.69	1.03
<b>AT</b>	0.00	1.44	1.56
<b>PL</b>	0.00	1.88	0.60
<b>PT</b>	0.00	1.87	1.25
<b>RO</b>	0.12	0.44	0.33
<b>SI</b>	0.00	1.00	0.94
<b>SK</b>	0.00	0.16	2.12
<b>FI</b>	0.00	0.11	0.33
<b>SE</b>	0.00	0.22	0.18
<b>EU</b>	0.09	1.22	0.98
<b>EA</b>	0.09	1.29	1.04

Source: Autumn package/Autumn forecast 2023