



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY

Recent Trends in Energy Prices

IN-DEPTH ANALYSIS

Abstract

After a dramatic fall in 2014, oil and fuel prices in euro terms increased in the first part of 2015, before decreasing again and since mid-2015 to record low levels, similar to early 2015. However, retail gas and electricity prices - which traditionally follow similar trends with some delay stabilized or in some cases even increased, in large part due to higher taxes. Large differences persist amongst EU Member States and commodities. Conversely, most experts claim that fossil fuel prices can be expected to stay "low for long." Notwithstanding important recent progress in developing renewable fuel sources, low fossil fuel prices could discourage innovation in and adoption of cleaner energy technologies.

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1. GENERAL TRENDS AND OBSERVATIONS

High level of uncertainty remains.

The recent fall in oil prices, continued geopolitical instability and the December 2015 Paris climate negotiations are witness to the dynamic nature of energy markets. In a time of high volatility and uncertainty, understanding the implications of the shifting energy landscape for economic and environmental goals and for energy security is of paramount importance. To facilitate this process, this publication presents updated energy pricing data for EU Member States, as well as some expert insights on the prospects for fossil fuels, renewables, and the power sector. While the fall in energy prices has been an economic boon for many energy importers - not the least the European Union - alleviating fiscal strains and allowing money to be freed up to stimulate other parts of the economy, it by no means has eliminated the uncertainty about growth prospects. In Europe, the legacy of the economic downturn continues to subdue demand. From an energy perspective, the economic structure of individual EU Member States - and contribution that different economic sectors make to total GDP can be as important as the overall rates of growth - as the extent to which they use energy as an input to generate economic output (or value added) varies significantly.

Price is a key driver of energy trends.

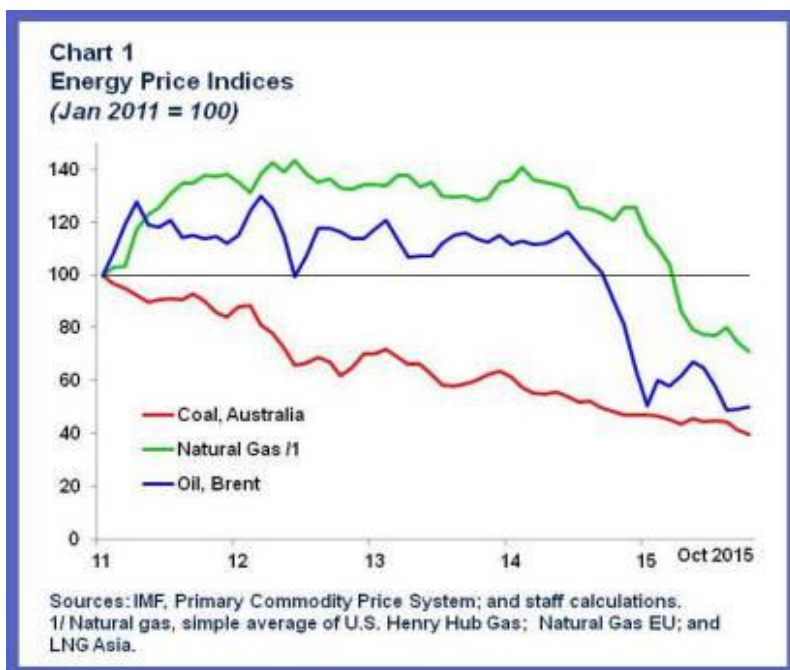
Prices paid by consumers affect the amount of each fuel they choose to consume and their choice of technology and equipment to provide an energy service. Conversely, the price that producers receive, which is not dealt with in this paper strongly influences their investment decisions and therefore the level of future production. Retail prices in end-uses take into account local market conditions, including taxes, excise duties, carbon prices and relevant subsidies. The price paths for fuels also reflects the differences in the policies introduced to address energy security, environmental and other issues, and their respective impacts on supply and demand.

Oil prices are expected to stay low for an extended period of time.

Recently, a global oil supply glut has been created, notably as shale oil production, made possible by hydraulic fracturing ("fracking") has added about 4.2 million barrels per day (about 5% of the total) to the crude oil market. Experts say that shale oil is leading to shorter and more limited oil-price cycles. This is explained by the fact that shale requires a lower level of sunk costs than conventional oil, while the lag between first investment and production is much shorter. Furthermore, shale is still at a relatively early stage of its industry life cycle, where the scope for learning is substantial, as shown by production levels that have proven resilient thanks to phenomenal efficiency gains forced by the big fall in oil prices. In addition, other factors are putting downward pressure on oil prices: change in the strategic behaviour of the Organization of Petroleum Exporting Countries (OPEC), the projected increase in Iranian exports, the scaling down of global demand (especially from emerging markets), the secular drop in petroleum consumption in the United States, and some displacement of oil by substitutes. These likely persistent forces, point to a "low for long" price scenario, even after the supply legacy left by the high-price era of the 2000s has dissipated. Futures markets, which show only a modest recovery of prices to around EUR 55 a barrel by 2019, support this view.

Coal and natural gas have similarly seen price declines that look to be long-lived.

Coal and natural gas are mainly inputs to electricity generation, whereas oil is used mostly to power transportation, yet the prices of all these energy sources are linked, including



through oil-indexed contract prices. The shale gas boom has resulted in record low prices. The recent discovery of the giant Zohr gas field off the Egyptian coast is expected to have repercussions on pricing in the Mediterranean region and Europe, and there is significant development potential in many other locales, notably Latin America. Coal prices also are low, owing to oversupply and the scaling down of demand, especially from China, which burns half of the world’s coal.

Renewables account for a small share of global primary energy consumption, which is still dominated by fossil fuels.

Table 1: Energy consumption (2014)

**Share of Primary Energy Consumption in 2014
(percentage points)**

	Oil	Natural Gas	Coal	Nuclear Energy	Renewables
World	33	24	30	4	9
United States	36	30	20	8	5
China	18	6	66	1	10
European Union	37	22	17	12	13

Sources: BP Statistical Review of World Energy, June 2015; and IMF staff calculations.

Technological innovations have unleashed the power of renewables such as wind, hydro, solar, and geothermal. Even Africa and the Middle East, home to economies that are heavily dependent on fossil fuel exports, have enormous potential to develop renewables. Progress in the development of renewables could be fragile, however, if fossil fuel prices

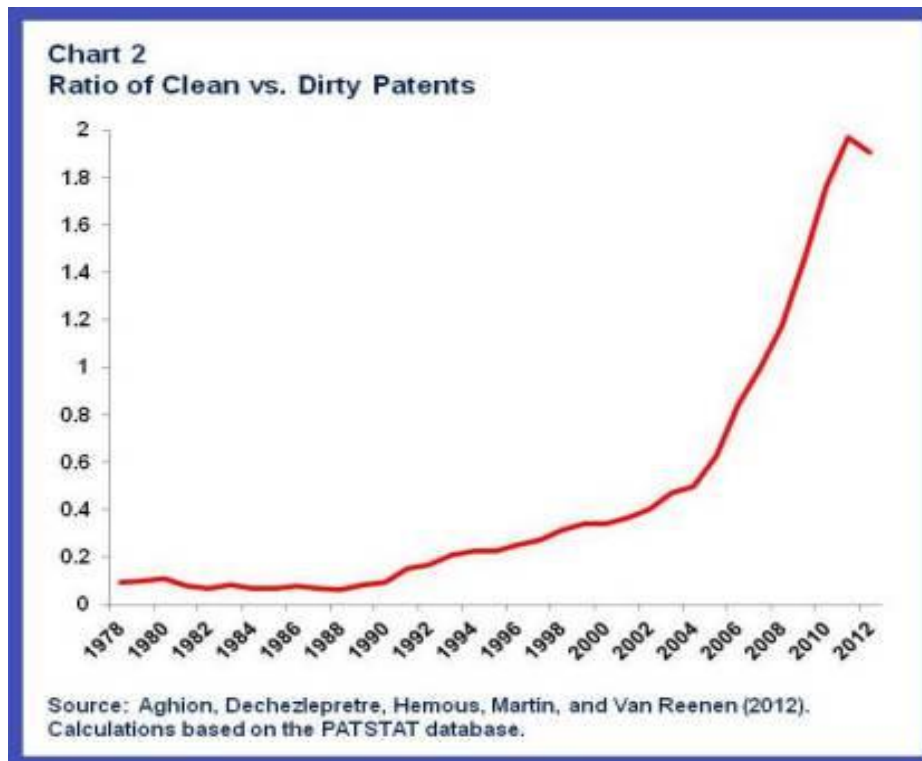
remain low for long. Renewables account for only a small share of global primary energy consumption, which is still dominated by fossil fuels: about 30% each for coal and oil, 24% for natural gas (see Table 1). But renewable energy will have to displace fossil fuels to a much greater extent in the future to reduce climate risks. Unfortunately, the current low

prices for oil, gas and coal may provide scant incentive for research to find even cheaper substitutes for those fuels. There is strong evidence that both innovation and adoption of cleaner technology are strongly encouraged by higher fossil fuel prices. The same is true for new technologies for mitigating fossil fuel emissions.

The current low fossil fuel prices delays the energy transition.

The current low fossil-fuel price environment will certainly delay the energy transition (see Chart 2). That transition from fossil fuel to clean energy sources is not the first one.

Earlier transitions were those from wood/biomass to coal in the eighteenth and nineteenth centuries, and from coal to petroleum in the nineteenth and twentieth centuries. One important lesson is that these transitions take a long time to complete.

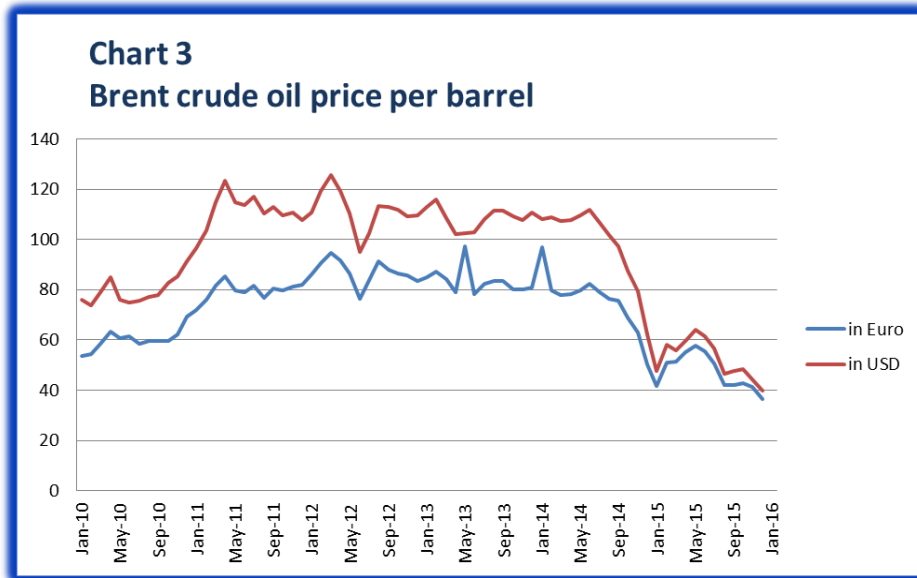


2. BRENT OIL PRICES

Back to the price level of early 2015.

Oil prices have dropped by over 50 % between early 2014 and the beginning of 2015 (see Chart 3). In early 2015, the volatility in the euro/dollar rate caused a rise in euro denominated crude oil. In the second half of the year, however, the oil Brent price in euro fell to the levels of the beginning of the year. A commonly held view in the oil industry is that “the best cure for low oil prices is low oil prices.” The reasoning behind this adage is that low oil prices discourage investment in new production capacity, eventually shifting the

oil supply curve backward and bringing prices back up as existing oil fields - which can be tapped at relatively low marginal cost - are depleted. However, due to new technologies, the dynamic adjustment to low oil prices may be different this time.



Source: ECB, authors' own calculations.

3. FUELS

3.1. Unleaded petrol

Prices fell in almost all EU Member States, with an increasing tax component.

In September 2015, the median unleaded petrol price, including taxes, amounted to 131 eurocent for the euro area and 125 eurocent for the EU 28. Part of the difference is due to the tax component, which is 1.2 percentage points higher in the euro area than in EU 28. The highest price was in the UK and the Netherlands at 152 eurocent per litre, whilst the lowest price was in Estonia at 108.4 eurocent per litre. Over the previous three years, trend prices have been gradually falling, in tandem with an increase in the tax component, in particular in the previous year and in all EU Member States, without one single exception.

Table 2: Premium unleaded petrol prices in the EU (September 2013, 2014 & 2015) eurocent per litre

European unleaded petrol prices at mid September												
Country	Price excl tax and duty				Pump price				Tax component (%)			
	2013	2014	2015	change p.a.	2013	2014	2015	change p.a.	2013	2014	2015	change p.a.
Austria	65,4	62,5	48,6	-29%	136,0	130,9	117,6	-11%	51,9	52,3	58,7	11%
Belgium	69,7	68,3	49,9	-37%	156,6	152,7	135,1	-13%	55,5	55,3	63,0	12%
Finland	69,9	64,5	52,5	-23%	162,0	153,0	146,2	-5%	56,8	57,9	64,1	10%
France	65,8	60,1	46,3	-30%	150,0	141,7	131,4	-8%	56,1	57,6	64,8	11%
Germany	67,8	62,9	49,5	-27%	156,4	148,4	137,0	-8%	56,7	57,6	63,9	10%
Greece	70,4	63,7	49,6	-28%	168,5	157,7	144,9	-9%	58,2	59,6	65,8	9%
Ireland	64,9	63,4	50,7	-25%	152,5	148,6	137,3	-8%	57,5	57,3	63,1	9%
Italy	71,9	65,3	50,5	-29%	172,8	163,9	150,7	-9%	58,4	60,2	66,5	10%
Luxembourg	67,7	66,0	51,4	-28%	129,5	126,1	114,4	-10%	47,7	47,6	55,0	13%
Netherlands	68,2	63,0	48,3	-30%	171,3	163,9	152,3	-8%	60,2	61,6	68,3	10%
Portugal	69,0	63,7	52,7	-21%	154,9	146,4	141,0	-4%	55,5	56,5	62,6	10%
Spain	71,7	66,6	52,7	-26%	141,4	133,7	119,8	-12%	49,3	50,2	56,0	10%
Cyprus	73,9	66,5	52,9	-26%	137,7	134,2	121,4	-11%	46,3	50,4	56,4	11%
Estonia	65,6	60,8	47,7	-28%	128,0	120,9	108,1	-12%	48,8	49,7	55,9	11%
Latvia	68,1	60,6	49,3	-23%	133,5	121,7	110,6	-10%	49,0	50,2	55,4	9%
Lithuania	72,3	63,4	51,6	-23%	138,7	126,3	115,1	-10%	47,8	49,8	55,2	10%
Malta	75,2	67,1	62,6	-7%	145,0	136,0	135,4	0%	48,1	50,6	53,7	6%
Slovakia	68,5	61,5	48,2	-28%	148,7	138,5	126,5	-9%	54,0	55,6	61,9	10%
Slovenia	67,7	59,8	45,1	-33%	148,2	136,1	123,5	-10%	54,3	56,1	63,5	12%
Euro Area Median	68,5	63,4	49,9	-27%	148,7	138,5	131,4	-5%	54,3	55,6	62,6	11%
Denmark	73,0	68,9	56,8	-21%	163,2	157,3	147,7	-6%	55,2	56,2	61,6	9%
Sweden	66,8	61,6	51,3	-20%	162,2	149,0	139,8	-7%	58,8	58,7	63,3	7%
UK	65,4	58,4	47,8	-22%	159,2	152,7	152,5	0%	58,9	61,8	68,6	10%
Bulgaria	72,6	68,3	55,4	-23%	129,5	123,1	110,1	-12%	43,9	44,5	49,7	10%
Croatia	67,4	61,3	48,0	-28%	138,1	133,4	124,1	-7%	51,2	54,0	61,3	12%
Czech Republic	67,0	60,4	49,2	-23%	139,7	126,3	117,0	-8%	52,0	52,2	57,9	10%
Hungary	68,9	62,8	49,4	-27%	138,5	126,8	112,1	-13%	50,3	50,5	56,0	10%
Poland	68,6	59,5	49,4	-20%	132,0	119,3	109,7	-9%	48,0	50,2	54,9	9%
Romania	64,7	62,6	48,3	-30%	124,2	131,6	117,2	-12%	47,9	52,4	58,8	11%
EU 28 Median	68,3	62,9	49,5	-27%	146,6	136,0	125,3	-9%	53,0	54,7	61,4	11%

Source: Eurostat, authors' own calculations.

3.2. Diesel

Prices fell across the board at double the rate of unleaded petrol prices, tax component increasing too.

The Median EU Member State's average Diesel price including taxes in September 2015 amounted to 113 eurocent per litre. The lowest price was in Luxembourg at 100 cents per litre. The highest price was in the UK at 150 eurocent per litre, which is primarily due to a tax component (69%), much higher than the 54% average EU 28 and Euro Area tax component. Median euro area and median EU prices of Diesel fell at about double the rate of unleaded petrol prices in the year to September 2015.

Table 3: Diesel prices in the EU (September 2013, 2014 & 2015) eurocent per litre

European unleaded diesel prices at mid September												
Country	Price excl tax and duty				Pump price				Tax component (%)			
	2013	2014	2015	change p.a.	2013	2014	2015	change p.a.	2013	2014	2015	change p.a.
Austria	72,0	64,9	49,4	-31%	134,2	124,3	108,5	-15%	46,4	47,8	54,52	12%
Belgium	74,2	69,0	51,3	-35%	140,1	132,4	114,1	-16%	47,0	47,9	55,06	13%
Finland	74,0	67,3	51,4	-31%	147,6	137,6	125,8	-9%	49,9	51,1	59,11	14%
France	69,2	60,6	45,0	-35%	133,9	122,7	111,8	-10%	48,3	50,6	59,78	15%
Germany	73,3	64,6	49,3	-31%	141,7	129,8	114,8	-13%	48,3	50,2	57,04	12%
Greece	78,5	71,9	58,6	-23%	137,7	128,3	114,0	-12%	43,0	43,9	48,58	10%
Ireland	68,1	66,4	50,2	-32%	143,5	139,7	123,2	-13%	52,5	52,4	59,30	12%
Italy	75,1	66,5	50,7	-31%	163,6	152,6	137,4	-11%	54,1	56,4	63,11	11%
Luxembourg	72,6	65,8	51,8	-27%	121,0	112,1	100,0	-12%	40,0	41,3	48,14	14%
Netherlands	72,5	64,6	50,4	-28%	140,5	133,7	120,4	-11%	48,4	51,7	58,16	11%
Portugal	75,4	65,9	54,7	-20%	136,7	123,9	116,8	-6%	44,9	46,9	53,21	12%
Spain	76,4	68,5	53,1	-29%	135,9	125,3	108,9	-15%	43,8	45,3	51,22	12%
Cyprus	77,5	70,0	53,5	-31%	138,6	135,1	118,7	-14%	44,1	48,2	54,90	12%
Estonia	69,0	62,1	46,3	-34%	128,7	119,0	102,8	-16%	46,4	47,9	55,00	13%
Latvia	72,5	65,5	48,8	-34%	129,0	118,8	100,6	-18%	43,8	44,9	51,49	13%
Lithuania	77,7	68,5	52,1	-31%	132,9	120,6	103,1	-17%	41,5	43,2	49,48	13%
Malta	74,6	69,0	62,7	-10%	134,2	128,4	126,4	-2%	44,4	46,3	50,36	8%
Slovakia	74,4	67,3	49,0	-37%	136,7	126,7	107,7	-18%	45,6	46,9	54,48	14%
Slovenia	69,4	61,9	44,4	-39%	136,8	128,0	112,4	-14%	49,2	51,6	60,52	15%
Euro Area Median	74,0	66,4	50,7	-31%	136,7	128,0	114,0	-12%	46,4	47,9	54,90	13%
Denmark	74,4	67,3	49,0	-37%	136,7	126,7	107,7	-18%	45,6	46,9	54,48	14%
Sweden	76,2	66,2	56,5	-17%	163,1	144,8	135,7	-7%	53,3	54,2	58,36	7%
UK	70,4	62,9	45,9	-37%	165,1	158,1	150,2	-5%	57,4	60,2	69,44	13%
Bulgaria	78,1	73,5	58,7	-25%	132,2	125,6	110,1	-14%	40,9	41,5	46,69	11%
Croatia	69,8	65,8	52,1	-26%	128,2	126,6	115,9	-9%	45,6	48,0	55,08	13%
Czech Republic	73,5	66,5	52,0	-28%	138,9	125,8	112,0	-12%	47,1	47,2	53,53	12%
Hungary	76,9	66,6	53,3	-25%	144,6	127,8	113,1	-13%	46,8	47,9	52,88	9%
Poland	73,0	61,9	49,1	-26%	131,3	116,5	103,1	-13%	44,4	46,9	52,40	11%
Romania	73,7	67,0	51,2	-31%	131,8	133,5	116,9	-14%	44,1	49,8	56,21	11%
EU 28 Median	73,8	66,5	51,2	-30%	136,7	127,3	113,6	-12%	46,0	47,9	54,71	13%

Source: Eurostat, last available data, authors' own calculations.

4. GAS

Fall in gas prices mitigated by large tax increases.

In the year to the first half of 2015, the median gas price for euro-area medium-size consumers, amounted to 4.99 eurocent per kWh for the euro area without taxes and 6.78 eurocent including taxes. Net-of-tax gas prices fell markedly since the end of 2013 in most EU Member States, but tax increases 'masked' a large part of the decrease. The highest price (taxes included) was in Sweden and Portugal at respectively 11.3 and 9.8 eurocent per kWh, whilst the lowest price was in Romania at 3.1 eurocent per kWh. A large part of the price gap is due to the impact of exchange rate developments (e.g. UK) and significant differences in the tax component of the consumer price. In most EU Member States, consumers pay a lower per unit price when they use higher volumes.

Table 4: Domestic gas prices in the EU for medium consumers eurocent per kWh (excluding taxes)

Country	Periods								change p.a.
	2011 H2	2012 H1	2012 H2	2013 H1	2013 H2	2014 H1	2014 H2	2015 H1	
Austria	5,34	5,61	5,67	5,70	5,60	5,54	5,40	5,38	-2,9%
Belgium	5,86	5,47	5,85	5,23	5,23	5,13	5,01	4,78	-6,8%
Finland	..	..	..	..	..	..	..	..	..
France	5,38	5,29	5,68	5,65	6,06	5,81	6,26	5,60	-3,6%
Germany	4,78	4,76	4,86	4,96	5,19	5,10	5,13	5,08	-0,5%
Greece	..	..	8,43	6,26	7,28	5,83	6,47	5,44	-6,6%
Ireland	5,17	5,13	5,61	5,45	5,99	5,62	6,19	5,55	-1,3%
Italy	5,62	5,11	6,45	5,64	6,21	5,32	6,26	5,04	-5,3%
Luxembourg	5,24	5,17	5,37	5,64	5,08	4,78	4,57	4,35	-9,1%
Netherlands	4,86	4,65	5,30	4,78	5,06	4,61	4,79	4,29	-7,0%
Portugal	6,43	5,88	6,87	6,57	7,23	7,13	8,02	7,53	5,6%
Spain	4,58	5,60	7,22	5,82	7,14	5,98	7,69	5,81	-2,9%
Cyprus	..	..	..	..	..	..	..	..	..
Estonia	3,42	3,93	4,08	4,12	3,74	3,86	3,92	3,58	-7,4%
Latvia	3,57	4,03	4,46	4,01	3,99	3,83	3,87	3,92	2,2%
Lithuania	4,46	4,21	5,05	4,98	5,07	4,62	4,12	3,50	-24,4%
Malta	..	..	..	..	..	..	..	..	..
Slovakia	4,27	4,29	4,29	4,15	4,32	4,23	4,32	4,14	-2,2%
Slovenia	6,16	6,20	5,64	5,09	5,33	4,98	4,66	4,94	-0,8%
Euro Area Median	5,17	5,13	5,62	5,34	5,28	5,12	5,07	4,99	-2,5%
Denmark	5,38	5,43	5,19	4,41	4,28	3,67	3,42	3,56	-2,8%
Sweden	6,49	6,40	6,70	6,71	6,77	6,52	6,26	6,12	-6,1%
UK	4,98	4,97	5,50	5,05	5,60	5,71	6,15	6,04	5,7%
Bulgaria	3,93	4,12	4,63	4,27	4,32	4,09	3,94	3,97	-2,8%
Croatia	3,02	3,09	3,78	3,72	3,74	3,71	3,80	3,78	1,9%
Czech Republic	4,96	5,49	5,51	5,30	4,75	4,53	4,65	4,74	4,6%
Hungary	4,56	3,72	3,98	3,40	3,31	2,88	2,76	2,77	-3,6%
Poland	4,07	3,81	4,68	3,82	4,14	3,98	4,07	4,07	2,4%
Romania	1,44	1,42	1,46	1,52	1,61	1,60	1,53	1,50	-6,0%
EU 28 Median	4,91	5,04	5,37	5,05	5,08	4,78	4,66	4,74	-0,9%

Source: Eurostat, authors' own calculations.

Table 5: Domestic gas prices in the EU for medium consumers eurocent per kWh (including taxes)

Country	Periods								change p.a.
	2011 H2	2012 H1	2012 H2	2013 H1	2013 H2	2014 H1	2014 H2	2015 H1	
Austria	7,21	7,57	7,63	7,67	7,54	7,48	7,30	7,29	-2,5%
Belgium	7,31	6,88	7,34	6,59	6,68	6,58	6,50	5,84	-11,1%
Finland	..	..	..	..	..	..	..	..	..
France	6,46	6,34	6,82	6,78	7,29	7,01	7,62	7,01	0,0%
Germany	6,40	6,37	6,48	6,61	6,89	6,78	6,81	6,76	-0,3%
Greece	..	..	10,17	7,72	8,88	7,23	7,98	6,81	-5,8%
Ireland	6,18	6,14	6,72	6,53	7,22	6,81	7,45	6,73	-1,2%
Italy	8,75	7,69	9,68	8,34	9,46	7,97	9,51	7,65	-3,9%
Luxembourg	5,79	5,78	5,94	6,24	5,65	5,32	5,14	4,96	-6,8%
Netherlands	7,41	7,56	8,45	8,12	8,46	7,98	8,20	7,64	-4,3%
Portugal	7,38	7,38	8,53	8,36	9,33	9,34	10,39	9,76	4,4%
Spain	5,40	6,61	8,63	7,32	8,92	7,52	9,59	7,31	-2,8%
Cyprus	..	..	..	..	..	..	..	..	..
Estonia	4,37	4,99	5,18	5,24	4,75	4,91	4,93	4,56	-7,1%
Latvia	4,57	5,12	5,60	5,06	5,04	4,84	4,88	4,96	2,4%
Lithuania	5,39	5,10	6,11	6,03	6,14	5,59	4,99	4,23	-24,3%
Malta	..	..	..	..	..	..	..	..	..
Slovakia	5,11	5,15	5,14	4,99	5,18	5,07	5,19	4,96	-2,3%
Slovenia	7,92	7,97	7,30	6,68	7,09	6,67	6,34	6,81	2,1%
Euro Area Median	6,40	6,37	7,06	6,65	7,16	6,80	7,06	6,78	-0,2%
Denmark	10,85	11,08	10,83	9,93	9,77	9,08	8,78	8,02	-11,7%
Sweden	11,65	11,73	12,68	12,27	12,24	11,84	11,38	11,31	-4,5%
UK	5,23	5,22	5,78	5,31	5,88	6,00	6,46	6,34	5,7%
Bulgaria	4,72	4,94	5,56	5,13	5,18	4,90	4,73	4,77	-2,8%
Croatia	3,72	3,83	4,72	4,65	4,68	4,64	4,75	4,72	1,8%
Czech Republic	5,95	6,59	6,61	6,41	5,75	5,48	5,63	5,74	4,6%
Hungary	5,70	4,83	5,17	4,32	4,20	3,65	3,50	3,52	-3,5%
Poland	5,00	4,68	5,76	4,70	5,09	4,89	5,00	5,00	2,2%
Romania	2,76	2,70	2,74	2,85	3,07	3,09	3,19	3,11	0,8%
EU 28 Median	5,87	6,24	6,61	6,53	6,68	6,58	6,46	6,34	-3,6%

Source: Eurostat, authors' own calculations.

5. ELECTRICITY

Electricity price developments vary across EU Member States with significant tax increases in most countries.

In the first half of 2015, the median electricity price for medium-size consumers, including taxes, amounted to 17.6 eurocent per kWh for the euro area and 17.1 eurocent for the EU 28. The highest price was in Denmark at respectively 30.7 cents/kWh, whilst the lowest price was in Bulgaria at 9.4 eurocent per kWh. Electricity prices (without taxes) fell in most EU Member States in the year to mid-2015. However, tax hikes mitigated this fall in so far that prices including taxes slightly rose in almost all EU Member States. A large part of the price gap amongst Member States is due significant differences in the tax component of the consumer price. Here as well, consumers pay often a lower per unit price when they use higher volumes.

Table 6: Domestic electricity prices in the EU for medium consumers eurocent per kWh (excluding taxes)

Country	Periods								change p.a.
	2011 H2	2012 H1	2012 H2	2013 H1	2013 H2	2014 H1	2014 H2	2015 H1	
Austria	14,44	14,32	14,12	14,13	13,61	13,21	12,94	12,60	-4,6%
Belgium	15,95	15,89	16,84	15,83	16,41	16,73	16,78	18,20	8,8%
Finland	11,08	10,89	10,97	11,02	10,87	10,70	10,50	10,26	-4,1%
France	10,17	9,86	10,26	10,07	10,99	10,64	12,06	10,95	2,9%
Germany	13,95	14,40	14,32	14,93	14,89	14,35	14,40	14,31	-0,3%
Greece	10,03	10,65	10,72	11,70	11,93	12,04	12,16	12,11	0,6%
Ireland	17,55	18,49	19,54	19,51	20,26	20,08	20,85	19,69	-1,9%
Italy	14,12	14,44	15,25	14,98	15,01	15,39	14,68	15,06	-2,2%
Luxembourg	14,36	14,67	14,77	14,47	14,29	14,31	14,31	13,31	-7,0%
Netherlands	13,43	13,16	13,77	13,22	13,74	13,06	12,69	12,61	-3,5%
Portugal	10,68	11,05	11,74	12,10	12,43	12,68	13,01	11,50	-9,3%
Spain	16,84	17,65	17,89	17,52	17,87	17,02	18,61	18,14	6,6%
Cyprus	20,35	23,37	24,14	22,77	20,28	18,61	19,15	15,73	-15,5%
Estonia	7,63	7,71	7,94	9,94	10,07	9,67	9,82	9,50	-1,7%
Latvia	11,00	11,43	9,55	9,64	8,53	8,60	8,54	10,83	25,9%
Lithuania	10,09	10,42	10,48	11,32	8,78	8,93	8,83	8,74	-2,1%
Malta	16,15	16,14	16,15	16,15	16,09	14,04	11,87	11,92	-15,1%
Slovakia	13,95	13,99	14,04	13,84	13,66	12,24	12,37	12,22	-0,1%
Slovenia	11,49	11,93	11,92	11,77	11,76	11,52	11,51	11,22	-2,5%
Euro Area Median	13,95	13,99	14,04	13,84	13,66	13,06	12,69	12,22	-6,4%
Denmark	13,15	13,13	12,96	13,00	12,49	13,17	13,10	12,77	-3,0%
Sweden	13,40	13,11	13,45	13,59	13,21	12,64	11,94	11,83	-6,4%
UK	15,09	16,02	17,01	16,58	17,12	18,26	19,17	20,18	10,5%
Bulgaria	7,27	7,06	7,96	7,71	7,35	6,89	7,46	7,85	14,0%
Croatia	9,25	9,65	11,00	10,91	10,60	10,04	10,13	10,08	0,4%
Czech Republic	12,08	12,34	12,38	12,49	12,23	10,49	10,43	10,39	-0,9%
Hungary	11,92	11,81	12,33	10,61	10,19	9,46	9,02	8,86	-6,3%
Poland	10,52	11,06	11,95	11,55	11,21	11,07	10,97	11,25	1,7%
Romania	8,23	7,95	7,48	8,90	8,96	9,10	9,06	9,27	1,9%
EU 28 Median	12,61	12,73	12,67	12,75	12,46	12,44	12,11	11,87	-4,5%

Source: Eurostat, authors' own calculations.

Table 7: Domestic electricity prices in the EU for medium consumers eurocent per kWh (including taxes)

Country	Periods								change p.a.
	2011 H2	2012 H1	2012 H2	2013 H1	2013 H2	2014 H1	2014 H2	2015 H1	
Austria	19,65	19,74	20,24	20,82	20,18	20,21	19,87	20,09	-0,6%
Belgium	21,19	23,26	22,23	21,73	22,15	20,97	20,43	21,26	1,4%
Finland	15,73	15,48	15,59	15,78	15,59	15,63	15,38	15,51	-0,7%
France	14,22	13,91	14,50	14,72	15,89	15,85	17,51	16,63	5,0%
Germany	25,31	25,94	26,76	29,19	29,21	29,81	29,74	29,50	-1,0%
Greece	12,38	13,90	14,18	15,63	16,97	17,67	17,85	17,66	0,0%
Ireland	20,86	21,54	22,89	22,95	24,05	24,07	25,36	24,25	0,8%
Italy	20,65	21,31	22,97	22,92	23,23	24,46	23,38	24,50	0,2%
Luxembourg	16,62	16,95	17,06	16,65	16,46	17,38	17,38	17,66	1,7%
Netherlands	18,38	18,57	18,95	19,16	19,15	18,21	17,32	19,56	7,4%
Portugal	18,81	19,92	20,63	20,81	21,31	21,75	22,31	22,78	4,8%
Spain	20,88	21,89	22,75	22,28	22,73	21,65	23,67	23,08	6,6%
Cyprus	24,13	27,80	29,09	27,60	24,81	22,91	23,56	19,57	-14,6%
Estonia	10,42	10,96	11,23	13,51	13,67	13,07	13,25	13,01	-0,4%
Latvia	13,42	13,81	13,69	13,78	13,58	13,65	13,01	16,35	19,8%
Lithuania	12,21	12,59	12,68	13,70	13,91	13,30	13,19	12,55	-5,6%
Malta	17,00	16,99	17,00	17,00	16,89	14,74	12,47	12,52	-15,0%
Slovakia	17,10	17,15	17,22	16,98	16,78	15,07	15,23	15,05	-0,1%
Slovenia	14,92	15,41	15,42	16,10	16,57	16,30	16,32	15,88	-2,6%
Euro Area Median	17,10	17,15	17,22	17,00	16,97	17,67	17,51	17,66	0,0%
Denmark	29,75	29,96	29,72	30,00	29,36	30,42	30,35	30,67	0,8%
Sweden	20,44	20,26	20,83	21,01	20,46	19,67	18,67	18,50	-5,9%
UK	15,84	16,81	17,85	17,41	17,97	19,18	20,13	21,19	10,5%
Bulgaria	8,74	8,46	9,55	9,24	8,82	8,32	8,95	9,42	13,3%
Croatia	11,46	12,07	13,84	13,72	13,50	13,12	13,24	13,16	0,4%
Czech Republic	14,66	14,96	15,01	15,25	14,93	12,83	12,74	12,73	-0,8%
Hungary	15,53	15,48	16,18	13,97	13,26	12,02	11,46	11,27	-6,3%
Poland	13,51	14,17	15,29	14,80	14,37	14,21	14,08	14,43	1,6%
Romania	10,85	10,50	10,75	13,23	12,79	12,90	12,48	13,03	1,0%
EU 28 Median	16,23	16,88	17,03	16,82	16,83	16,84	17,35	17,15	1,8%

Source: Eurostat, authors' own calculations.

6. RENEWABLES

Steady increase, and with large differences amongst EU Member States.

Over the last ten years the consumption of renewable energy steadily increased in all Member States and hence in the EU as a whole. The reason lies mainly in the launch of variety of EU-wide and national initiatives to combat climate change and comply with energy objectives. For instance, renewable support schemes put in place encourage investments in solar photovoltaic and onshore wind. Some Member States traditionally make considerable use of renewable energy, with approximately one third of their energy consumption coming from renewable sources (Finland 29%, Latvia 32%, Sweden 40% in 2004), while others used renewables significantly less (Malta, Luxembourg, UK, Netherlands, Belgium, consuming less than 2% in 2004). These figures have increased in all Member States over the years. The most recent data show that Sweden is outperforming all Member States, with renewable energy consumption accounting for more than half of the gross energy consumption. It is followed by Finland, Latvia and Austria that hold levels at above 30%. Member States that typically rely less on renewables have multiplied usage over the period of observation (2004-2014) by up to four times in certain cases.

Table 8: Share of renewable energy in gross final energy consumption in percentage (2004-2014)

Country	Periods					
	2005	2010	2011	2012	2013	2014
Austria	23,9	30,8	30,9	32,1	32,6	34,6
Belgium	2,3	5,7	6,1	7,4	7,9	8,5
Finland	28,8	32,5	32,9	34,5	36,8	36,1
France	9,6	12,8	11,2	13,6	14,2	14,4
Germany	6,7	10,4	11,4	12,1	12,4	13,4
Greece	7,0	9,8	10,9	13,4	15,0	14,2
Ireland	2,9	5,6	6,6	7,3	7,8	8,3
Italy	5,8	10,5	12,1	15,4	16,7	16,5
Luxembourg	1,4	2,9	2,9	3,1	3,6	3,9
Netherlands	2,3	3,7	4,3	4,5	4,5	5,1
Portugal	19,5	24,2	24,7	25,0	25,7	27,0
Spain	8,4	13,8	13,2	14,3	15,4	16,3
Cyprus	3,1	6,0	6,0	6,8	8,1	8,1
Estonia	17,5	24,6	25,5	25,8	25,6	27,8
Latvia	32,3	30,4	33,5	35,8	37,1	35,4
Lithuania	17,0	19,8	20,2	21,7	23,0	22,8
Malta	0,2	1,0	1,4	2,7	3,8	3,0
Slovakia	5,9	9,0	10,3	10,4	9,8	11,3
Slovenia	16,0	19,3	19,4	20,2	21,5	21,5
Euro Area Median	7,0	10,5	11,4	13,6	15,0	14,4
Denmark	15,6	22,0	23,4	25,6	27,2	27,9
Sweden	40,5	47,2	48,9	51,1	52,1	53,8
UK	1,4	3,3	3,8	4,2	5,1	5,1
Bulgaria	9,4	14,1	14,3	16,0	19,0	18,1
Croatia	12,8	14,3	15,4	16,8	18,0	17,1
Czech Republic	6,0	9,5	9,5	11,4	12,4	12,4
Hungary	4,5	8,6	9,1	9,5	9,8	10,9
Poland	6,9	9,2	10,3	10,9	11,3	11,7
Romania	17,6	23,4	21,4	22,8	23,9	25,1
EU 28 Median	7,7	11,7	11,8	14,0	15,2	15,3

Source: Eurostat, authors' own calculations.

REFERENCES

- IEA (International Energy Agency), Various publications 2015.
- IMF (International Monetary Fund) (2015).

NOTES

