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Cumulative Costs Assessment (CCA) of the EU Ceramics and Glass industries

Final workshop, 30 October 2017
CEPS, Brussels

Research Team



Leading Firm (policy evaluation, assessment of regulatory costs, energy, climate, competition, trade)



Partner (sectoral and competitiveness analysis, internal market, environment, consumer and health, worker safety, transport and logistic)



Partner (economic analysis, internal market, environment)

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Scope

Rationale and scope of the CCA

- **Cumulative cost assessment:** “what are the costs of the EU *acquis* for a given industry?”
 - Identifying, assessing and, where possible, quantifying the cumulative costs generated by selected areas of EU legislation on a given industrial sector
 - Evaluating the impact of regulatory costs on the cost structure and profitability of a typical company operating in a given industrial sector
 - **Key features**
 - No benefits, all about regulatory costs
 - Several legislative acts
 - *Ex post* perspective (e.g. 2006-2015)
 - Single industry
 - Sectoral competitiveness (cost competitiveness, *international competitiveness*)

CCA of the EU ceramics and glass industries: Sectors

- **Ceramics**

- Bricks and tiles
- Ceramic tiles
- Fired refractories
- Unfired shaped refractories

- **Glass**

- Packaging glass
- Glass tableware
- Flat (float) glass

CCA of the EU ceramics and glass industries: Areas of EU legislation

1. **Internal Market:** Internal Market for chemicals (REACH and CLP), Internal market for construction products (CPD/CPR), Measuring Instruments Directive
2. **Energy legislation:** Electricity (Internal Energy Market, Renewable Energy, Energy Taxation), Gas (Internal Energy Market, Energy Taxation), Energy efficiency
3. **Climate legislation** (EU ETS, Verification, Monitoring and Reporting of greenhouse emission)
4. **Environmental legislation:** Industrial Emissions (IPPC/IED), Waste (Waste Framework Directive and Landfill of Waste), Packaging and packaging waste
5. **Workers' and workplace safety legislation:** General workers' health and safety and workplace safety, special workers' health and safety (noise, electromagnetic fields, artificial optical radiation, chemical agents)
6. **Consumers and health legislation** (GPSD, Contact with food)

Cumulative Cost Assessment: Ceramics

Ceramics: Composition of the sample

	Bricks and Tiles	Ceramic Tiles	Refractories
Southern Europe	6	7	6*
Central Eastern Europe	5	5	2
Northern Western Europe	12	4	7*
Total	23	16	15**

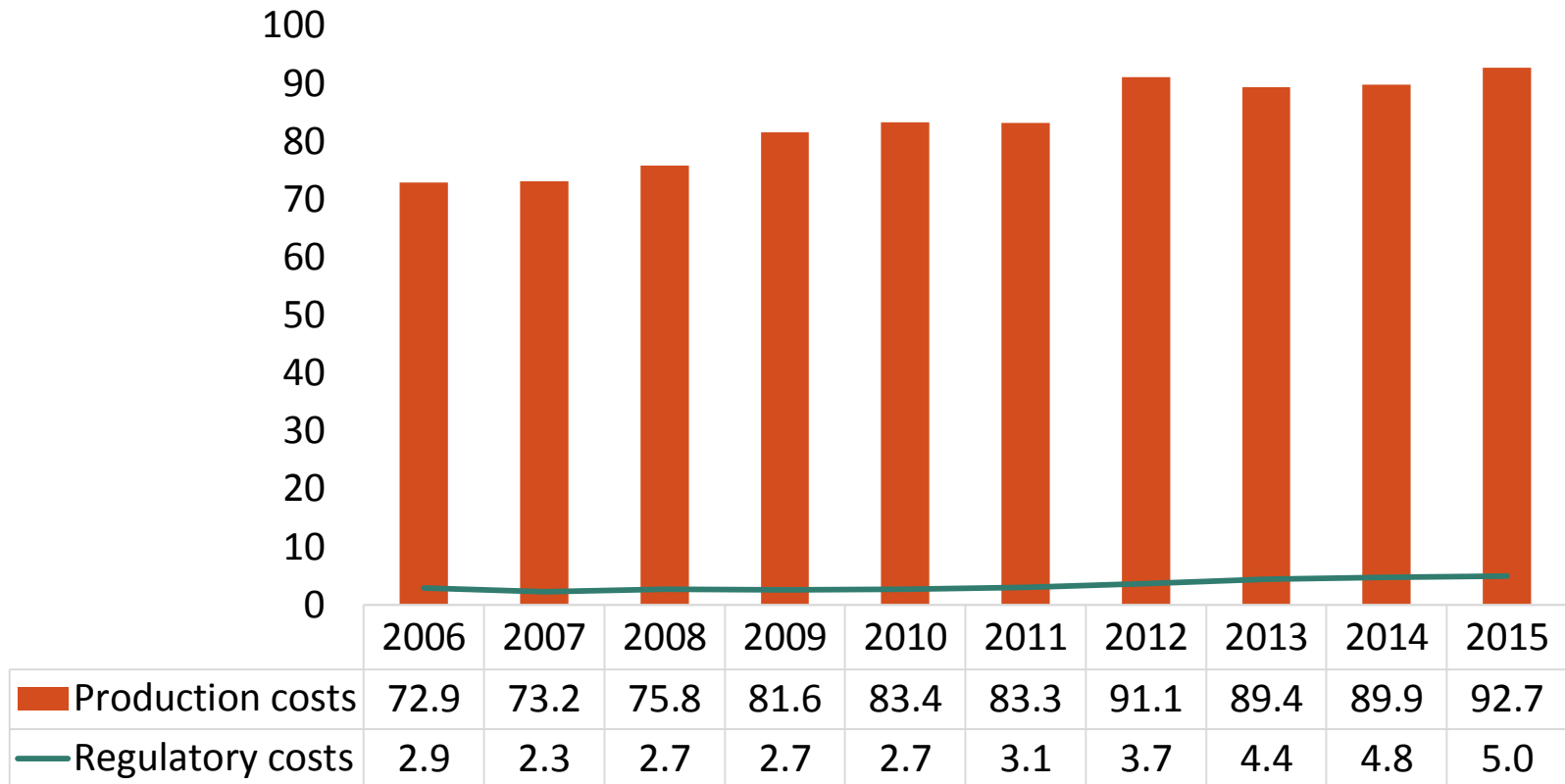
Note: *Two producers of unfired shaped refractories; ** four producers of unfired shaped refractories.

Ceramics: Turnover of sampled plants out of total value of production sold by EU producers (%)

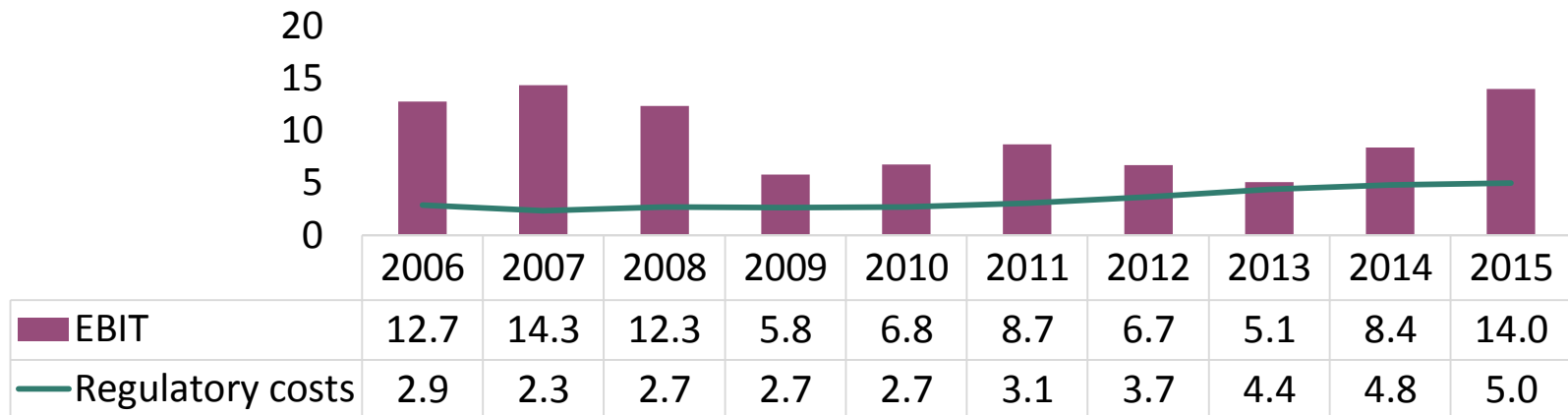
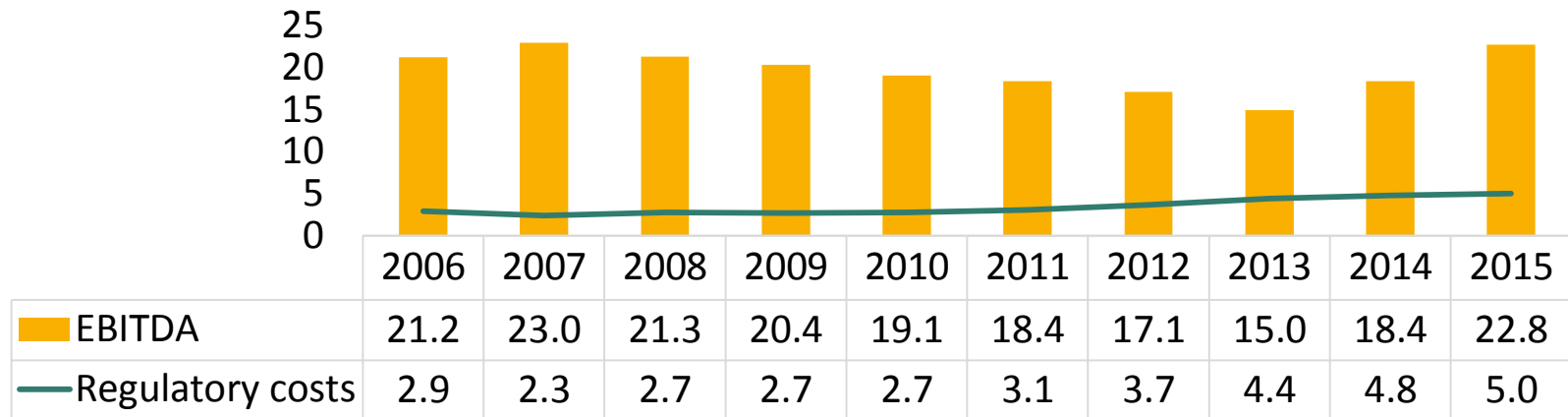
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ceramic Tiles	3.9*	4.0*	6.0*	6.9*	7.1*	10.1*	10.3*	10.2*	10.7*	11.2*
Bricks and Tiles	2.8**	2.9**	4.0**	3.8**	4.5**	4.9**	4.8**	5.0**	5.0**	5.1**
Fired Refractories	21.8	21.4	23.9	27.7	25.5	25.5	26.2	27.2	27.9	25.7
Unfired Shaped Refractories	11.1	12.6	14.1	10.5	19.3	18.2	17.2	17.1	18.7	15.4

*Note: *Missing data for one plant over the period 2006-2014; for a second plant over the period 2006-2010, for a third plant over the period 2006-2008, for a fourth plant over the period 2006-2007; **Missing data for three plants over the entire period, and for another two plants over the period 2006-2007; Fired Refractories includes the NACE Rev. 2 categories 23.20.11 and 23.20.12; Unfired Shaped Refractories includes the NACE Rev. 2 category 23.20.14.*

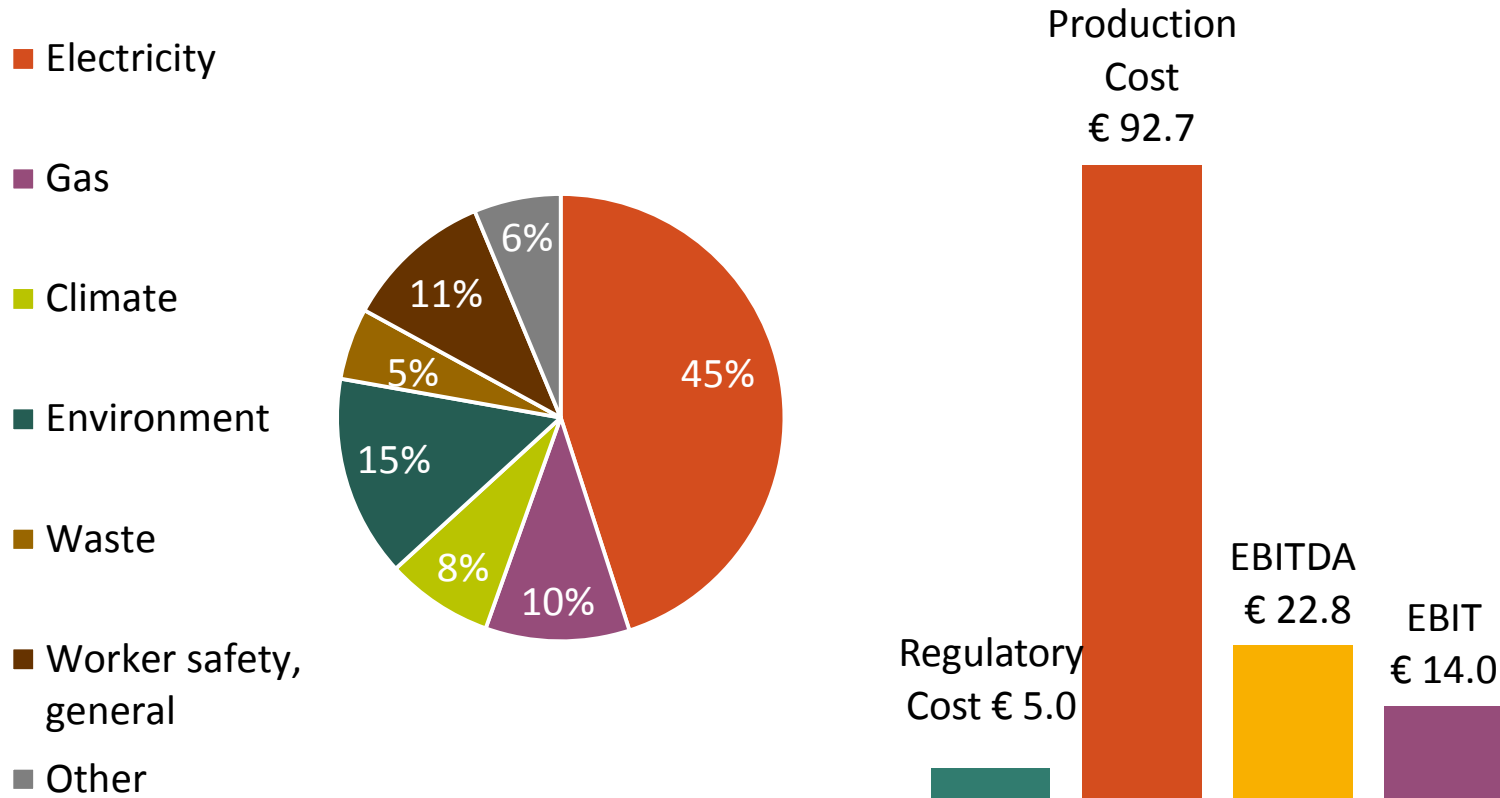
Bricks and tiles: Cumulative costs versus production costs (€/tonne)



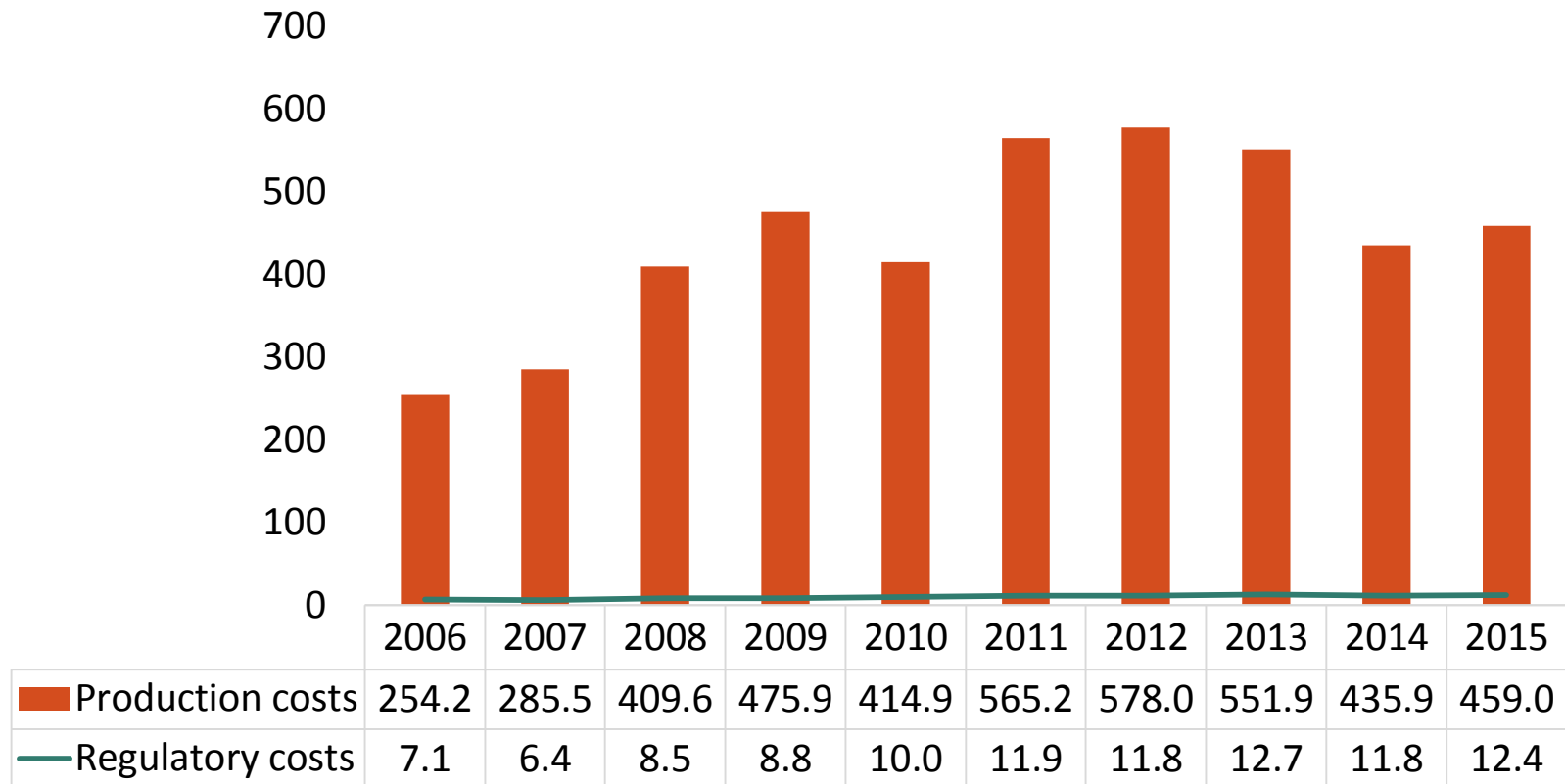
Bricks and tiles: Cumulative costs versus margins (€/tonne)



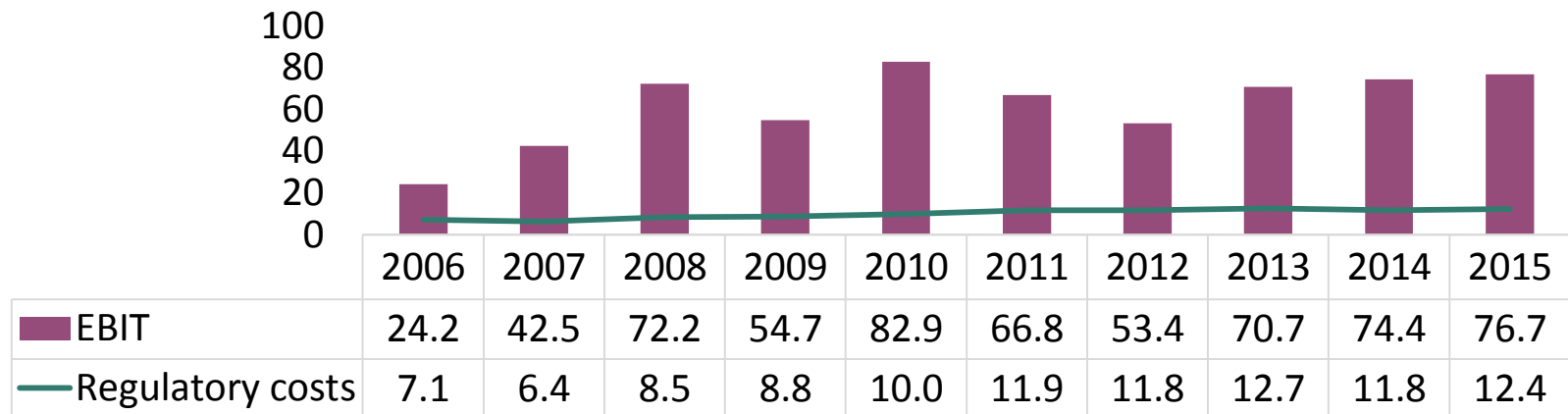
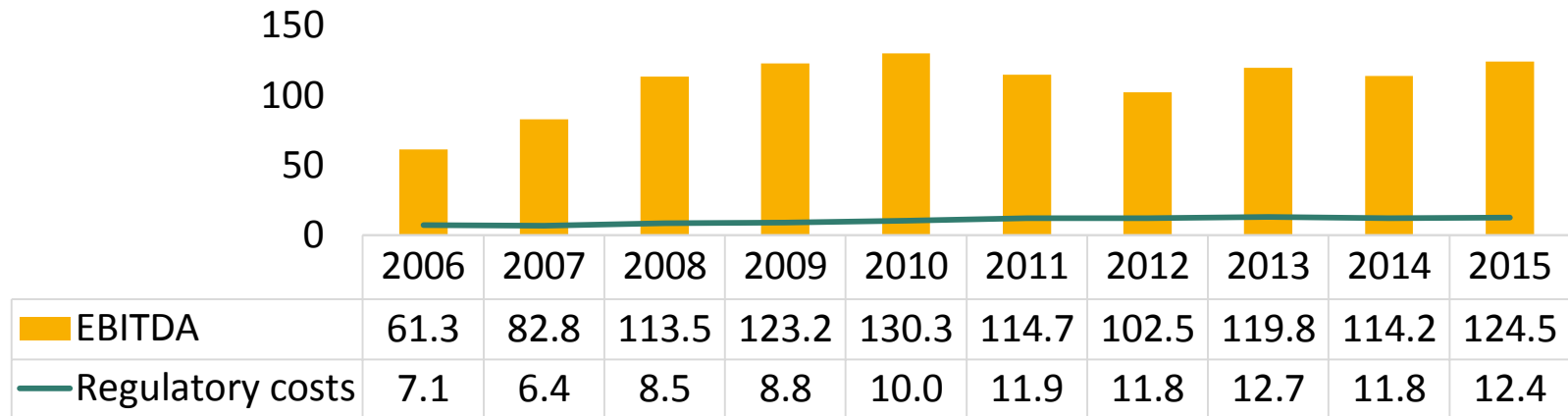
Bricks and tiles: Regulatory costs by area of legislation and comparison with KPI (2015, €/tonne)



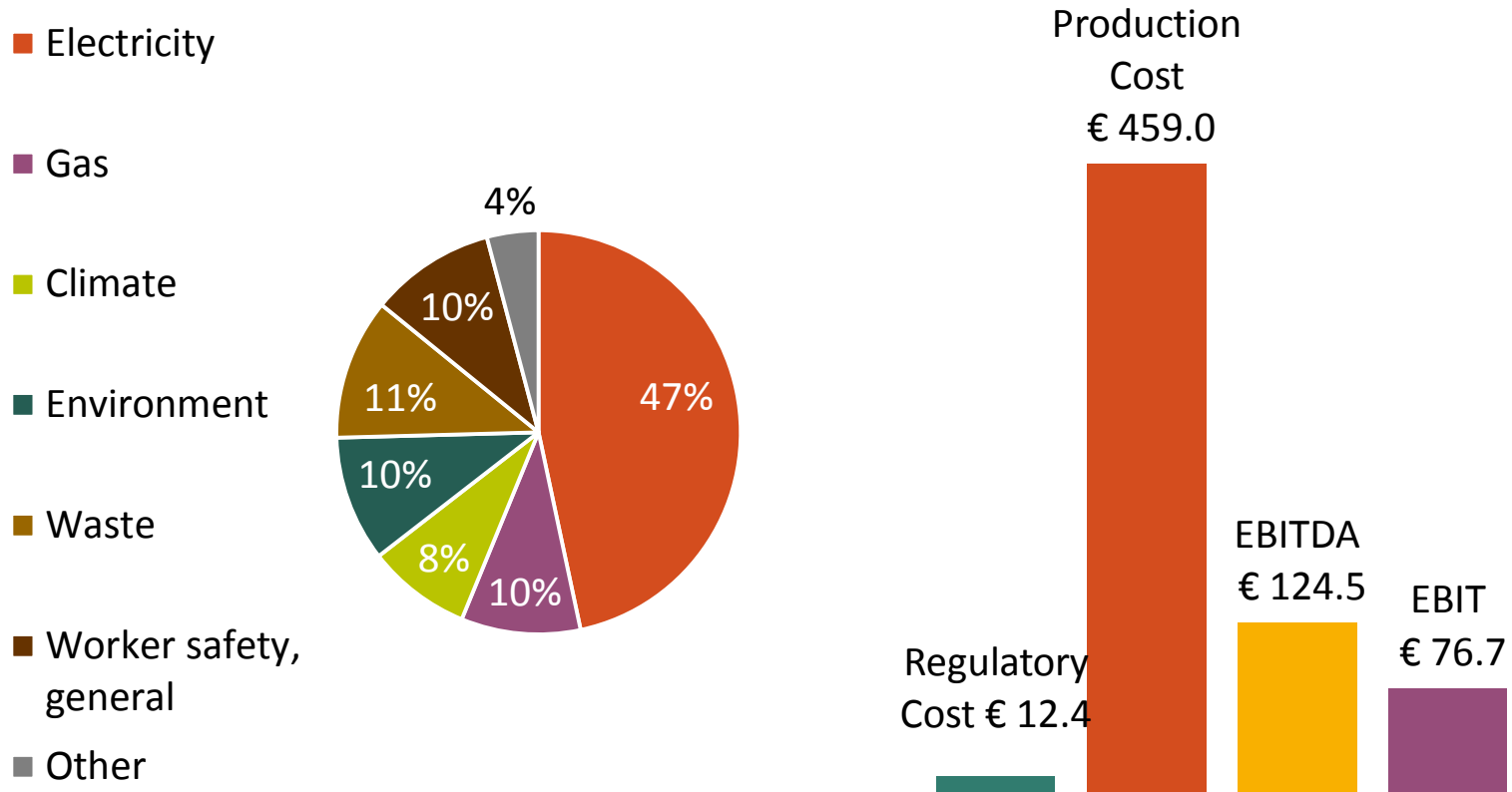
Ceramic tiles: Cumulative costs versus production costs (€/tonne)



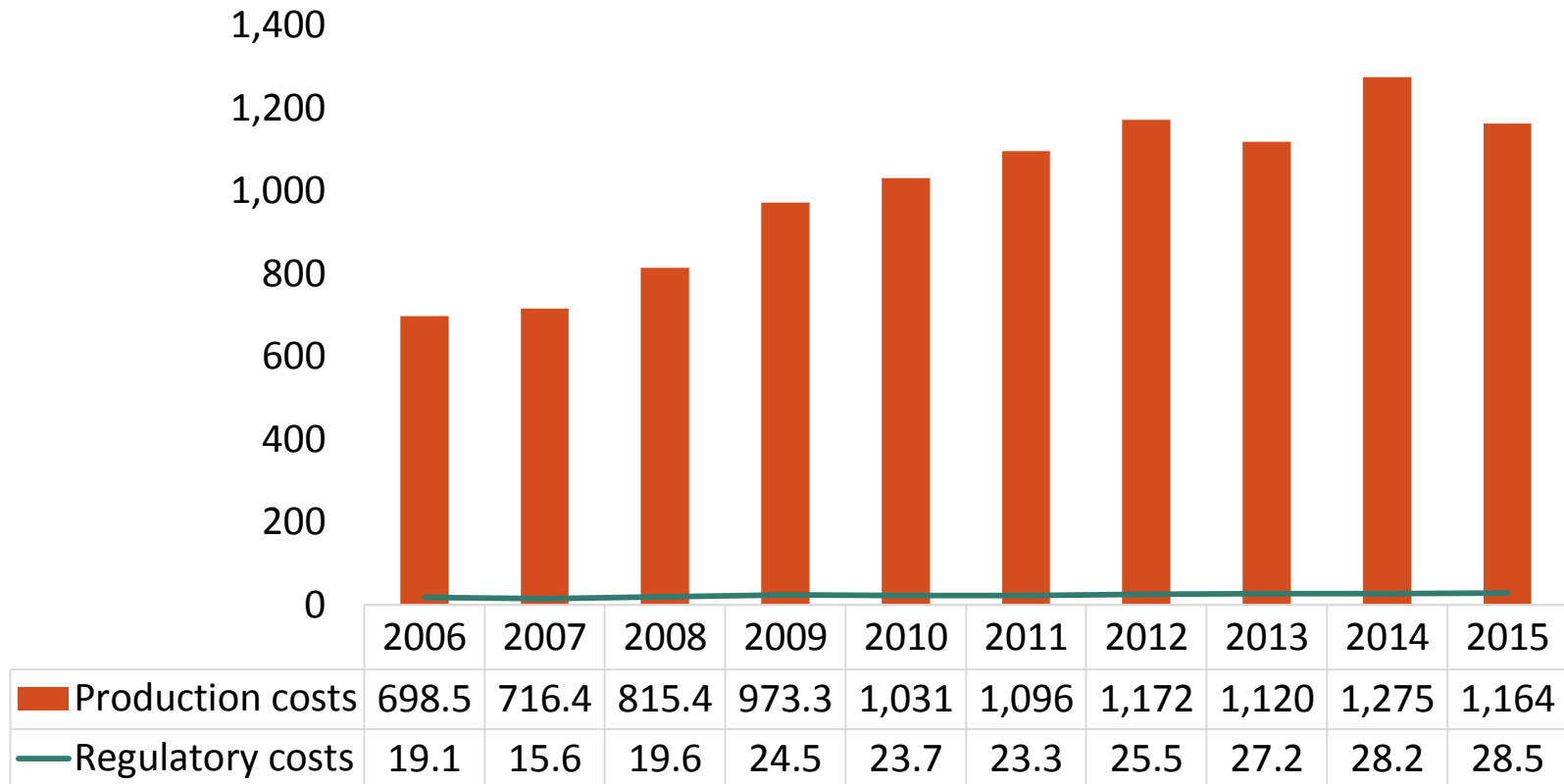
Ceramic tiles: Cumulative costs versus margins (€/tonne)



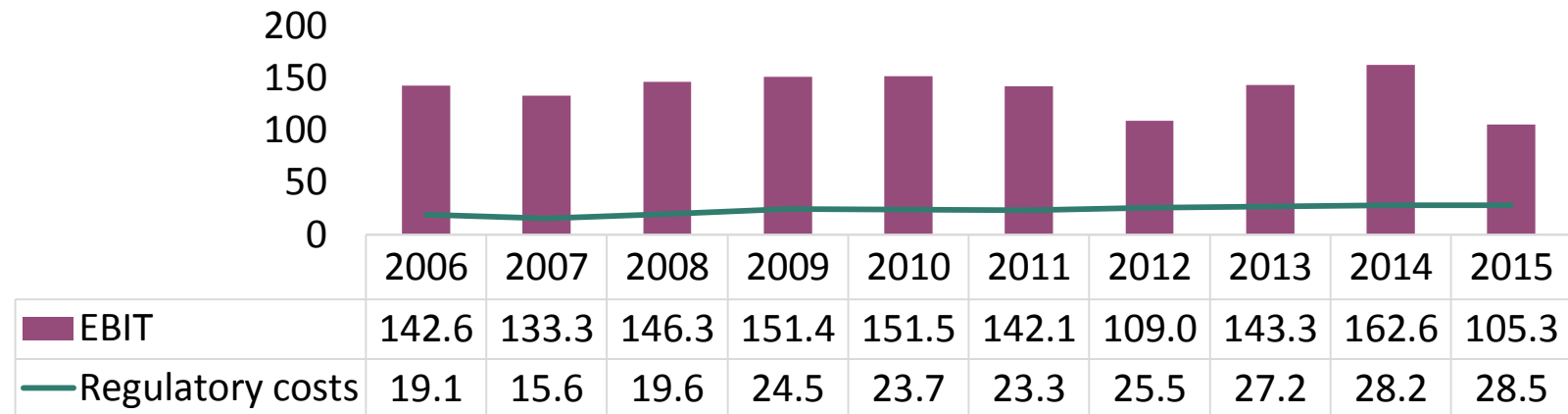
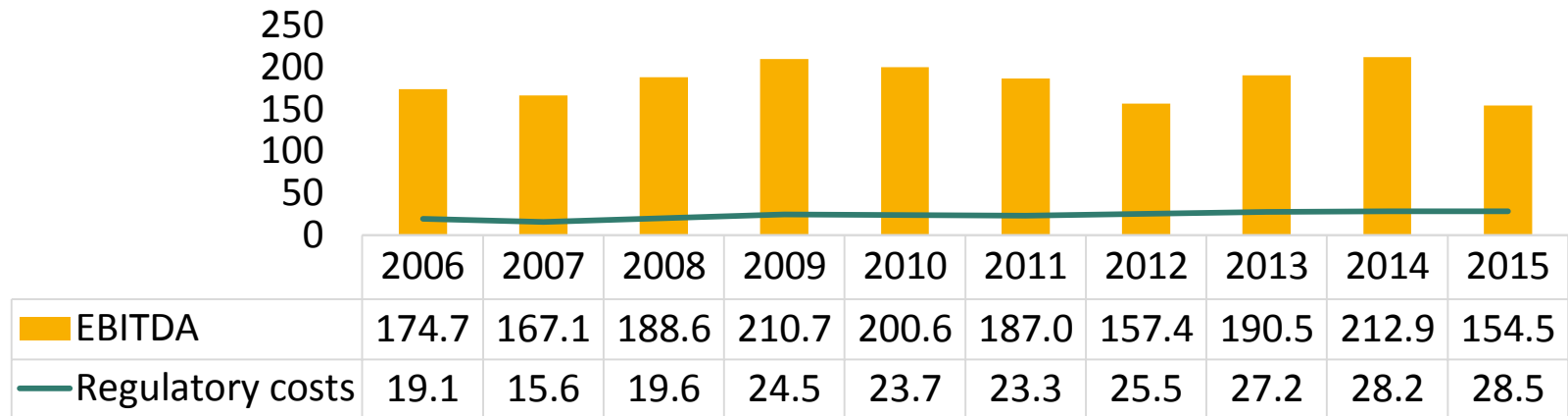
Ceramic tiles: Regulatory costs by area of legislation and comparison with KPI (2015, €/tonne)



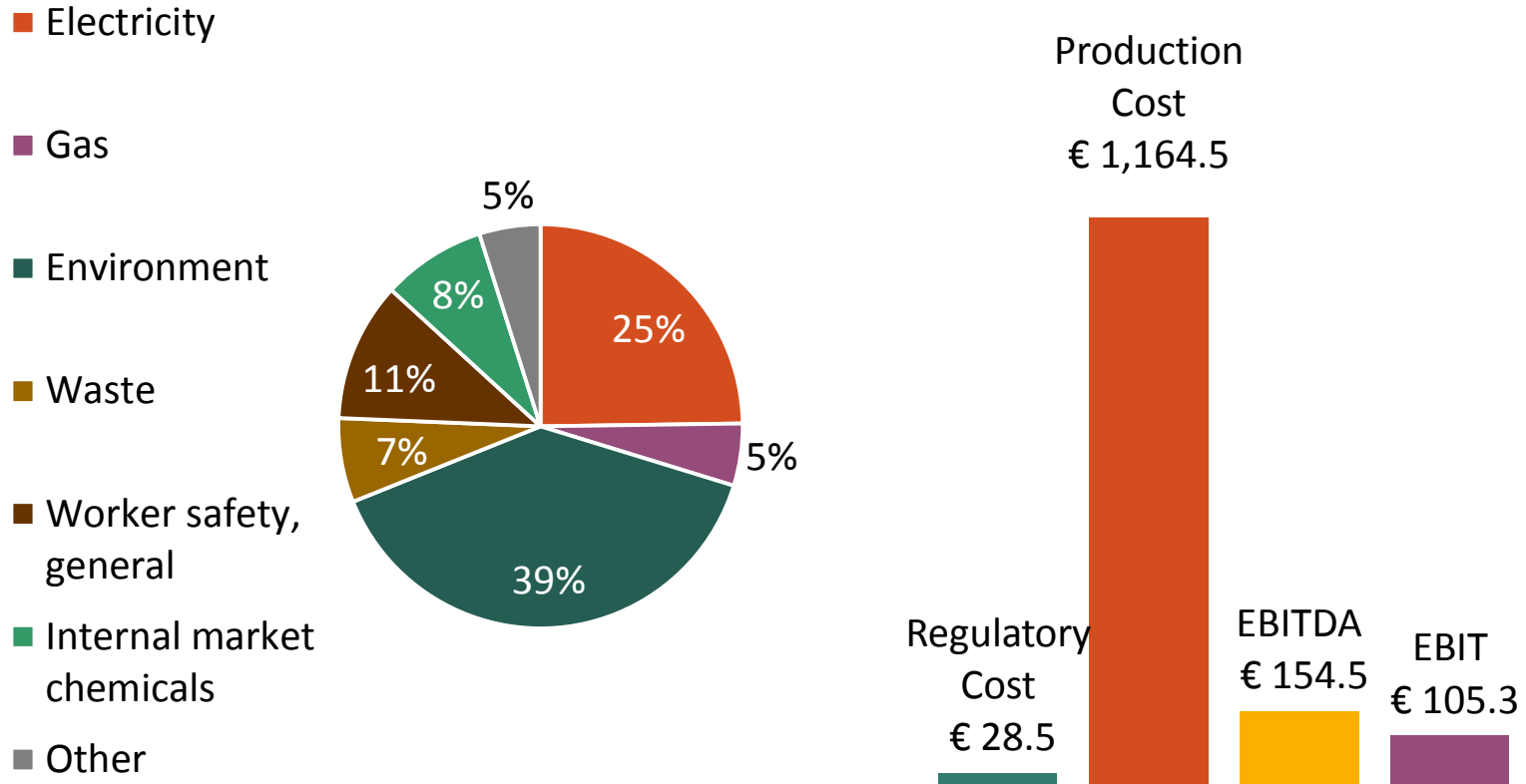
Fired refractories: Cumulative costs versus production costs (€/tonne)



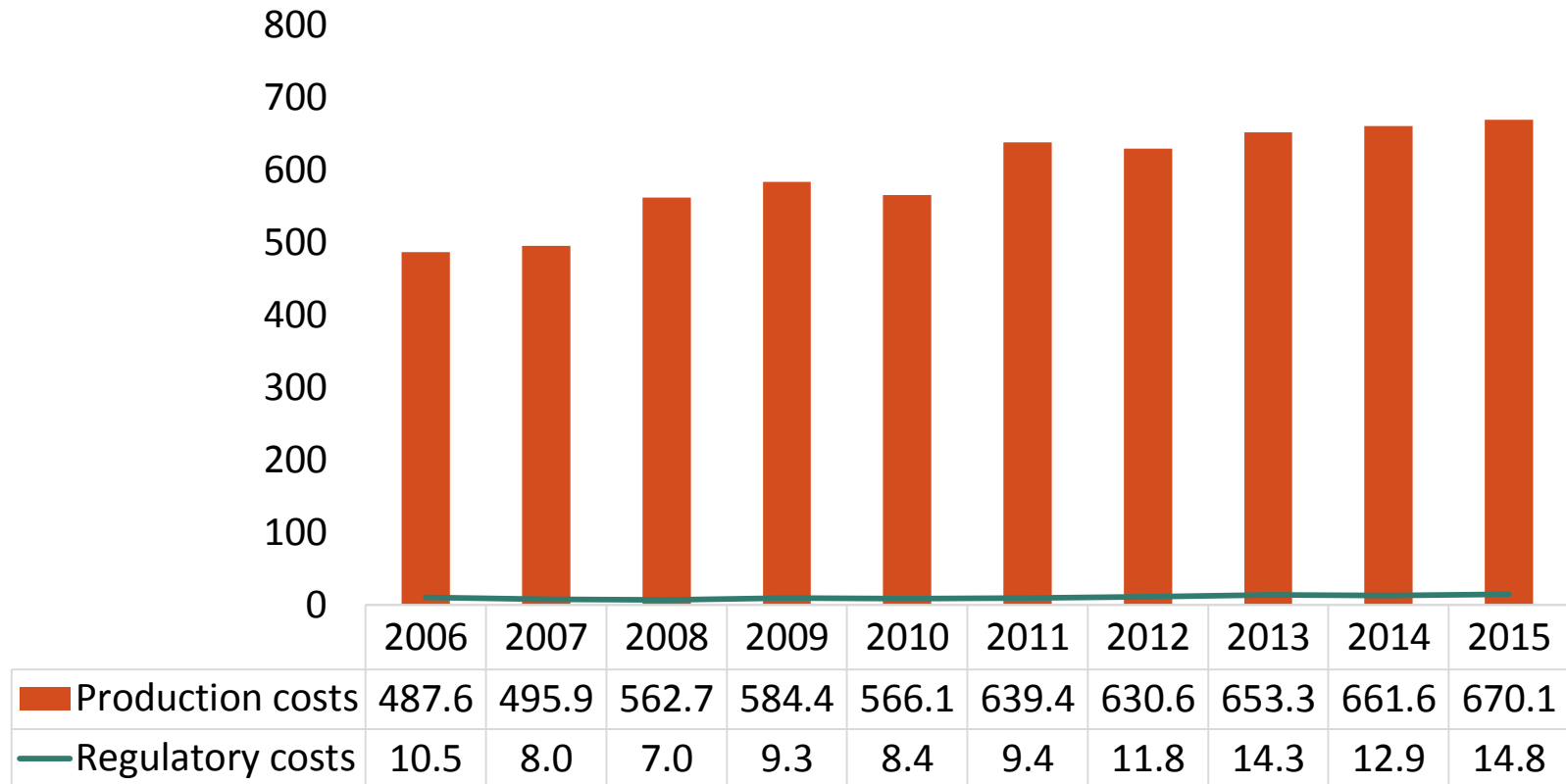
Fired refractories: Cumulative costs versus margins (€/tonne)



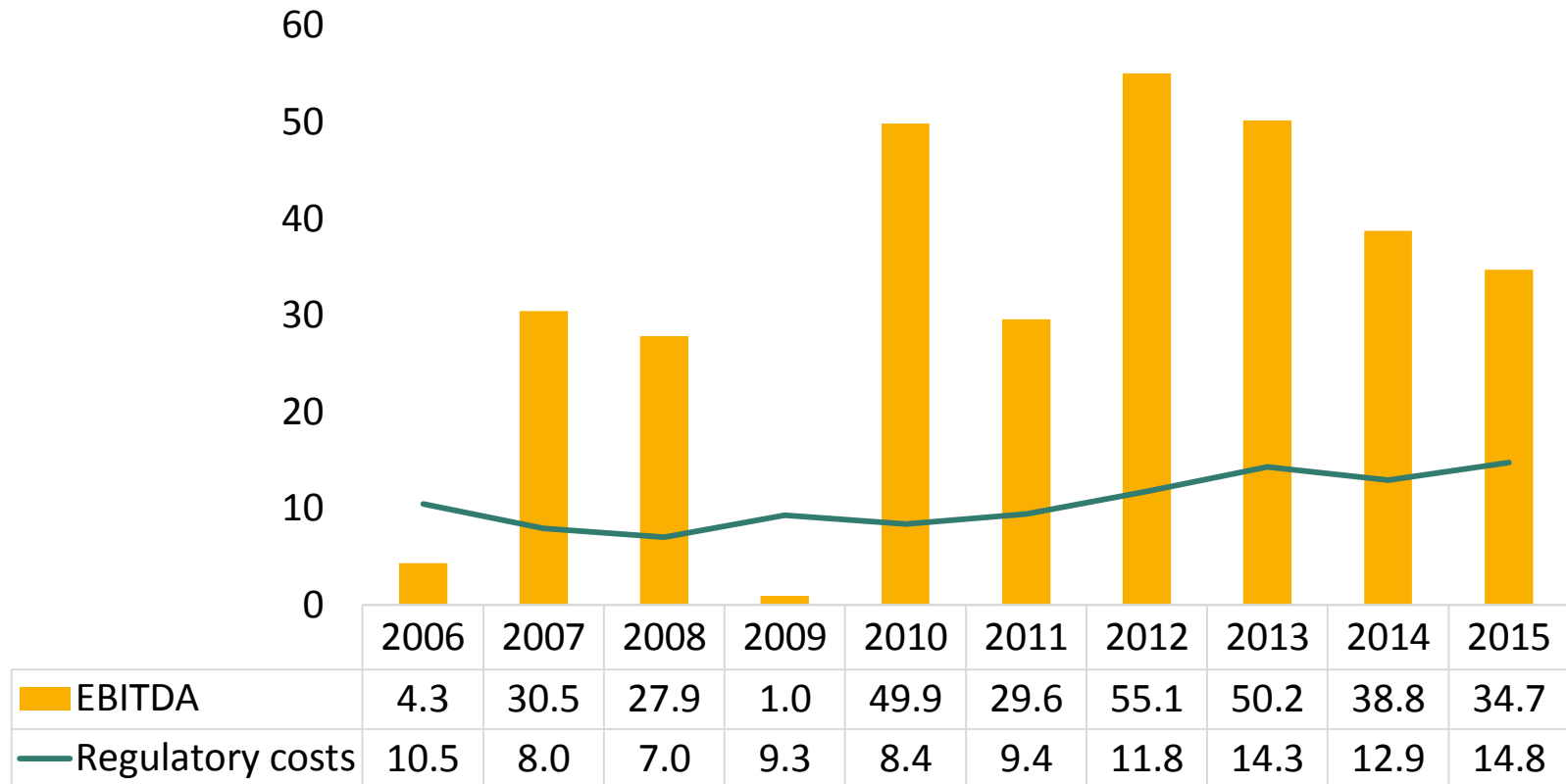
Fired refractories: Regulatory costs by area of legislation and comparison with KPI (2015, €/tonne)



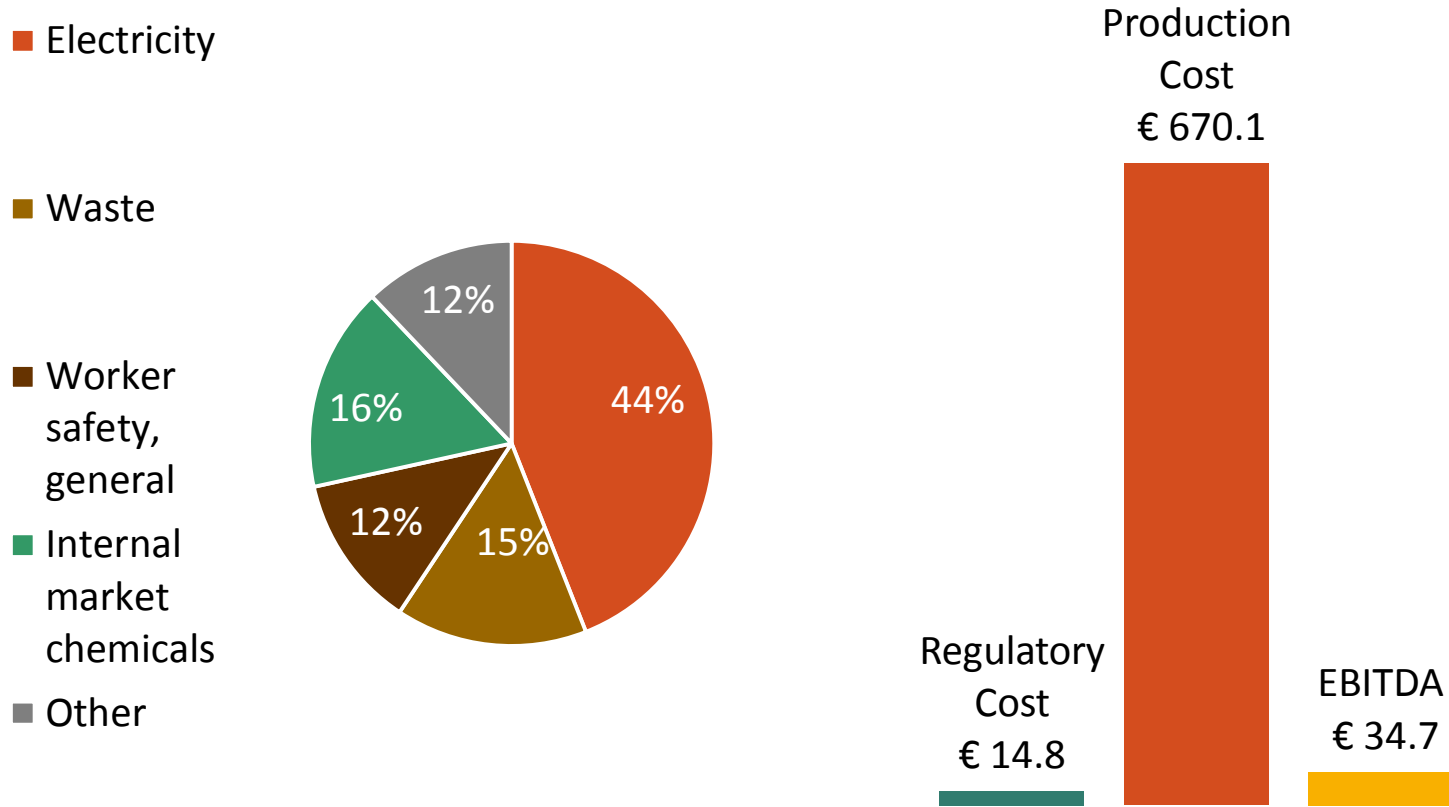
Unfired shaped refractories: Cumulative costs versus production costs (€/tonne)



Unfired shaped refractories: Cumulative costs versus EBITDA (€/tonne)



Unfired shaped refractories: Regulatory costs by area of legislation and comparison with KPI (2015, €/tonne)



Cumulative Cost Assessment: Glass

Glass: Composition of the sample

	Flat Glass	Packaging glass	Glass tableware
Southern Europe	5	10	5
Central Eastern Europe	5	6	
Northern Western Europe	5	10	
Total	15	26*(21)**	5

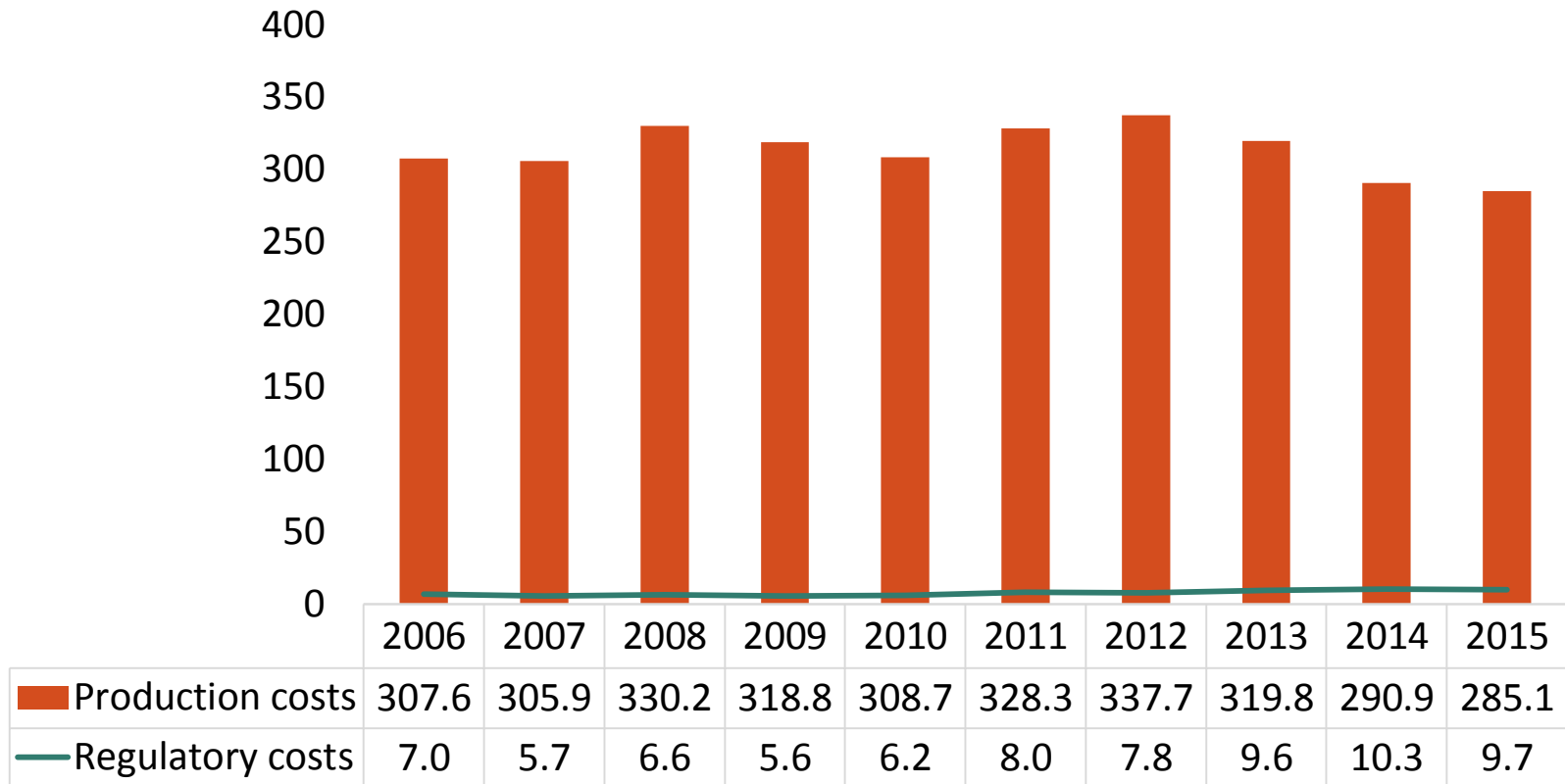
*Note: *Four plants withdrew from the Study; **five respondents manufacture special products and cannot be considered as 'typical plants', hence, their data have not been used to assess regulatory costs.*

Glass: Turnover of sampled plants out of total value of production sold by EU producers (%)

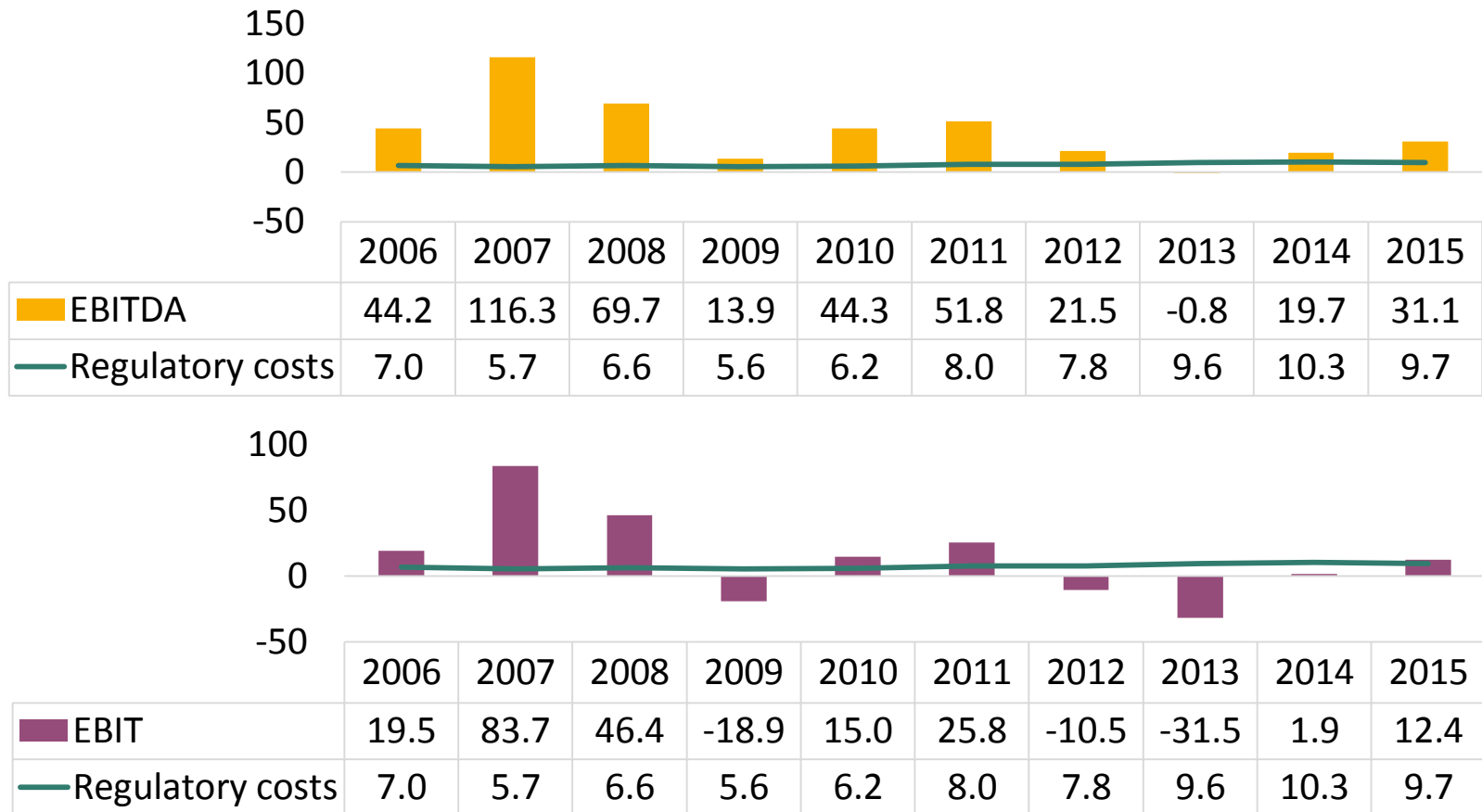
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Flat Glass	23.7*	32.9*	31.9*	35.2*	34.7*	35.1*	33.1*	33.2*	34.2*	36.6*
Hollow Glass – Packaging***	12.9**	14.0**	13.4**	14.4**	14.7**	15.2**	15.8**	15.2**	15.2**	15.7**
Hollow Glass - Tableware	70.6****	36.5	38.0	37.7	38.3	39.9	56.5	36.4	38.3	41.7

*Note: *Missing data for two plants over the entire period and for a third plant over the period 2006-2011; **missing data for one plant over the period 2006-2011 and for another plant over the period 2006-2009; ***turnover based on a sample of 21 plants used to assess regulatory costs; ****for 2006, the higher value is due to lack of data from PRODCOM for the product 'Other drinking glasses' (23131290); Flat Glass covers only the float glass segment and includes the NACE Rev. 2 category 23.11.12; Hollow Glass Packaging includes the NACE Rev. 2 categories 23.13.11.10/20/30/40/50/60/80; Hollow Glass Tableware includes the NACE Rev. 2 categories 23.13.12.20/40/60 and 23.13.13.50/90.*

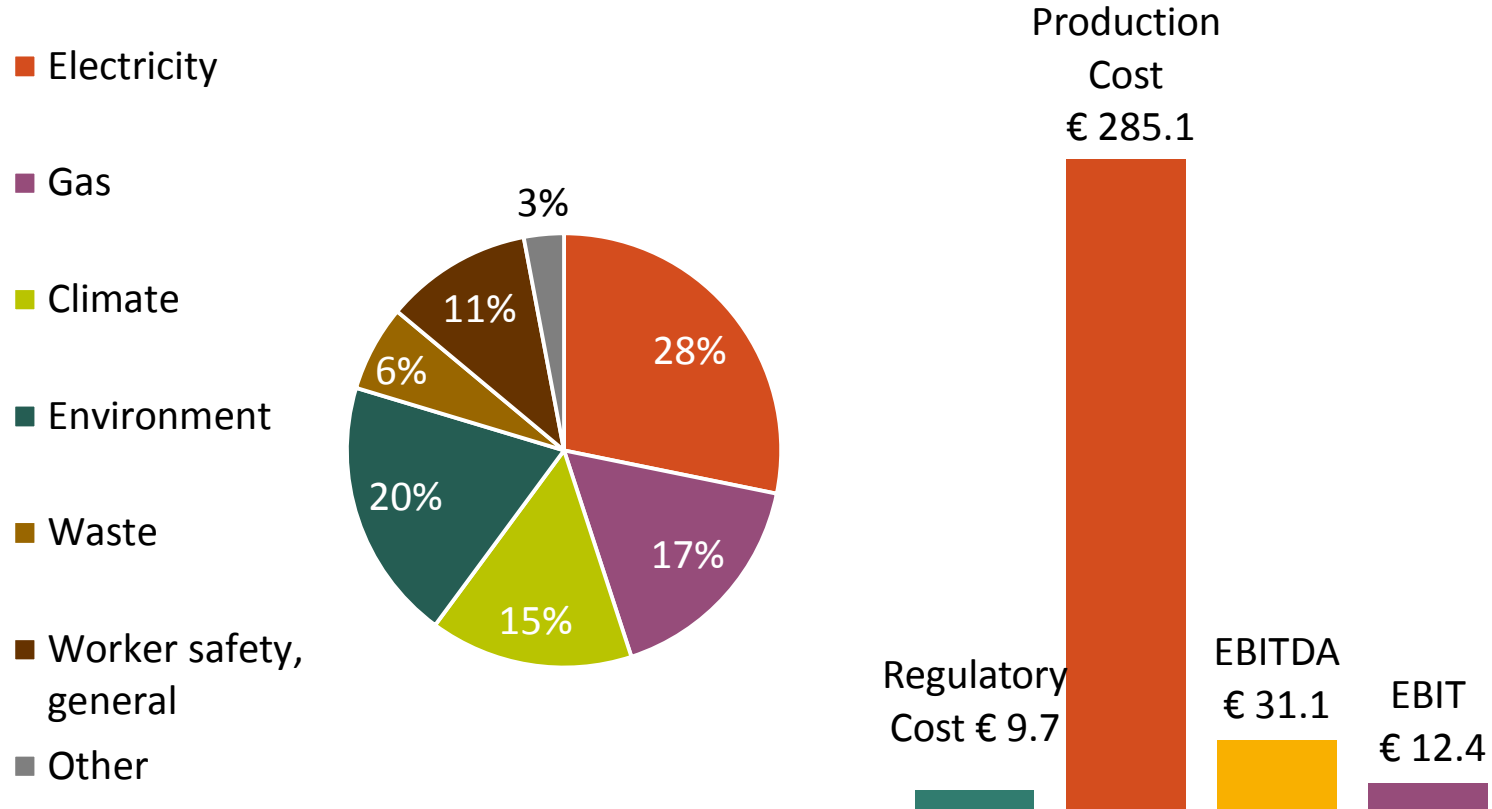
Flat glass: Cumulative costs versus production costs (€/tonne)



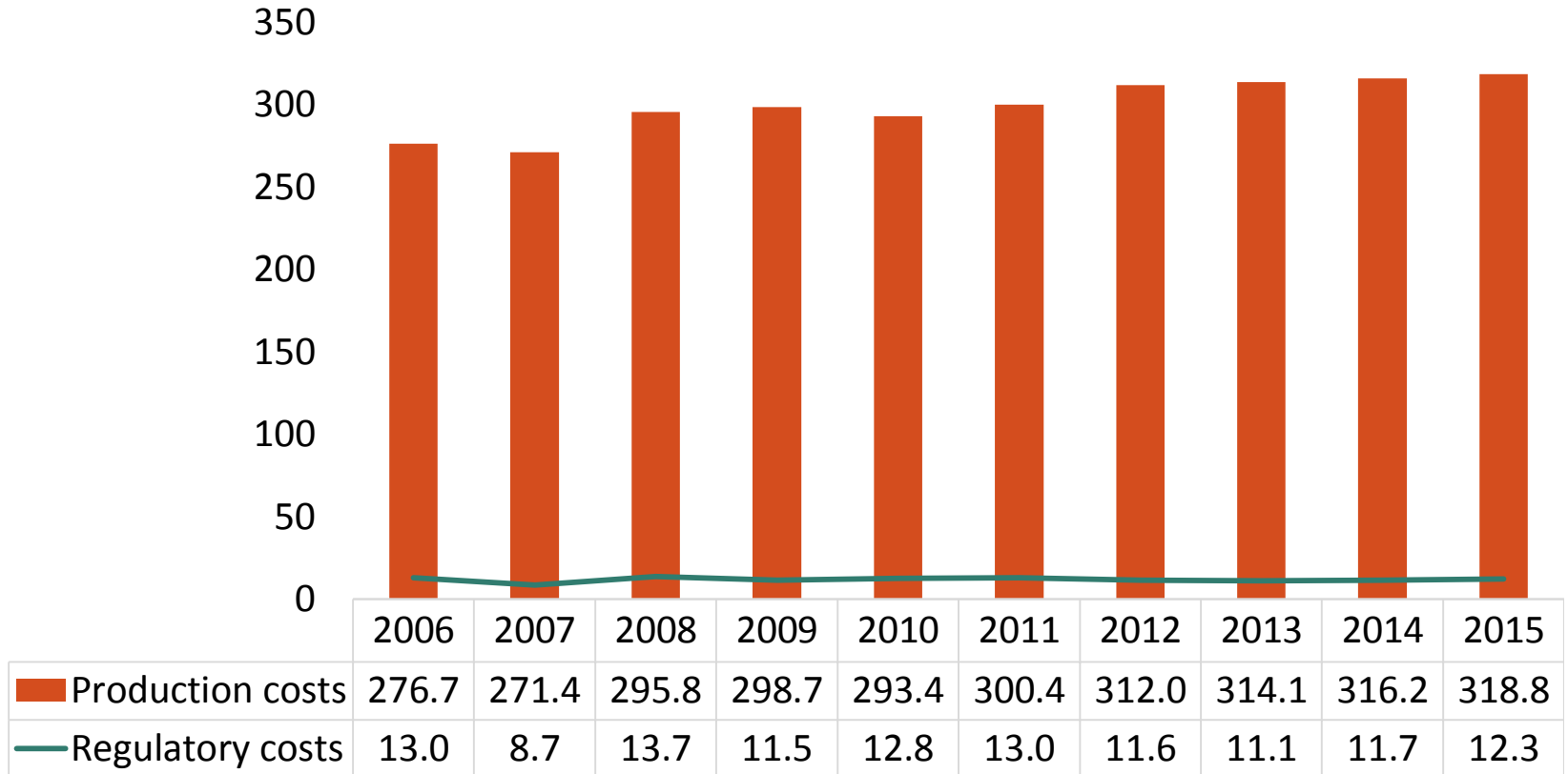
Flat glass: Cumulative costs versus margins (€/tonne)



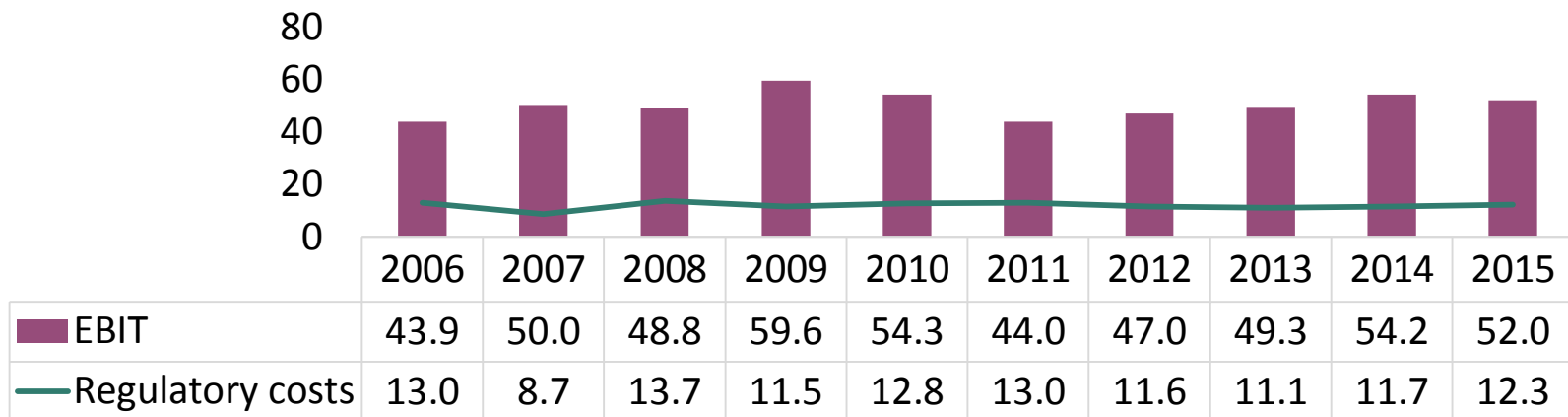
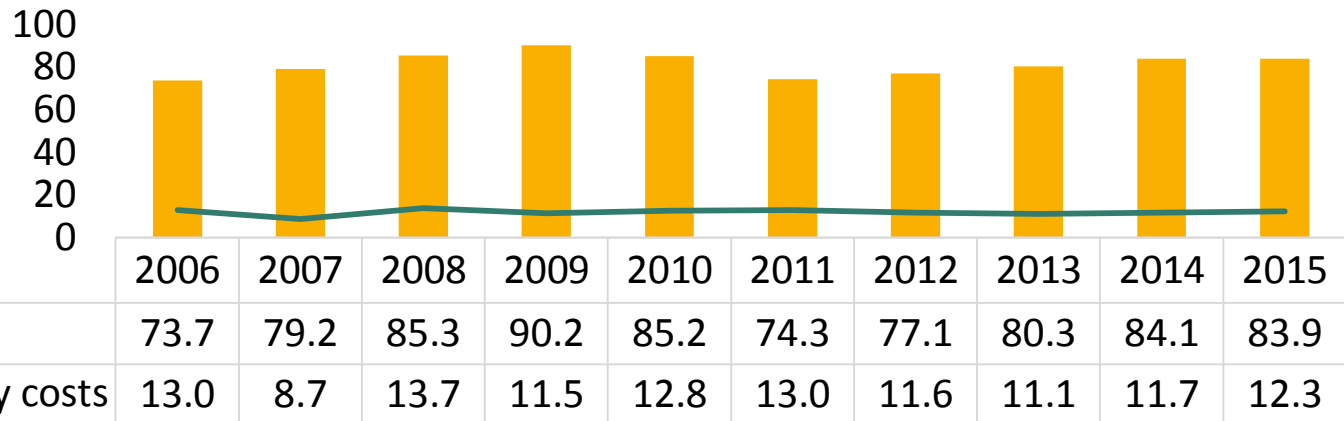
Flat glass: Regulatory costs by area of legislation and comparison with KPI (2015, €/tonne)



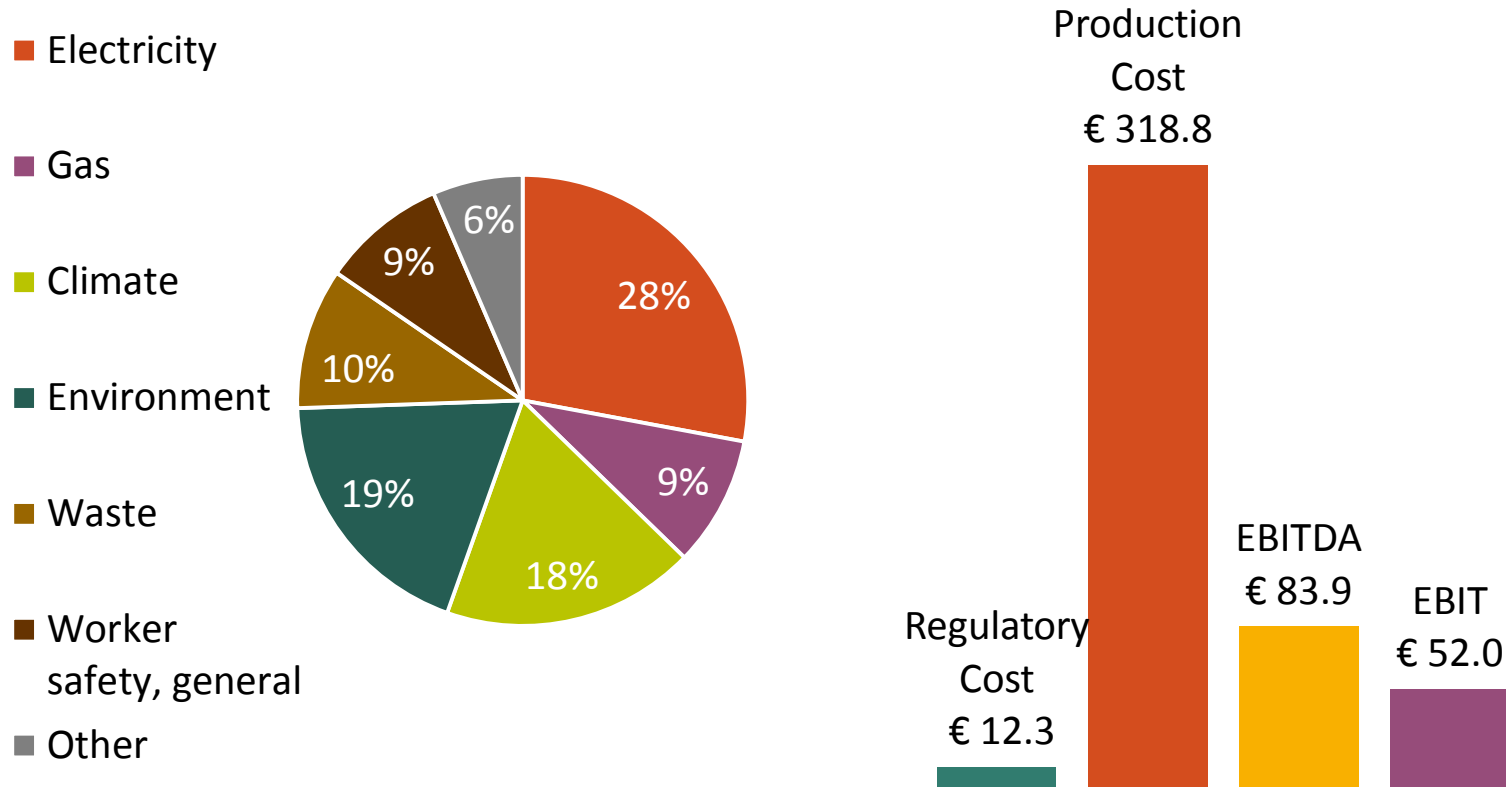
Packaging glass: Cumulative costs versus production costs (€/tonne)



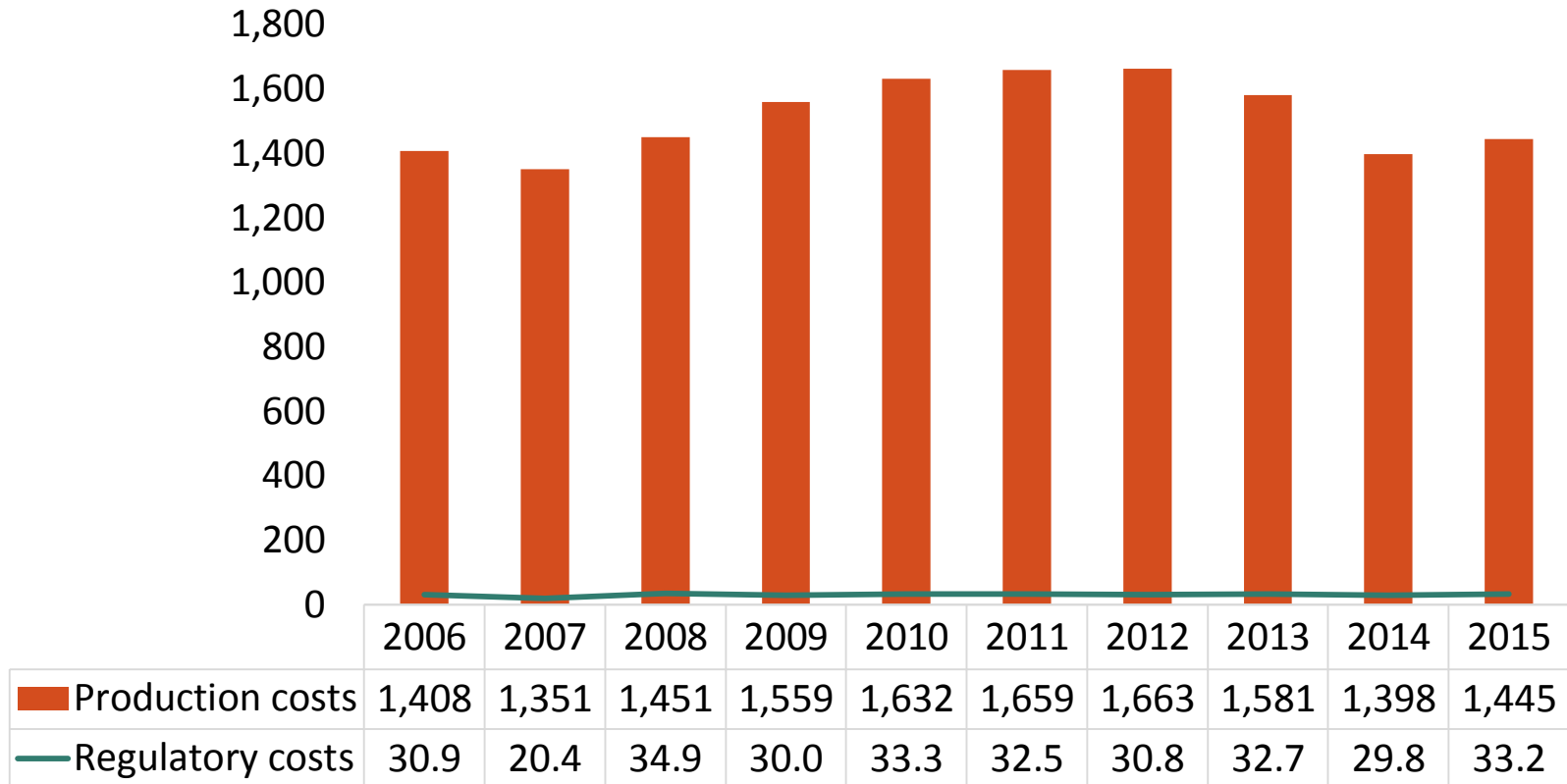
Packaging glass: Cumulative costs versus margins (€/tonne)



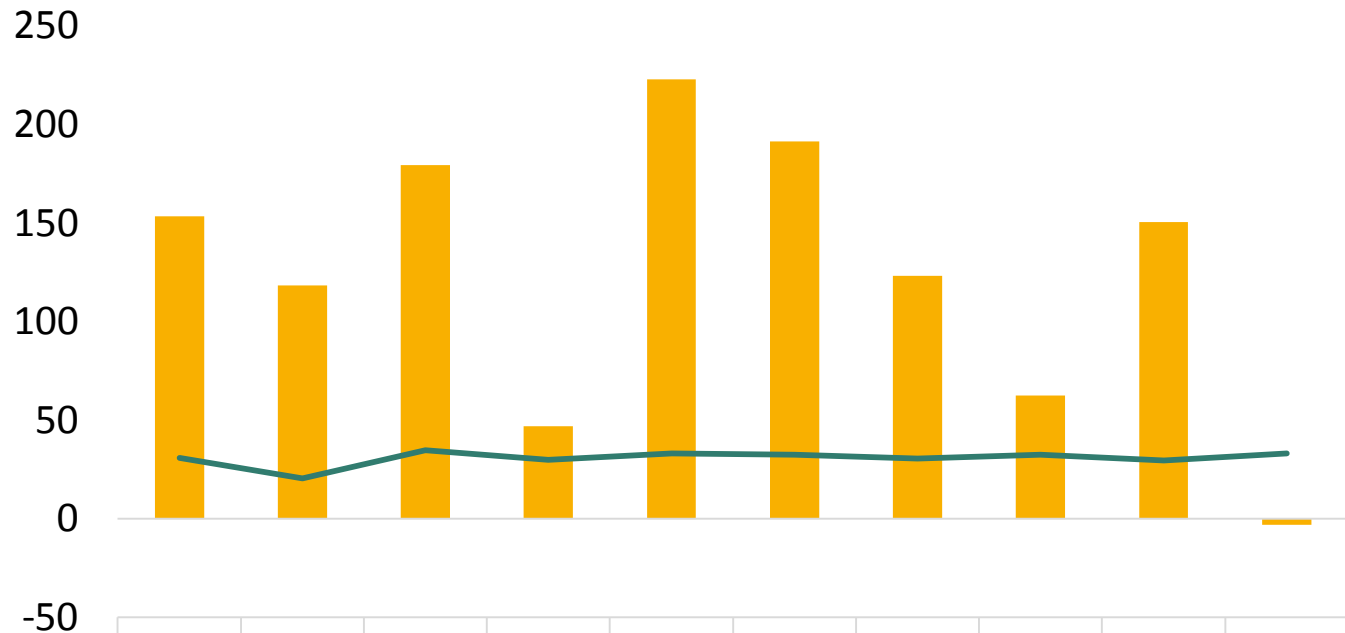
Packaging glass: Regulatory costs by area of legislation and comparison with KPI (2015, €/tonne)



Glass tableware: Cumulative costs versus production costs (€/tonne)



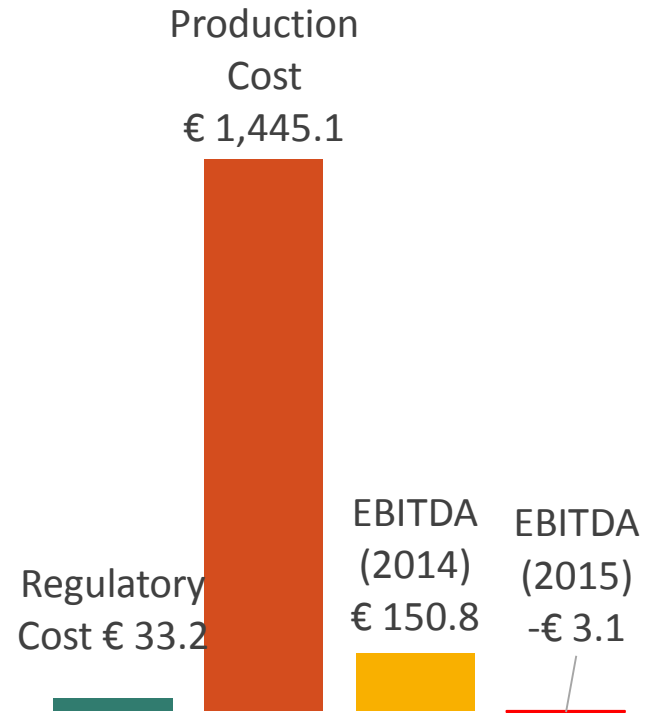
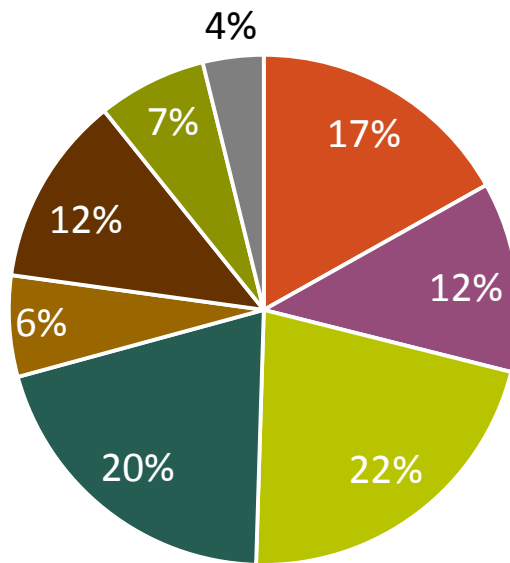
Glass tableware: Cumulative costs versus EBITDA (€/tonne)



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EBITDA	153.5	118.6	179.7	47.0	223.1	191.6	123.5	62.5	150.8	-3.1
Regulatory costs	30.9	20.4	34.9	30.0	33.3	32.5	30.8	32.7	29.8	33.2

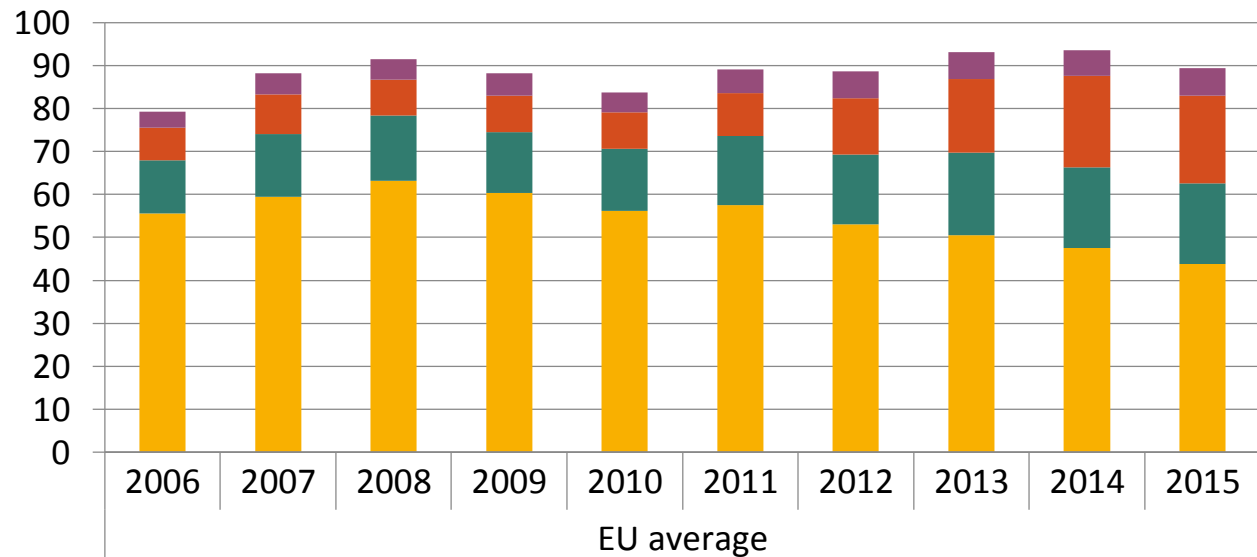
Glass tableware: Regulatory costs by area of legislation and comparison with KPI (2015, €/tonne)

- Electricity
- Gas
- Climate
- Environment
- Waste
- Worker safety, general
- Measuring Instrument Directive
- Other



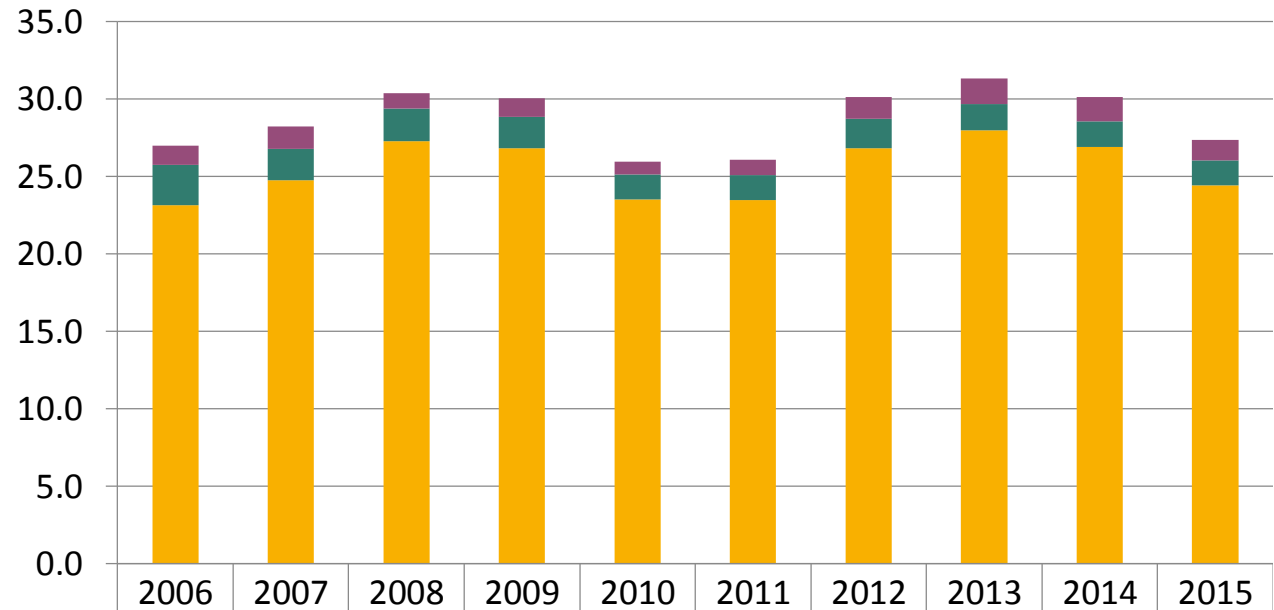
Energy legislation: Ceramics

Bricks and tiles: Electricity prices (€/MWh)



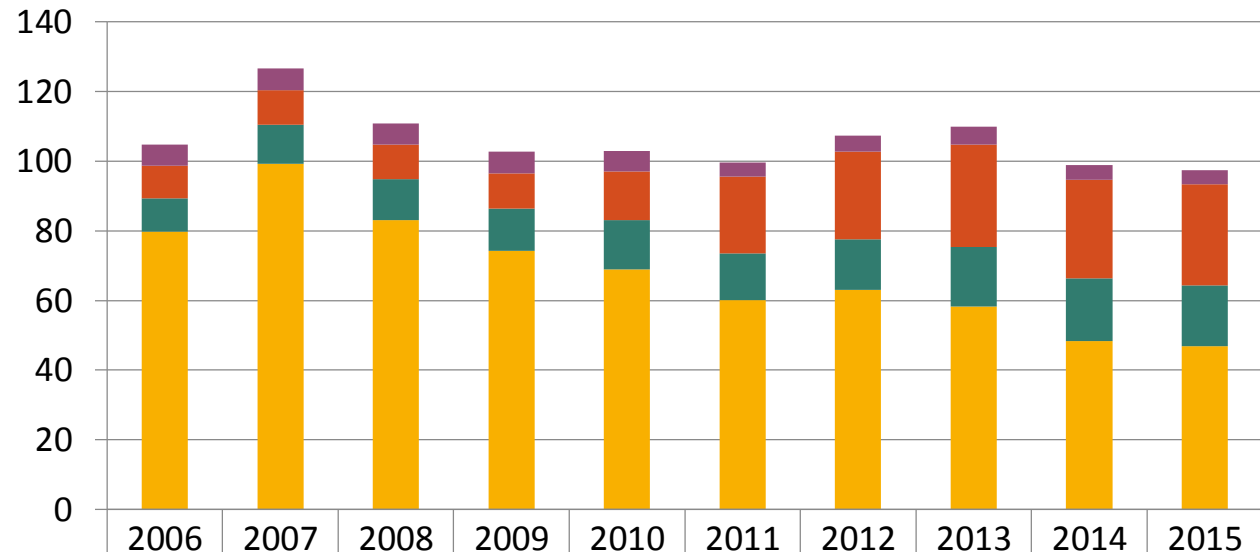
■ Other taxes, fees, levies and charges (excl. VAT)	3.7	4.9	4.8	5.2	4.5	5.5	6.2	6.2	5.9	6.4
■ Renewable support	7.5	9.2	8.3	8.6	8.6	10.0	13.2	17.2	21.3	20.4
■ Network costs	12.5	14.5	15.1	14.1	14.5	16.1	16.2	19.3	18.7	18.7
■ Energy supply costs	55.5	59.5	63.2	60.3	56.1	57.5	53.0	50.5	47.6	43.8

Bricks and tiles: Gas prices (€/MWh)



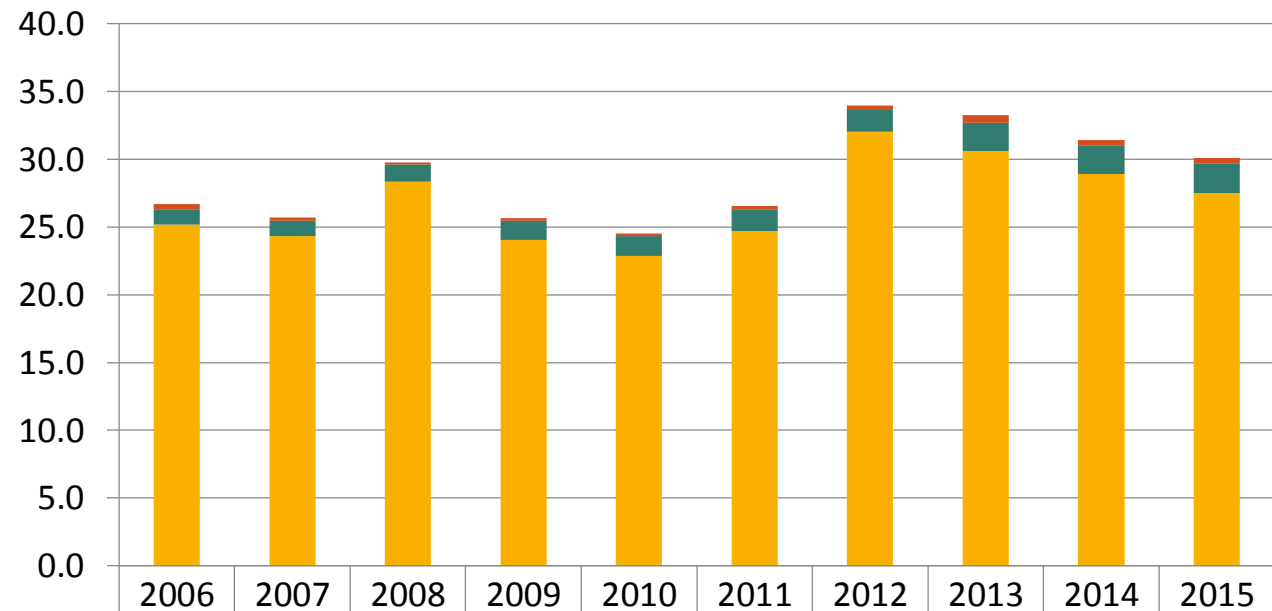
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Other taxes, fees, levies and charges (excl. VAT)	1.2	1.5	1.0	1.2	0.8	1.0	1.4	1.7	1.6	1.3
Network costs	2.6	2.0	2.1	2.0	1.6	1.6	1.9	1.7	1.6	1.6
Energy supply costs	23.2	24.8	27.3	26.8	23.5	23.5	26.8	28.0	26.9	24.4

Ceramic tiles: Electricity prices (€/MWh)



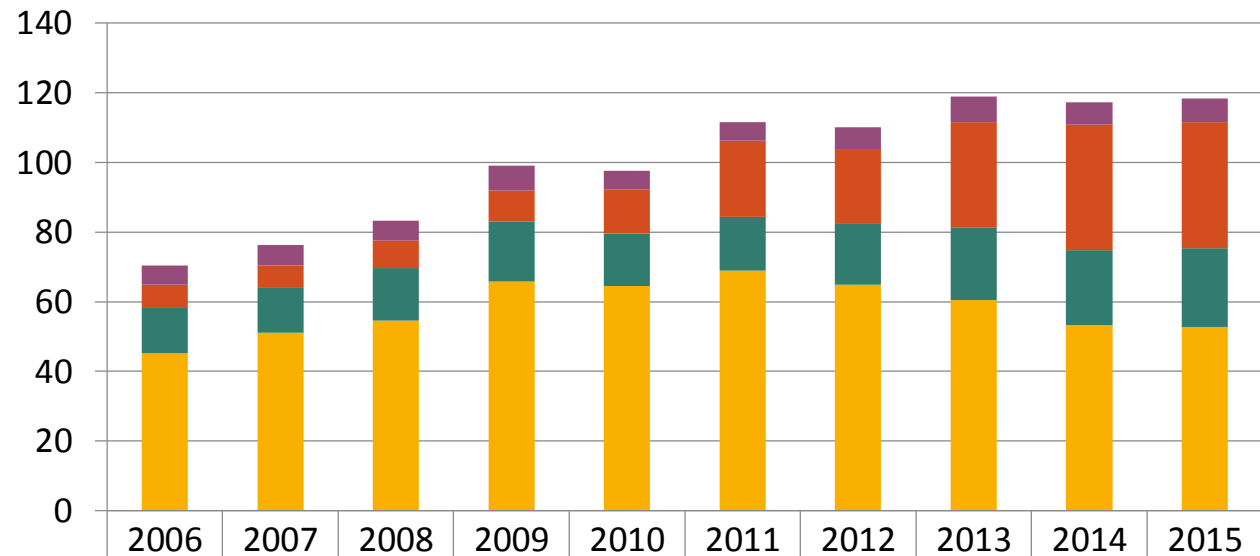
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Other taxes, fees, levies and charges (excl. VAT)	6.2	6.2	6.1	6.2	5.8	4.1	4.5	5.0	4.2	4.1
Renewable support	9.3	9.9	10.0	10.2	14.1	22.1	25.1	29.4	28.2	28.9
Network costs	9.5	11.2	11.8	12.2	14.1	13.4	14.6	17.2	18.1	17.6
Energy supply costs	79.8	99.4	83.0	74.2	68.9	60.1	63.1	58.2	48.4	46.8

Ceramic tiles: Gas prices (€/MWh)



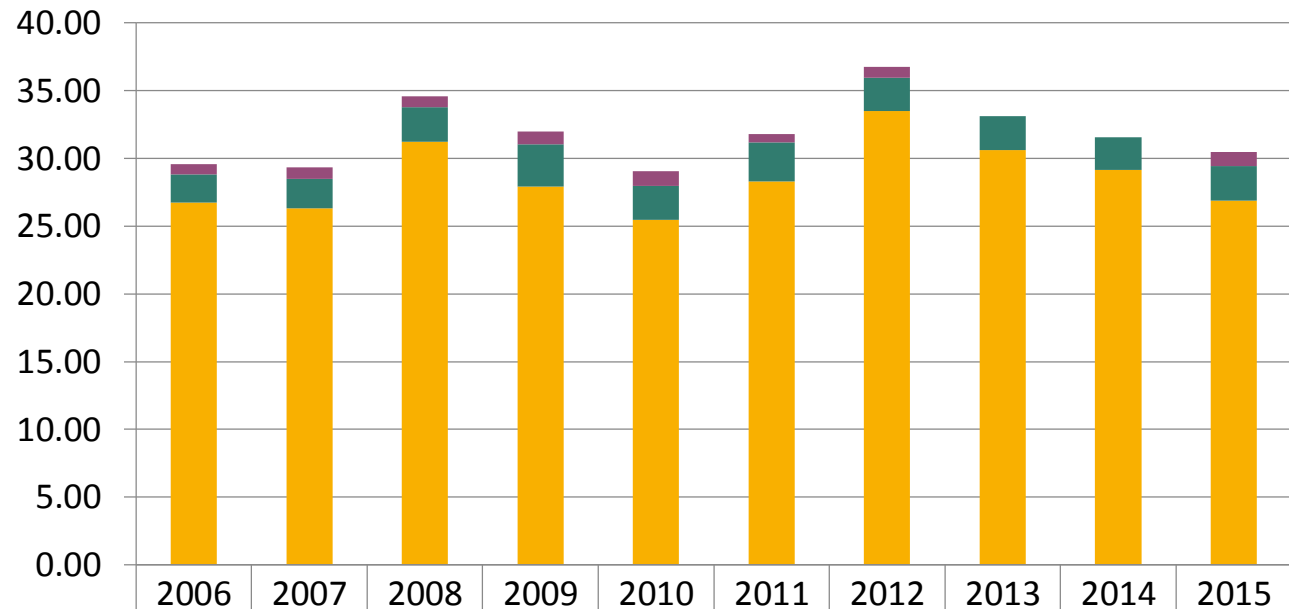
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
■ Other taxes, fees, levies and charges (excl. VAT)	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.6	0.4	0.4
■ Network costs	1.1	1.1	1.3	1.4	1.5	1.6	1.6	2.1	2.1	2.2
■ Energy supply costs	25.2	24.3	28.4	24.0	22.9	24.7	32.0	30.6	28.9	27.5

Fired refractories: Electricity prices (€/MWh)



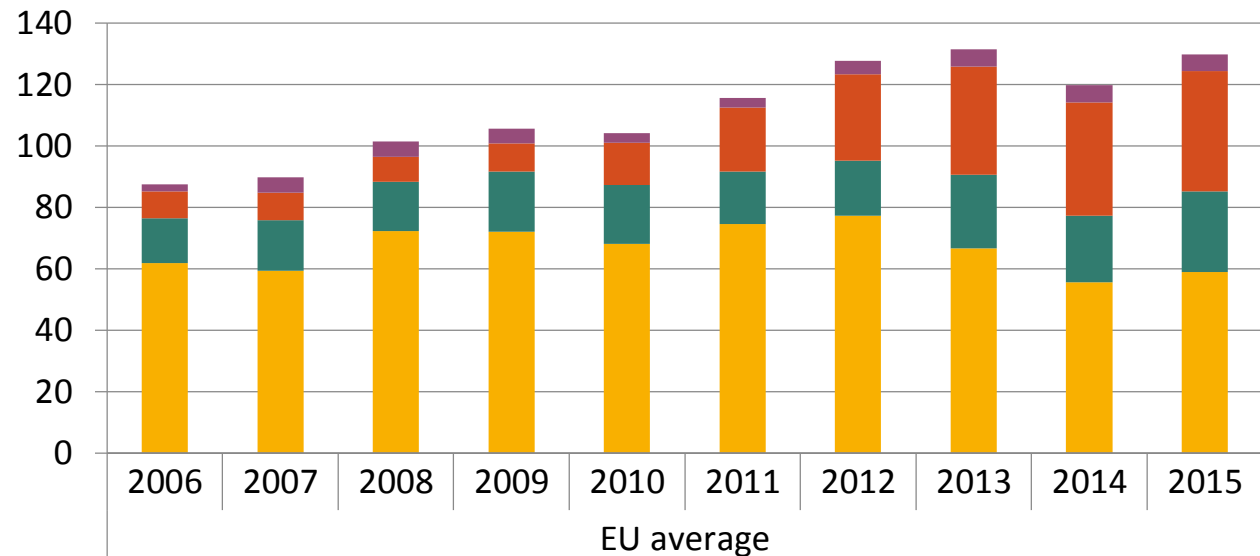
■ Other taxes, fees, levies and charges (excl. VAT)	5.5	5.8	5.7	7.3	5.4	5.4	6.3	7.3	6.6	6.8
■ Renewable support	6.4	6.6	7.7	8.8	12.6	21.8	21.4	30.4	36.0	36.3
■ Network costs	13.2	12.8	15.2	17.2	15.2	15.5	17.5	20.9	21.5	22.5
■ Energy supply costs	45.3	51.1	54.6	65.9	64.4	68.8	64.9	60.4	53.3	52.8

Fired refractories: Gas prices (€/MWh)



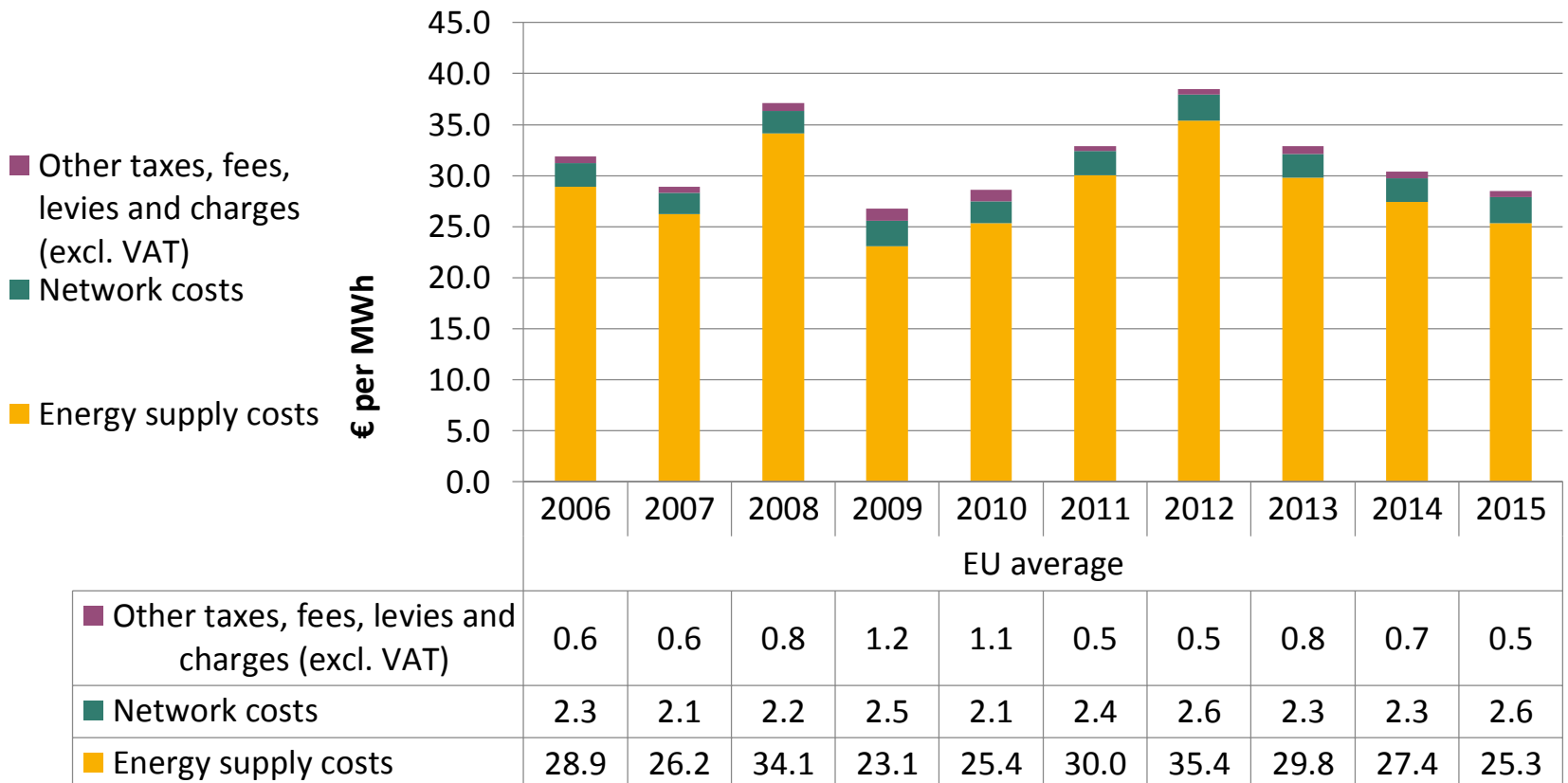
■ Other taxes, fees, levies and charges (excl. VAT)	0.78	0.86	0.82	0.95	1.06	0.63	0.83	0.00	0.00	1.04
■ Network costs	2.07	2.19	2.53	3.10	2.52	2.89	2.45	2.46	2.39	2.53
■ Energy supply costs	26.73	26.30	31.25	27.94	25.46	28.28	33.47	30.64	29.15	26.89

Unfired shaped refractories: Electricity prices (€/MWh)



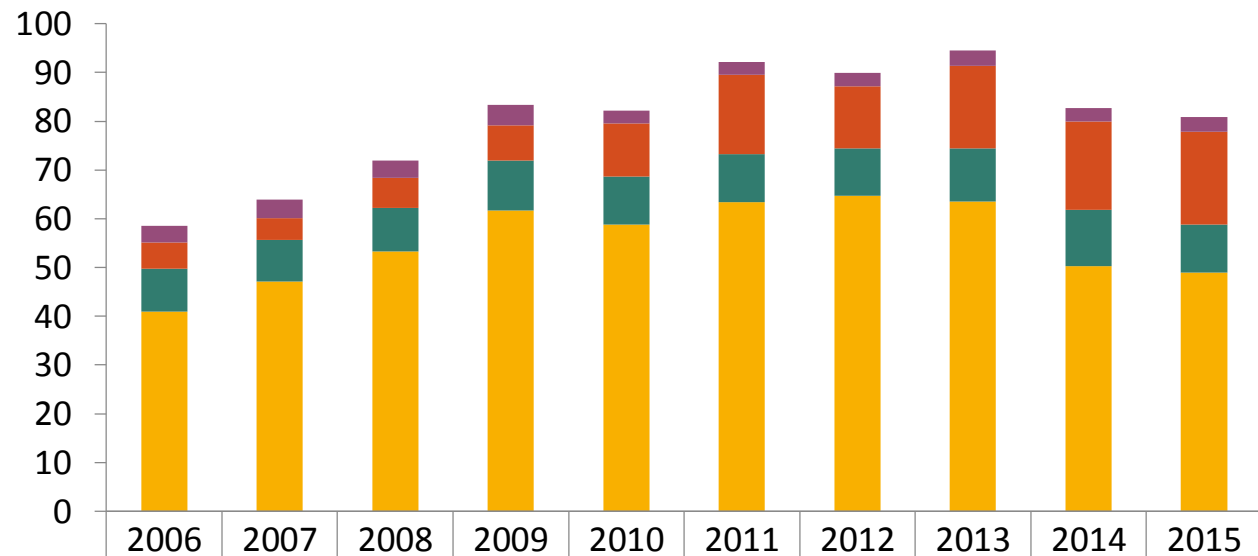
Other taxes, fees, levies and charges (excl. VAT)	2.4	4.9	4.9	4.7	3.2	3.3	4.4	5.7	5.6	5.3
Renewable support	8.8	9.0	8.3	9.2	13.7	20.8	28.1	35.2	36.9	39.3
Network costs	14.5	16.5	16.0	19.7	19.2	17.1	17.9	23.9	21.6	26.1
Energy supply costs	61.8	59.3	72.2	71.9	68.0	74.4	77.2	66.7	55.6	58.9

Unfired shaped refractories : Gas prices (€/MWh)



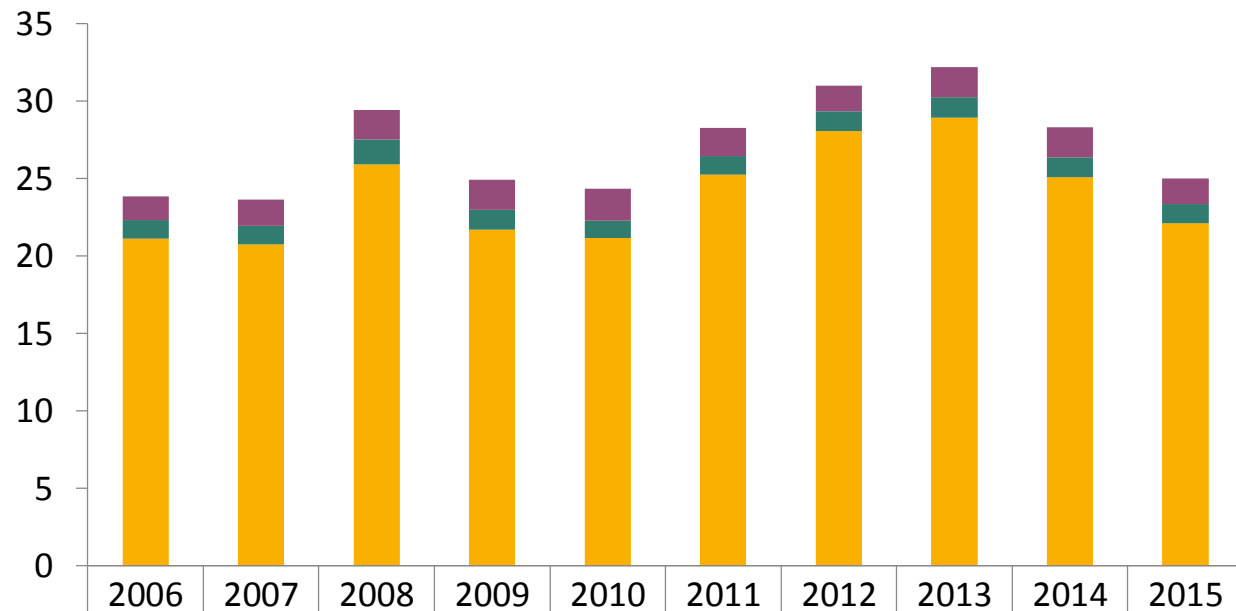
Energy legislation: Glass

Flat glass: Electricity prices (€/MWh)



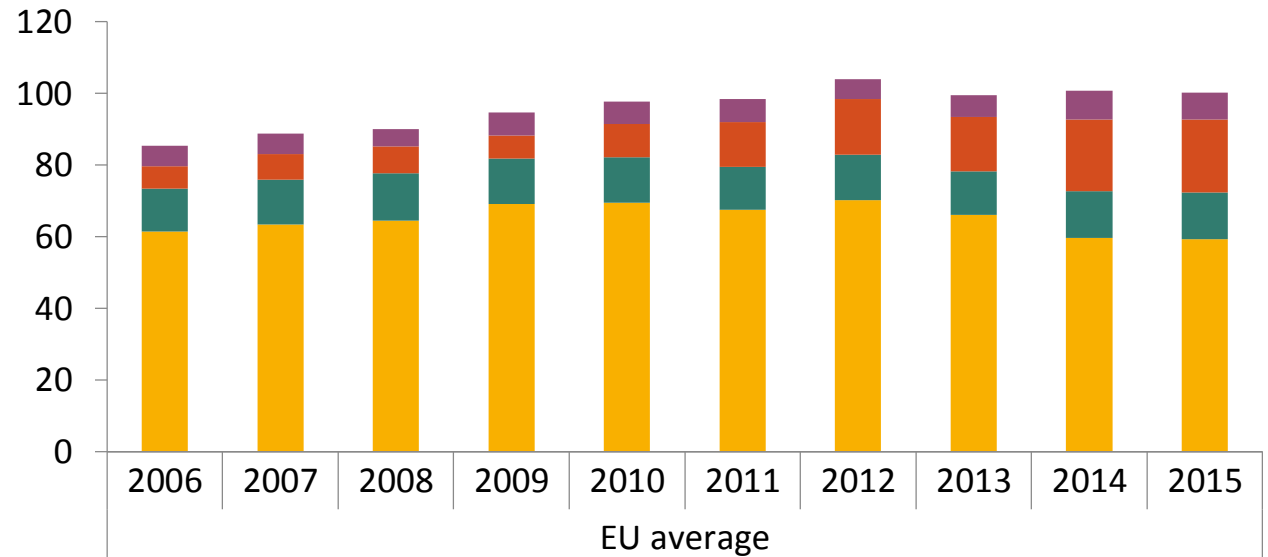
Other taxes, fees, levies and charges (excl. VAT)	3	4	4	4	3	3	3	3	3	3
Renewable support	5	5	6	7	11	16	13	17	18	19
Network costs	9	9	9	10	10	10	10	11	11	10
Energy supply costs	41	47	53	62	59	63	65	64	50	49

Flat glass: Gas prices (€/MWh)



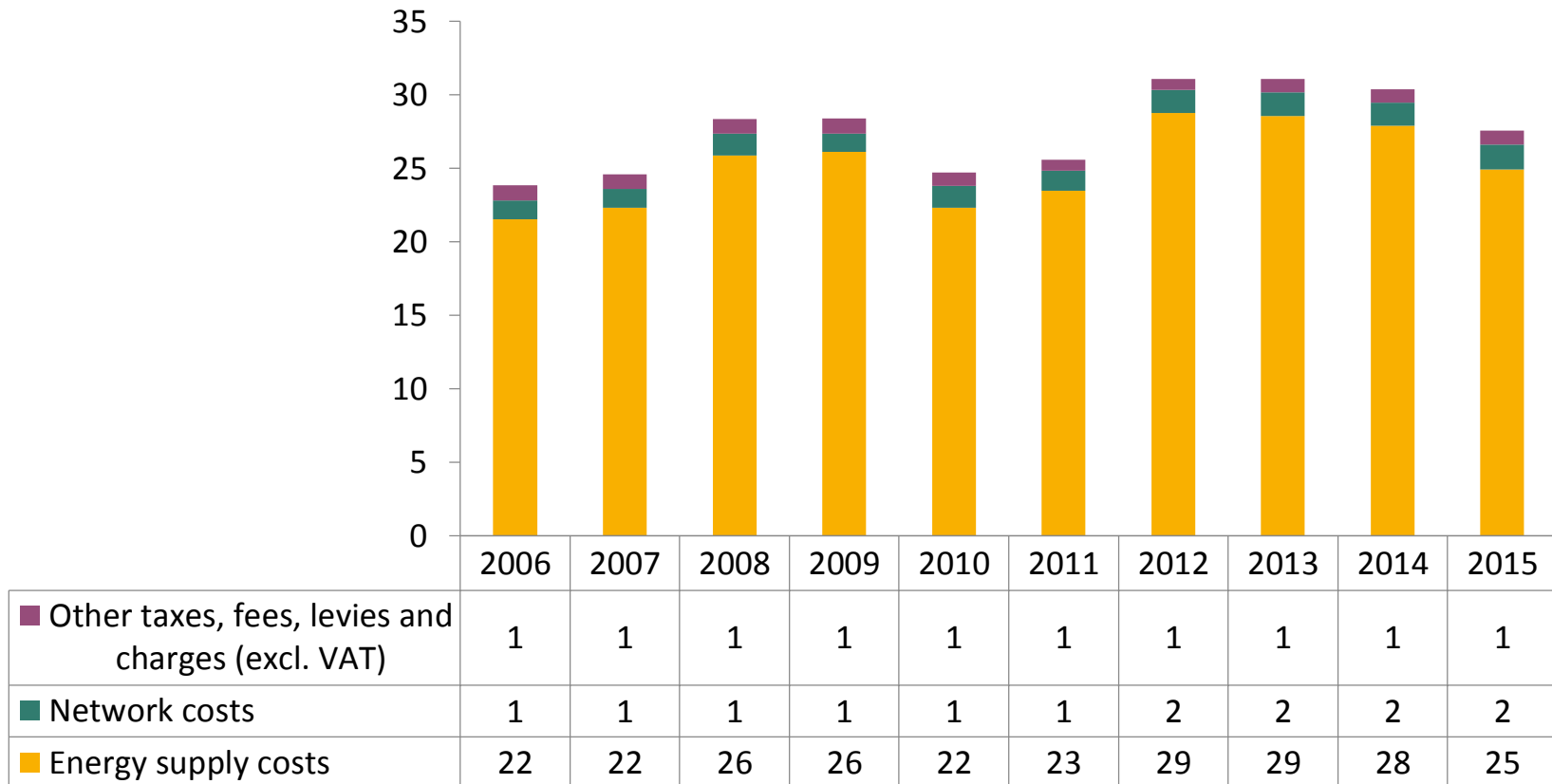
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Other taxes, fees, levies and charges (excl. VAT)	2	2	2	2	2	2	2	2	2	2
Network costs	1	1	2	1	1	1	1	1	1	1
Energy supply costs	21	21	26	22	21	25	28	29	25	22

Packaging glass: Electricity prices (€/MWh)

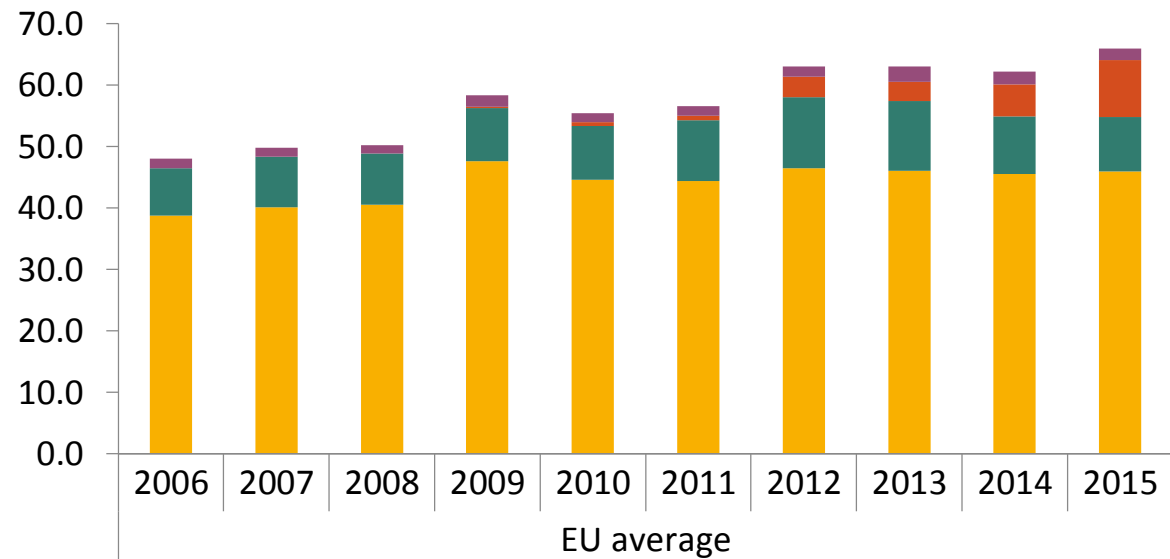


	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Other taxes, fees, levies and charges (excl. VAT)	6	6	5	6	6	6	6	6	8	8
Renewable support	6	7	7	7	9	13	15	15	20	20
Network costs	12	13	13	13	13	12	13	12	13	13
Energy supply costs	62	63	64	69	69	68	70	66	60	59

Packaging glass: Gas prices (€/MWh)

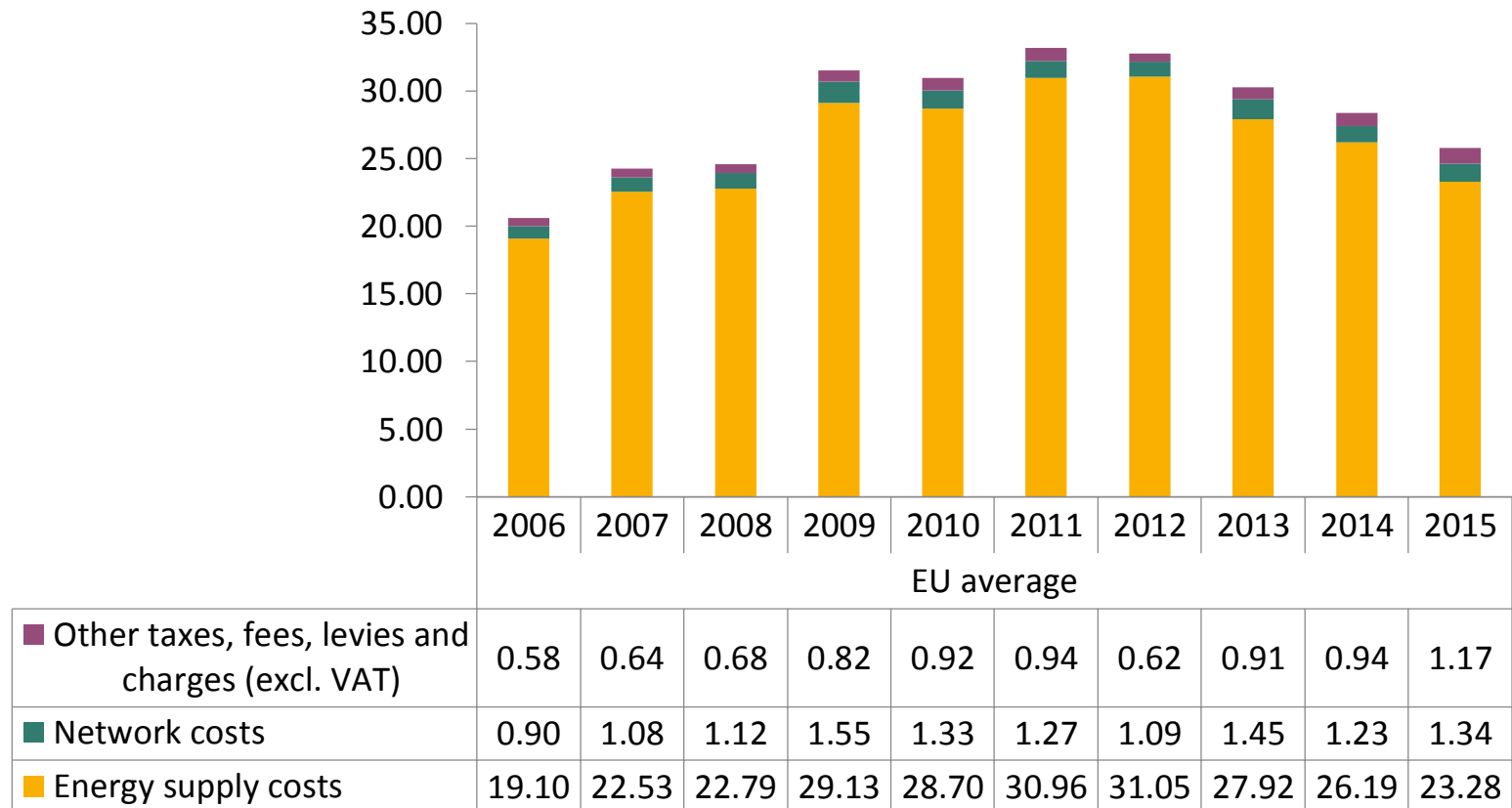


Glass Tableware: Electricity prices (€/MWh)



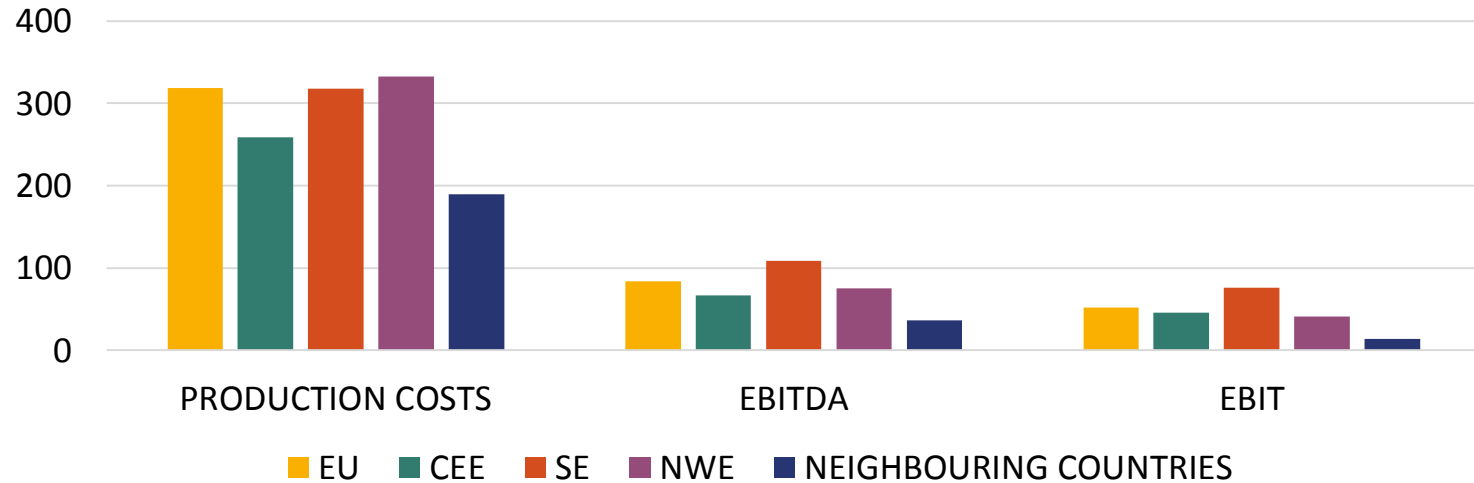
■ Other taxes, fees, levies and charges (excl. VAT)	1.5	1.5	1.3	1.8	1.4	1.6	1.6	2.5	2.1	1.9
■ Renewable support	0.0	0.0	0.0	0.2	0.7	0.7	3.3	3.1	5.3	9.3
■ Network costs	7.7	8.2	8.3	8.7	8.8	9.9	11.5	11.4	9.4	8.9
■ Energy supply costs	38.8	40.1	40.5	47.6	44.6	44.4	46.5	46.0	45.5	45.9

Glass tableware: Gas prices (€/MWh)



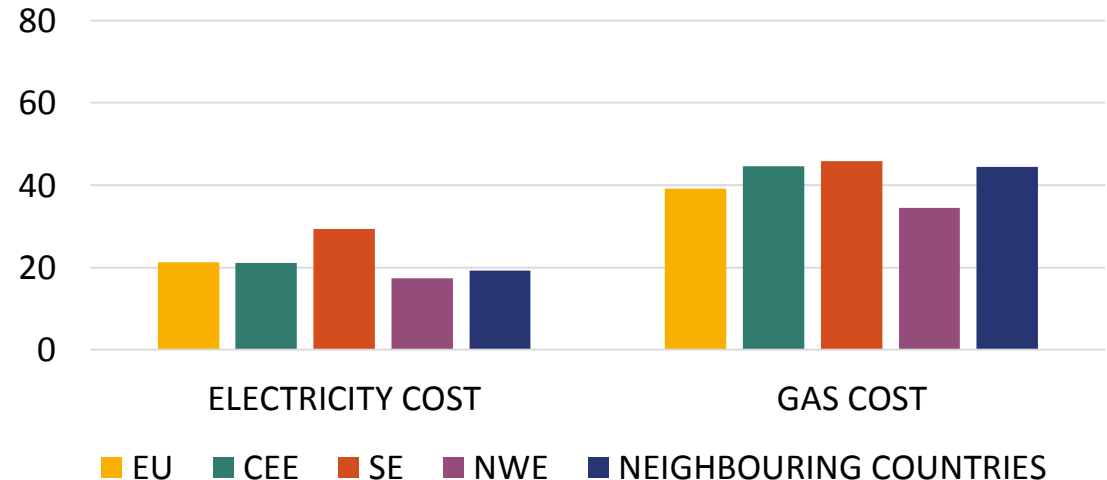
International comparison

Packaging glass: International comparison (€/tonne)

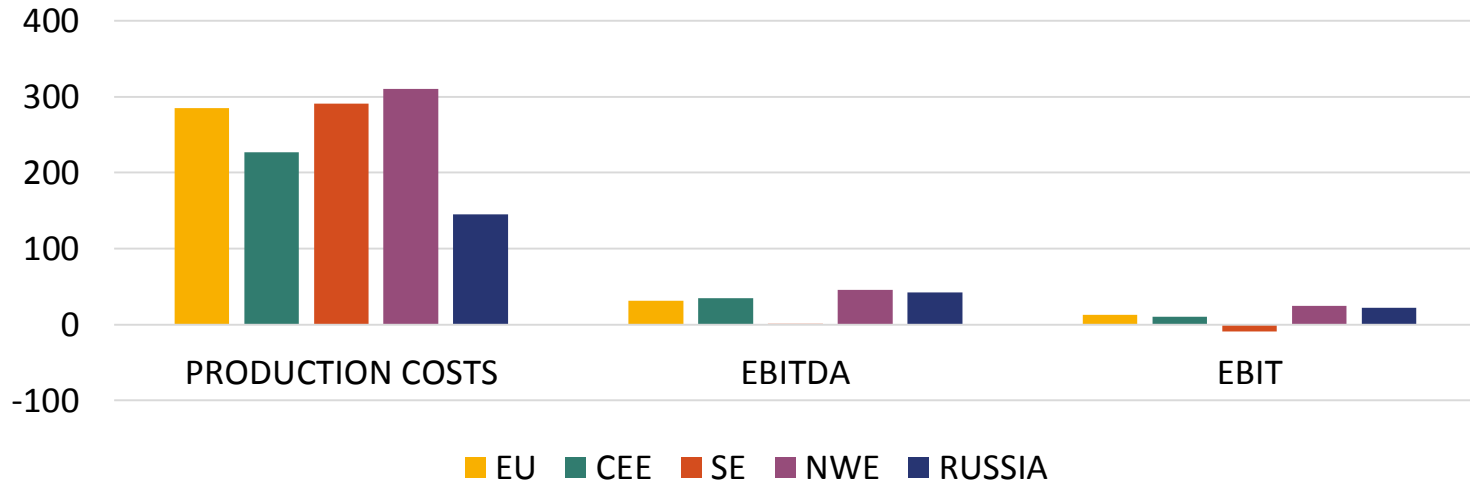


Data for neighbouring countries are based on a total of **six observations** from:

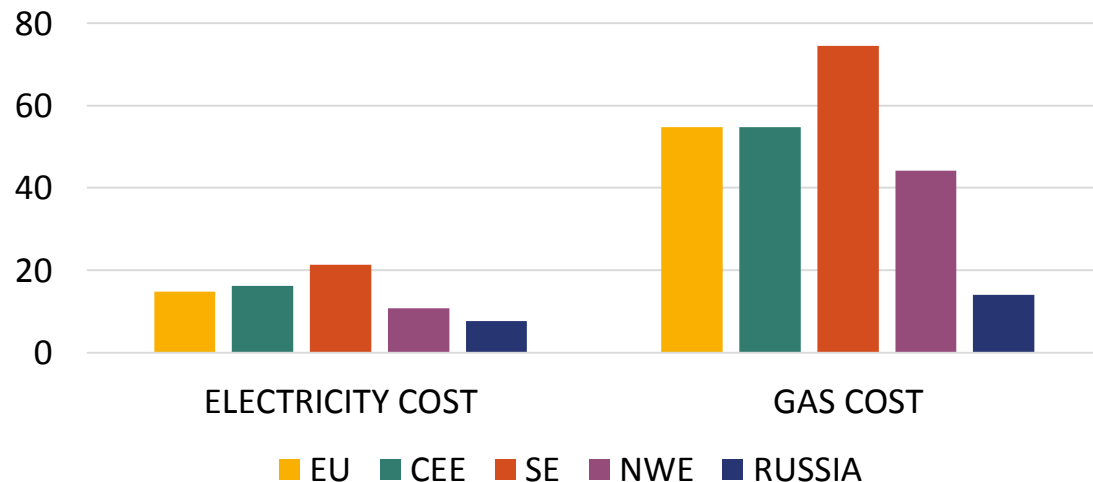
- Algeria
- Russia
- Switzerland
- Turkey
- Ukraine



Flat glass: International comparison (€/tonne)



Data for Russia are based on a total of **three observations**





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Thank you for your attention.



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