



# **Household Energy Price Index for Europe**

JULY 3, 2023

## **June Prices Just Released**

The most up-to-date picture of European household electricity and gas prices: VaasaETT and two leading European energy market authorities collaborate to track monthly energy prices in 33 European countries.

Energie-Control Austria, the Hungarian Energy and Public Utility Regulatory Authority (MEKH) and VaasaETT are delighted to publish the results of our study of residential electricity and gas prices covering 33 European countries. Our price survey now includes every EU Member State in addition to selected members of the European Energy Community (Montenegro, Norway, Serbia and Ukraine), plus Great Britain and Switzerland.

We would like to use this opportunity to thank the energy market authorities, energy suppliers and distributors for their time and cooperation to ensure the quality of our data.

If you would like to know more about the latest developments in residential energy prices, visit our project webpage at <a href="https://www.energypriceindex.com">www.energypriceindex.com</a> and subscribe to the free monthly update of the HEPI index for Europe.

# IN THIS MONTH'S EDITION

Significant electricity price increase in Ljubljana

Significant electricity price decrease in Stockholm

Electricity price decreases in Amsterdam, Athens, Brussels, Copenhagen, Helsinki, Lisbon, London, Madrid, Nicosia, Oslo, Riga, Rome and Vilnius

Significant natural gas price increases in Ljubljana and Zagreb

Natural gas price increase in Amsterdam

Significant natural gas price decreases in Athens, Brussels, Madrid, Prague and Tallinn

Natural gas price decreases in Berlin, Copenhagen, Rome, Sofia and Vienna

Fixed vs variable tariff analysis: fixed prices are typically higher than variable

# **European Energy Price Development**

Figure 1 shows the evolution of residential energy and distribution prices excluding taxes between January 2009 and June 2023 in 15 European capital cities. The index is calculated by weighing prices in each of the capital cities by the respective national electricity or gas residential consumption.

Residential electricity prices steadily decreased over the first half of 2009 and reached a trough at 96 index points in June 2009 as the economic crisis took its toll on demand and wholesale prices plummeted. Prices started to recover in the second half of 2009 together with (temporary) green shoots in economic activity and a general feeling that the worst of the crisis was behind us. They have been on an upward trend since then. The index for electricity reached as high as 116 index points in October 2014. Since then, it faltered and remained around 108 index points in 2016 and 2017. During 2019, the index was fluctuating around 115 and 119 points. However, the recent developments on the wholesale markets due to COVID-19 restrictions dropped the index rate down to 112 points in 2020. During 2021, the index followed an increasing trend as people and businesses were resuming their activities, hence there was higher demand, and the energy crisis was gradually developing. The extraordinary weather conditions, the record high wholesale natural gas prices and the lack of storage materials to cover demand led to repetitive record high prices in most of the European capitals by the end of 2021. The increasing trend became more extreme during the second half of the year, reaching 164 points in December 2021. After climbing the sharpest step in its historical data in January 2022 and its largest peak in October 2022, the HEPI electricity index has followed a decreasing trend and it currently stands at 202 points (EUR-15).

The economic downturn which impacted energy demand and wholesale prices in 2009 is much more visible in the development of residential gas prices. The gas price index dropped significantly in 2009 and reached its lowest value only in February 2010 at 81 index points (nine months after the lowest value in the electricity price index). Retail prices started to recover in the winter of 2010 when a cold wave hit many parts of Europe. The index steadily increased until the beginning of 2013. It remained between 105 and 110 index points ever since despite a significant drop in natural gas prices on international markets during the year 2015. In 2016 however, gas prices plummeted reaching a 6-year low in September 2016 at 93 points. After a small hike up to 96 points in March 2017, a bigger one followed to 103 points in November 2018. There was a decreasing trend for two years, up until the gas price index started increasing, surpassing November 2018 levels for the first time in August 2021. The ongoing energy crisis greatly affected the gas price index, which was almost doubled within 2021, going from 87 points in January 2021 to 163 points in November 2021. Since then, its value was doubled again in October 2022, reaching 351 points; it currently stands at 200 index points.

When examining the averages of the end-user prices for both electricity and gas, the following changes can be observed; from a year ago, June 2022, the electricity bills in all EU capitals have decreased by 6% while the gas bills have decreased by 10%.

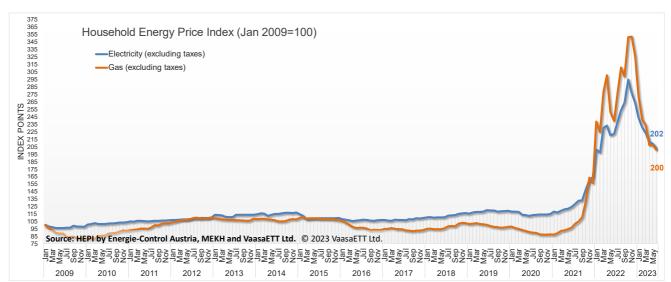
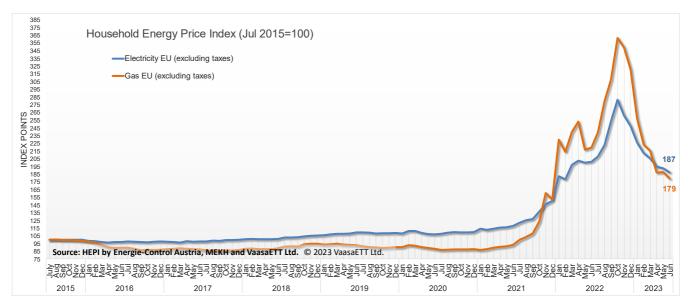


Figure 1: Evolution of residential energy and distribution prices excluding taxes in the EUR-15





 $<sup>^{\</sup>rm 1}$  EU-28 values were used between July 2015 - January 2020. EU-27 values are used from February 2020 onwards.

# **Residential Electricity Prices**

Figure 3 shows the end-user price of electricity in the 33 European capital cities as of June 1st, 2023. It shows that depending on where a customer lives in Europe, the electricity price can vary by a ratio of almost 5. If we include Kyiv, the price varies by a ratio of over 11. Dublin and London are the most expensive cities for household customers in Europe, followed by Prague, Rome and Berlin.

Kyiv<sup>1</sup> appears to have the least expensive electricity price, followed by Belgrade, Budapest and Podgorica. In nominal terms, prices in the capital cities of Central and Eastern Europe (CEE) tend to be lower than average; Prague, Riga and Tallinn are the only capital cities among the CEE countries in which the price of electricity is above the European average.

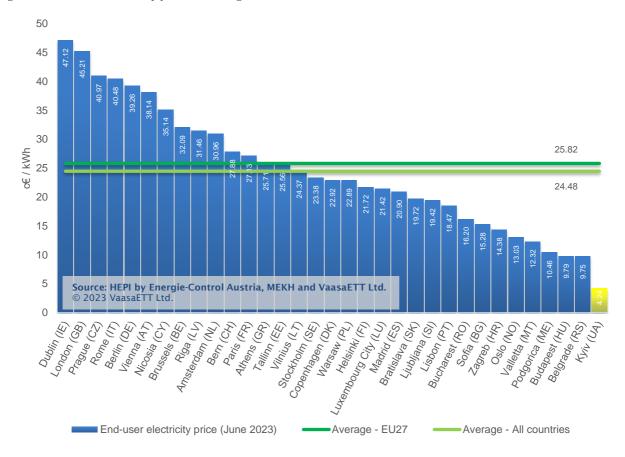


Figure 3: Residential electricity prices including taxes

 $<sup>^{1}</sup>$  As long as the Ukrainian crisis continues, the price of Kyiv will be kept stable and will be represented in different colour in the HEPI graphs.

The most significant changes that took place in the electricity market this month were as follows<sup>2</sup>:

- An 11% price increase in Ljubljana, due to the return of the VAT to its previous value;
- A 13% price decrease in Stockholm, due to a decrease in the energy component;
- A 9% price decrease in Lisbon, due to a decrease in the energy component;
- An 8% price decrease in Brussels, due to decreases in the energy and energy taxes components;
- A 7% price decrease in Vilnius, due to decreases in the energy and distribution components;
- A 6% price decrease in Helsinki, due to a decrease in the energy component;
- A 5% price decrease in Copenhagen, Nicosia and Rome, due to decreases in their energy components;
- A 3% price decrease in Athens, due to decreases in the energy and energy taxes components;
- A 3% price decreases in London and Madrid;
- A 3% price decrease in Oslo and Riga, due to decreases in their energy components;
- A 2% price decrease in Amsterdam, due to a decrease in the energy component.

In June, household electricity prices followed a drop, on average, compared to the price levels of May. This indicates the resumption of the decreasing trend that was observed in electricity retail markets since November 2022, after a month with no significant price change, in May 2023. The majority of the capital cities recorded minor or no changes in their retail electricity prices this month, while some considerable reductions have been observed in Stockholm, Lisbon, Brussels and Vilnius. On the other hand, Ljubljana was the only capital city where retail prices saw an increase in June. The price drop in the wholesale market is driving retail prices and is attributed to various reasons, predominantly to the reduced consumption, the mild weather conditions and the increase in supply, especially because of the renewable's uptake. The support measures implementation has helped restraining European energy prices in some extent, while the EC reports<sup>3</sup> that the current situation does not require their extension. Hence, the monitoring of future energy policies and pricing strategies of each market will be of great interest, in order to comprehend the future trajectory of retail electricity prices.

In Ljubljana, the increase in retail electricity prices is attributed to the fact that the reduced VAT, applicable since September 2022, returned to the pre-crisis levels, namely 22%<sup>4</sup>.

<sup>&</sup>lt;sup>2</sup> The change in each capital city is calculated using the prices in their local currency to exclude the impact of exchange rate fluctuations.

<sup>&</sup>lt;sup>3</sup> EC: "Commission report: Emergency energy measures facilitated market improvement", 05.06.23

<sup>&</sup>lt;sup>4</sup> Finance.si: " Konec znižane stopnje DDV na energente, pričakujte višje položnice".30.05.23

In Stockholm, the decrease in retail electricity prices is mainly due to the wholesale price, that reached its lowest levels observed during the past 2 years, recording numerous hours of zero or even negative prices, which was reflected to the retail as well<sup>5</sup>.

Similarly, in Vilnius, Helsinki and Oslo, the drop in retail electricity prices is mainly due to the decrease on the Nord Pool exchange, which is an outcome of the favouring weather conditions, the electricity demand reduction and the increase in generation<sup>6,7,8</sup>.

In Lisbon, household electricity prices fell driven by the developments in the wholesale market. Furthermore, the country's main electricity suppliers<sup>9,10</sup> announced lower retail energy tariffs, applicable from July 1st.

In Brussels, new reduced electricity tariffs were announced in June, predominantly due to the fall on the wholesale electricity markets that has been observed over the past months<sup>11</sup>.

Finally, in Nicosia, a slight decrease in retail electricity prices can be accredited to the continuous fall in the cost of fuel, that is mainly used for domestic electricity generation, which led to the announcement of the government to remove relief measures, as of July<sup>12</sup>. End-user prices remain, however, at levels significantly higher than prior to the energy crisis.

When adjusted to purchasing power standards (PPS) in each country, the picture changes dramatically. PPS is an artificial common reference currency that eliminates general price level differences between countries<sup>13</sup>. When expressed in PPS, energy prices are thus shown in relation to the cost of other goods and services. The lowest adjusted household electricity prices are found in Oslo, Valletta, Budapest and Luxembourg City, while the highest are currently in Prague, Rome and Riga. Most of the CEE countries usually end up with electricity prices which are relatively low compared to the general level of prices in the country and below the European average (Figure 4). However, this is not the case in June; Bucharest, Prague, Riga, Tallinn, Vilnius and Warsaw are the capital cities among the CEE countries in which the price of electricity is above the European average.

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<sup>&</sup>lt;sup>5</sup> NyTeknik: "Rekordmanga Timmar med minuspriser i Sverige". 02.06.23

<sup>&</sup>lt;sup>6</sup> LRT: "LEA: elektros kainos mažėjo du mėnesius ir toliau išlieka žemos". 02.06.23

<sup>&</sup>lt;sup>7</sup> Europower: "Strømprisen kollapser i sola – faller til 6 øre/kWh i Norge". 12.05.23

<sup>&</sup>lt;sup>8</sup> Sijoitaja: " <u>Sähkön hinta painunut todella alas</u>". 02.06.23

<sup>&</sup>lt;sup>9</sup> CNN Portugal: "Galp baixa em 10% precos da eletricidade e gás natural a partir de julho". 06.06.23

<sup>&</sup>lt;sup>10</sup> SAPO:" Iberdrola reduz preco da energia a partir de 01 de junho".16.06.23

<sup>&</sup>lt;sup>11</sup> Nieuwsblad.be: "Energiecontract in juni fors goedkoper: zoveel kan je besparen".02.06.23

<sup>&</sup>lt;sup>12</sup> Cyprus Mail: "Fuel and electricity costs to rise as relief measures expire".14.06.23

<sup>&</sup>lt;sup>13</sup> Eurostat: <u>Purchasing power parities - Overview</u>

Figure 4: Residential electricity prices including taxes at PPS

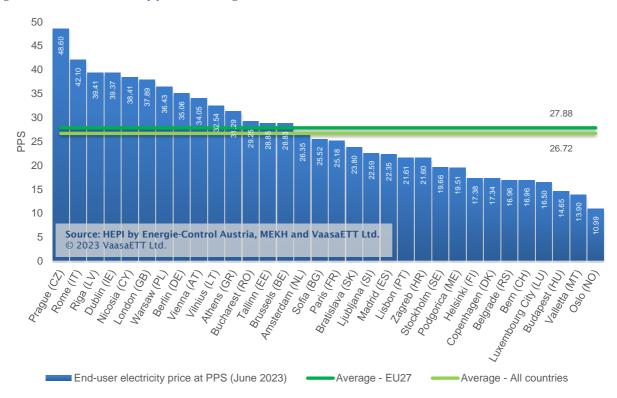


Figure 5 shows the breakdown of the electricity price in the 33 analysed capitals, into energy, distribution, energy taxes<sup>14</sup> and VAT. Our survey shows that on average, energy (the contestable component of the price) represents 59% of the end-user price of electricity bill, distribution 23%, energy taxes 3% and VAT 15% for the European capitals.

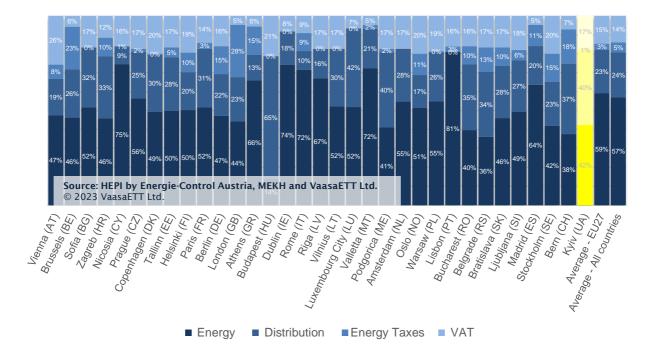
If we focus on the cost of energy as a commodity, in Budapest it currently represents just 14% of the end-user electricity price, which is the lowest among all surveyed cities. On the contrary, Lisbon has the greatest energy percentage, reaching 81% of the end-user price in June 2023.

Additionally, starting from January 2020, a typical consumer in Amsterdam pays zero energy tax due to the increased amount of tax credit, which exceeds the indicated energy tax amount. On the contrary, they receive a refund on the exceeding tax credit amount. The aim of this refund is to encourage consumers towards electrification and switching away from gas heating and appliances.

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<sup>&</sup>lt;sup>14</sup> Energy taxes component is the sum of all the taxes, fees and levies.

Figure 5: Residential electricity price breakdown<sup>15</sup>



In the same manner, in Luxemburg City<sup>16</sup>, the typical customer is paying negative energy taxes as a result of the compensation mechanism that is currently in force, intended to offset the increase in the energy component and stabilise prices to 2022 levels.

Likewise, in Vilnius, starting from January 2023, a typical customer appears to receive compensation through the energy taxes, to partly offset the increase, since the State Regulatory Authority set a higher minimum limit above which prices are being compensated.

<sup>&</sup>lt;sup>15</sup> Please note that proportions appearing in the graph are rounded, and due to this may not add up to 100%. Additionally, for Amsterdam (NL), the typical household considered in HEPI research receives a tax refund on their energy tax. When considering this, the end-consumer's bill breakdown is as follows: Energy component 66%, distribution 34%, energy taxes -18%, and VAT 17%. For Vilnius (LT), the typical household considered in HEPI research receives a tax refund on their energy tax. When considering this, the end-consumer's bill breakdown is as follows: Energy component 54%, distribution 32%, energy taxes -3%, and VAT 17%. For Luxembourg City (LU), the typical household considered in HEPI research receives a tax refund on their energy tax. When considering this, the end-consumer's bill breakdown is as follows: Energy component 81%, distribution 65%, energy taxes -53%, and VAT 7%. For Lisbon (PT) the typical household considered in HEPI research receives a refund for the use of energy infrastructure, following the reduction in network access tariffs. When considering this, the end-consumer's bill breakdown is as follows: Energy component 124%, distribution -45%, energy taxes 4%, and VAT 16%. For Dublin (IE), the typical household considered in HEPI research receives a tax refund on their energy tax. When considering this, the end-consumer's bill breakdown is as follows: Energy component 78%, distribution 19%, energy taxes -5%, and VAT 8%.

<sup>&</sup>lt;sup>16</sup> ILR: "Règlement ILR/E22/58 du 28 décembre 2022 fixant la contribution au mécanisme de compensation de la catégorie A pour l'année 2023 - Secteur Électricité.", 28.12.2022

Moreover, starting also from January 2023, a typical consumer in Lisbon<sup>17</sup> will be paid for using the electricity infrastructure, following a noticeable reduction in network access tariffs, which aims at eliminating the significant energy component increases.

Finally, starting from March 2023, a typical customer in Dublin<sup>18</sup> is paying negative energy taxes, due to the increased amount of tax credit (PSO Payments), which will come as an additional relief to the electricity customers.

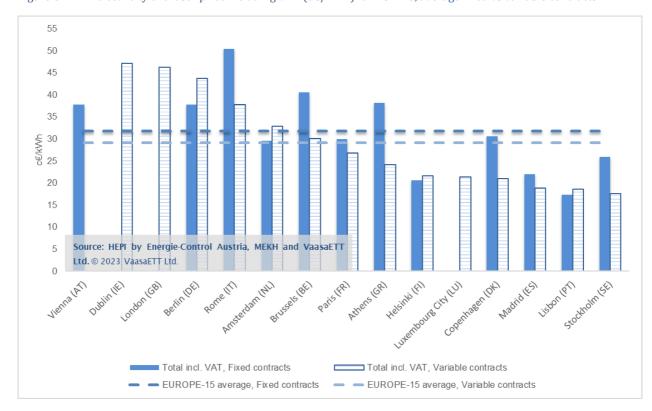


Figure 6: All-in electricity end-user price including VAT (c€/kWh) for EUR-15, average fixed vs variable contracts.

Before the energy crisis fixed (price and term) and variable prices were relatively similar. A fixed price was often cheaper since it afforded the supplier lower loyalty and procurement risk. Though customers essentially gambled a little on the direction of the market, it was not a particularly significant choice for most customers. In the more mature markets at least, active customers nevertheless tended to choose fixed prices. Since the crisis, the situation has mostly reversed. Fixed prices, where available (in some markets they have been unavailable since early or mid-crisis), now tend to be higher than variable prices, in some cases by a very large margin.

<sup>&</sup>lt;sup>17</sup> Echoboomer: "O que muda na fatura da energia em 2023", 31.12.2022

<sup>18</sup> CRU: "Direct PSO Payments Mechanism" /

Figure 7: All-in electricity end-user price including VAT (c€/kWh) for EUR-15, variable contracts only

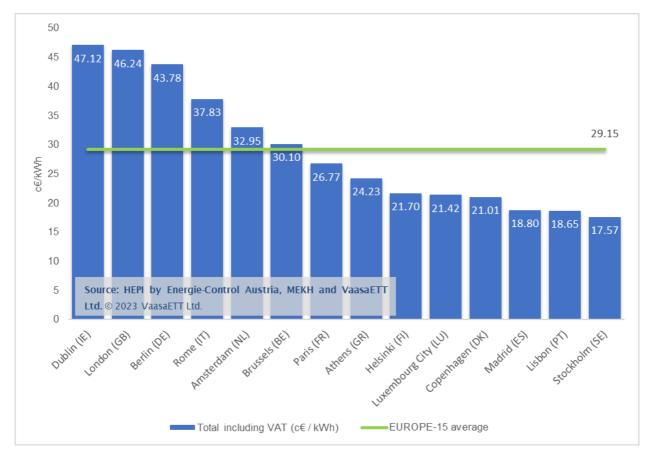


Figure 8: All-in electricity end-user price including VAT (PPS) for EUR-15, variable contracts only

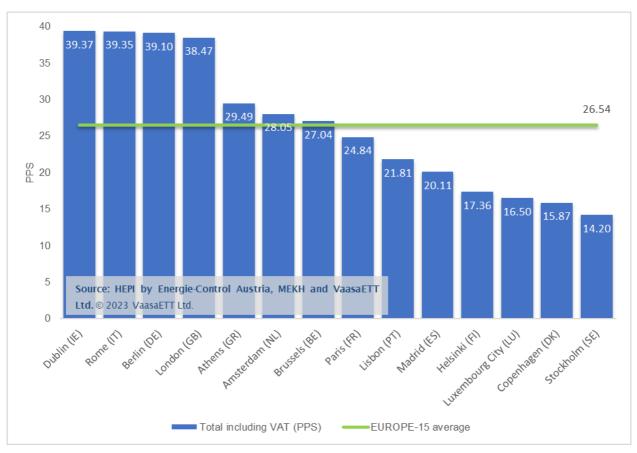


Figure 6 and Figure 7 show the situation as of June 2023 for a selection of markets, the EUR-15 markets. Across all the markets shown, the average price for fixed prices was 31.75 c€/kwh. For variable prices it was 29.15 c€/kWh. Naturally, for those markets where fixed prices are both available and very different from variable prices, the average of the two is less representative than in other markets. This is especially the case in Athens where most customers have variable contracts and therefore the variable price is more representative of the typical price paid.

If we adjust the variable prices for purchasing parity (Figure 8), we arguably gain a clearer picture of the relative significance of the most popular prices in June 2023.

#### **Residential Gas Prices**

Figure 9 shows the price of natural gas paid typically by residential customers in 28 European capital cities as of June 1st, 2023<sup>19</sup>. The highest price is paid by inhabitants of Stockholm who pay over 2 times the European average end-user price, followed by Amsterdam, which is the second most expensive capital city. This can be explained by the nature of the Swedish gas market; the small size of only 92,000 household gas customers in the whole of Sweden of which 58,000 in the isolated gas network in Stockholm.<sup>20</sup> Dublin is currently the third most expensive capital city.

The price in Stockholm is almost 11 times as high as in Budapest, which is the cheapest city for gas in EU, and almost 15 times as high if we include Kyiv<sup>21</sup>. Household natural gas is usually cheaper in the CEE countries; Prague and Ljubljana are the only capital city among the CEE countries in which the price of natural gas is above the European average.

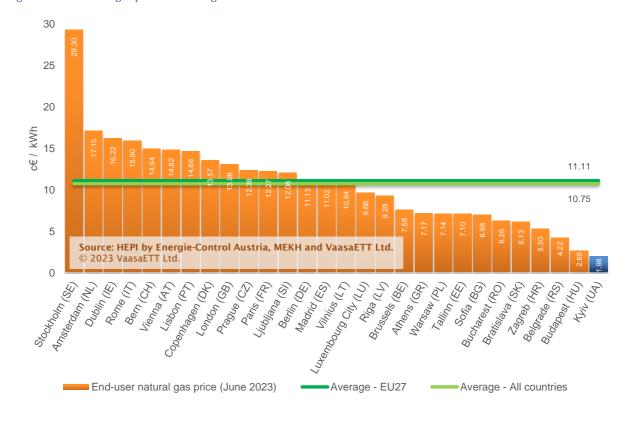


Figure 9: Residential gas prices including taxes

<sup>&</sup>lt;sup>19</sup> Please note that Helsinki, Nicosia, Oslo, Podgorica and Valletta have been left out of this analysis on gas prices as there is virtually no residential gas market in these cities.

<sup>&</sup>lt;sup>20</sup> The Swedish electricity and natural gas market 2021 Ei (Ei R2022:07)

<sup>&</sup>lt;sup>21</sup> As long as the Ukrainian crisis continues, the price of Kyiv will be kept stable and will be represented in different colour in the HEPI graphs.

The most significant changes that took place in the natural gas market this month were as follows <sup>22</sup>:

- A 15% price increase in Zagreb, due to an increase in the energy component;
- An 11% price increase in Ljubljana, due to the return of the VAT to its previous value;
- A 3% price increase in Amsterdam, due to an increase in the energy component;
- A 27% price decrease in Brussels, due to a decrease in the energy component;
- A 15% price decrease in Athens and Prague, due to decreases in their energy components;
- A 12% price decrease in Madrid;
- An 11% price decrease in Tallinn, due to a decrease in the energy component;
- A 9% price decrease in Copenhagen and Sofia, due to decreases in their energy components;
- A 5% price decrease in Berlin, due to a decrease in the energy component;
- A 5% price decrease in Vienna, due to decreases in the energy and energy taxes components;
- A 3% price decrease in Rome, due to a decrease in the energy component.

In June, retail gas prices saw a decrease on average across Europe, resuming the trend that was observed since last October (except for May, when prices followed a minor increase). In the majority of the studied capital cities prices remained steady, while in several other cities the end-user prices saw a drop, with Brussels, Athens, Prague, Madrid and Tallinn being the ones where the biggest decrease was reported. On the other hand, the gas price in June increased in only 3 out of 28 capitals. The general decline is mainly attributed to the adequacy of gas supply, also because of the new LNG terminals that facilitate storage potential. Furthermore, the drop in demand, that is amplified by the start of the summer season, is further affecting prices downwards. This is initially reflected in the wholesale gas market, which, despite some increases in June, is still below the 40 €/MWh landmark.

In Zagreb, a rise on natural gas household tariffs came amidst the introduction of the updated price list from the Croatian Energy Regulatory Agency, that will be valid until the end of the year<sup>23</sup>. Since the heating season is over, retail prices rose again to the levels that applied during summer 2022.

In Ljubljana, natural gas end-user prices followed an increase this month, similarly to the electricity ones, as the VAT rate of 22% was re-introduced<sup>24</sup>, after a period of temporary VAT cut to 9.5% that applied since September 2022.

<sup>&</sup>lt;sup>22</sup> The change in each capital city is calculated using the prices in their local currency to exclude the impact of exchange rate fluctuations.

<sup>&</sup>lt;sup>23</sup> Narodne Novine: "Odluka o iznosu tarifnih stavki za javnu uslugu opskrbe plinom za razdoblje od 1. lipnja do 31. prosinca 2023. te za razdoblje od 1. siječnja do 31. ožujka 2024".12.05.23

<sup>&</sup>lt;sup>24</sup> Finance.si: " Konec znižane stopnje DDV na energente, pričakujte višje položnice".30.05.23

In Brussels, the remarkable monthly price fluctuations continue in the retail market after the recent change in the indexation system of offered contracts. In June, retail gas prices saw a significant decline, as new, considerably lower tariffs have been implemented, both for fixed and variable contracts by the main suppliers within the country<sup>25</sup>.

In Prague<sup>26</sup> and Tallinn<sup>27</sup>, households viewed a fall in their natural gas prices, which can be deemed as the outcome of the decrease on the wholesale market. Sufficient gas storage levels, combined with a fall in demand and the uptake of renewable generation are considered as the main drivers of the decreasing prices.

Finally, households in Sofia faced a decline in their natural gas prices, resulting from a decision of the Commission for Water and Energy Regulation to further reduce prices to 65.82€/MWh, responding to the fall in the international markets alongside the reduction in domestic gas consumption<sup>28</sup>.

In the same vein as for electricity, gas prices at PPS have a very different outcome from the actual prices. This month, Budapest, Brussels and Belgrade were the cheapest cities when adjusted to PPS (Figure 10).

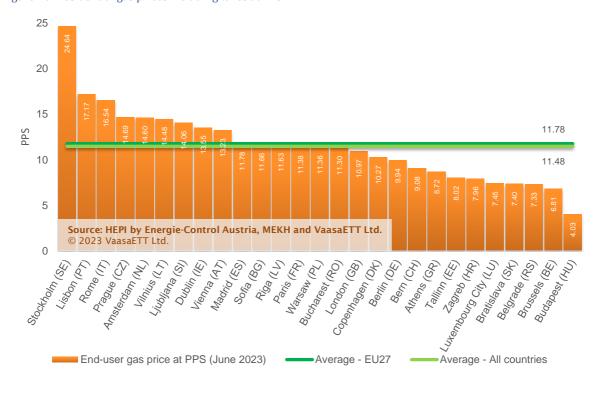


Figure 10: Residential gas prices including taxes at PPS

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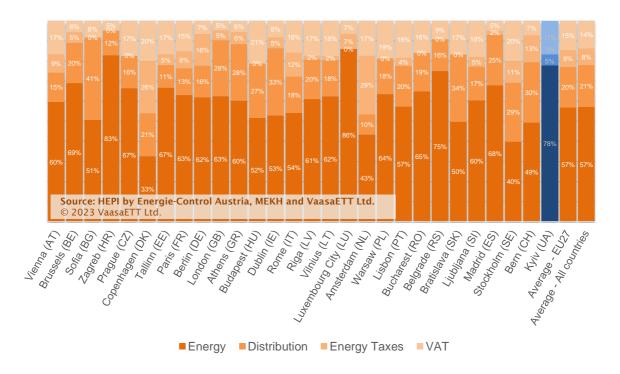
<sup>&</sup>lt;sup>25</sup> VRT.be: "Nu gasprijzen blijven dalen: is dit het moment om je energiecontract te herzien?.", 05.06.23

<sup>&</sup>lt;sup>26</sup> Novinky.cz: "Cena plynu je nejnižší za dva roky, není poptávka". 28.5.23

<sup>&</sup>lt;sup>27</sup> Postimees: "Gaasi börsihind kukkus järsult, kas odavnemine jõuab ka kodukliendini?".26.06.23

<sup>&</sup>lt;sup>28</sup> SEGA.bg: "<u>Цената на природния газ падна под 66 лв. от 1 юни</u>". 01.06.23

Figure 11: Residential gas price breakdown



Our survey shows that on average, energy (the contestable component of the price) represents 57% of the end-user price of natural gas, distribution 20%, energy taxes 8% and VAT 15% for the European capitals. In the Netherlands, energy taxes are used for nudging the consumers' behaviour and energy use. Even more so starting from January 2020, the energy tax for residential natural gas user is typically 29%. The aim is to encourage the use of electric heating and appliances instead of gas.

Overall, results show that market forces represent about 58% of the end-user price both for electricity and gas, whereas national fiscal and regulatory elements are responsible for the remaining 42% through distribution tariffs, energy taxes and VAT. The current energy crisis has led to significant increase of the average energy component in EU capitals. The energy share of end-user price of electricity used to be 42% back in June 2021, then climbed at 60% a year later and is currently standing at 59%. Likewise, in the natural gas market, the energy percentage of the end-user price used to be 43% back in June 2021 before reaching 62% in June 2022 and 57% this month. In places where the energy component is lower, so is the incentive for customers to look for more competitive offers<sup>29</sup>.

<sup>29</sup> Latest utility customer switching data can be accessed in the most recent version of Capgemini's <u>World Energy Markets Observatory</u>, created with partnership with VaasaETT, De Pardieu Brocas Maffei and Enerdata. VaasaETT contributes with data on the retail markets sections.

#### **HEPI Data Attributes**

All prices and other statistics relate to:

- The prices being offered to customers actively searching for an offer at the time of data collection
- The first day of the month
- Residential customers with a typical consumption for the national capital city
- Standing fees are added to the price per kWh so that the entire end-user cost is taken into account.
- In case of spot-based tariffs the previous month's average price is considered in the calculations to smooth day-to-day extreme changes

HEPI prices do not relate to:

- The prices paid by customers on fixed price contracts agreed prior to the time of data collection
- The price paid by customers on tariff contracts set at a level no longer available at the time of data collection
- Sign in and other temporary bonuses and other forms of non-monetary benefits are not taken into account since they can distort the overall tariff offered, especially in cases where they are offered on a "one-off" basis
- Contracts with extra services (e.g. insurance, maintenance, etc.) and prepaid contracts are also omitted from the analysis.

#### Note on retrospective price adjustments:

In cases of retrospective adjustments to previous months' price (i.e. application of support measures or review of regulated price where applicable) changes are integrated retrospectively in the prices of the month(s) for which the adjustments apply. This might create a difference between the HEPI price and the actual bill amount for a given month.

Visit our project webpage at <a href="http://www.energypriceindex.com">http://www.energypriceindex.com</a> and subscribe to the free monthly update of the HEPI index for Europe.

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#### **Energie-Control Austria**

Energie-Control Austria was set up by the legislator on the basis of the new Energy Liberalisation Act and commenced operation on 1 March 2001. Energie-Control is headed by Mr. Wolfgang Urbantschitsch and Mr. Andreas Eigenbaueras managing

directors and is entrusted with monitoring, supporting and, where necessary, regulating the implementation of the liberalisation of the Austrian electricity and natural gas markets.

More at: <u>www.e-control.at</u>



# The Hungarian Energy and Public Utility Regulatory Authority

The main responsibilities of the Hungarian Energy and Public

Utility Regulatory Authority are consumer protection, providing regulated access to networks and systems, carrying out regulatory competencies in order to maintain security of supply and fostering competition. The scope of the infrastructures, which have to be overseen by the Hungarian Energy and Public Utility Regulatory Authority, has been extended in 2011 with the complete regulation of district heating and in 2012 with the water public utilities. As market progresses are becoming more widespread, we put emphasis on our market monitoring task and we pay specific attention to regional market integration both in electricity and natural gas. **More at:** www.mekh.hu



#### **VaasaETT**

VaasaETT is a research and advisory consultancy dedicated to customer related issues in the energy industry. VaasaETT

advises its clients based on empirical evidence brought about from extensive research in the area of customer behaviour and competitive market behaviour (including smart energy offerings, demand response, energy efficiency, smart home, smart grid). VaasaETT's unique collaborative approach enables it to draw on an extensive network of several thousand energy practitioners around the world who can contribute to its research activities or take part in industry events it organises allowing VaasaETT to integrate global knowledge and global best practice into its areas of expertise. VaasaETT's truly global focus is reflected by research and strategic support having been provided to a diverse array of organisations on 5 continents including for instance 28 of the Fortune Global 500 companies, the European Commission, Government and public research bodies in Europe, Japan, the UAE, the Middle East and Australia. **More at:** www.vaasaett.com