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COMMISSION STAFF WORKING DOCUMENT
Accompanying the document

**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE
COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE
COMMITTEE OF THE REGIONS**

Energy prices and costs in Europe

{COM(2016) 769 final}

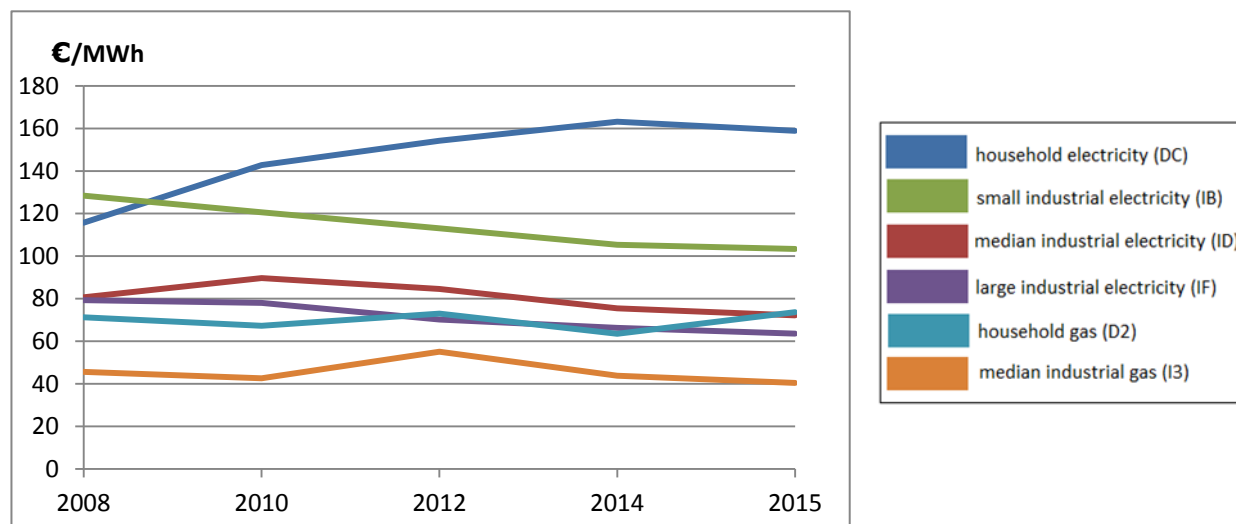
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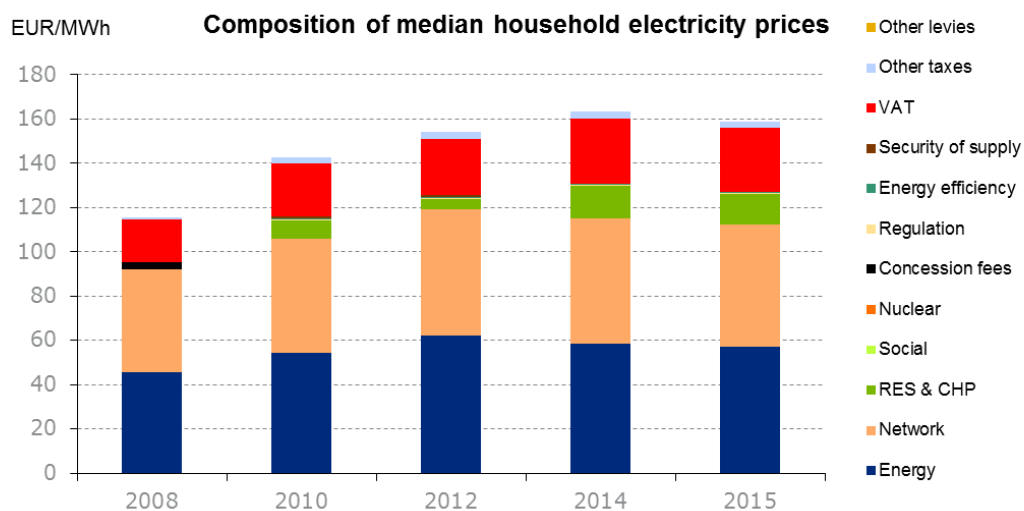
Slovenia

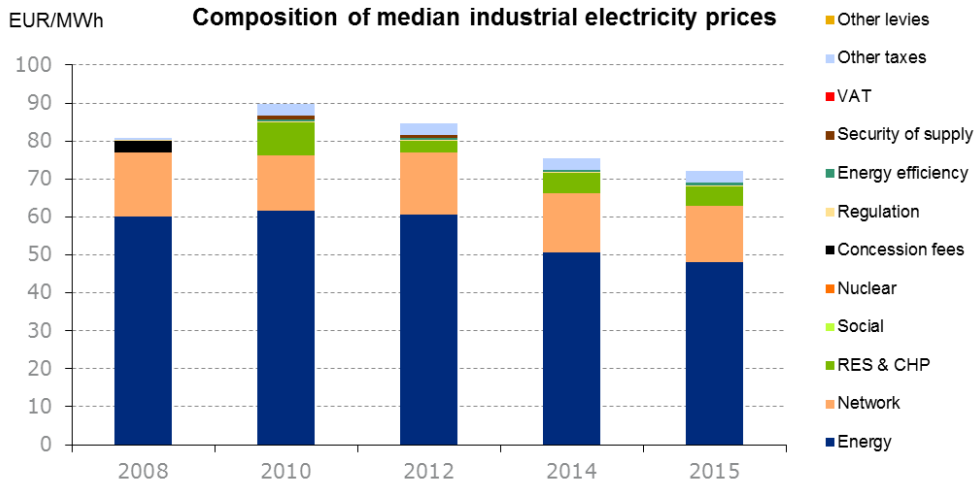


Evolution of electricity and natural gas prices

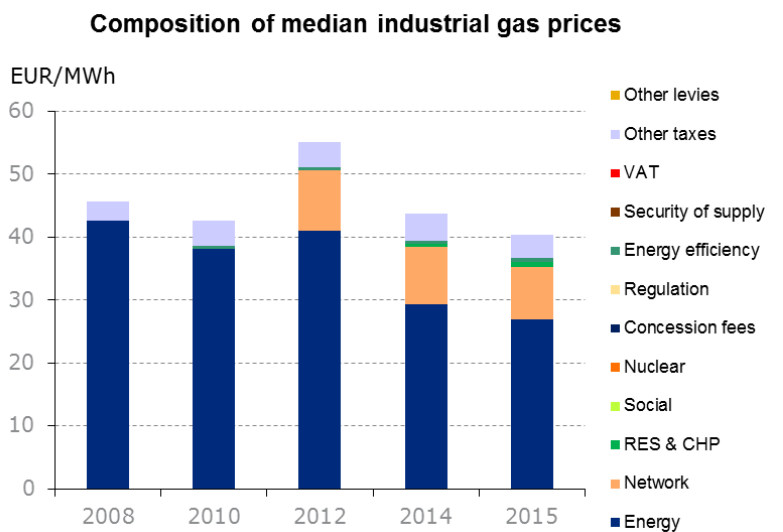
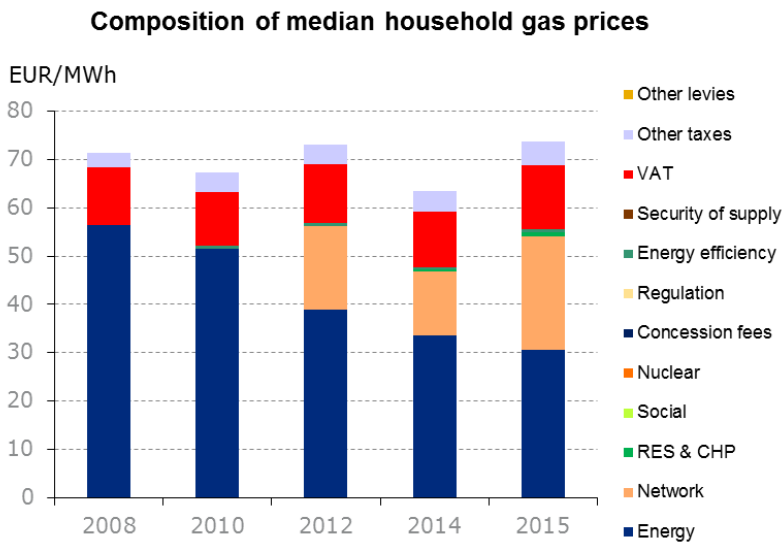


Composition of electricity prices



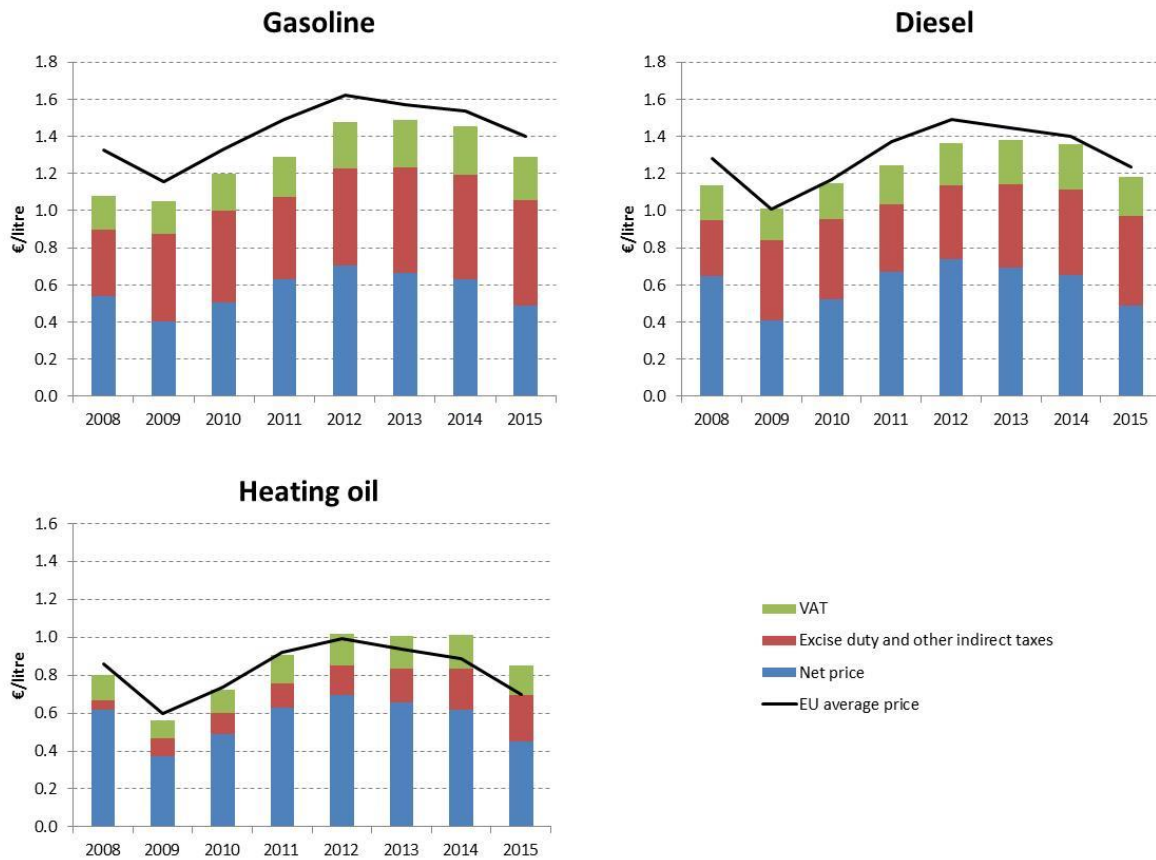


Composition of gas prices¹

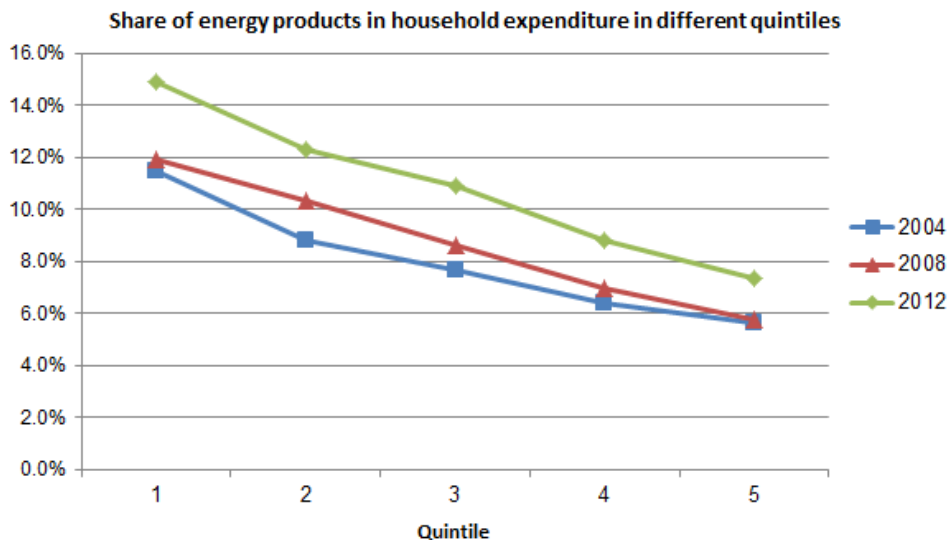


¹ Combined energy and network component for the years 2008 and 2010

Oil products prices

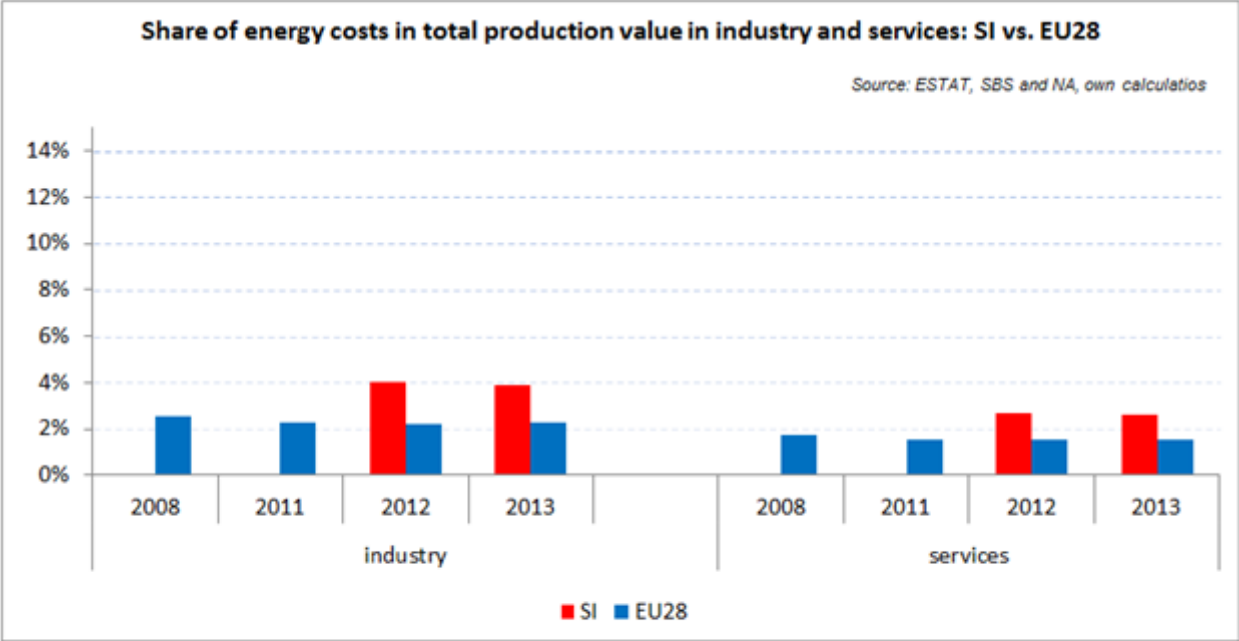


Energy in Households budgets



In Slovenia the share of energy in total household expenditure rose measurably between 2004 (blue line) and 2012 (green line): in the case of the poorest households (Quintile 1) it went up from 11.5% to 14.9%, while in the case of households with middle income (Quintile 3) it rose from 7.6% to 10.9%.

Energy costs shares in total production costs



Notes
 Data for Malta, Poland, Slovenia (prior to 2012) and Ireland (after 2012) is not available
 Data for 2009 and 2010 is incomplete and not reported
 Industry defined as NACE Rev.2 Section C (Manufacturing)
 Services defined as NACE Rev. 2 Sections G - U

Electricity and gas prices – Breakdown by price element

| Electricity Households (DC) | EUR/kWh |
|--|-----------------|
| | |
| Energy and supply | 0.064200 |
| Day-ahead market | |
| Ancillary services | |
| | |
| Total energy component | 0.064200 |
| Distribution | 0.037900 |
| Transmission | 0.012900 |
| | |
| Total network component | 0.050800 |
| Nuclear sector | 0.000200 |
| Special tax on electricity consumption | 0.009300 |
| Deficit annuity | 0.016200 |
| Capacity payments | 0.005400 |
| Specific compensation for renewable energy | 0.038700 |
| VAT | 0.040100 |
| Financing for the NRA | 0.000100 |
| Island compensation | 0.003900 |
| Financing of system and market operators | 0.000100 |
| Energy security and generation adequacy | 0.002000 |
| Other costs | |
| | |
| Total taxes & levies component | 0.116000 |
| | |
| Total price | 0.231000 |

| Electricity Industry (ID) | EUR/kWh |
|-------------------------------|-----------------|
| | 2015 |
| Energy and supply | 0.054100 |
| Day-ahead market | |
| Ancillary services | |
| | |
| Total energy component | 0.054100 |
| Distribution | 0.010500 |
| Transmission | 0.003600 |

| | |
|--|-----------------|
| | |
| Total network component | 0.014100 |
| Nuclear sector | 0.000100 |
| Special tax on electricity consumption | 0.004700 |
| Deficit annuity | 0.004500 |
| Capacity payments | 0.005400 |
| Specific compensation for renewable energy | 0.010800 |
| VAT | 0.000000 |
| Financing for the NRA | 0.000100 |
| Island compensation | 0.001100 |
| Financing of system and market operators | 0.000100 |
| Energy security and generation adequacy | 0.002000 |
| Other costs | |
| | |
| Total taxes & levies component | 0.028800 |
| | |
| Total price | 0.097000 |

| Natural Gas Households (D2) | EUR/kWh |
|---|-----------------|
| | |
| Energy and supply | 0.031772 |
| | |
| Total energy component | 0.031772 |
| Conduction | 0.030115 |
| Capacity reserve | 0.000420 |
| | |
| Total network component | 0.030535 |
| VAT | 0.013576 |
| Hydrocarbons tax | 0.002340 |
| | |
| Total taxes & levies component | 0.015916 |
| | |
| Total price | 0.078223 |

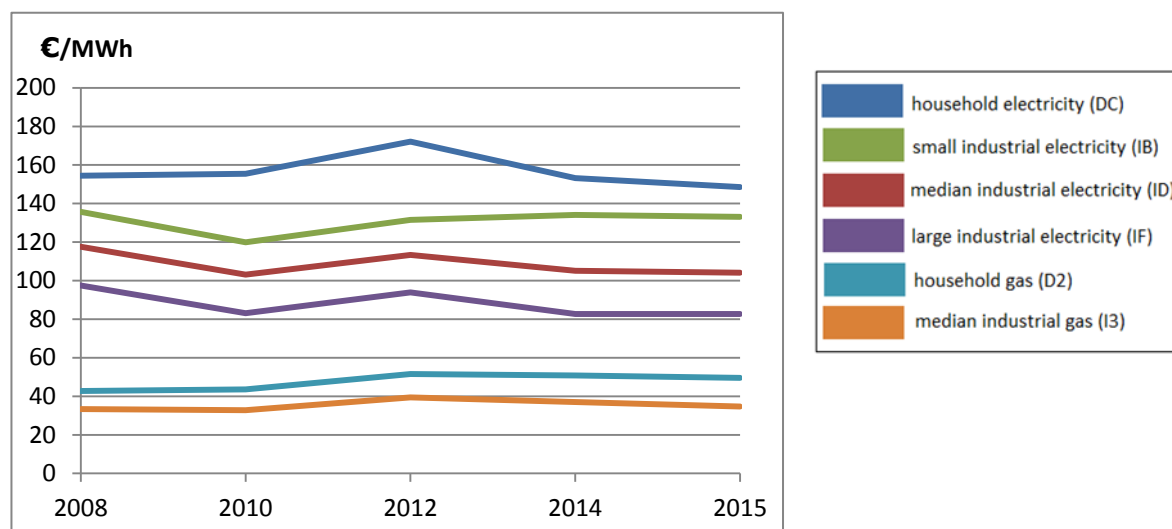
| Natural gas Industry (I3) | EUR/kWh |
|----------------------------------|----------------|
| | 2015 |
| Energy and supply | 0.030487 |

| | |
|---|-----------------|
| | |
| Total energy component | 0.030487 |
| Conduction | 0.003169 |
| Capacity reserve | 0.000420 |
| | |
| Total network component | 0.003589 |
| VAT | 0.000000 |
| Hydrocarbons tax | 0.000540 |
| | |
| Total taxes & levies component | 0.000540 |
| | |
| Total price | 0.034616 |

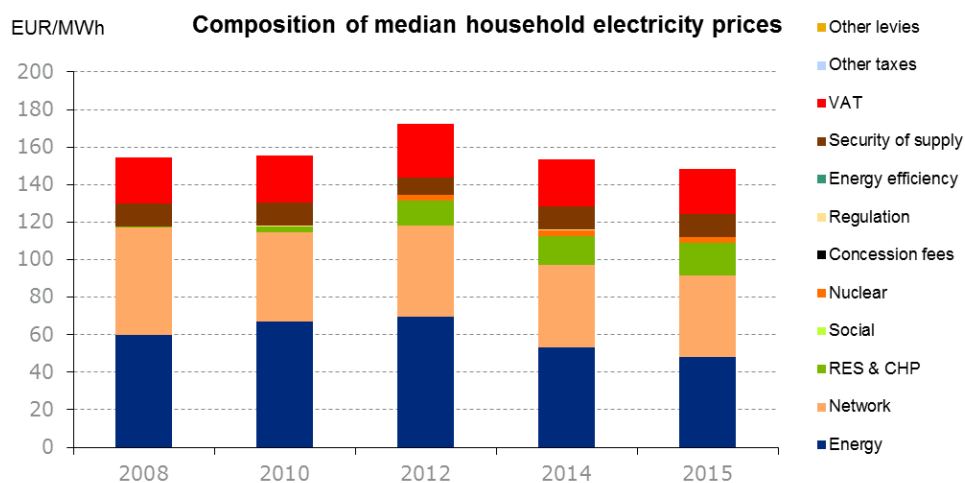
Slovakia

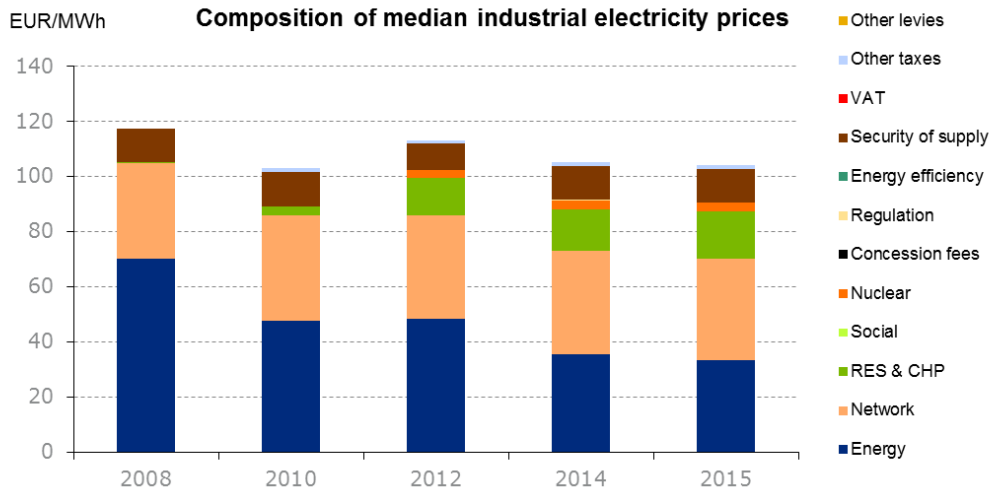


Evolution of electricity and natural gas prices



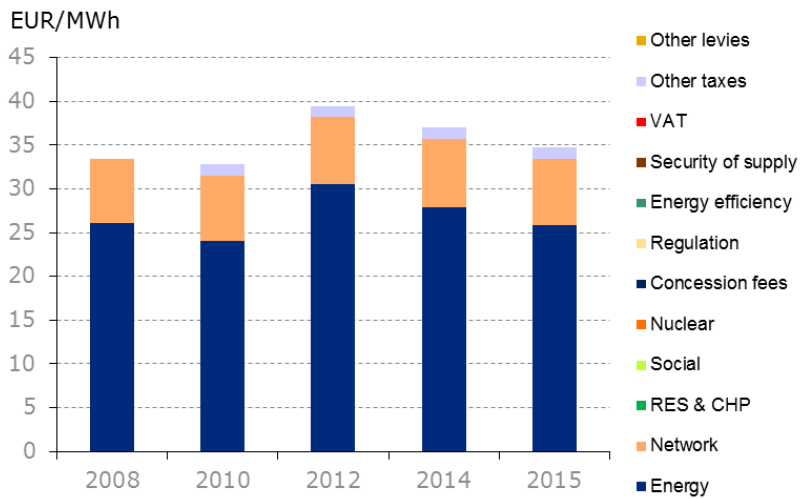
Composition of electricity prices



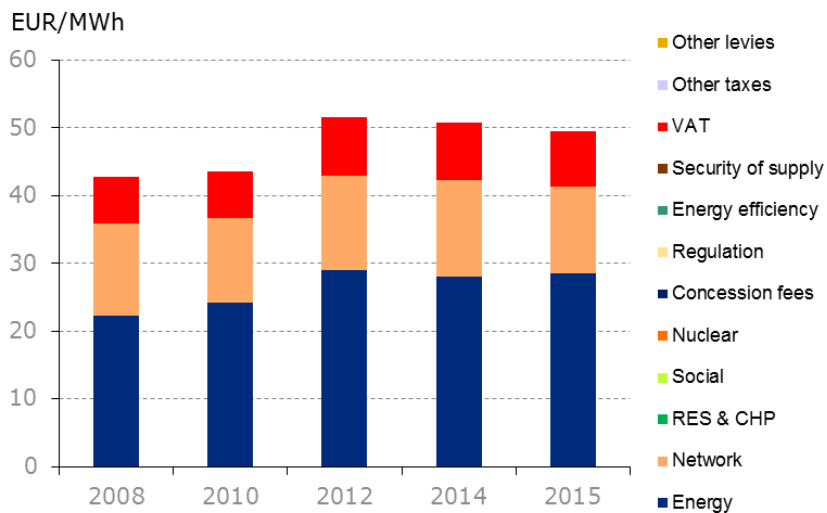


Composition of gas prices

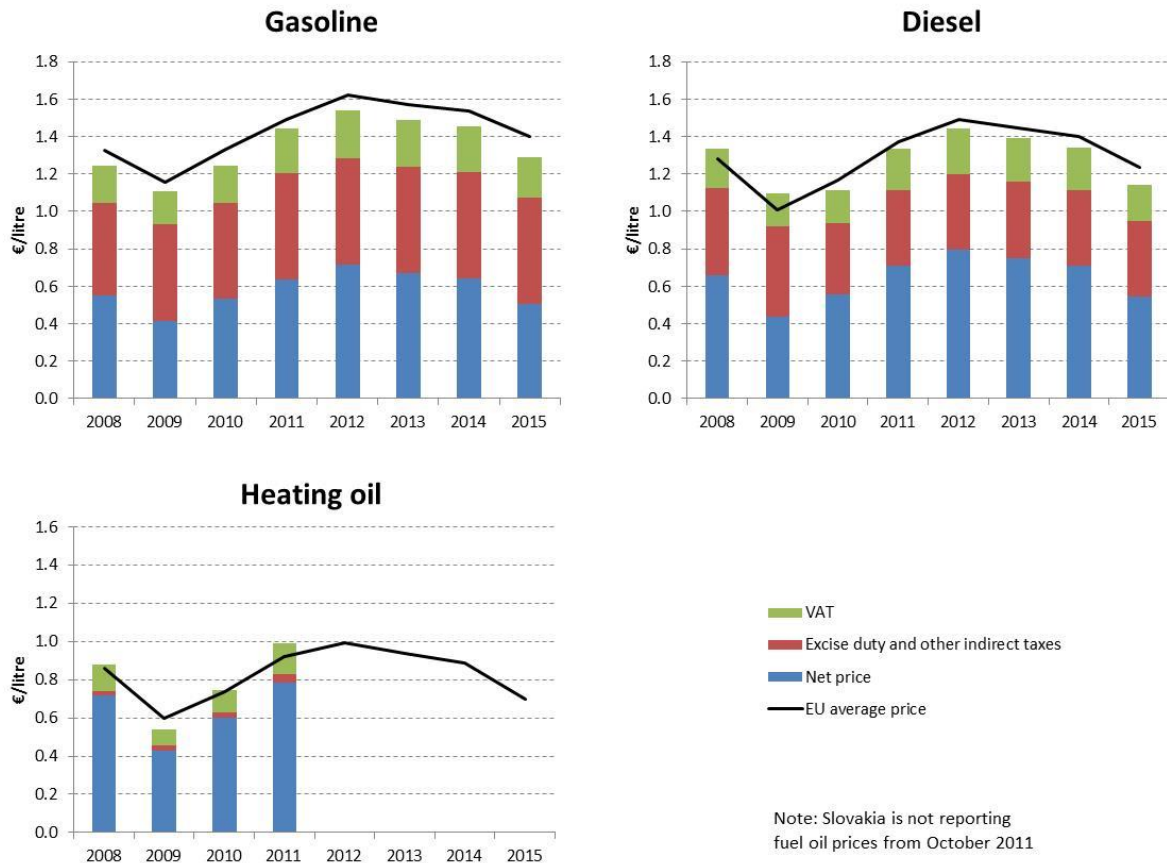
Composition of median industrial gas prices



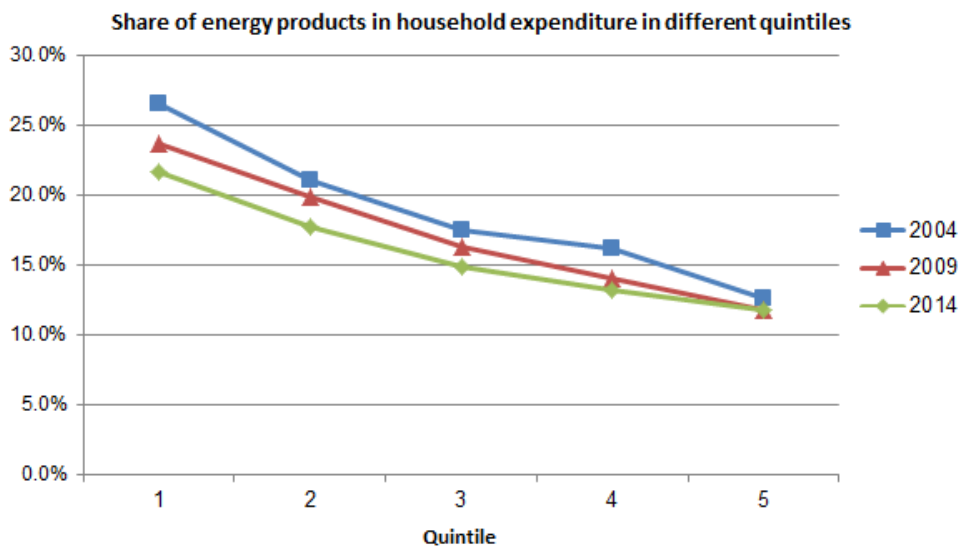
Composition of median household gas prices



Oil products prices

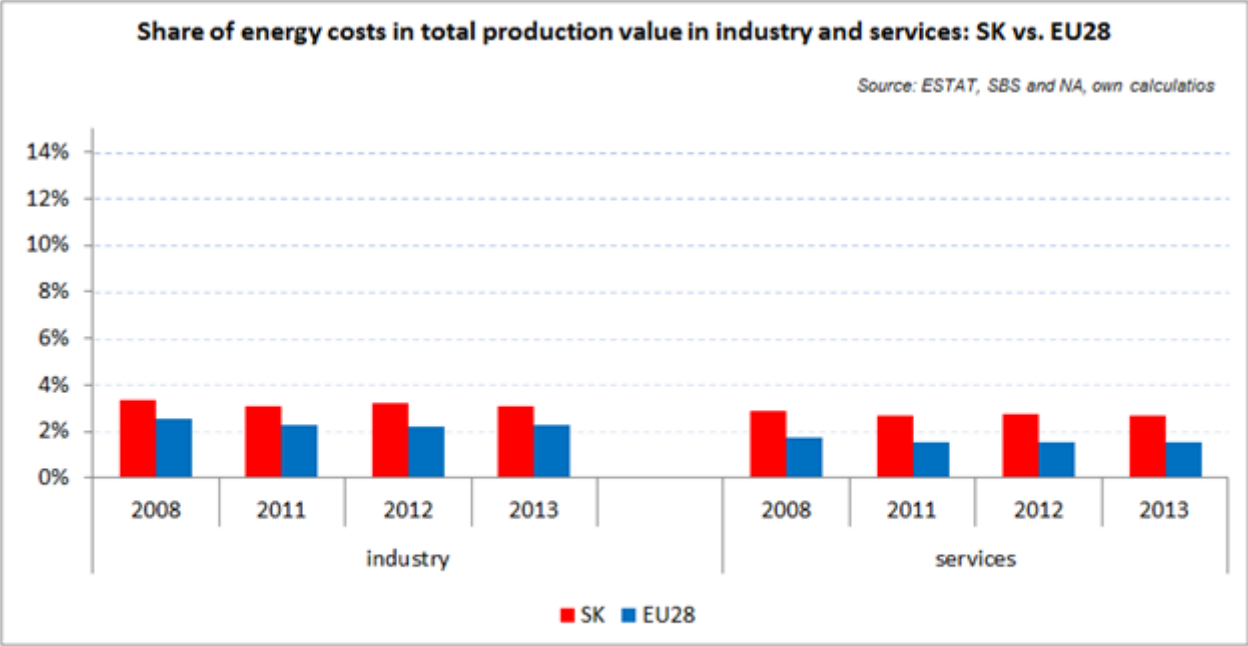


Energy in Households budgets



In Slovakia the share of energy in total household expenditure, being the highest in EU comparison, decreased significantly between 2004 (blue line) and 2014 (green line). In the case of the poorest households (Quintile 1) it went down from 26.5% to 21.7%, while in the case of households with middle income (Quintile 3) it decreased from 17.5% to 14.8%.

Energy costs shares in total production costs



Notes
 Data for Malta, Poland, Slovenia (prior to 2012) and Ireland (after 2012) is not available
 Data for 2009 and 2010 is incomplete and not reported
 Industry defined as NACE Rev.2 Section C (Manufacturing)
 Services defined as NACE Rev. 2 Sections G - U

Electricity and gas prices – Breakdown by price element

| Band DC | EUR/kWh 2015 |
|--|-------------------------|
| Energy and supply | 0.048100 |
| Total energy component | 0.048100 |
| network | 0.043500 |
| Total network component | 0.043500 |
| Support for RES and CHP combined | 0.000000 |
| promotion of production from domestic coal | 0.004400 |
| market operator | 0.000300 |
| RES promotion | 0.014300 |
| Support for combined heat and power (CHP) | 0.002800 |
| national nuclear fund | 0.003200 |
| ancillary services tariff | 0.007700 |
| VAT | 0.024200 |
| Total taxes & levies component | 0.056900 |
| | |
| Total price | 0.148500 |

| Band ID | EUR/kWh 2015 |
|--|-------------------------|
| Energy and supply | 0.033400 |
| Total energy component | 0.033400 |
| network | 0.036700 |
| Total network component | 0.036700 |
| Support for RES and CHP combined | 0.000000 |
| promotion of production from domestic coal | 0.004400 |
| market operator | 0.000300 |
| RES promotion | 0.014300 |
| Support for combined heat and power (CHP) | 0.002800 |
| national nuclear fund | 0.003200 |
| ancillary services tariff | 0.007700 |
| VAT | 0.000000 |
| excise tax | 0.001300 |
| Total taxes & levies component | 0.034000 |
| | |
| Total price | 0.104100 |

| | |
|----------------|----------------|
| Band D2 | EUR/kWh |
|----------------|----------------|

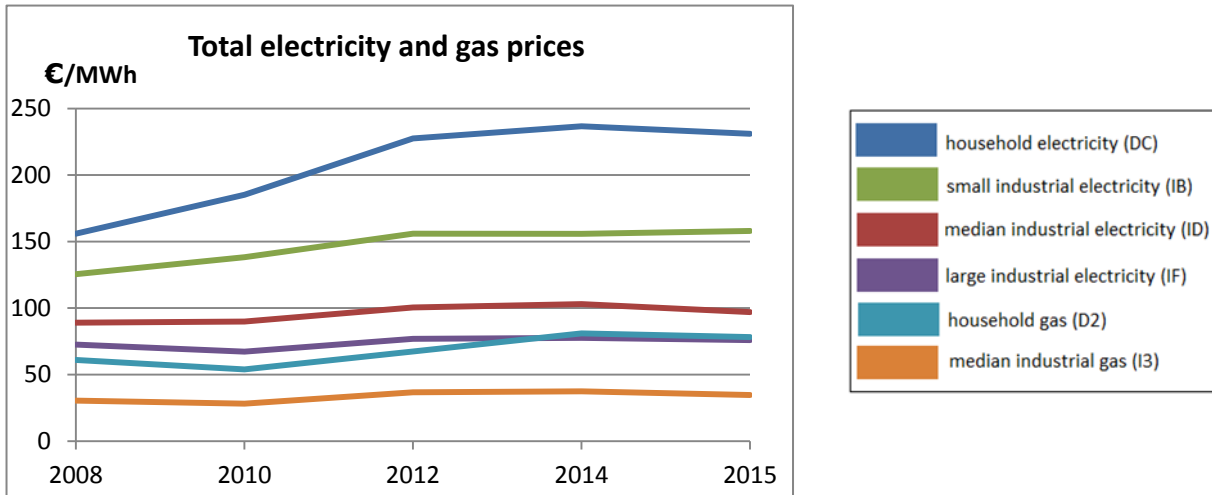
| | 2015 |
|---|-----------------|
| Energy and supply | 0.028497 |
| Total energy component | 0.028497 |
| network | 0.012832 |
| Total network component | 0.012832 |
| VAT | 0.008269 |
| Total taxes & levies component | 0.008269 |
| | |
| Total price | 0.049599 |

| Band I3 | EUR/kWh 2015 |
|---|-------------------------|
| Energy and supply | 0.025817 |
| Total energy component | 0.025817 |
| network | 0.007628 |
| Total network component | 0.007628 |
| VAT | 0.000000 |
| excise tax | 0.001296 |
| Total taxes & levies component | 0.001296 |
| | |
| Total price | 0.034741 |

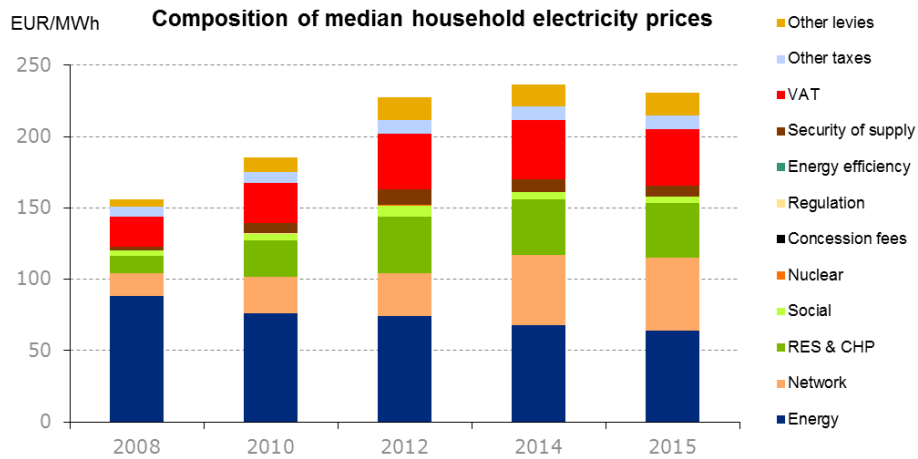
Spain

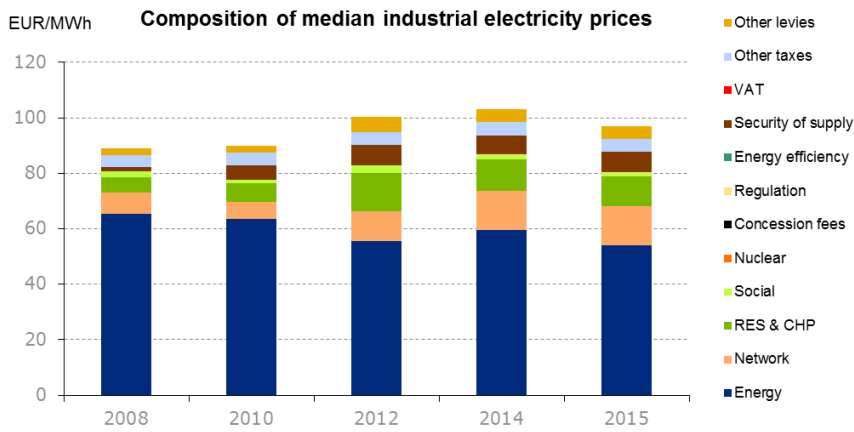


Evolution of electricity and natural gas prices



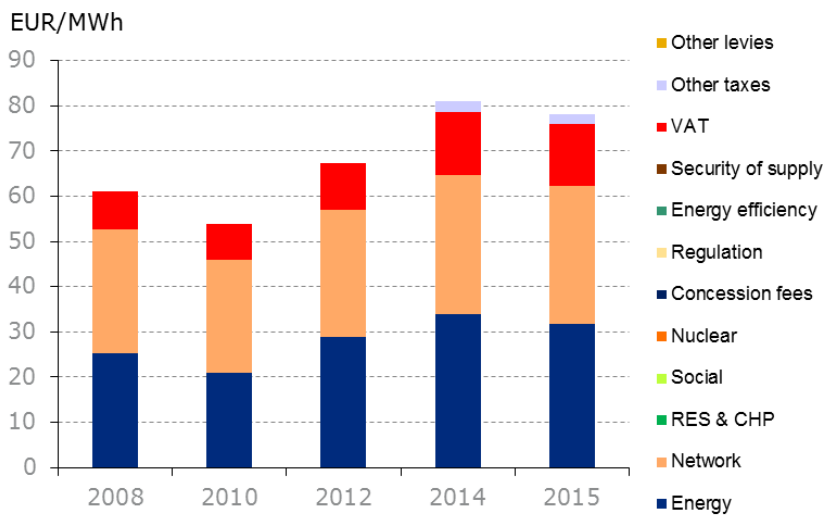
Composition of electricity prices



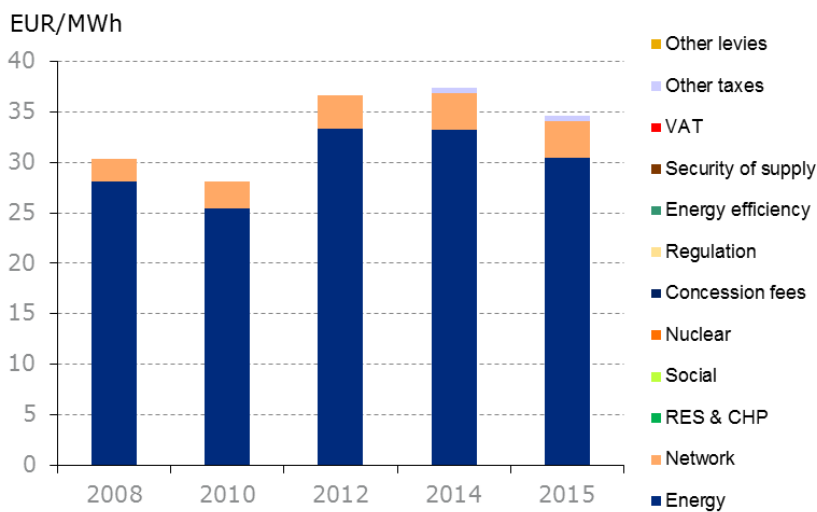


Composition of gas prices

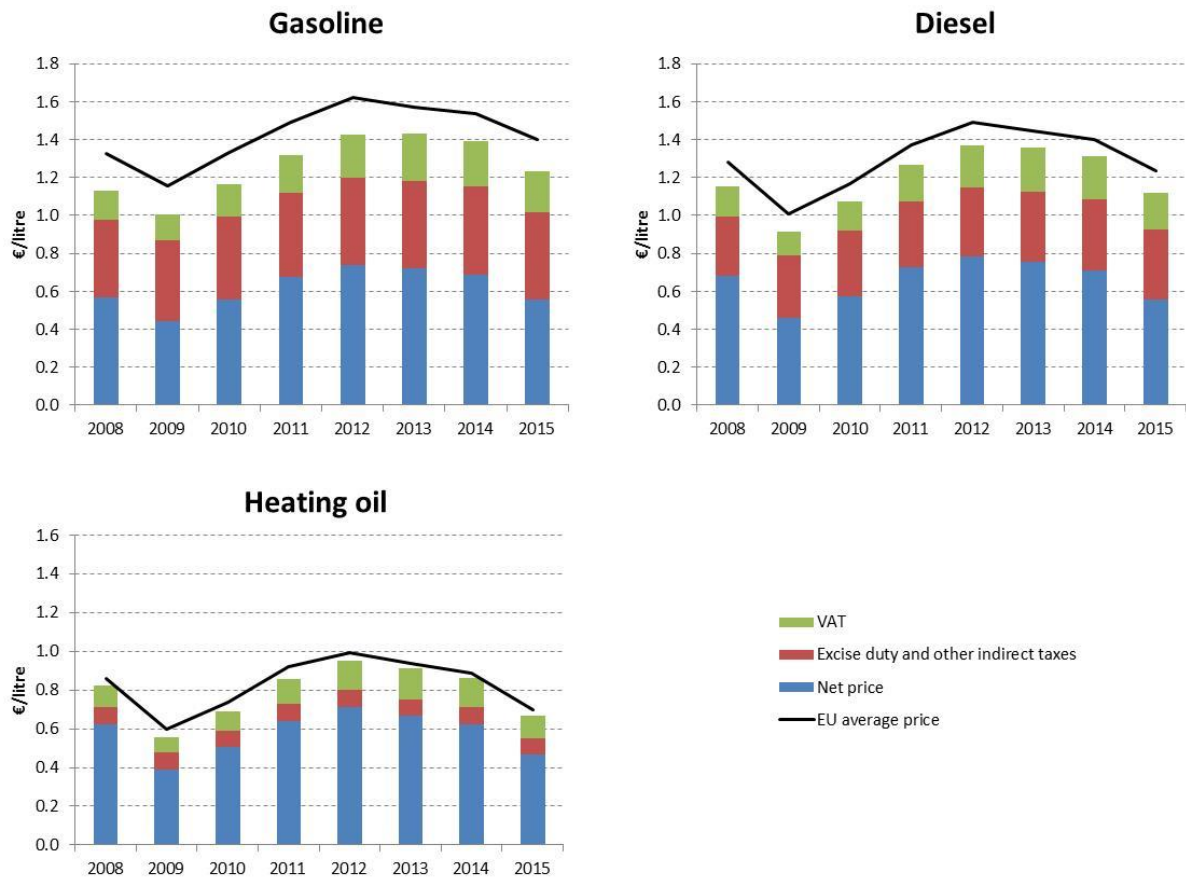
Composition of median household gas prices



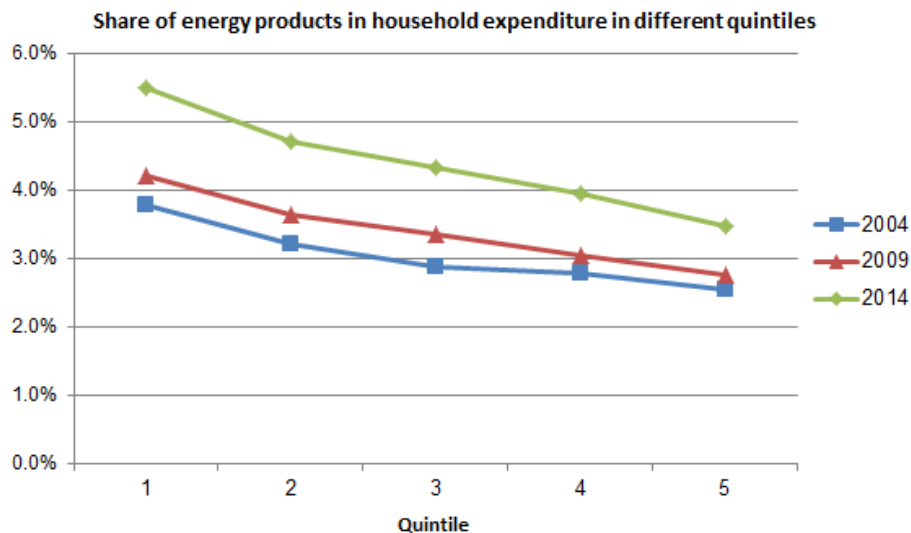
Composition of median industrial gas prices



Oil products prices

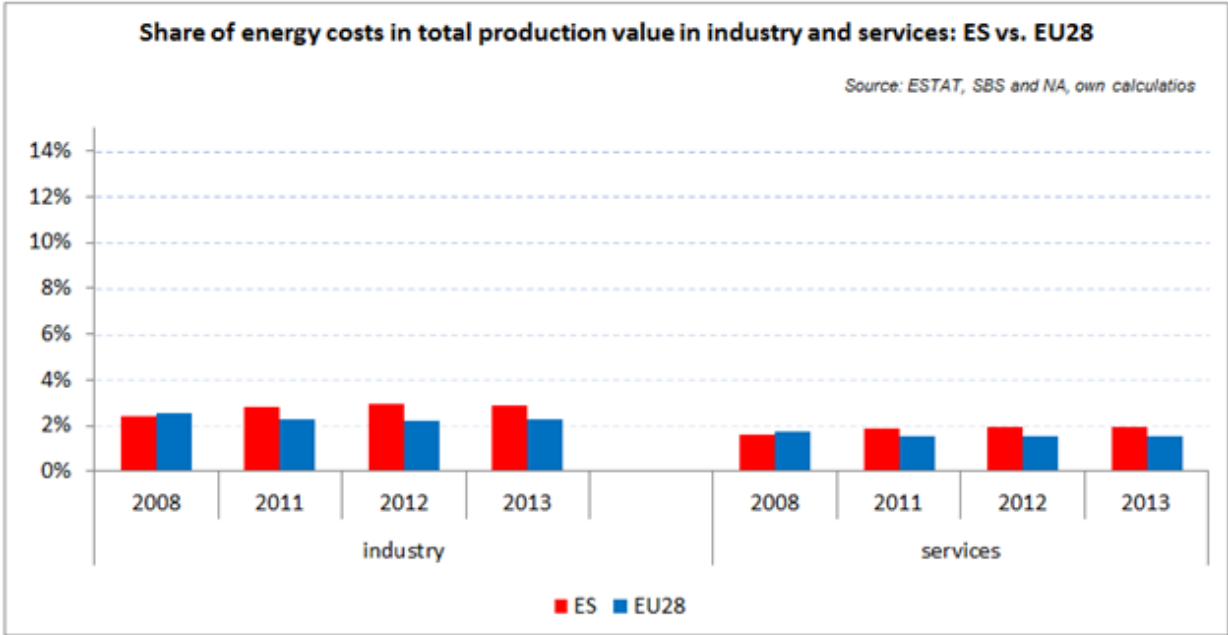


Energy in Households budgets



Between 2004 (blue line) and 2014 (green line) the share of energy in total household expenditure rose by 1-1.7% in all income quintiles in Spain. In the case of the poorest households (Quintile 1) it went up from 3.8% to 5.5%, whereas for households with middle income (Quintile 3) it rose from 2.9% to 4.3%.

Energy costs shares in total production costs



Notes
 Data for Malta, Poland, Slovenia (prior to 2012) and Ireland (after 2012) is not available
 Data for 2009 and 2010 is incomplete and not reported
 Industry defined as NACE Rev.2 Section C (Manufacturing)
 Services defined as NACE Rev. 2 Sections G - U

Electricity and gas prices – Breakdown by price element

| Electricity Households (DC) | EUR/kWh |
|--|-----------------|
| | |
| Energy and supply | 0.064200 |
| Day-ahead market | |
| Ancillary services | |
| | |
| Total energy component | 0.064200 |
| Distribution | 0.037900 |
| Transmission | 0.012900 |
| | |
| Total network component | 0.050800 |
| Nuclear sector | 0.000200 |
| Special tax on electricity consumption | 0.009300 |
| Deficit annuity | 0.016200 |
| Capacity payments | 0.005400 |
| Specific compensation for renewable energy | 0.038700 |
| VAT | 0.040100 |
| Financing for the NRA | 0.000100 |
| Island compensation | 0.003900 |
| Financing of system and market operators | 0.000100 |
| Energy security and generation adequacy | 0.002000 |
| Other costs | |
| | |
| Total taxes & levies component | 0.116000 |
| | |
| Total price | 0.231000 |

| Electricity Industry (ID) | EUR/kWh |
|-------------------------------|-----------------|
| | 2015 |
| Energy and supply | 0.054100 |
| Day-ahead market | |
| Ancillary services | |
| | |
| Total energy component | 0.054100 |
| Distribution | 0.010500 |
| Transmission | 0.003600 |

| | |
|--|-----------------|
| | |
| Total network component | 0.014100 |
| Nuclear sector | 0.000100 |
| Special tax on electricity consumption | 0.004700 |
| Deficit annuity | 0.004500 |
| Capacity payments | 0.005400 |
| Specific compensation for renewable energy | 0.010800 |
| VAT | 0.000000 |
| Financing for the NRA | 0.000100 |
| Island compensation | 0.001100 |
| Financing of system and market operators | 0.000100 |
| Energy security and generation adequacy | 0.002000 |
| Other costs | |
| | |
| Total taxes & levies component | 0.028800 |
| | |
| Total price | 0.097000 |

| Natural Gas Households (D2) | EUR/kWh |
|---|-----------------|
| | |
| Energy and supply | 0.031772 |
| | |
| Total energy component | 0.031772 |
| Conduction | 0.030115 |
| Capacity reserve | 0.000420 |
| | |
| Total network component | 0.030535 |
| VAT | 0.013576 |
| Hydrocarbons tax | 0.002340 |
| | |
| Total taxes & levies component | 0.015916 |
| | |
| Total price | 0.078223 |

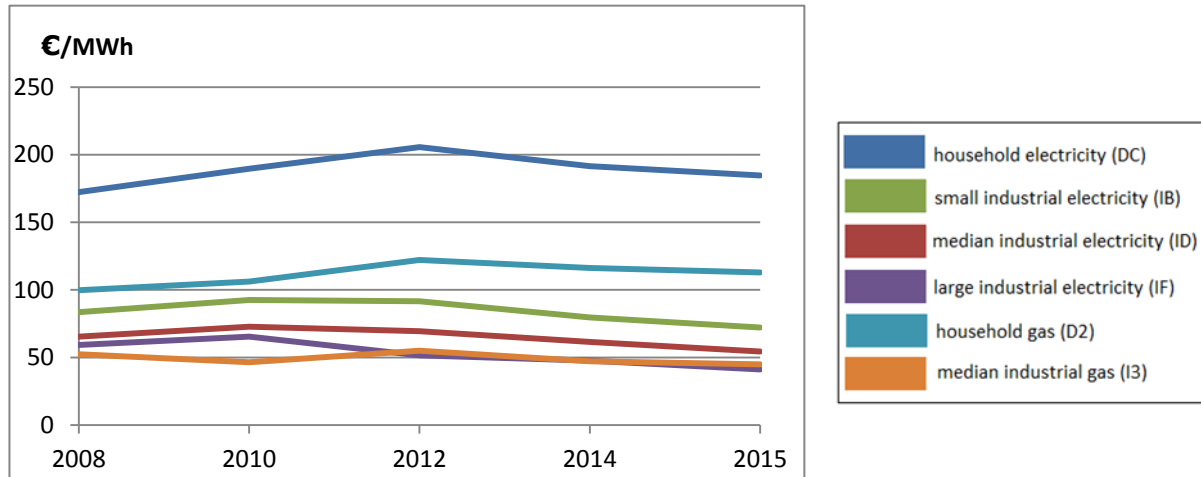
| Natural gas Industry (I3) | EUR/kWh |
|----------------------------------|----------------|
| | 2015 |
| Energy and supply | 0.030487 |

| | |
|---|-----------------|
| | |
| Total energy component | 0.030487 |
| Conduction | 0.003169 |
| Capacity reserve | 0.000420 |
| | |
| Total network component | 0.003589 |
| VAT | 0.000000 |
| Hydrocarbons tax | 0.000540 |
| | |
| Total taxes & levies component | 0.000540 |
| | |
| Total price | 0.034616 |

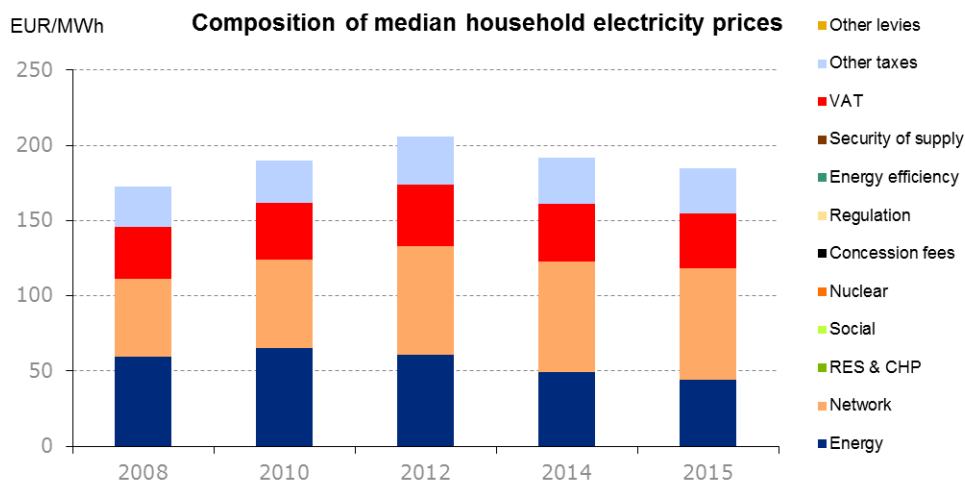
Sweden



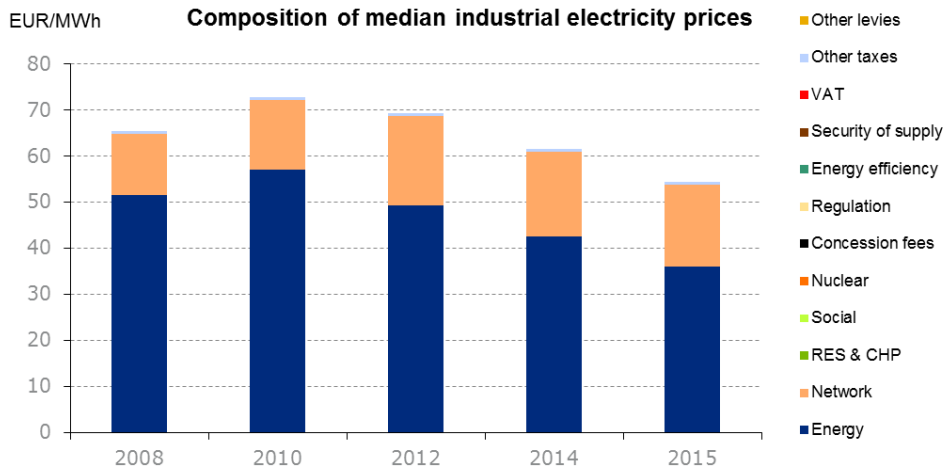
Evolution of electricity and natural gas prices



Composition of electricity prices²

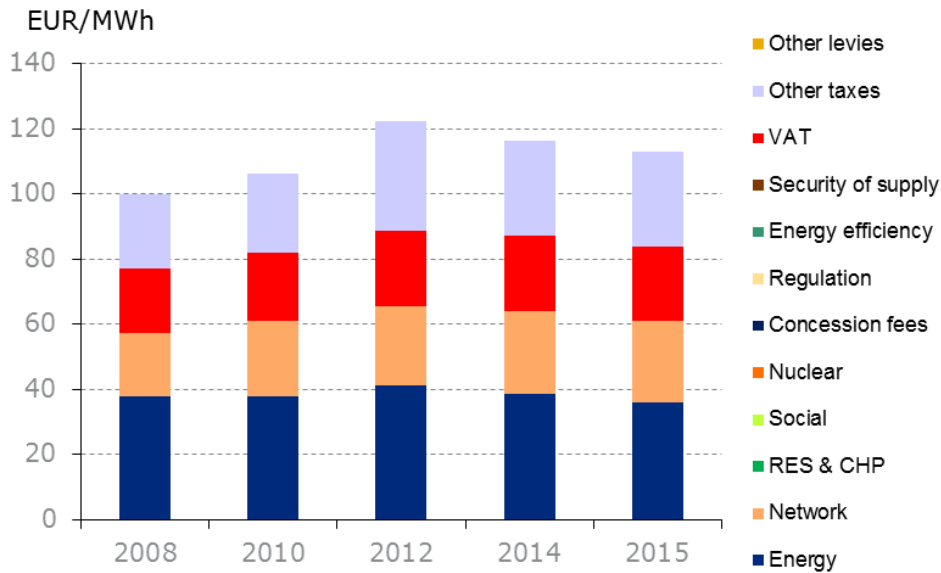


² It is to be noted that Sweden applies a Nuclear Capacity tax. This tax is not allocated to the nuclear sub-component of the taxes & levies main component, as the sub-component contains only costs elements that support the nuclear sector.

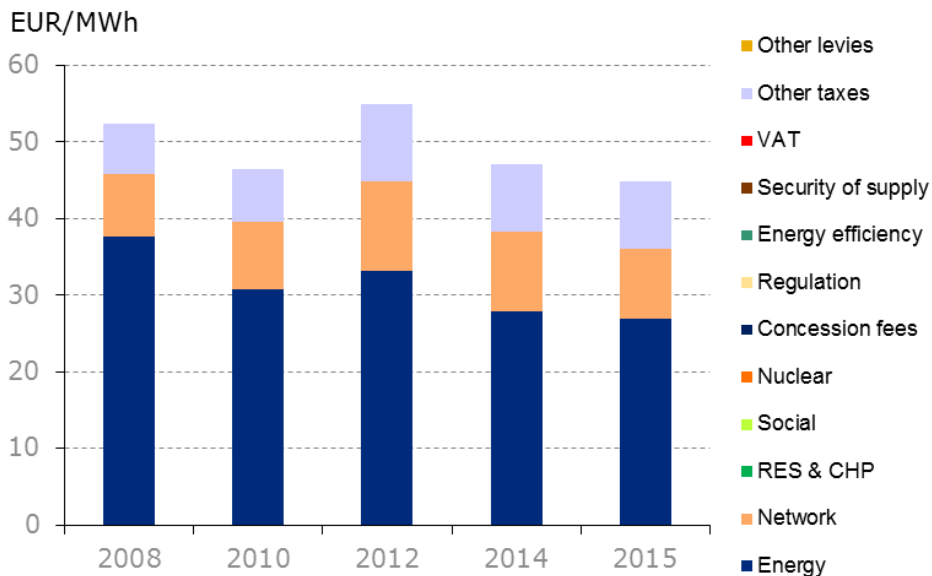


Composition of gas prices

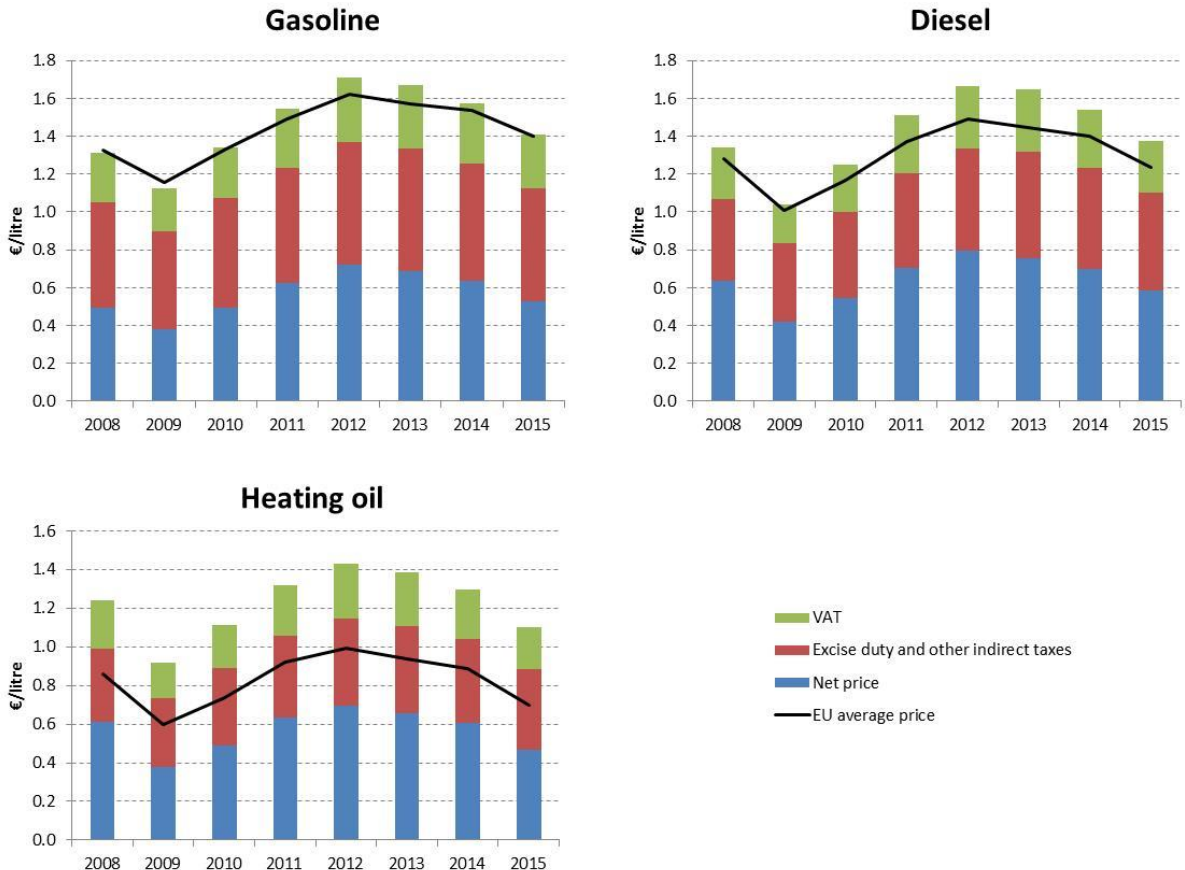
Composition of median household gas prices



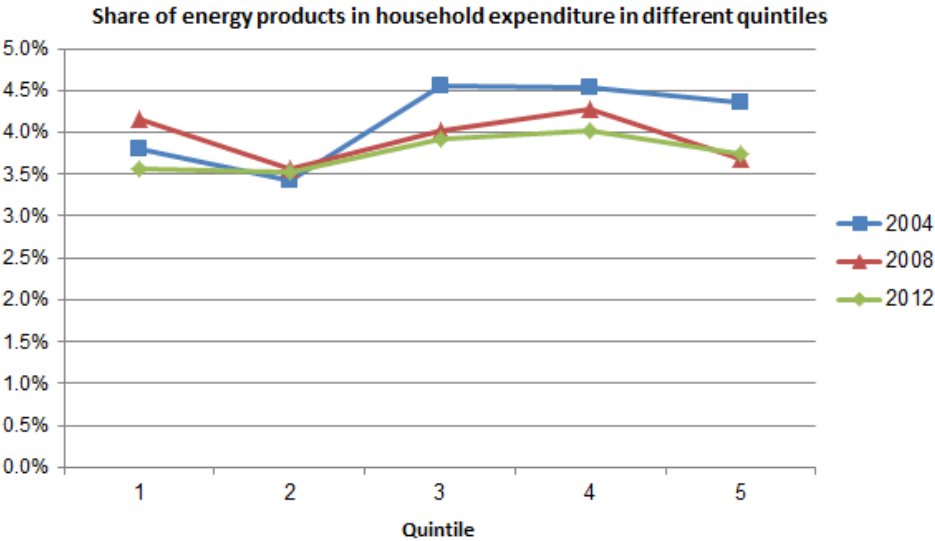
Composition of median industrial gas prices



Oil products prices

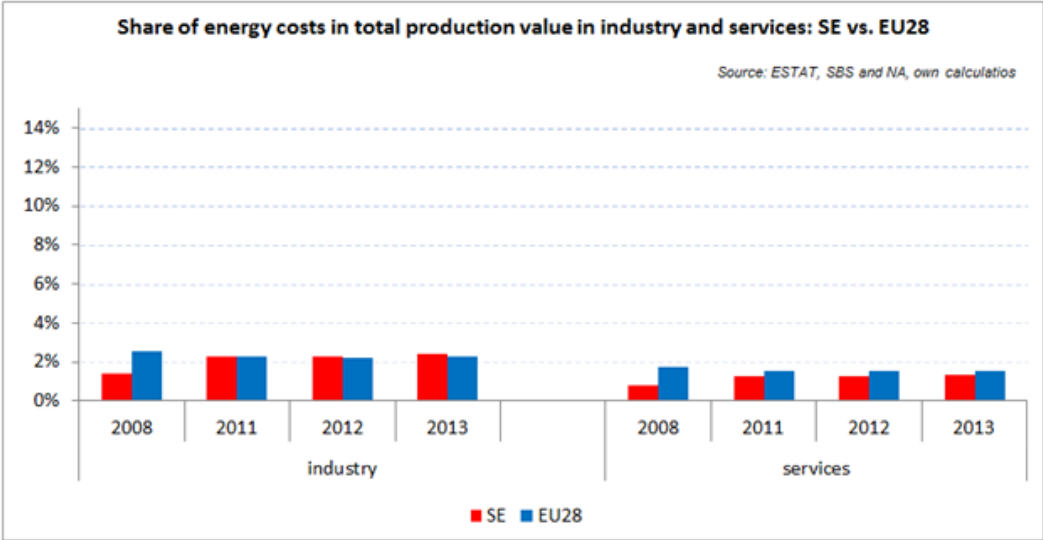


Energy in Households budgets



In Sweden the share of energy in total household expenditure has been low in EU comparison, and between 2004 (blue line) and 2012 (green line), unlike many EU countries, it decreased slightly in most of the income quintiles. In the case of the poorest households (Quintile 1) the energy share slightly went down from 3.8% to 3.6%, while for households with middle income (Quintile 3) it decreased from 4.6% to 3.9%.

Energy costs shares in total production costs



Notes
 Data for Malta, Poland, Slovenia (prior to 2012) and Ireland (after 2012) is not available
 Data for 2009 and 2010 is incomplete and not reported
 Industry defined as NACE Rev.2 Section C (Manufacturing)
 Services defined as NACE Rev. 2 Sections G - U

Breakdown of electricity and natural gas prices by price element

| Band DC | EUR/kWh 2015 |
|---|-------------------------|
| Energy | 0.044006 |
| Total energy component | 0.044006 |
| Network | 0.074020 |
| Total network component | 0.074020 |
| energy taxes | 0.029693 |
| VAT | 0.036956 |
| Total taxes & levies component | 0.066650 |
| | |
| Total price | 0.184676 |

| Band IB | EUR/kWh 2015 |
|---|-------------------------|
| Energy | 0.036850 |
| Total energy component | 0.036850 |
| Network | 0.034713 |
| Total network component | 0.034713 |
| energy taxes | 0.000534 |
| VAT | 0.000000 |
| Total taxes & levies component | 0.000534 |
| | |
| Total price | 0.072097 |

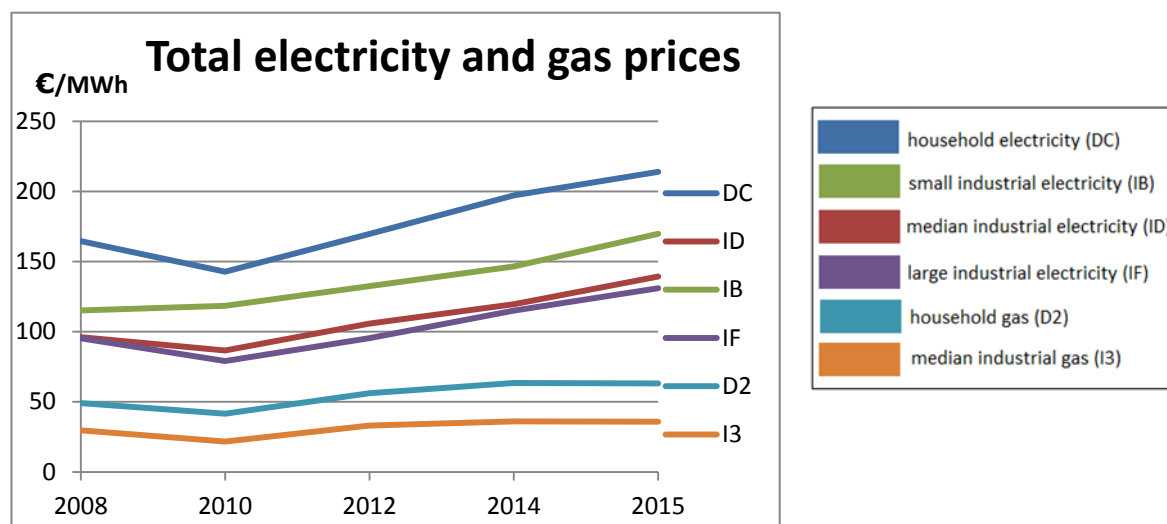
| Band D2 | EUR/kWh 2015 |
|---|-------------------------|
| Energy | 0.035888 |
| Total energy component | 0.035888 |
| Network | 0.025100 |
| Total network component | 0.025100 |
| Energy taxes | 0.008224 |
| VAT | 0.022644 |
| Carbon Tax | 0.021042 |
| Total taxes & levies component | 0.051910 |
| | |
| Total price | 0.112899 |

| Band I3 | EUR/kWh 2015 |
|---|-------------------------|
| Energy | 0.026916 |
| Total energy component | 0.026916 |
| Network | 0.009186 |
| Total network component | 0.009186 |
| Energy taxes | 0.002457 |
| VAT | 0.000000 |
| Carbon Tax | 0.006302 |
| Total taxes & levies component | 0.008758 |
| | |
| Total price | 0.044860 |

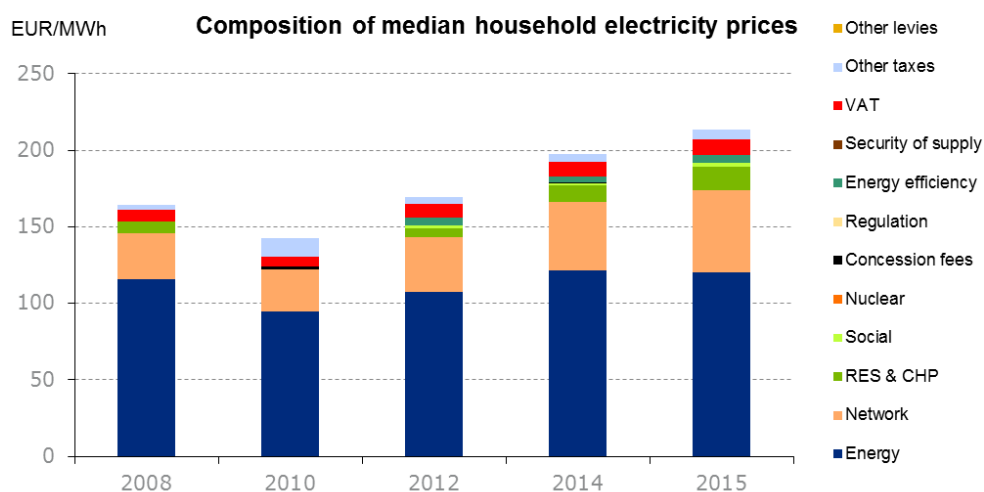
United Kingdom



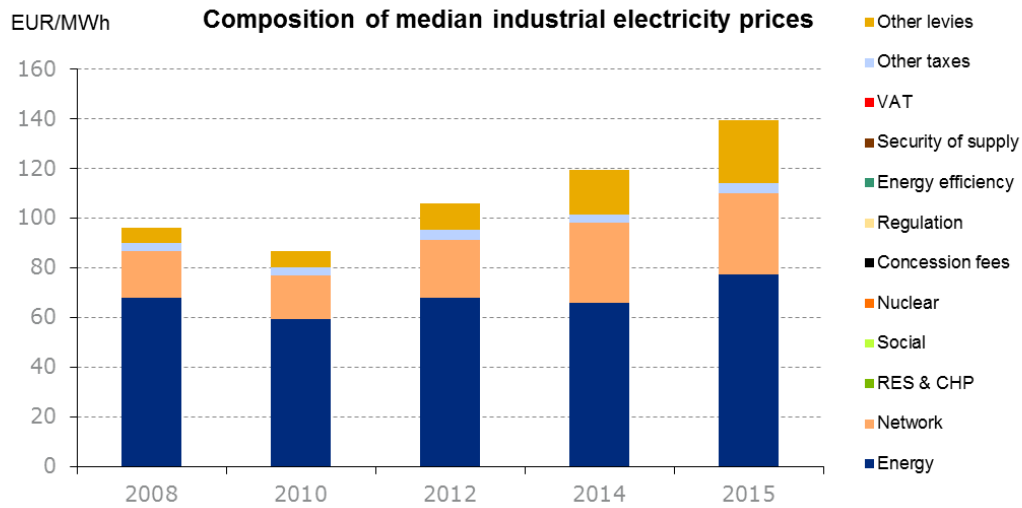
Evolution of electricity and natural gas prices



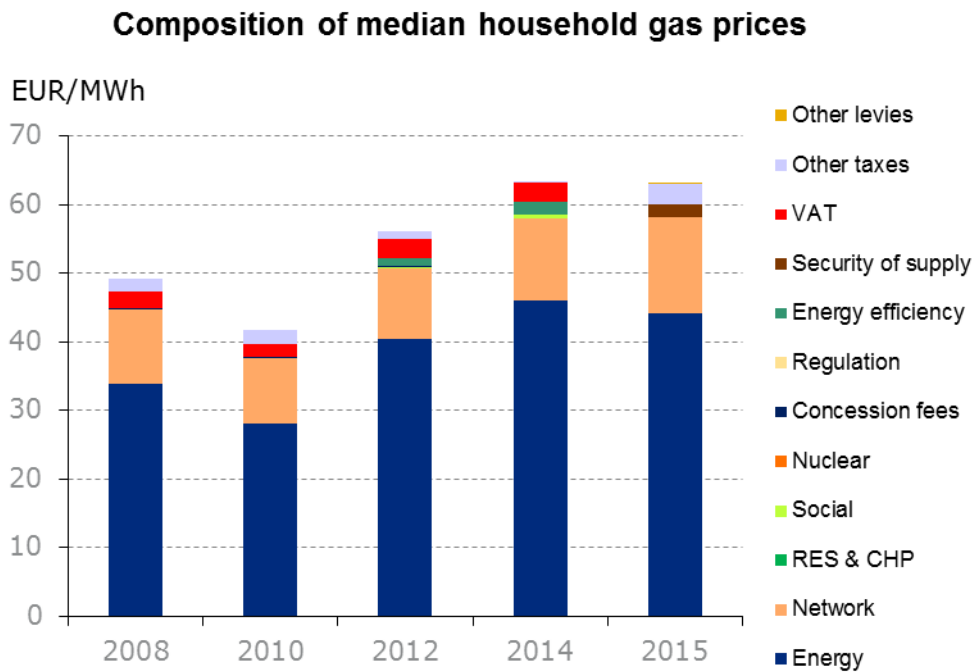
Composition of electricity prices³



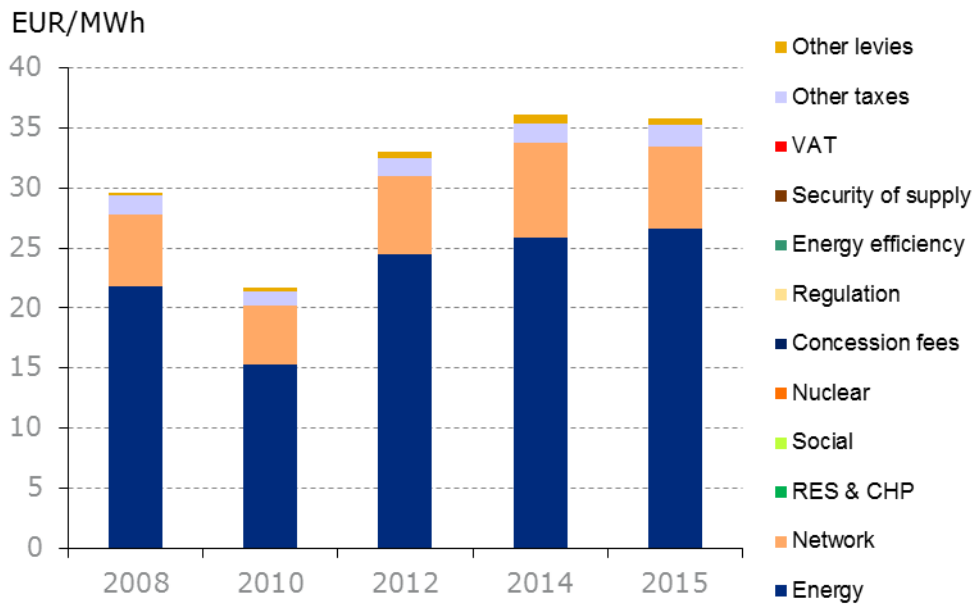
³ The United Kingdom's Warm Home Discount is a redistributive levy. All households pay towards this levy via their gas and electricity bills. All the money collected is recycled back as £140 annual rebates on the electricity bills of eligible low-income and vulnerable households. As such, the net effect of the policy on average dual fuel (gas and electricity) bills is £0. In the current study, only the gross cost is reflected as the rebate only applies to a subset of households. Furthermore, United Kingdom distinguishes EU ETS and Carbon Price Support as taxes on the power generation sector which impact on the wholesale price, from other direct top-up taxes and levies.



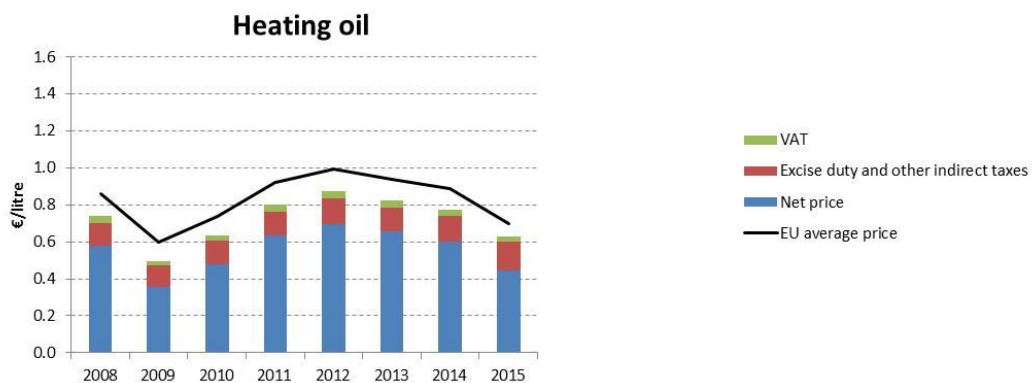
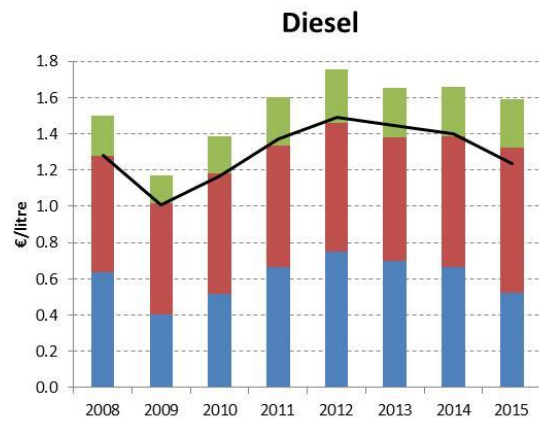
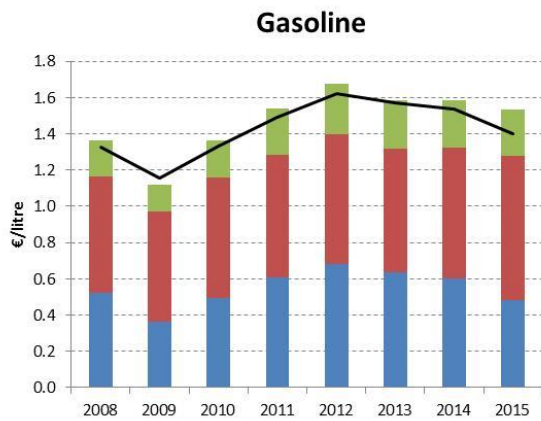
Composition of gas prices



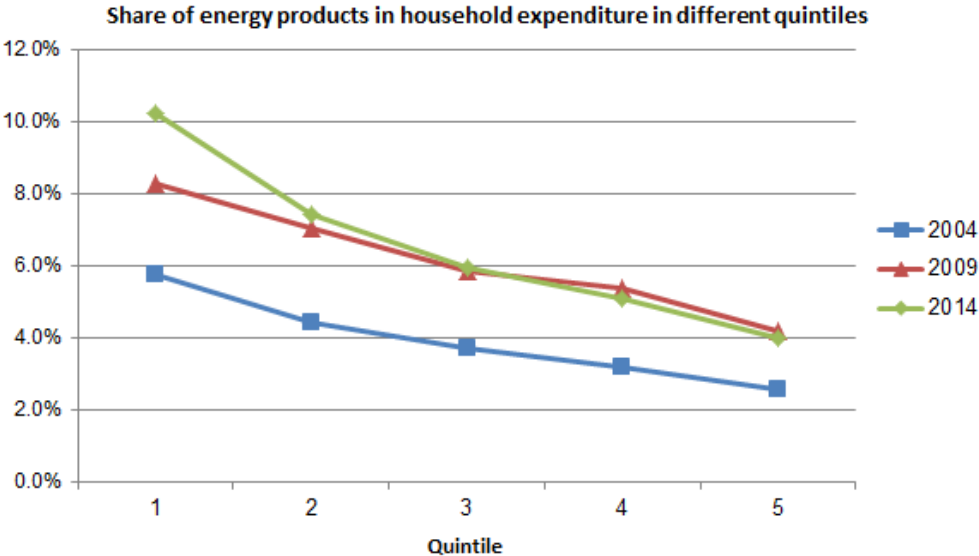
Composition of median industrial gas prices



Oil products prices

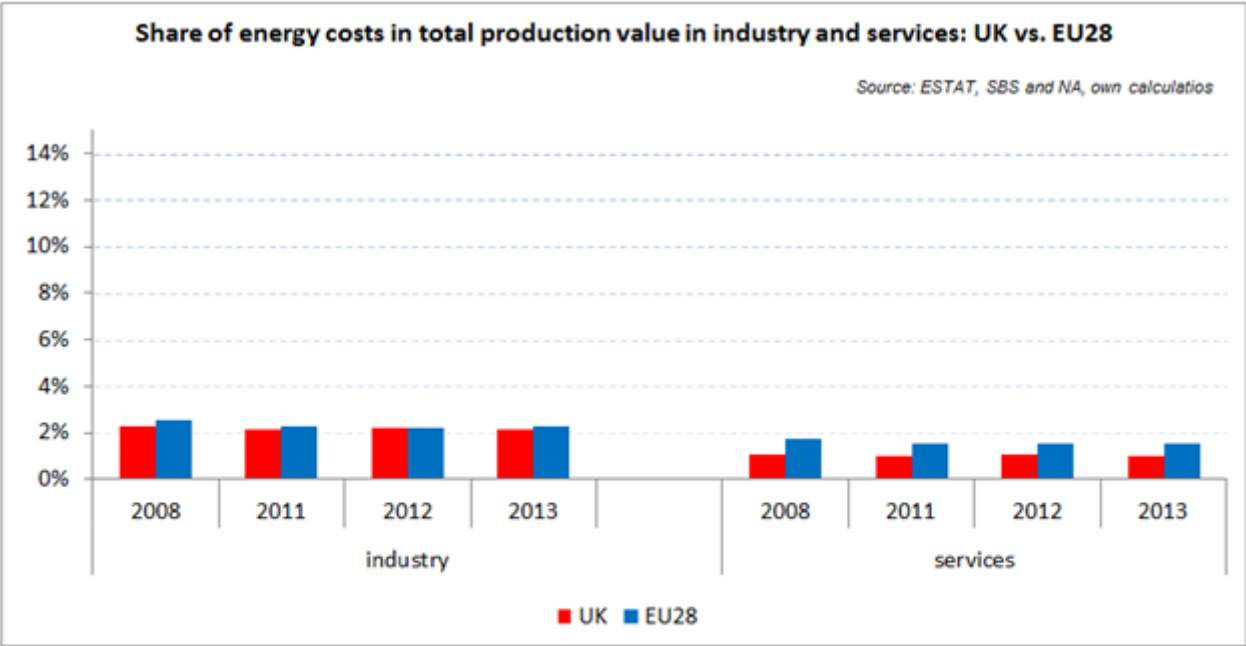


Energy in Households budgets



In the United Kingdom the share of energy in total household expenditure rose from 5.8% to 10.2% between 2004 (blue line) and 2014 (green line) in the case of the poorest households (Quintile 1). In the case of households with middle (Quintile 3) the energy share went up from 3.7% to 5.9%.

Energy costs shares in total production costs



Notes
 Data for Malta, Poland, Slovenia (prior to 2012) and Ireland (after 2012) is not available
 Data for 2009 and 2010 is incomplete and not reported
 Industry defined as NACE Rev.2 Section C (Manufacturing)
 Services defined as NACE Rev. 2 Sections G - U

Electricity and gas prices – Breakdown by price element

| Band DC | EUR/kWh 2015 |
|---|-------------------------|
| Energy and supply | 0.11990 |
| Total energy component | 0.11990 |
| Network | 0.05375 |
| Total network component | 0.05375 |
| VAT | 0.01020 |
| Renewables Obligation (RO) | 0.01268 |
| Other | |
| Climate Change Levy (CCL) | |
| Carbon Price Support | 0.00397 |
| Smart Metering | 0.00044 |
| EU ETS | 0.00234 |
| CERT/ECO | 0.00524 |
| Warm Homes Discount support | 0.00221 |
| CESP | 0.00000 |
| FiTs | 0.00317 |
| Total taxes & levies component | 0.04024 |
| | |
| Total price | 0.21389 |

| Band ID | EUR/kWh 2015 |
|--------------------------------|-------------------------|
| Energy and supply | 0.07718 |
| Total energy component | 0.07718 |
| Network | 0.03308 |
| Total network component | 0.03308 |
| VAT | 0.00000 |
| Renewables Obligation (RO) | |
| Other | 0.02536 |
| Climate Change Levy (CCL) | 0.00372 |
| Carbon price floor | |
| Smart Metering | |
| Indirect ETS cpst | |
| CERT/ECO | |
| Warm Homes Discount support | |
| CESP | |
| FiTs | |

| | |
|---|----------------|
| | |
| Total taxes & levies component | 0.02908 |
| | 0.00000 |
| Total price | 0.13933 |

| Band D2 | EUR/kWh 2015 |
|---|-------------------------|
| Energy and supply | 0.04410 |
| Total energy component | 0.04410 |
| Network | 0.01406 |
| Total network component | 0.01406 |
| VAT | 0.00303 |
| Carbon price floor | 0.00012 |
| Smart Metering | 0.00001 |
| Climate Change Levy (CCL) | |
| Other | |
| CERT/ECO | 0.00179 |
| Warm Homes Discount support | 0.00000 |
| Total taxes & levies component | 0.00496 |
| | 0.00000 |
| Total price | 0.06312 |

| Band I3 | EUR/MWh 2015 |
|---|-------------------------|
| Energy and supply | 0.026598777 |
| Total energy component | 0.026598777 |
| Network | 0.006890875 |
| Total network component | 0.006890875 |
| VAT | 0 |
| Carbon price floor | |
| Smart Metering | |
| Climate Change Levy (CCL) | 0.001791627 |
| Other | 0.00055127 |
| CERT/ECO | |
| Warm Homes Discount support | |
| Total taxes & levies component | 0.002342897 |
| | |
| Total price | 0.035832549 |

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