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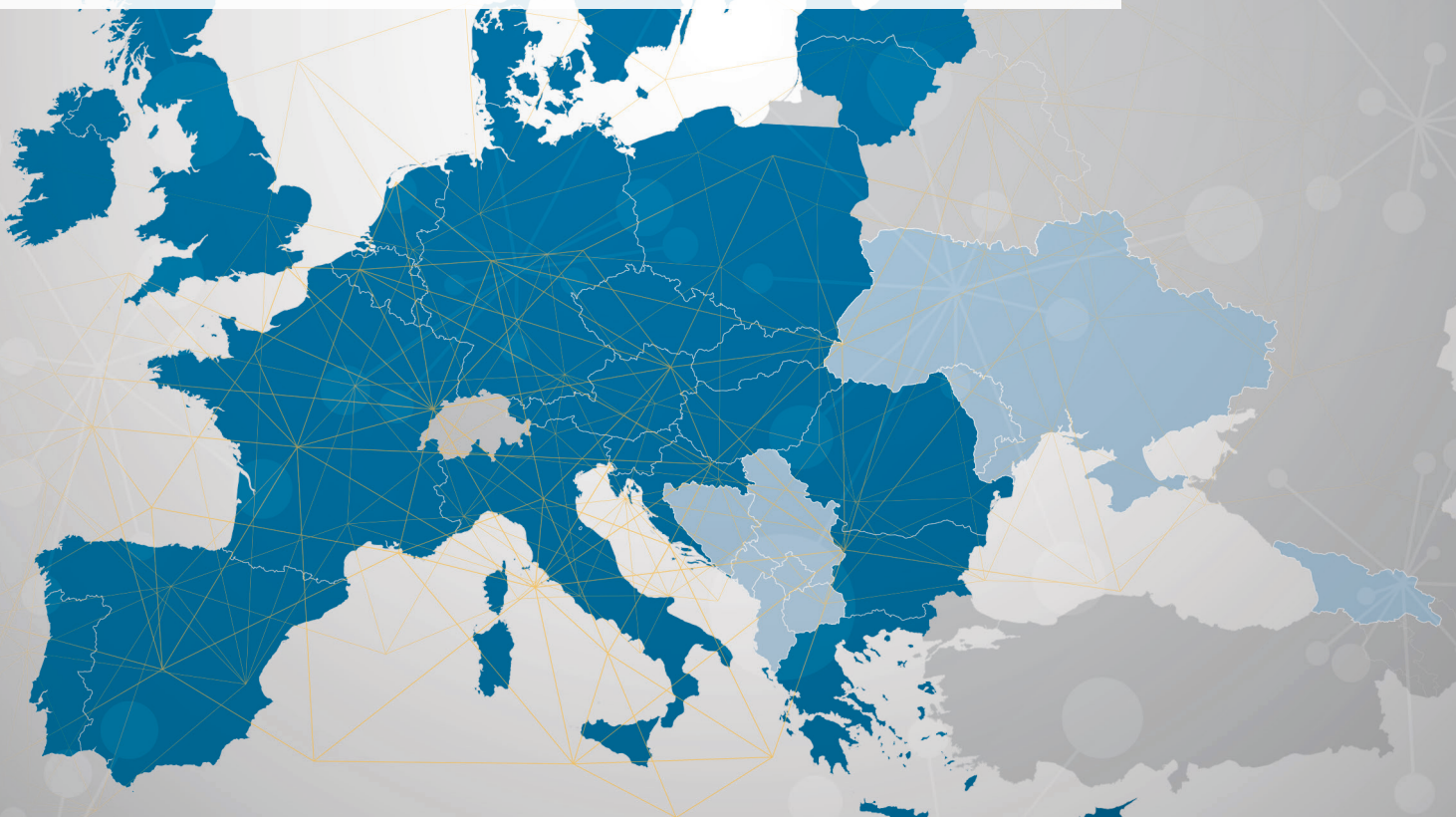


## ACER/CEER

# Annual Report on the Results of Monitoring the Internal Electricity and Gas Markets in 2016

## Electricity and Gas Retail Markets Volume

October 2017



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# ACER/CEER

## Annual Report on the Results of Monitoring the Internal Electricity and Gas Markets in 2016

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## Executive summary

- 1 This volume assesses the main retail price trends in the Member States (MSs) of the European Union (EU) and the Energy Community Contracting Parties (EnC CPs)<sup>1</sup>.

### EUROPEAN UNION

- 2 Retail energy prices vary greatly across the EU. For both electricity and gas, price levels in the highest-priced MSs are three times higher than those in the lowest-priced MSs. Compared to 2008, the average EU final electricity price has risen by 26.4% and by 5.8% for household and industrial consumers, respectively. Gas prices have risen by 8.9% for household consumers, but have decreased by 28.2% for industrial consumers.
- 3 However, while on average prices in 2016 were higher compared to 2008, the pattern of rising prices seems to be reversing. While industrial gas consumers have benefited since 2012 from lower prices compared to 2008, household consumers have seen prices decreasing in the past two years. In addition, in 2016, compared to 2015, average gas prices fell substantially for both household and industrial consumers across the EU, by 8.4% and 20.1%, respectively. For electricity, the decreasing trend was observed for the third consecutive year in the industrial segment, whereas households saw the first decrease, of 7.1%, last year.
- 4 Every year the Agency analyses the price breakdown of the standard incumbent electricity and gas offers available to households in EU capital cities. On average, 35% of the final electricity price in 2016 consisted of the energy component (contestable charges), while 65% of the bill consisted of non-contestable charges, i.e. the sum of network costs, taxes, levies and other charges. For gas, the bill for households was, on average, split evenly between contestable and non-contestable charges. As might be expected, the actual breakdown varies by capital city.
- 5 In 2016, the share of the energy component in the end price continued to decrease. In the 2012–2016 period, the share fell from 41% to 35% for electricity, and from 56% to 50% for gas, leaving little room in the final energy bill for competition among suppliers.

### ENERGY COMMUNITY CONTRACTING PARTIES

- 6 In the EnC CPs, and contrary to the EU, industrial electricity and gas prices tend to be higher than household prices.
- 7 In the period between 2013 and 2016, the average electricity price for households increased by 11%, while average industrial prices decreased by almost 30%. This price convergence between the two segments is partially explained by the unwinding of cross-subsidisation in Ukraine.
- 8 Average gas household prices increased by 129% between 2013 and 2016, while industrial gas prices decreased by 56%. The substantial increase in household prices reflects the increases in Ukrainian gas household prices, because all other EnC CPs recorded lower gas household prices during the same period.
- 9 When examining the price breakdown, the composition of the final household price for both gas and electricity varies widely across the EnC CPs. A clear trend is difficult to detect which is most likely due to the heterogeneity of the EnC CPs.

1 The Energy Community is an international organisation dealing with energy policy, bringing together the EU and countries of South-East Europe and the Black Sea regions. At present, the Energy Community has nine Contracting Parties: Albania, Bosnia and Herzegovina, Georgia, Kosovo\*, the Former Yugoslav Republic (FYR) of Macedonia, Moldova, Montenegro, Serbia and Ukraine. Throughout this document the \* symbol refers to the following statement: "This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Advisory Opinion on the Kosovo declaration of independence".

# 1. Introduction

- 10 The Market Monitoring Report (MMR), which is in its sixth edition, consists of four volumes: Electricity Wholesale Markets, Gas Wholesale Markets, Electricity and Gas Retail Markets, and Consumer Protection and Empowerment. The MMR covers the Member States (MSs) of the European Union (EU) and, for selected topics, also the Contracting Parties (CPs) of the Energy Community (EnC).
- 11 The main objective of the Electricity and Gas Retail Markets Volume is to monitor the retail prices paid by household and industrial consumers for electricity and gas in 2016 throughout Europe<sup>2</sup>. Despite the reduced scope of this year's Electricity and Gas Retail Market Volume, due to internal Agency-wide resource constraints, this volume is thematically aligned with the previous editions of the MMR. Moreover, it contains two major novelties regarding the process and the geographical scope of the analysis.
- 12 First, in close collaboration with the EnC Secretariat and the respective National Regulatory Authorities (NRAs) of its CPs, the data collection and analysis of retail price evolution and energy cost breakdown was extended to the EnC CPs, which enriched the analysis with a comparative approach between the retail markets in the EU and the EnC<sup>3</sup>.
- 13 Second, the offer data used for the energy cost breakdown was collected by the Agency and validated by NRAs through the newly developed web-based ACER Retail Energy Application (AREA), which is part of the ACER Electricity and Gas Information System (AEGIS). The main purpose of AREA is to improve the data collection process and thereby enhance analytical work.
- 14 This document is structured in three analytical chapters. Chapter 2 presents the level and evolution of retail electricity and gas prices, for both household and industrial consumers in the EU and EnC CPs. Chapter 3 illustrates the cost breakdown of the standard incumbent offer for gas and electricity in EU MSs, and for the first time also in the EnC CPs. Chapter 4 focuses on the year-on-year evolution of the various cost components of the standard incumbent offer in EU MSs and the EnC CPs.

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2 Throughout this volume, the 'EU' analysis refers to the 28 MSs of the EU (EU28), while 'Europe' refers to the EU28 and Norway. Where other European countries such as CPs of the EnC are included in the analysis, this is explicitly mentioned.

3 The analysis was extended to the EnC CPs, for which the NRAs provided data. However, data was not consistently available for all EnC CPs. For all the analyses presented in this volume, data availability is specified.

## 2. Level and evolution of retail energy prices

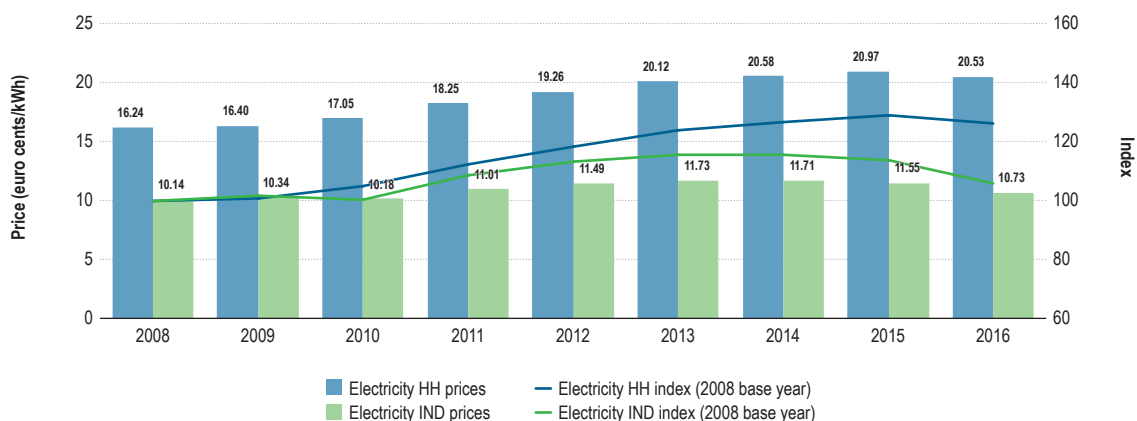
### 2.1 Retail electricity prices

#### 2.1.1 European Union

15 Retail energy prices, which vary greatly across the EU, constitute an important part of household and industrial consumers' expenditure. For the purpose of this analysis, average EU electricity post-taxes total price ('POTP' or 'final price') trends are examined over the 2008-2016 period. The final price is defined as the sum of the commodity price, regulated transmission and distribution charges, and retail components (billing, metering, customer services and margin), plus value-added tax (VAT), levies (local, national, environmental, as applicable) and any surcharges, if applicable.

16 Since 2008, as shown in Figure 1, the average<sup>4</sup> final electricity price in the Europe has risen by 26.4% and 5.8% for household and industrial consumers, respectively. However, in 2016, the average electricity prices fell for both household and industrial consumers across the EU and Norway by 2.1% and 7.1%, respectively. While this decreasing trend was observed for the third consecutive year in the industrial segment, the upward trend observed in the household segment for the past eight years was reversed for the first time in 2016. As shown in Figure 1, in 2016, the average final price settled at 20.53 euro cents/kWh for household consumers and at 10.73 euro cents/kWh for industrial consumers.

Figure 1: Trends in final electricity prices for household and industrial consumers in EU MSs and Norway – 2008–2016 (euro cents/kWh and index change, 2008 = 100)



Source: ACER calculations based on Eurostat (17 July 2017).

Note: Throughout this document, unless otherwise specified, the analysis of retail electricity prices for both the EU MSs and EnC CPs is based on bi-annual data provided by Eurostat for consumption bands DC: 2,500–5,000 kWh (household electricity consumption) and IE: 20,000–70,000 MWh (industrial electricity consumption). The right vertical axis shows an index change compared to the base year of 2008. Throughout this document, IND refers to the industrial segment, and HH designates the household segment of the retail market.

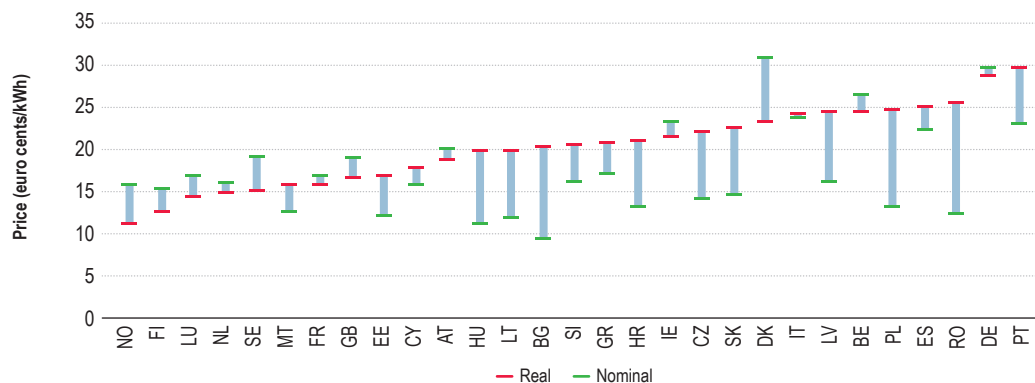
17 In line with the findings from previous years, large discrepancies are observed at the national level across the EU. First, Figure 2 shows that the final price for household consumers continued to be the highest in Denmark (30.86 euro cents/kWh) in nominal terms, where consumers pay more than three times the price paid by Bulgarian consumers. Second, it shows that the discrepancies in the final price observed across the EU in nominal terms are also observed in real terms, i.e. when purchasing power parity (PPP) of the national markets is considered, although to a slightly lesser extent. For example, in 2016, the highest final price in real terms in the EU was observed in Portugal (29.79 euro cents/kWh), where household consumers paid 2.3 times the price paid by Finnish<sup>5</sup> consumers (12.68 euro cents/kWh).

4 This analysis includes Eurostat prices weighted according to their consumption by the household sector in each MS.

5 Norwegian prices were even lower in real terms in 2016, i.e. 11.31 euro cents/kWh.



Figure 2: Final prices in nominal and real terms for electricity household consumers in EU MSs and Norway – 2016 (euro cents/kWh)



Source: ACER calculations based on Eurostat (17 July 2017).

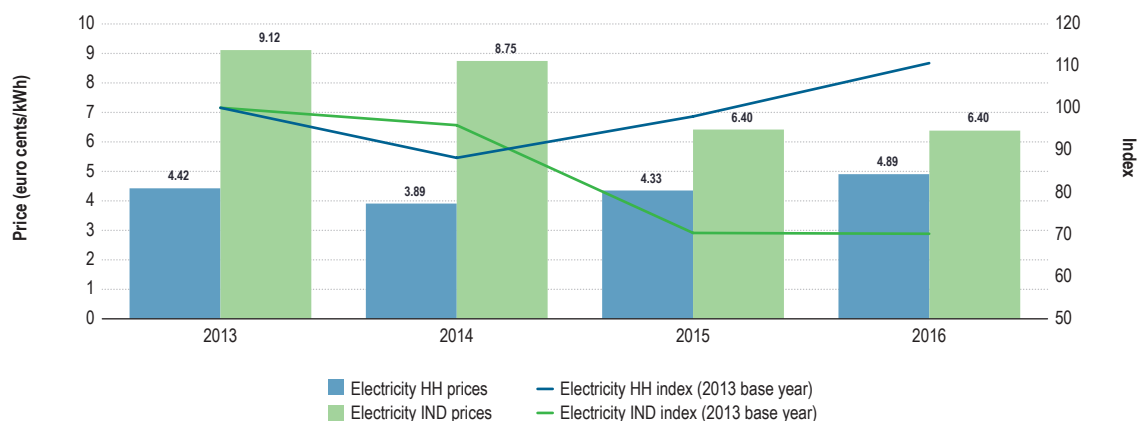
Note: The data points are ranked by the price in real terms in 2016, in ascending order.

### 2.1.2 Energy Community

18 In the EnC, contrary to the trends observed in the EU, industrial electricity prices are higher than household prices. In the period between 2013 and 2016, the average<sup>6</sup> electricity price for households in the EnC CPs increased by 11%, while average industrial prices decreased by almost 30%, as shown in Figure 3. This price convergence between the two segments is partially explained by the unwinding of cross-subsidisation in Ukraine.

19 In 2016, the average electricity price for household consumers in EnC CPs was 4.89 euro cents/kWh, which is around 2.7 times less than the average EU electricity price for households in the same year. To a certain degree, this sizeable difference is due to the low household price in Ukraine<sup>7</sup>. Figure 4 provides more clarity on the dynamics of household electricity prices per EnC CP between 2013 and 2016.

Figure 3: Trends in final electricity prices for household and industrial consumers in EnC CPs – 2013–2016 (euro cents/kWh and index change, 2013 = 100)



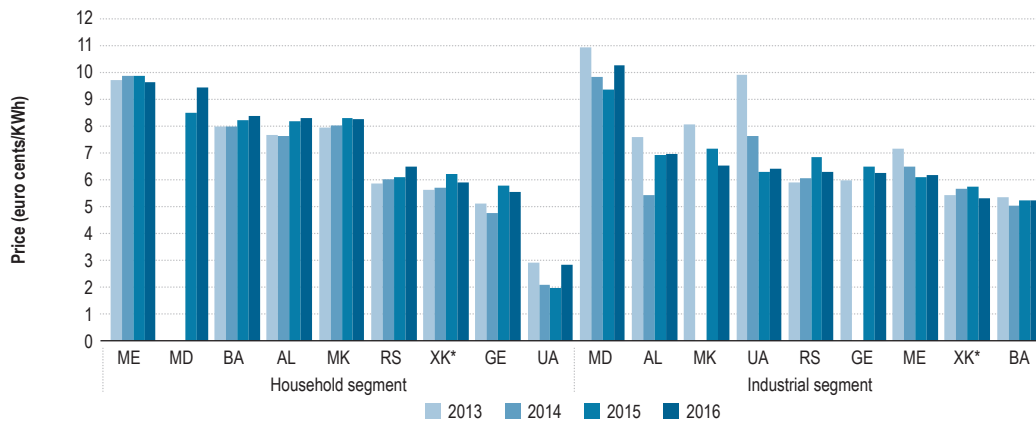
Source: ACER calculations based on Eurostat (14 June 2017), NRAs, EnC Secretariat.

Note: This figure is based on bi-annual data provided by Eurostat for consumption band DC: 2,500-5,000 kWh (household electricity consumption) for Albania (AL), Bosnia and Herzegovina (BA), the FYR of Macedonia (MK), Kosovo\* (XK\*), Montenegro (ME) and Serbia (RS) and consumption band IE: 20,000-70,000 MWh (industrial electricity consumption) for Bosnia and Herzegovina, the FYR of Macedonia, Kosovo\*, Montenegro and Serbia. Additionally, in order to fill the remaining data gaps, this figure draws on annual data provided by NRAs for household prices in Georgia (GE), Moldova (MD) and Ukraine (UA) and for industrial prices in Albania, Georgia, Moldova and Ukraine.

6 The average prices are weighted by the consumption of the respective segment in each country.

7 The impact of low prices in Ukraine is explained by the high quantity of electricity consumed in Ukraine (36,461 GWh) compared to the aggregated consumption of all other EnC CPs (31,827 GWh).

Figure 4: Final electricity prices in nominal terms for household and industrial consumers in EnC CPs – 2013–2016 (euro cents/kWh)



Source: ACER calculations based on Eurostat (14 June 2017), NRAs, EnC Secretariat.

Note: This figure is based on the data listed in the note under Figure 1. The prices are ranked in each segment by the price level in 2016, in descending order.

- 20 In general, household electricity prices in 2016 were the highest in Montenegro (9.63 euro cents/kWh), where consumers paid, on average, more than three times the price paid by consumers in Ukraine. It is worth mentioning that end consumer prices for households were still regulated in all EnC CPs, resulting in prices below actual costs, and therefore with cross-subsidisation<sup>8</sup> between industrial and household consumers.
- 21 In all EnC CPs, electricity prices for industrial consumers decreased between 2013 and 2016, mainly due to the stepwise, ongoing removal of cross-subsidies. The biggest drop (35%) was observed in Ukraine, where prices fell from 9.91 euro cents/kWh in 2013 to 6.43 euro cents/kWh in 2016. The lowest electricity prices for industrial consumers were in Bosnia and Herzegovina, with 5.25 euro cents/kWh, which is less than half the average end consumer prices for industrial consumers in EU MSs in 2016 (10.73 euro cents/kWh).

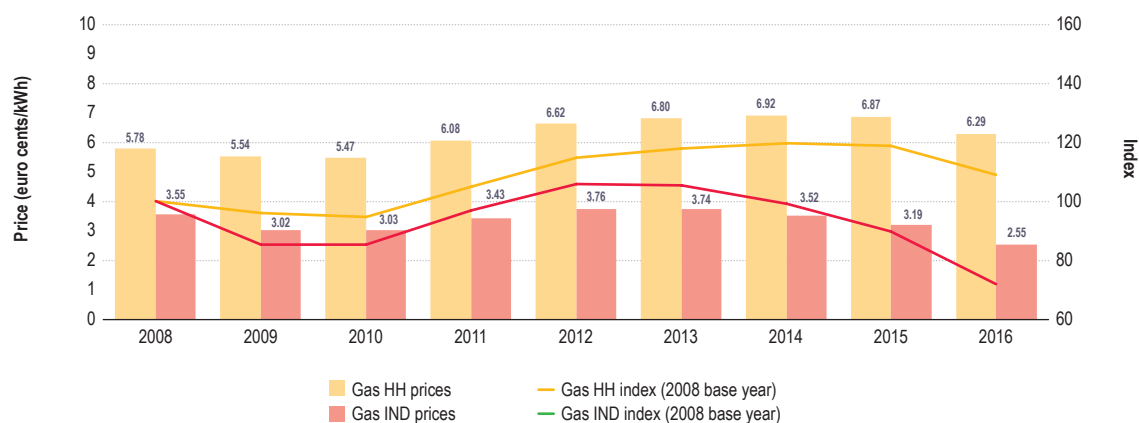
8 See also the Market Monitoring Report 2015 of the Energy Community Regulatory Board on 'Electricity and Gas Markets in the Energy Community – Contracting Parties & Georgia' for the reporting period 2014, available at: <https://www.energy-community.org/documents/reports.html>.

## 2.2 Retail gas prices

### 2.2.1 European Union

- 22 As shown in Figure 5, since 2008, the average<sup>9</sup> final price for gas has risen by 8.9% for household consumers, but has decreased by 28.2% for industrial consumers. While industrial gas consumers have benefited from lower prices since 2012 compared to 2008, household consumers have benefited from lower gas prices only in the past two years.
- 23 In 2016, compared to the previous year, average gas prices fell substantially for both household and industrial consumers across the EU by 8.4% and 20.1%, respectively, settling at 6.29 euro cents/kWh and at 2.55 euro cents/kWh, respectively. However, similarly to the electricity retail market, large discrepancies are observed across the EU at national level.

Figure 5: Trends in final gas prices for household and industrial consumers in EU MSs – 2008–2016 (euro cents/kWh and index change, 2008 = 100)

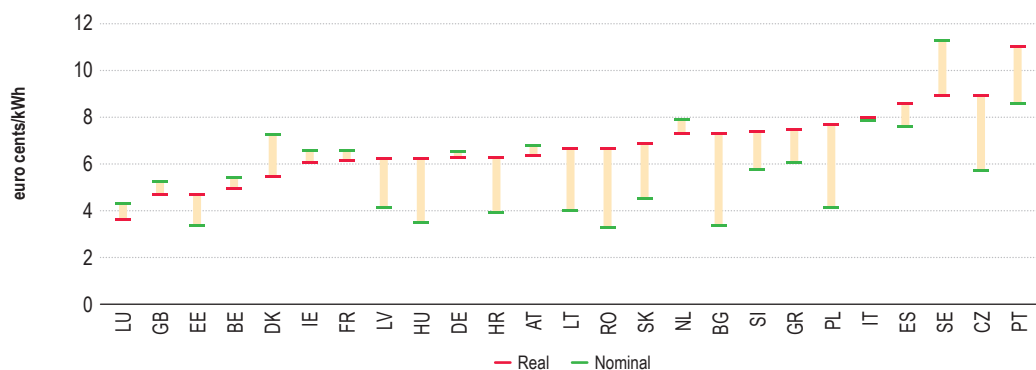


Source: ACER calculations based on Eurostat (17 July 2017).

Note: Throughout this document, unless otherwise specified, the analysis of retail gas prices for both EU MSs and EnC CPs is based on bi-annual data provided by Eurostat for consumption bands D2: 20–200 GJ (household gas consumption) and I5: 1,000,000–4,000,000 GJ (industrial gas consumption). Household gas consumption data for Greece was only partially available. Industrial gas consumption data for Luxembourg and Slovenia were not available for the relevant period, while data for Ireland, Greece, Croatia and Lithuania were only partially available. Gas data were not available for Cyprus, Finland, Malta and Norway. The right vertical axis shows an index change compared to the base year of 2008.

- 24 Figure 6 shows that the final price in nominal terms paid by household gas consumers in 2016 was the highest in Sweden at 11.36 euro cents/kWh, which is almost three times higher than the 3.28 euro cents/kWh paid by Romanian consumers. Similarly to the electricity household segment, Figure 6 shows that the discrepancies observed in the final price across the EU in nominal terms are also visible when the PPP of the national markets is considered. For example, the highest final price in real terms was observed in 2016 in Portugal (11.07 euro cents/kWh), where household consumers paid more than three times the price paid by consumers in Luxembourg.

Figure 6: Final prices in nominal and real terms for gas household consumers in EU MSs – 2016 (euro cents/kWh)



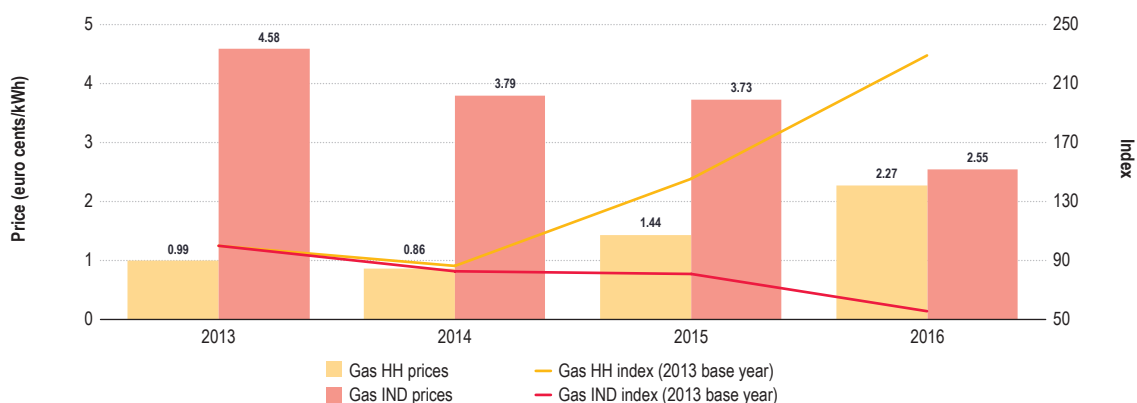
Source: ACER calculations based on Eurostat (17 July 2017).

Note: This figure is based on the data listed in the note under Figure 5.

### 2.2.2 Energy Community

- 25 Similarly to the electricity sector in the EnC, but contrary to the trends observed in the EU, the EnC industrial gas prices are higher than household prices. Figure 7 shows the trends in final gas prices for industrial and household consumers in the EnC CPs over the past four years. Between 2013 and 2016, average<sup>10</sup> gas household prices in the EnC CPs increased by 129%. This substantial increase reflects the increases in Ukrainian<sup>11</sup> gas household prices, because all other EnC CPs recorded lower gas household prices during the same period.
- 26 Concurrently, average industrial gas prices decreased in all EnC CPs by 56%, reaching the level of average industrial gas prices in the EU in 2016, i.e. 2.55 euro cents/kWh. This price convergence could be explained by the fact that the industrial consumers in Ukraine, which represent almost 70% of the EnC gas consumption in the industrial segment of the retail market, benefited from lower wholesale gas prices in 2016<sup>12</sup>.

Figure 7: Trends in final gas prices for industrial and household consumers in EnC CPs – 2013–2016 (euro cents/kWh and index change, 2013 = 100)



Source: ACER calculations based on Eurostat (14 June 2017), NRAs, EnC Secretariat.

Note: This figure is based on bi-annual data provided by Eurostat for consumption bands D2: 20–200 GJ (household gas consumption) and consumption band I5: 1,000,000–4,000,000 GJ (industrial gas consumption) for Bosnia and Herzegovina and Serbia. In order to fill data gaps, this figure is based on annual data provided by NRAs for gas household prices in Georgia, Moldova and Ukraine and for gas industrial prices in Georgia and Ukraine. Household prices for the FYR of Macedonia are not available due to very limited number of household customers in the country, all supplied at non-regulated prices which are not known to the NRA. Industrial prices for the FYR of Macedonia are not available for consumption band I5 for reasons of confidentiality.

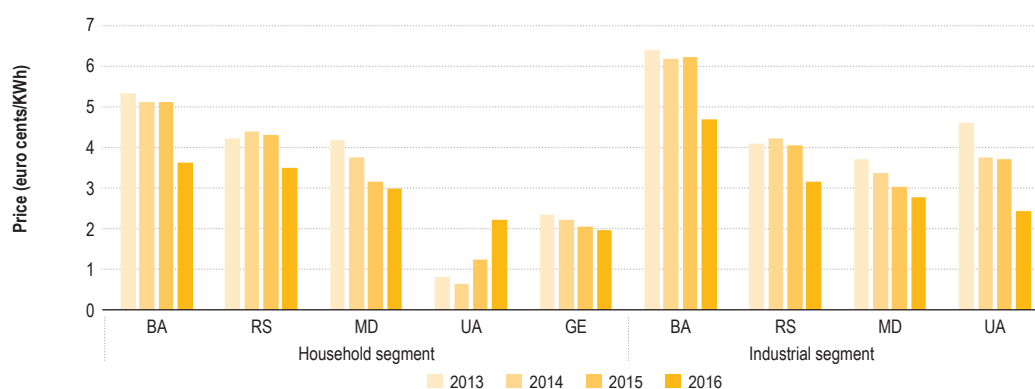
10 See footnote 4.

11 Gas household prices in Ukraine increased from 2014 onwards following the Cabinet of Minister’s resolutions covering, among others, the stepwise increase in gas household prices in line with an agreement made with the International Monetary Fund. The last resolution, issued in 2016 is available at: <http://www.kmu.gov.ua/control/uk/cardnpd?docid=249595270>.

12 Moreover, Ukraine relied in 2016 on domestic gas production and on EU bilateral imports, which could explain the price convergence between the industrial gas prices in the EU and the EnC. See further insights into the wholesale market developments in Ukraine in Section 3.1 of the Gas Wholesale Market Volume of the 2016 MMR.

- 27 Figure 8 shows that, similarly to the situation in the EU, national discrepancies are observed between the level of household and industrial gas prices across the EnC CPs. These discrepancies originate mainly from the different levels of cross-subsidisation<sup>13</sup> applied between the industrial and household segments in regulating end consumer gas prices. For example, in 2016, household gas prices were regulated in all EnC CPs except the FYR of Macedonia, while industrial gas prices were regulated in Bosnia and Herzegovina, Georgia, Moldova and partially in Serbia<sup>14</sup>.
- 28 Nevertheless, the degree of cross-subsidisation decreased over the observed period. Greater convergence between household and industrial gas prices was observed in 2016 in all EnC CPs. The closing gap between the two segments was especially visible in Ukraine between 2013 and 2016, where household prices almost tripled from 0.82 to 2.23 euro cents/kWh, while industrial prices were halved, from 4.63 to 2.45 euro cents/kWh, as shown in Figure 8.

**Figure 8:** Final gas prices in nominal terms for household and industrial consumers in EnC CPs – 2013–2016 (euro cents/kWh)



Source: ACER calculations, based on Eurostat (14 June 2017), NRAs, EnC Secretariat.

Note: This figure is based on the data listed in the note under Figure 7. The prices presented in this Figure are ranked in each segment by the price level in 2016, in descending order.

13 See footnote 6.

12 14 In 2016, industrial gas prices were regulated in Serbia for small non-household customers consuming less than 1 GWh/per year.

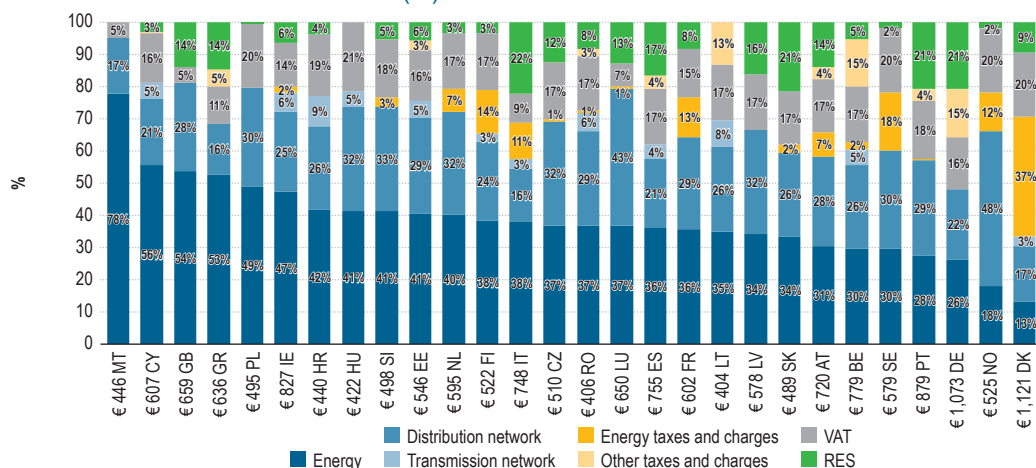
### 3. Energy price breakdown for households

#### 3.1 Electricity price breakdown

##### 3.1.1 European Union

- 29 The Agency analysed the breakdown<sup>15</sup> of the standard incumbent electricity and gas offers available to household consumers in EU capital cities for the fifth consecutive year. Similarly to the MMR covering 2015, the analysis for 2016 is based on an annual consumption of 3,500 kWh for electricity and 11,000 kWh for gas. Figure 9 shows the breakdown of the final price, based on the standard incumbent electricity offer, available in each EU capital city and Oslo at the end of 2016. It shows that the composition of the final electricity bill for household consumers continued to vary greatly across countries. For example, the energy component<sup>16</sup> accounted for 78% in Malta, while it accounted for only 13% of the final bill in Denmark.
- 30 Distribution network costs were the highest in Norway<sup>17</sup>, where they accounted for 48% of the standard incumbent offer price. Network transmission costs accounted for the largest share in the total offer price in Croatia (9%), while the retail electricity markets with the highest VAT are in Hungary, Denmark, Norway, Poland and Sweden. Moreover, 25 out of 28 EU NRAs reported RES charges in 2016, which accounted from 0.4% in Poland to 22% of the total offer price in Italy. Lastly, nine NRAs reported other taxes and charges, which were between 0.1% of the final price in Slovenia and 15% in Germany.

Figure 9: POTP electricity breakdown of incumbents' standard offers for households in EU capital cities – November–December 2016 (%)



Source: ACER calculations based on price comparison tools (PCTs), incumbent suppliers' websites and NRAs, collected via AREA<sup>18</sup> (2017).

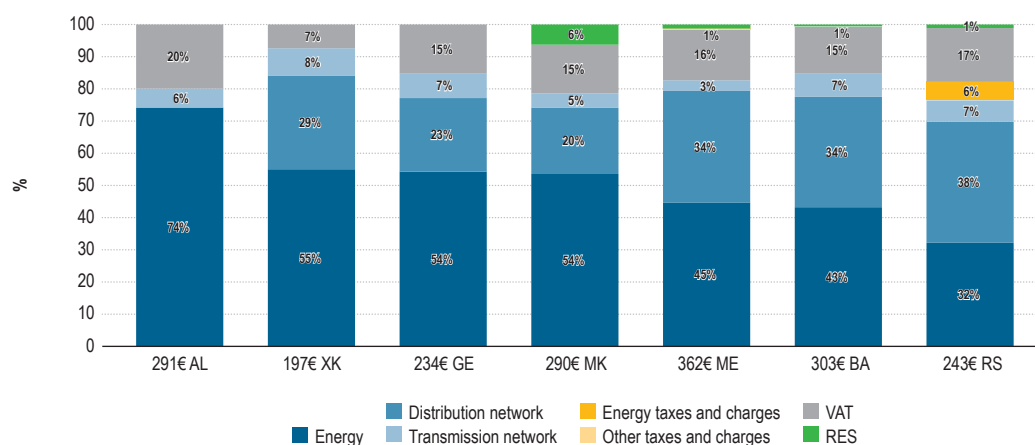
Note: The breakdown for Germany refers to the national average, instead of the standard incumbent offer, which is collected by the German NRA. The NRA of Bulgaria did not provide the required data for calculating the electricity price breakdown for 2016.

- 15 The Agency applies the following methodology to the breakdown of the standard incumbent offers: the price breakdown refers to a single standard offer proposed by the incumbent supplier for household consumers with an annual consumption of 3,500 kWh for electricity and 11,000 kWh for gas, as of November/December of the year analysed, in each capital city. The breakdown contains seven cost components: 1) energy costs, 2) transmission network costs, 3) distribution network costs, 4) energy taxes and charges, 5) VAT, 6) other taxes and charges and 7) charges for promoting electricity from renewable-energy sources (RES). The data is collected directly by the Agency from publicly available price comparison websites and made available to NRAs, which amend/confirm/provide missing data, as applicable. For future editions of the MMR, the Agency envisages the possibility to align its standard incumbent offer breakdown methodology with the methodology of the recently adopted Regulation (EU) 2016/1952 of 26 October 2016 on European statistics on natural gas and electricity prices, which is available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1952&from=EN>.
- 16 The 'energy component' reflects to a large extent the cost of purchasing electricity on the wholesale market, the cost of retailers to supply energy and, where applicable, other energy-related costs, while 'network charges' include the price charged for transmission and distribution, including transmission and distribution losses, system operation costs (excluding balancing energy), metering and meter rental. Whenever the breakdown between distribution and transmission costs was possible, these costs are presented separately.
- 17 See footnote 31 of the Electricity and Gas Retail Markets Volume of the 2015 MMR for further information on the composition of the distribution costs in Norway, available at: [http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/ACER%20Market%20Monitoring%20Report%202015%20-%20ELECTRICITY%20AND%20GAS%20RETAIL%20MARKETS.pdf](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Market%20Monitoring%20Report%202015%20-%20ELECTRICITY%20AND%20GAS%20RETAIL%20MARKETS.pdf).
- 18 In 2017, the Agency developed the web-based 'ACER Retail Energy Application' (AREA), which is part of the 'ACER Electricity and Gas Information System' (AEGIS) for the purpose of improving the data collection process for the Agency, to facilitate the data validation process for NRAs and more generally, to enhance transparency between NRAs and the Agency. Via this application, the Agency collects publicly available data from PCTs and incumbent suppliers' website. Prior to the Agency's analysis, NRAs validate, amend or complete the data, as applicable.

### 3.1.2 Energy Community

- 31 Figure 10 shows the breakdown<sup>19</sup> of final electricity price for households available in capital cities in November/December 2016 based on a consumption profile of 3,500 kWh per year. The composition of final household electricity price varies widely across the EnC CPs. The share of the energy component in the final bill was slightly above 50% in Kosovo\*, Georgia and the FYR of Macedonia, while it was the lowest in Serbia (32%) and the highest in Albania (74%)<sup>20</sup>. The major part of the energy component relates to the cost of purchasing electricity on the wholesale market.
- 32 In the EnC CPs, the share of transmission network costs in the total household electricity price was 7% of the final bill in Albania, Bosnia and Herzegovina, Georgia and Serbia, with a maximum 8% in Kosovo\* and a minimum 3% in Montenegro. Distribution network costs accounted for 38% in Serbia (the highest share) and 20% in the FYR of Macedonia (the lowest share). Taxes and levies on electricity bills vary between 7% and 20% of the final household prices, reflecting different national energy and fiscal policies.
- 33 Finally, the share of RES charges in the final price gives an indication of the support for renewable electricity production to the extent that it is financed by the electricity tariff. In Albania, Georgia and Kosovo\*, no RES support mechanism was reported by the NRAs for 2016. In all other EnC CPs, the RES support accounted for 1% of the final household electricity price, with the exception of FYR of Macedonia, which charged the highest share (6%).

Figure 10: POTP electricity breakdown of the incumbent's standard offers for households in EnC capitals – November–December 2016 (%)



Source: EnC Secretariat calculations, based on ACER's methodology and data provided by NRAs (2017).

Note: The NRAs of Georgia, Moldova and Ukraine did not provide the required data for calculating the electricity price breakdown. The energy component in Albania includes the costs of the distribution network. In Montenegro, the costs related to purchasing electricity for compensation of network losses are included in the energy component.

19 See methodology in footnote 15.

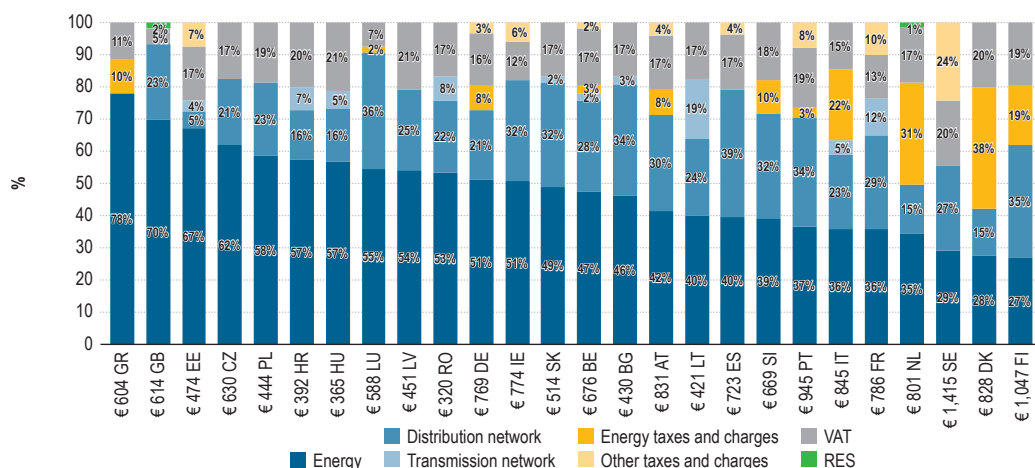
20 However, this share in the final price includes also the costs of distribution network, which cannot be disentangled from the energy component for Albania.

## 3.2 Gas price breakdown

### 3.2.1 European Union

- 34 Figure 11 shows the breakdown<sup>21</sup> of the final price, based on the standard incumbent gas offer, available in each EU capital city at the end of 2016, for which data was available and for which a gas retail market exists. It shows that the composition of the final gas bill for household consumers continued to vary greatly across MSs. For example, the energy component accounted for 78% in Greece<sup>22</sup>, while it represented only 27% of the final bill in Finland.
- 35 In 2016, network costs, including both distribution and transmission network costs, accounted for the largest share in the final price in Lithuania (43%), France (41%) and Spain (39%). Hungary (21%) and Latvia (21%) have the highest share of VAT in the final gas price, while Denmark is the country with the highest proportion of energy-related taxes and charges, which represented 38% of the final gas bill in 2016.
- 36 Great Britain and the Netherlands reported RES charges in the standard incumbent gas offer, which, at the end of 2016, amounted to approximately 2% and 1% of the final annual bill, respectively. Moreover, nine out of 26 NRAs reported other taxes and charges, which amounted to between 2% of the total price in Belgium and 24% in Sweden.

Figure 11: POTP gas breakdown of incumbents' standard offers for households in EU capitals – November–December 2016 (%)



Source: ACER calculations based on PCTs, incumbent suppliers' websites and NRAs, collected via AREA (2017).

Note: Cyprus, Malta and Norway are not included in this figure due to small or non-existent markets for household consumers. The natural gas prices for Sweden refer specifically to Gothenburg, a very limited area of the country with gas. The breakdown for Germany refers to the national average, instead of the standard incumbent offer, which is collected by the German NRA. For Greece, the energy component includes network costs (see also footnote 22).

### 3.2.2 Energy Community

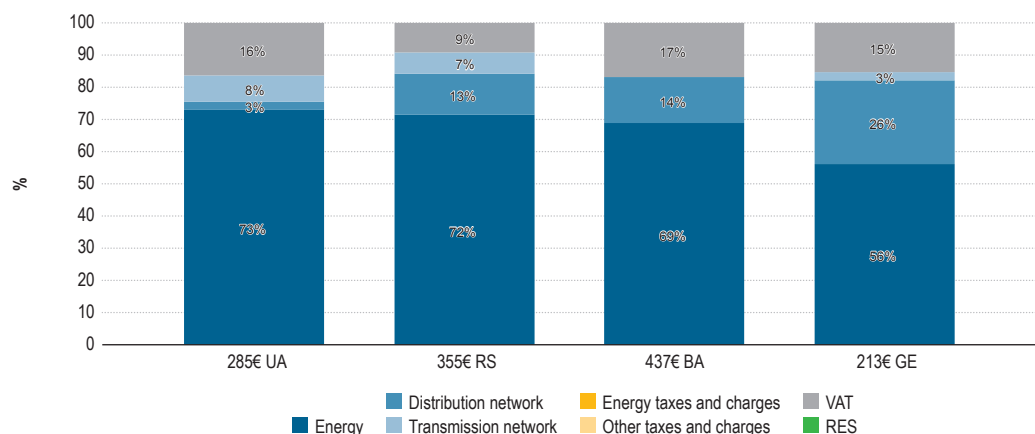
- 37 Figure 12 illustrates the breakdown of gas incumbents' standard offers to households in capital cities of the EnC CPs for an annual consumption profile of 11,000 kWh/year. The share of energy component in the final gas price in 2016 ranged from 56% in Georgia to 73% in Ukraine. Network charges ranged from 10% of the final gas price for consumers in Kiev to 28% for households in Tbilisi, with substantial differences in the share of distribution charges, which ranged from 3% in Ukraine to 26% in Georgia.

21 Similarly to the MMR covering 2015, the gas analysis for 2016 is based on an annual pan-European consumption profile of 11,000 kWh.

22 The energy component of the standard incumbent offer for Athens also includes network costs which could not be untangled, but which are estimated at 100 euros/year, i.e. 17% of the final price.



Figure 12: POTP gas breakdown of incumbents' standard offers for households in EnC capitals – November–December 2016 (%)



Source: EnC Secretariat calculations, based on ACER's methodology and data provided by NRAs (2017).

Note: Albania, Kosovo\*, Moldova and Montenegro are not included in this figure due to insufficient data. The FYR of Macedonia is not included in this figure due to its small retail gas market, with a very small number of household consumers. The transmission network costs for Bosnia and Herzegovina could not be disentangled and are included in the energy component.

## 4. Trends in energy components for households

### 4.1 Trends in electricity components

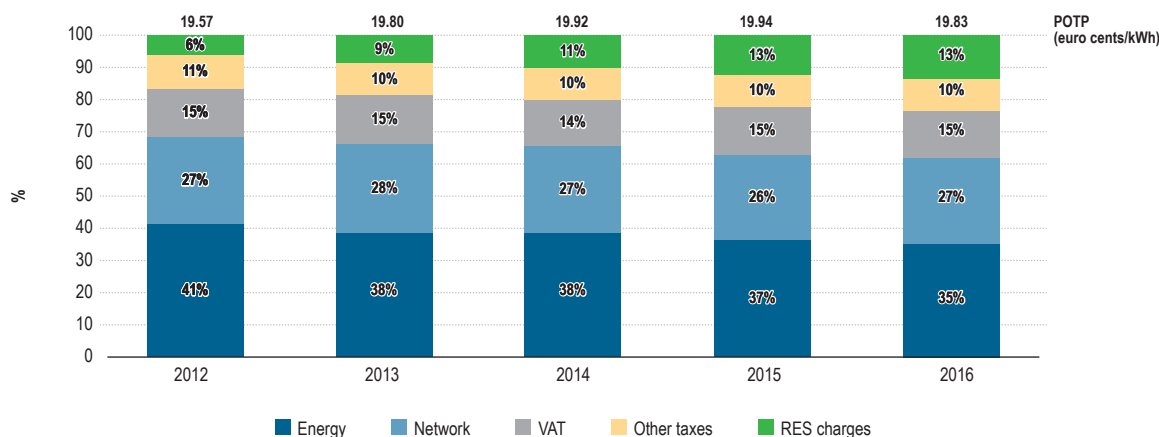
#### 4.1.1 European Union

38 On average<sup>23</sup>, 35% of the final price in 2016 consisted of the energy component (contestable charges), while the remaining 65% of the electricity bill consisted of non-contestable charges, i.e. the sum of network costs, taxes, levies and other charges.

39 Compared to 2012, the average final price for electricity for households increased by 1.5%, settling at 19.83 euro cents/kWh in 2016, as shown in Figure 13. This figure also shows that the importance of the energy component has declined during the observed period, both as a percentage of the final price (from 41% in 2012 to 35% in 2016) and in absolute terms (from 8 in 2012 to 7 euro cents/kWh in 2016), which reflects the decreasing wholesale<sup>24</sup> electricity prices. At the same time, the share of network costs, VAT and other energy and non-energy taxes remained almost unchanged, but increased in absolute terms.

40 Figure 13 shows that the share of RES charges increased every year and has doubled since 2012, from 6 to 13% in 2016, i.e. EU consumers paid on average 2.6 euro cents/kWh for RES charges in 2016.

Figure 13: Weighted average POTP electricity breakdown of incumbents' standard offers for households in EU capitals and Oslo – 2012–2016 (% and euro cents/kWh)



Source: ACER calculations based on the database of the Council of European Energy Regulators (CEER), PCTs, incumbent suppliers' websites and NRAs, collected via AREA (2017).

Note: For the purpose of this analysis, the average electricity price for household consumers in the EU is based on the standard incumbent offers for an annual pan-European average consumption of 3,500 kWh/year, weighted by total household consumption in each MSs, which is provided by CEER.

41 Between 2015 and 2016, developments at the national level display important discrepancies, as shown in Figure 14. For example, the final price for the electricity standard incumbent's offer increased on average by 3% in 14 out of 28 capital cities, ranging from a 0.02% increase in Croatia to a 15.8% increase in Norway. At the same time, the final price decreased on average by 6.1% in the other half of the EU MSs, ranging between a 0.1% decrease in France to a 19.5% decrease in Slovenia<sup>25</sup>.

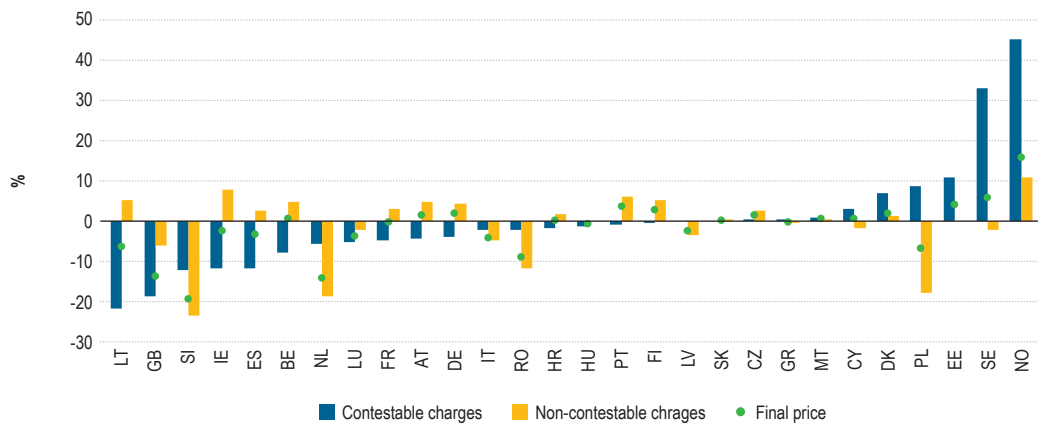
23 See note under Figure 13.

24 See Chapter 2 of the Electricity Wholesale Market Volume of the 2016 MMR.

25 The decrease of the standard incumbent offer in Ljubljana between 2015 and 2016 could be explained by more competition in the household segment, which was reflected by more (and cheaper) offers made available to consumers by suppliers, including the incumbent supplier.

42 During the same period, the contestable charges increased in ten MSs, while they remained stable or decreased in the remainder. The non-contestable charges increased in 15 countries, while they remained stable or decreased in the remaining ones. Overall, in 2016, household consumers in the capital cities of Great Britain, Slovenia, the Netherlands, Luxembourg, Italy and Romania benefited both from lower contestable and non-contestable charges.

Figure 14: Year-on-year changes in the final price, contestable and non-contestable components of the electricity offers for households in EU capitals and Oslo – 2015–2016 (%)



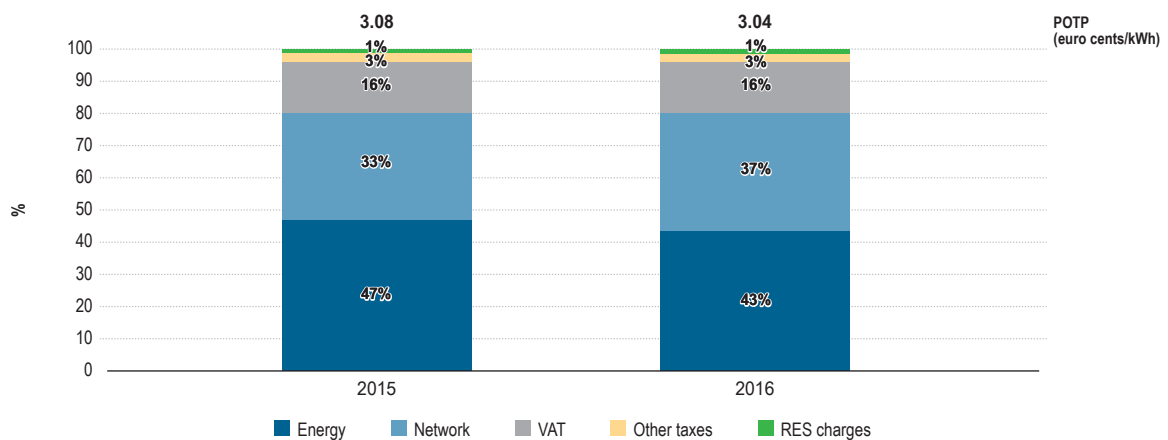
Source: ACER calculations based on CEER, PCTs, incumbent suppliers' websites and NRAs, collected via AREA (2017).

### 4.1.2 Energy Community

43 Figure 15 shows the weighted average final price breakdown of the incumbents' standard offers for electricity household consumers in EnC capitals in 2015 and 2016. In comparison to 2015, the structure of household electricity prices evolved in 2016 towards a lower share of the energy component (43% instead of 47%) and a higher share of the network component (37% instead of 33%).

44 Figure 16 shows that the major difference between 2015 and 2016 occurred in Serbia, where the share of energy component decreased from 40% to 32% of the final bill, while the share of network cost increased from 29% to 38%, mainly because of the rise in distribution network charges, which led to an overall price increase of 3.7%.

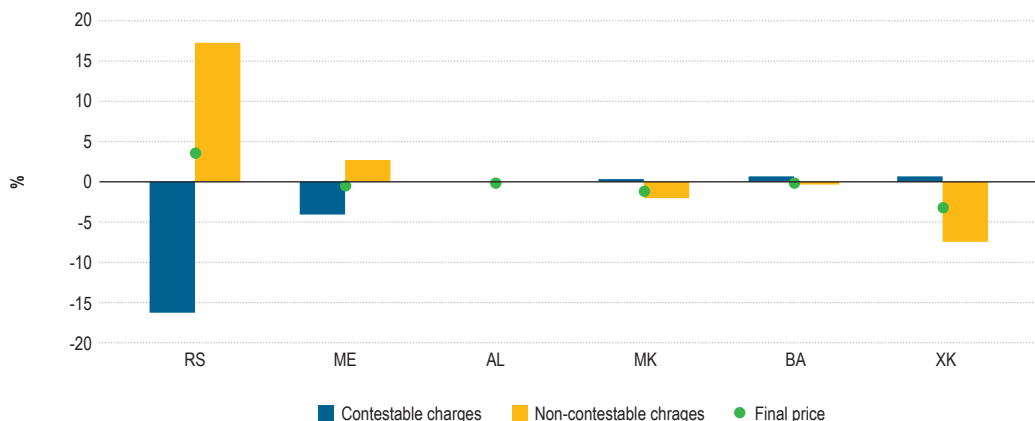
Figure 15: Weighted average POTP electricity breakdown of incumbents' standard offers for households in EnC capitals – 2015–2016 (% and euro cents/kWh)



Source: EnC Secretariat calculations, based on ACER's methodology and data provided by NRAs (2017).

Note: This figure is based on data provided by the respective NRAs for the electricity breakdown for Albania, Bosnia and Herzegovina, the FYR of Macedonia, Kosovo\*, Montenegro and Serbia, weighted by the total household electricity consumption in each country. The NRAs of Georgia, Moldova and Ukraine did not provide the required data for calculating the electricity price breakdown.

Figure 16: Year-on-year changes in the final price, contestable and non-contestable components of the electricity offers for households in EnC capitals – 2015–2016 (%)



Source: EnC Secretariat calculations, based on ACER’s methodology and data provided by NRAs (2017).

Note: This figure is based on the data listed in the note under Figure 15. The data are presented in ascending order of changes in the contestable charges.

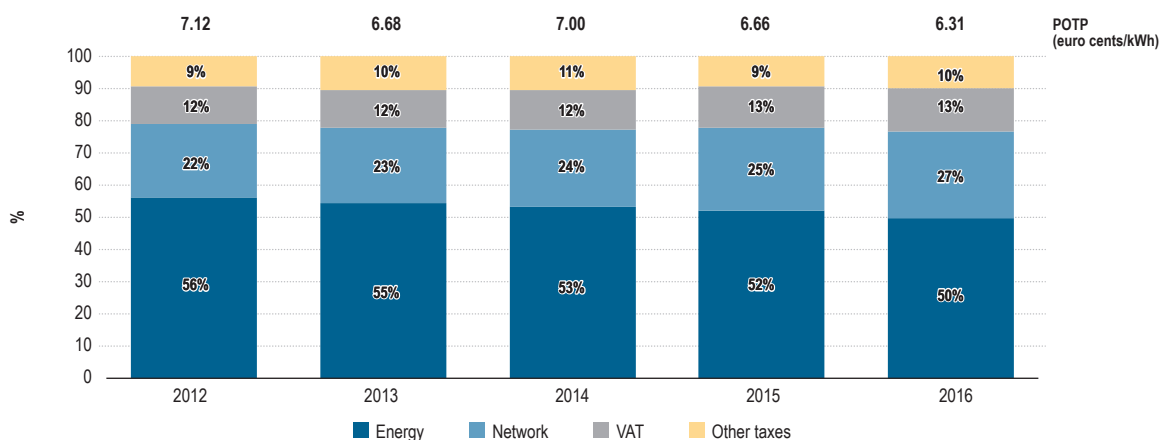
## 4.2 Trends in gas components

### 4.2.1 European Union

45 On average<sup>26</sup>, half of the final price paid in 2016 by end consumers covered the energy component of their annual gas bill, while the other half covered the sum of the network costs, taxes, levies and other charges (non-contestable charges). Compared to 2012, the average gas price paid by EU household consumers decreased in 2016 by 11% to 6.31 euro cents/kWh, mainly due to a decrease in the energy component. This decrease is linked to lower gas commodity prices and better functioning gas wholesale markets<sup>27</sup>.

46 While the energy component showed a steady decline between 2012 and 2016, as shown in Figure 17, the non-contestable component saw an upward trend. As a result, the share of the energy component in the final price dropped from 56% to 50%, whereas the share of network costs and taxes (VAT and other taxes) increased by 5 and 2 percentage points, respectively.

Figure 17: Weighted average POTP gas breakdown of incumbents’ standard offers for households in capital cities of the EU – 2012–2016 (% and euro cents/kWh)



Source: ACER calculations based on CEER, PCTs, incumbent suppliers’ websites and NRAs, collected via AREA (2017).

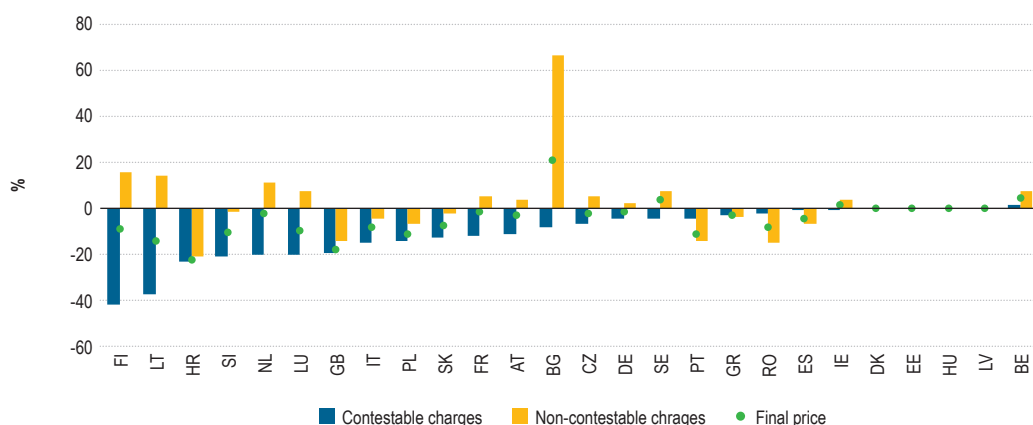
Note: For the purpose of this analysis, the average gas price for household consumers in the EU is based on the standard incumbent offers for an annual pan-European average consumption of 11,000 kWh/year, weighted by total household consumption in each MSs, which is provided by CEER.

26 See note under Figure 17.

27 See Chapters 2 and 3 in the Gas Wholesale Market Volume of the 2016 MMR.

- 47 Between 2015 and 2016, various developments were observed at the national level. Figure 18 shows that the final price for gas standard incumbents' offer decreased on average by 9% in 18 out of 26 capital cities, but stayed unchanged in the capitals of Denmark, Estonia, Hungary and Latvia. At the same time, the final price increased in the capitals of Bulgaria, Sweden, Ireland and Belgium. During the same period, contestable charges for gas decreased in 21 capital cities, while non-contestable charges decreased only in ten capitals.
- 48 Overall, in 2016, household consumers in the capitals of Croatia, Slovenia, Great Britain, Italy, Poland, Slovakia, Portugal, Greece, Romania and Spain benefited from both lower contestable and non-contestable gas charges. In Finland, Lithuania, the Netherlands, Luxembourg, France, Austria, the Czech Republic and Germany, the decrease in the energy component was partially offset by an increase in non-contestable charges, while in Bulgaria, Sweden and Ireland, this was fully offset by an increase in non-contestable charges, i.e. consumers in Bulgaria, Sweden and Ireland paid a higher gas price compared to the previous year. In Belgium, both components increased and lead to an increase in the final price.

Figure 18: Year-on-year changes in the final price, contestable and non-contestable components of gas offers for households in EU capitals – 2015–2016 (%)

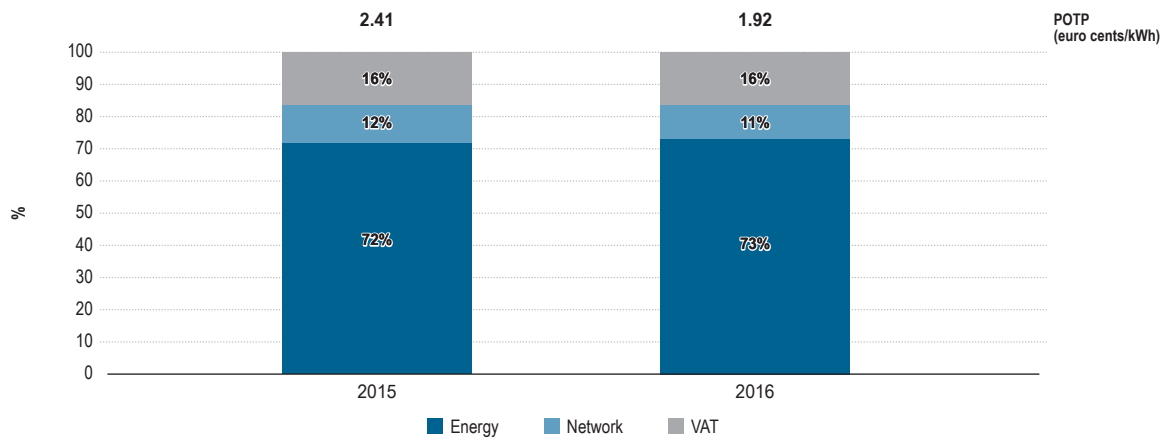


Source: ACER calculations based on CEER, PCTs, incumbent suppliers' websites and NRAs, collected via AREA (2017).  
 Note: The data were presented in ascending order by change in the contestable charges. Cyprus, Malta and Norway are not included in this figure due to small or non-existent markets for household consumers.

### 4.2.2 Energy Community

- 49 Figure 19 shows the weighted average gas POTP breakdown of the incumbents' standard offers for households in EnC capitals in 2015 and 2016. Compared to 2015, the overall structure of household gas prices remained almost unchanged in the EnC CPs. However, the cost levels evolved differently at national level. While in Ukraine, the contestable and non-contestable components increased, in Bosnia and Herzegovina and in Serbia there was a decrease in both components. Therefore, between 2015 and 2016, prices increased by 28% in Ukraine, while they decreased by 24% and 20% in Bosnia and Herzegovina, and Serbia, respectively.

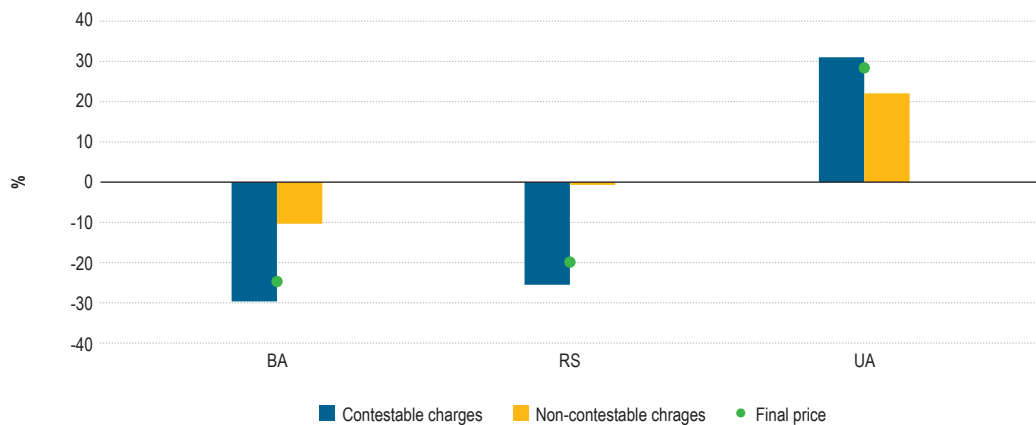
Figure 19: Weighted average POTP gas breakdown of incumbents' standard offers for households in EnC capitals – 2015–2016 (% and euro cents/kWh)



Source: EnC Secretariat calculations, based on ACER's methodology and data provided by NRAs (2017).

Note: This figure is based on data provided by the respective NRAs for the gas breakdown for Bosnia and Herzegovina, Serbia and Ukraine, weighted by the total household gas consumption in each country. Albania, Kosovo\*, Moldova and Montenegro are not included in this figure due to insufficient data. The FYR of Macedonia is not included in this figure due to its small retail gas market, with a very small number of household consumers.

Figure 20: Year-on-year changes in the final price, contestable and non-contestable components of gas offers for households in EnC capitals – 2015–2016 (%)



Source: EnC Secretariat calculations, based on ACER's methodology and data provided by NRAs (2017).

Note: This figure is based on the data listed in the note under Figure 19. The data are presented in ascending order of changes in the contestable charges.

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