

Greek Energy Newsletter

December 2012

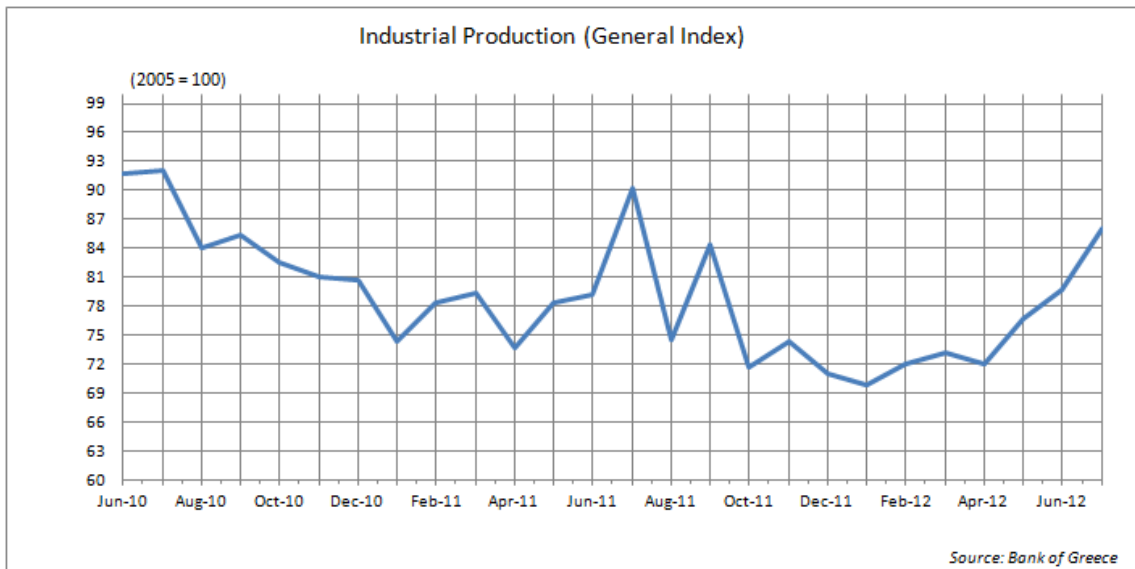
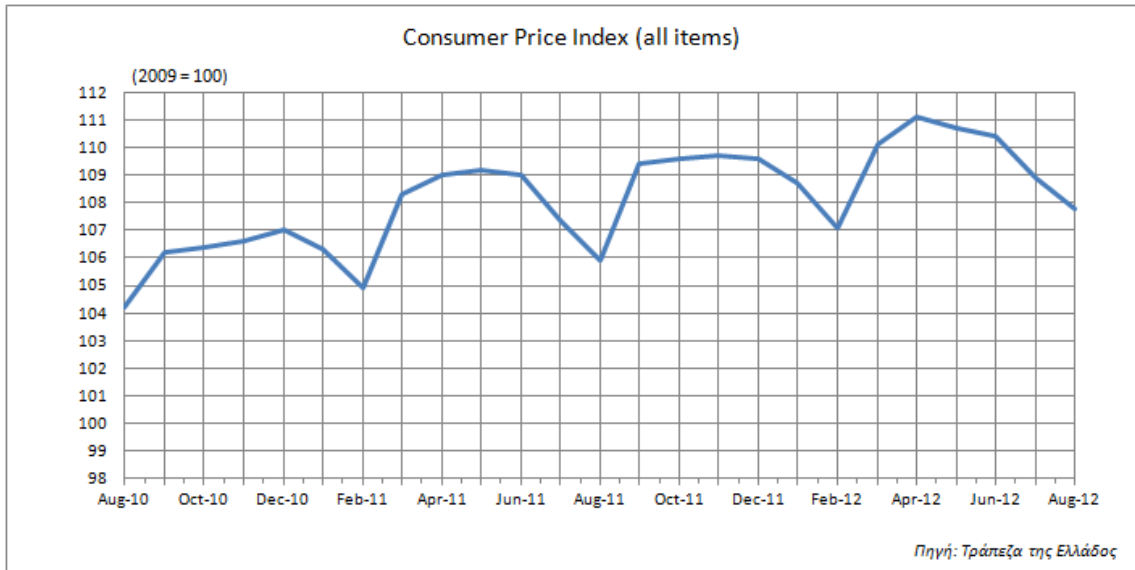
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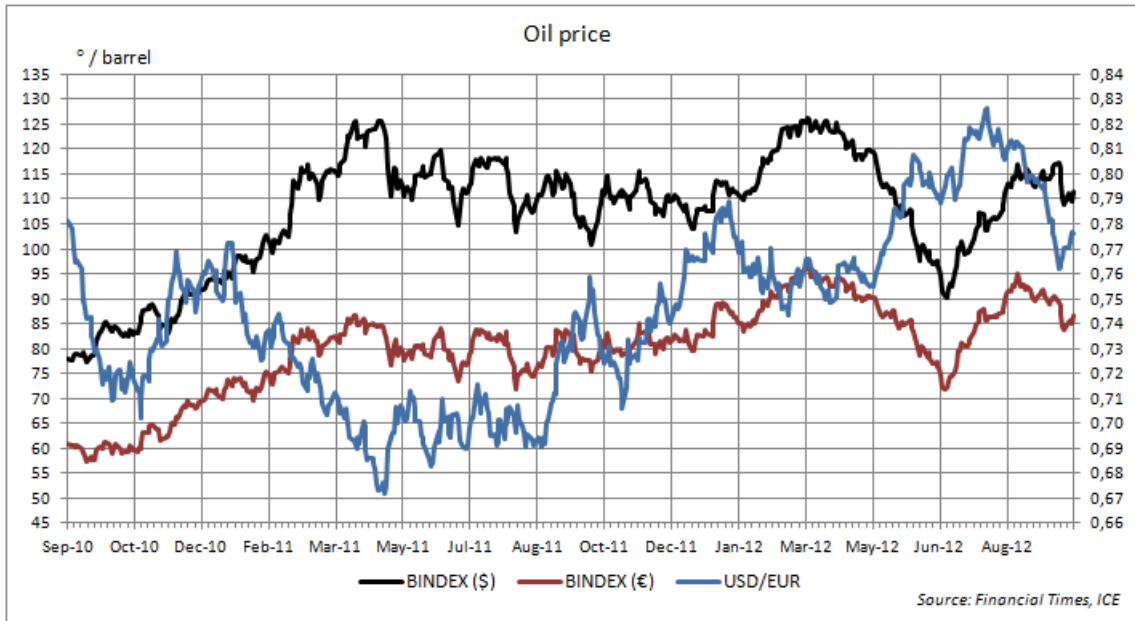
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Greek Economy

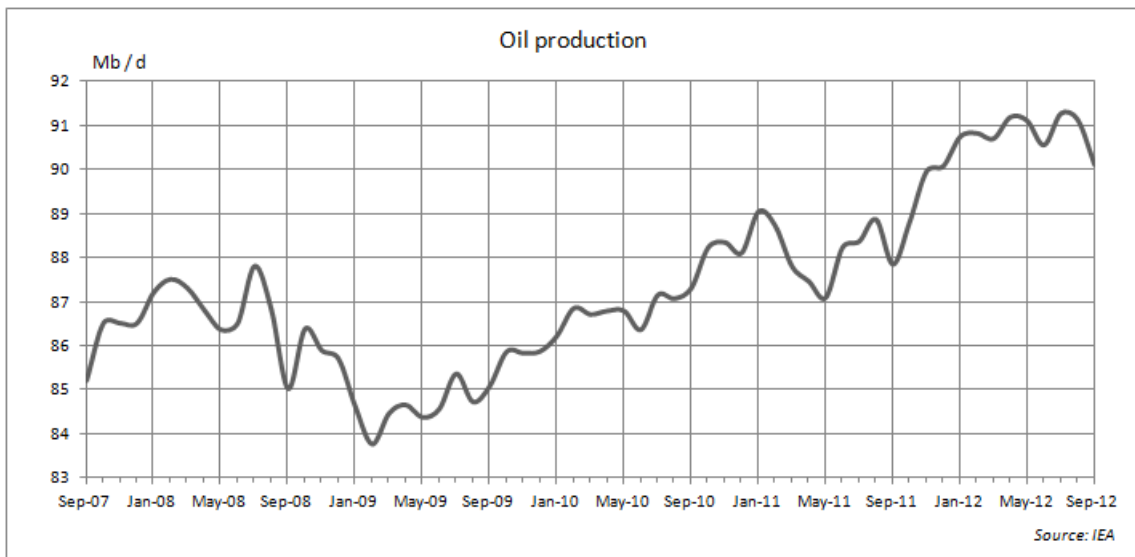


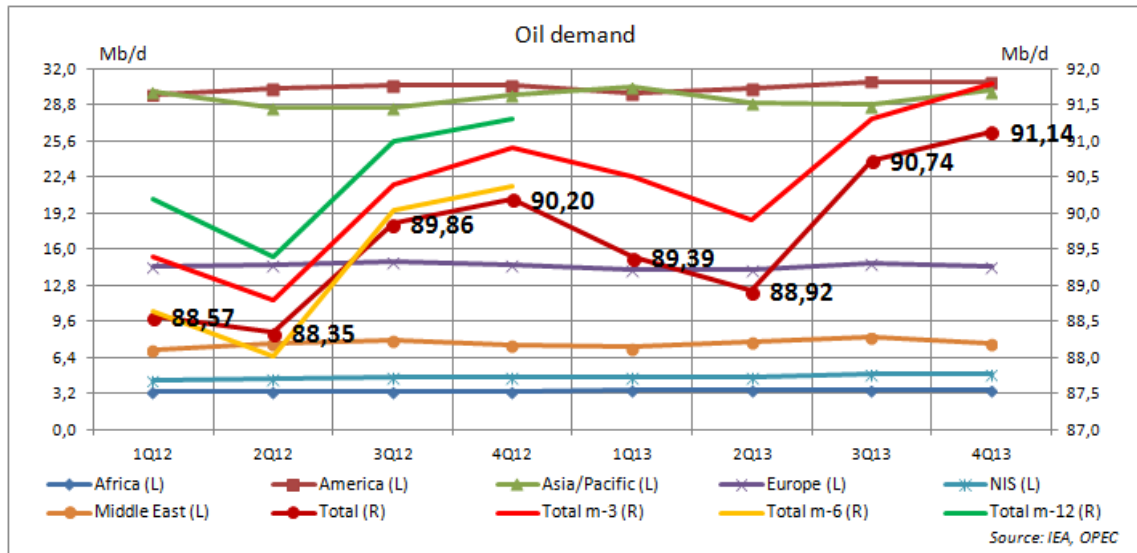
Oil

In Autumn 2012, price of crude oil remained in the area above 110 \$/b.

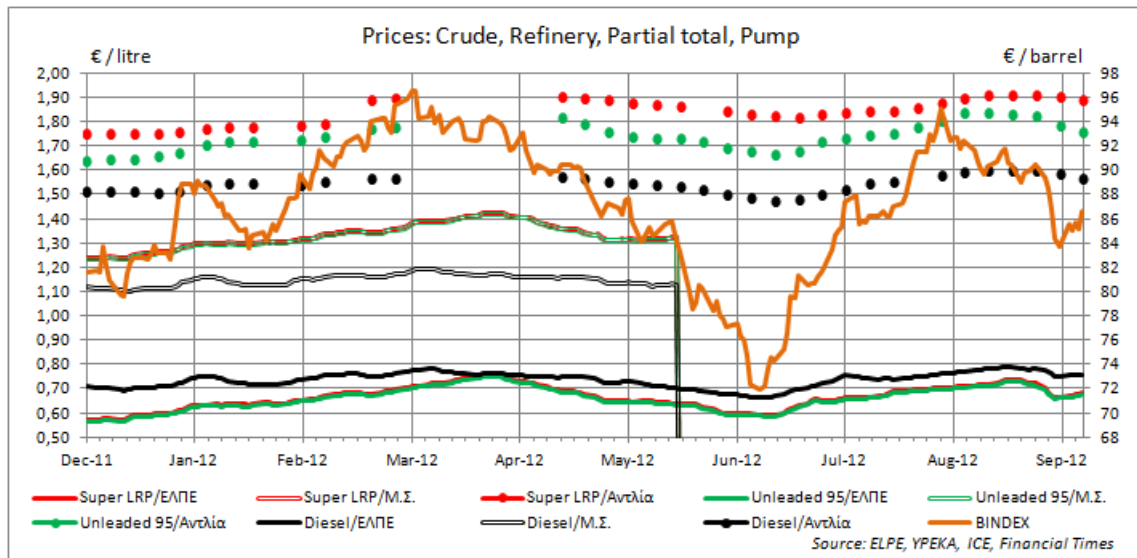


In the same time, crude oil production remained over 90 Mb/d. Estimations for crude oil demand, in 2013, assess that the 91 Mb/d mark will also be surpassed in Q4. To allow for comparisons, estimations on oil demand made 3, 6 and 12 months ago, are included in the demand diagram.





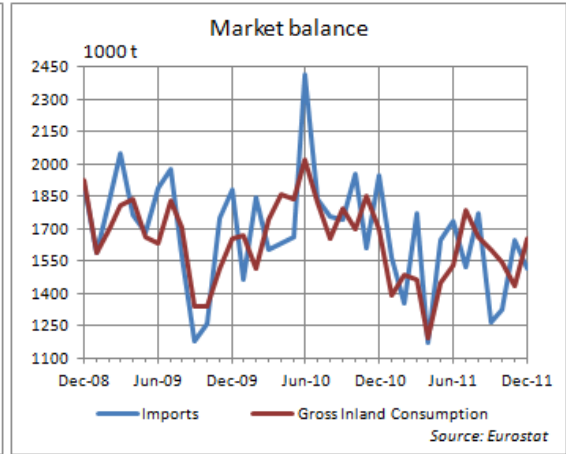
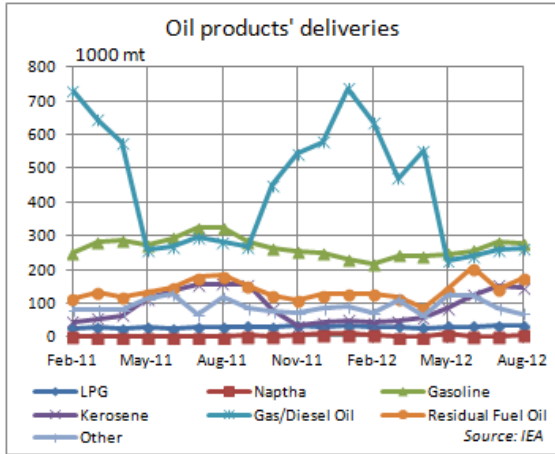
Price of gasoline in Greece was in the area of 1,70 - 1,80 €/lt (pump price), while the following diagram clearly depicts the effect of taxes and VAT in the final price of oil products.



It is reminded that ELPE prices (bold lines in the bottom of the diagram) include the value of the product, special services (loading charges), VAT of the special charges and a third party tax for the gas retailers pension fund. Indicative prices (partial total prices – double lines in the middle of the diagram) also include the special levy provided by the Law 3335/05, the RAE fee, the special tax on consumption and the customs operations' fees. Pump prices (dots in the top of the diagram) also include the marketing and retail sale profit as well as the VAT of the product.

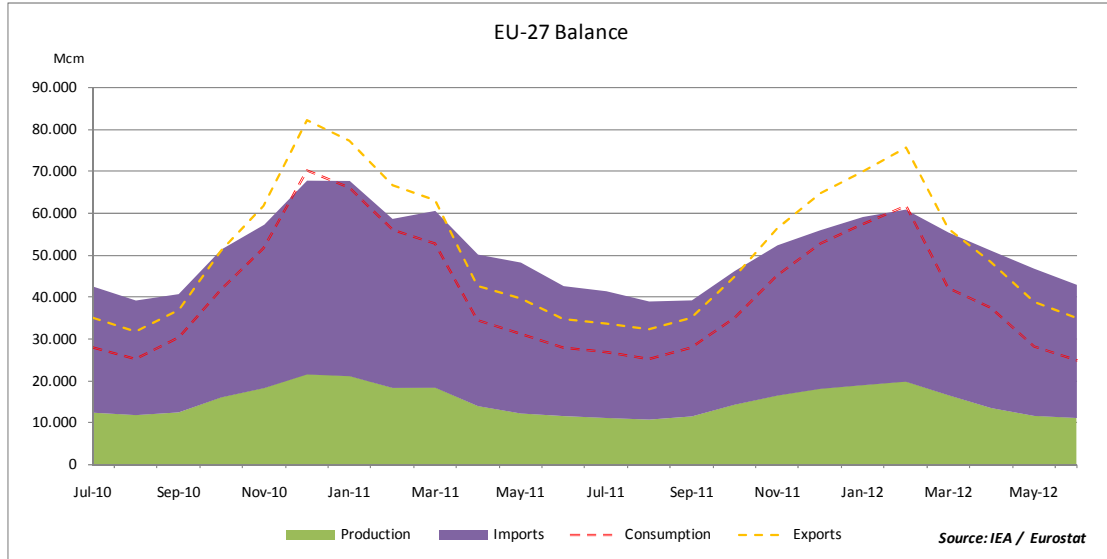
The following diagrams depict:

1. For unleaded gasoline, average price (national average) as well as minimum and maximum prices (prefectural averages), according to YPEKA
2. Total monthly deliveries of oil products in the Greek market
3. The total Greek monthly balance of oil

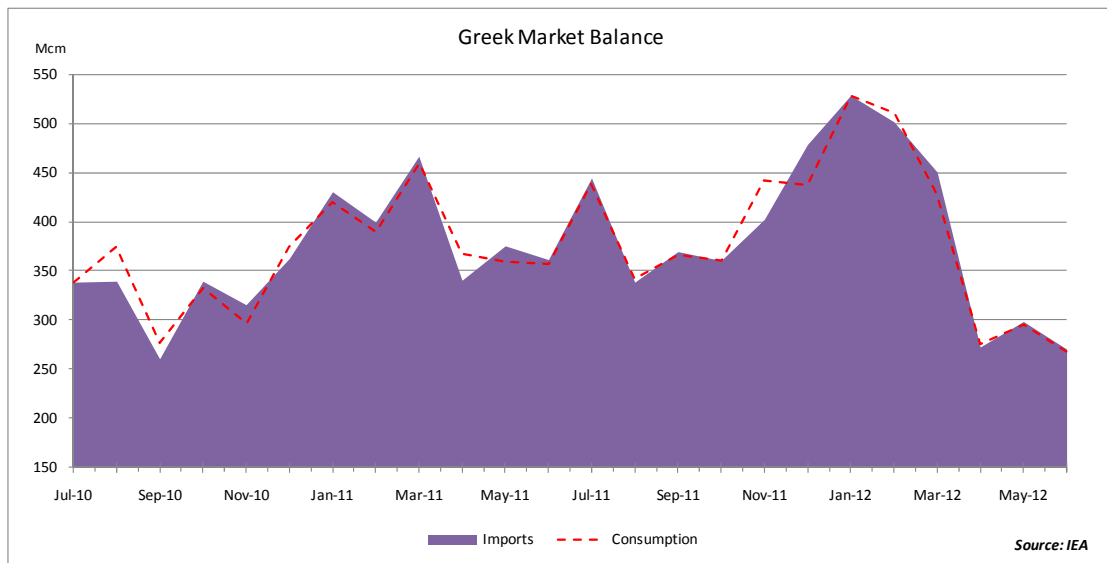


Natural Gas

Natural gas demand in June 2012 reached 25 bcm, 11.5% lower than May. Consumption has also showed a significant year-to-year decrease, 10% lower than June 2012. Gas production and imports were also reduced, to 11.2 bcm (4.2% monthly decrease) and 31.8 bcm (9.5% monthly decrease), respectively.

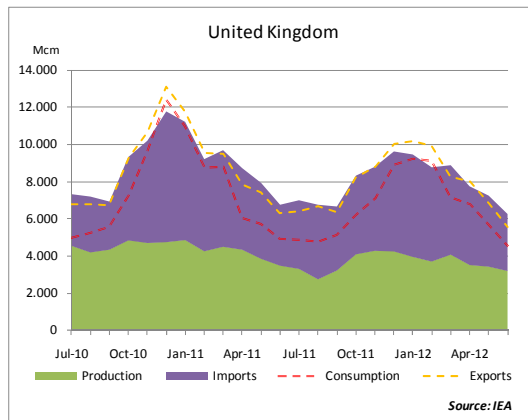
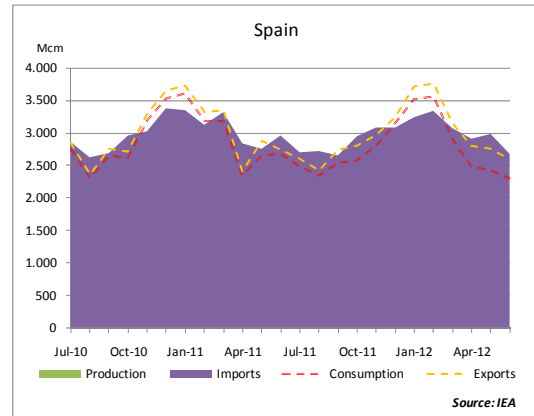
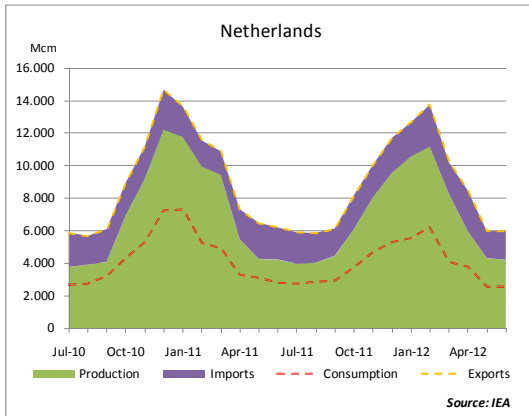
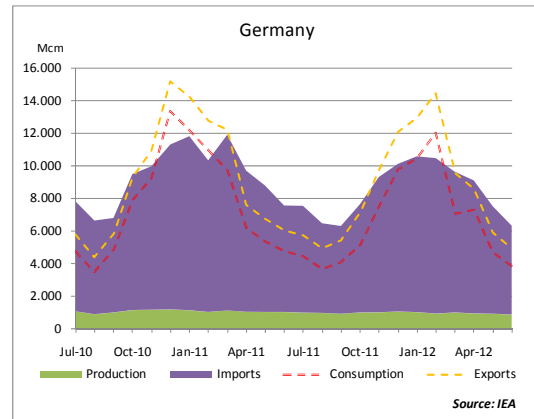
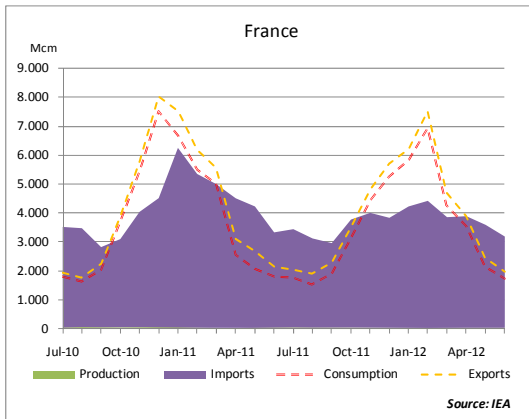


In Greece, gas consumption in June was 267 mcm, showing a very large decrease of 25% in comparison to June 2011. Imports showed a similar reduction, to 270 mcm.

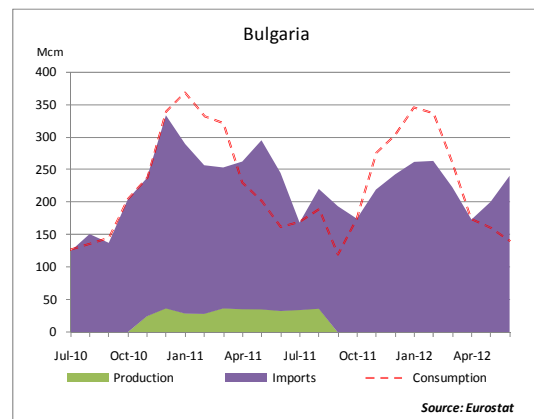
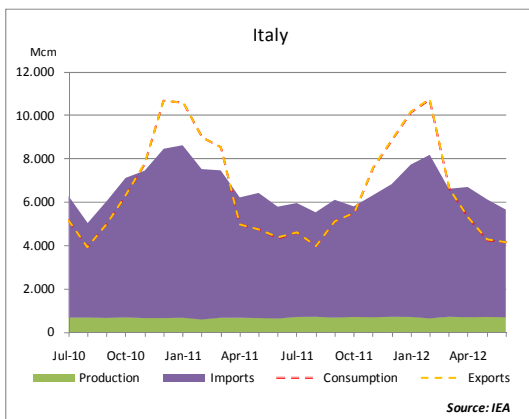


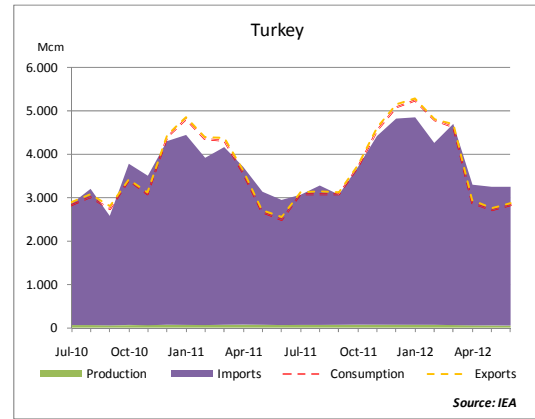
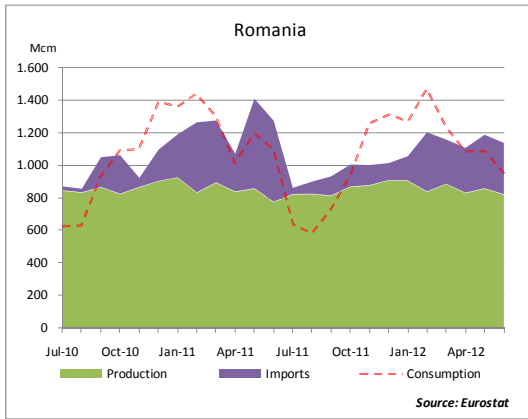
All large Western EU markets showed a year-to-year reduction in gas demand. In Germany consumption was decrease by 18.8% to 3.9 bcm and in Spain by 13.8% to 2.3 bcm. Gas imports showed a similar decreasing trend.

Gas balance of large Western markets



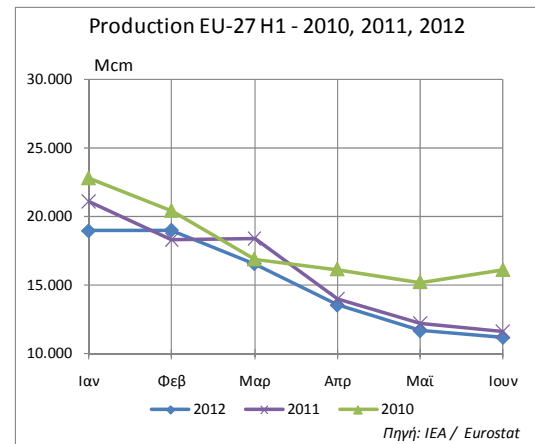
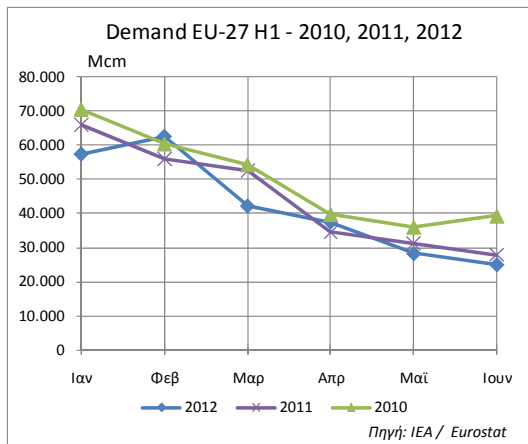
Gas balance of neighboring markets





Gas demand in EU during the 1st six months of 2012 reached 253 bcm, about 6% lower in comparison to 2011. Production and imports were also decreased, to 91 bcm (5% year-to-year reduction) and 225 bcm (3% year-to-year reduction) respectively.

Belgium showed a huge demand decrease, from 8.8 bcm in 2011 to 4.7 bcm. Demand in Germany was also significantly reduced, by 37 bcm. In Greece demand during the 1st half of 2012 was 2.3 bcm, in the same level with 2011.

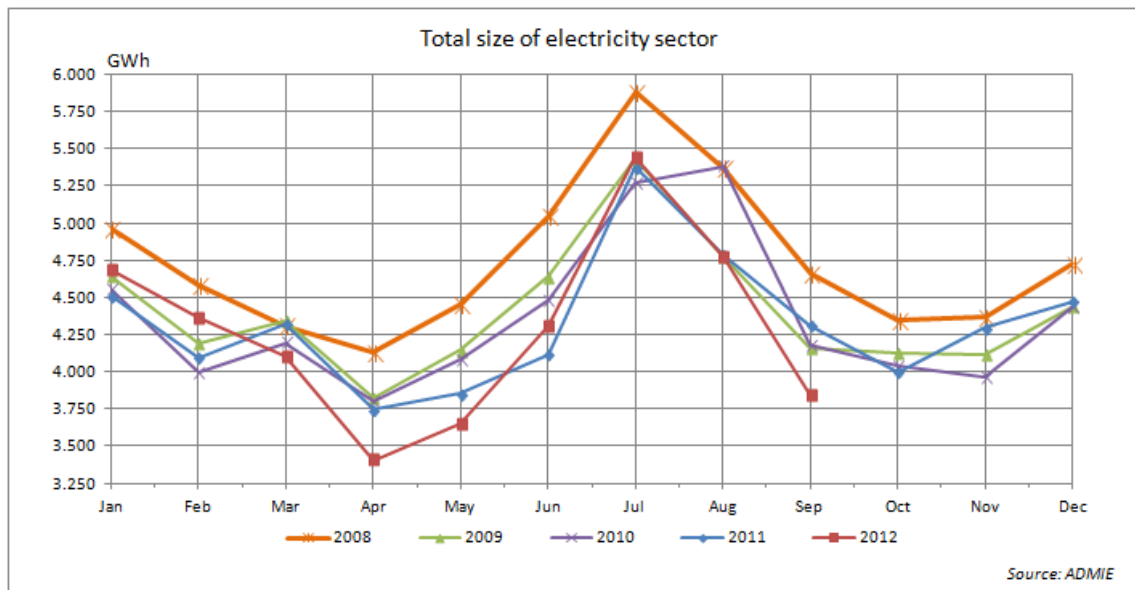


Electricity & RES

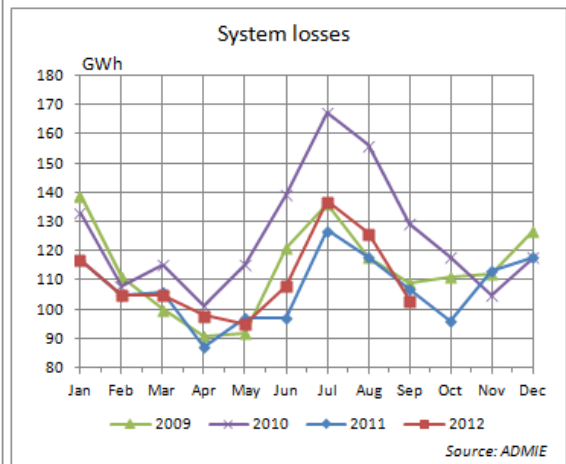
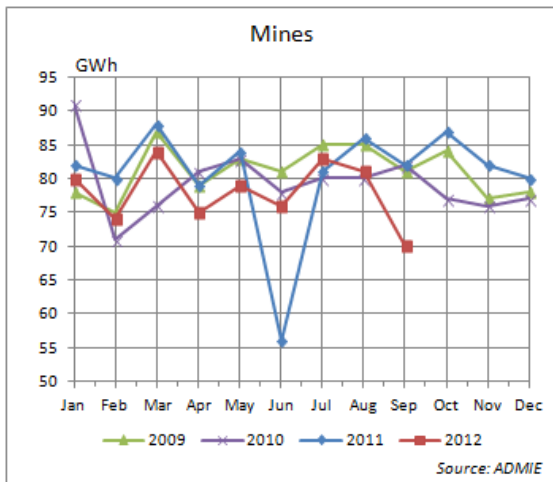
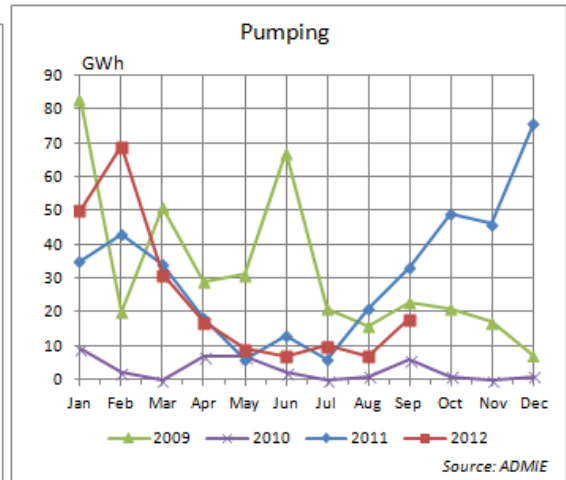
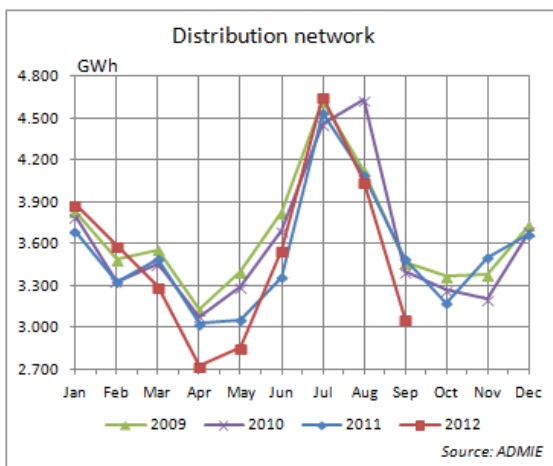
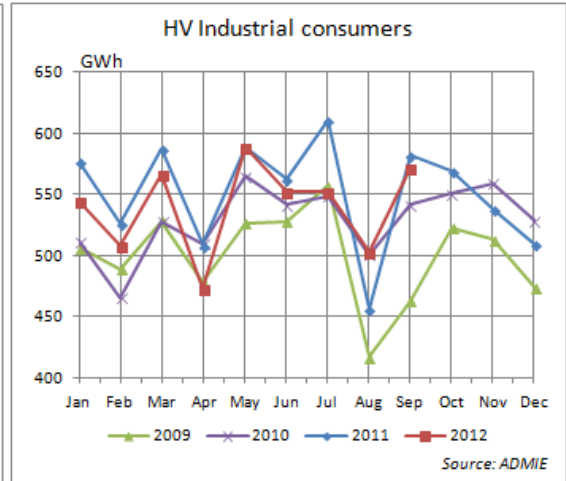
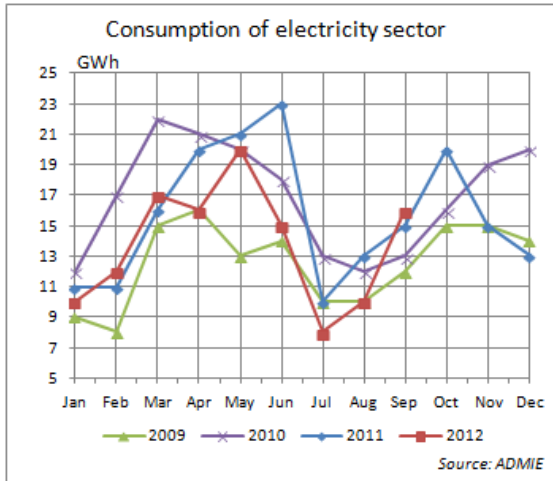
According to DESMIE, LAGMIE and ADMIE statistics, the total production/ consumption of electricity in September 2012 were:

MWh	09/2012	Previous year	
		09/2011	% change
Production			
Lignite	2.165.642	2.286.688	-5,3%
Oil	5	1	400,0%
Natural Gas	1.091.279	1.305.271	-16,4%
Hydro	223.252	295.745	-24,5%
RES & Other (HV)	216.831	230.842	-6,1%
Imports	145.880	194.422	-25,0%
Consumption			
Electricity sector	15.649	15.113	3,5%
HV Industrial	572.360	581.657	-1,6%
Distribution	3.064.282	3.494.058	-12,3%
Pumping	17.974	33.113	-45,7%
Mines	69.850	82.204	-15,0%
System losses	102.772	106.826	-3,8%
Total	3.842.888	4.312.971	-10,9%

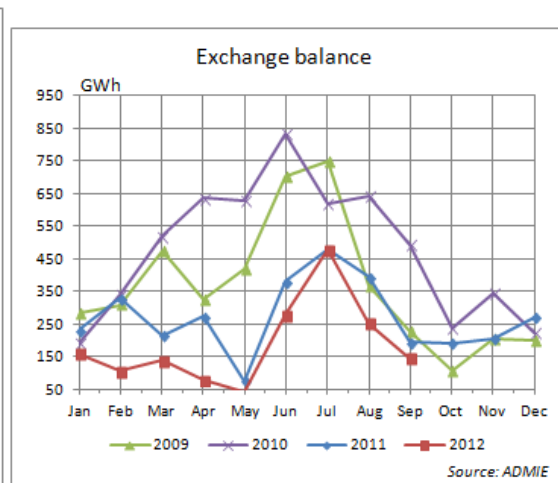
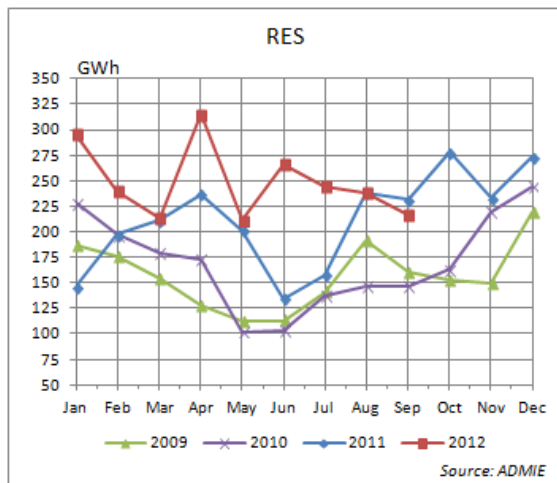
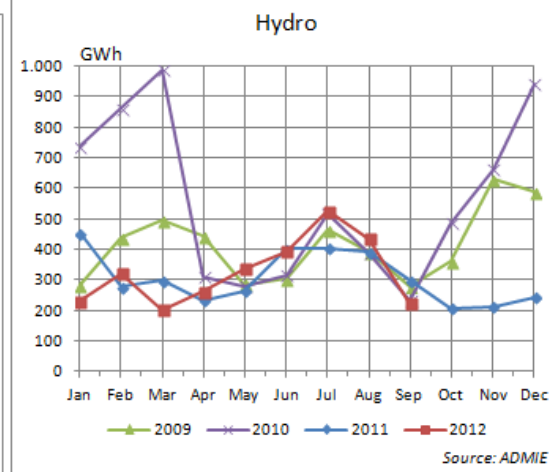
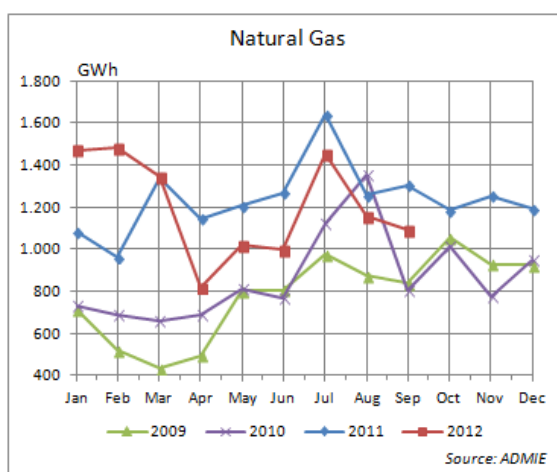
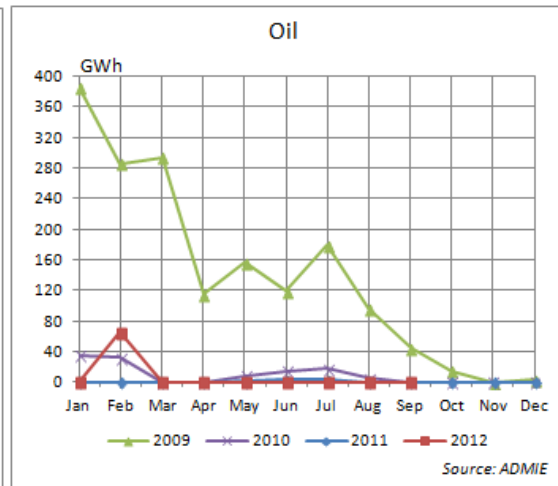
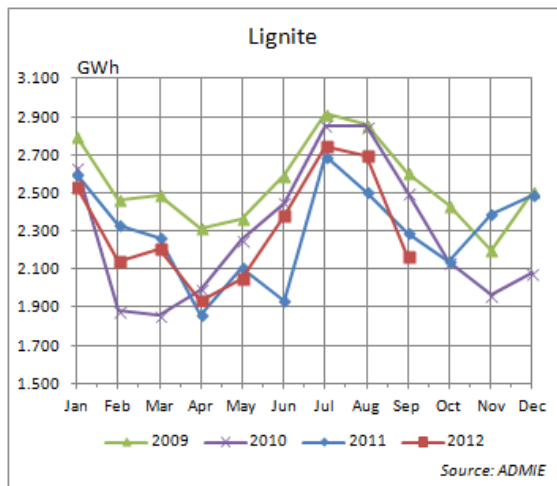
Total size of the Greek electricity sector is depicted in the next diagram:

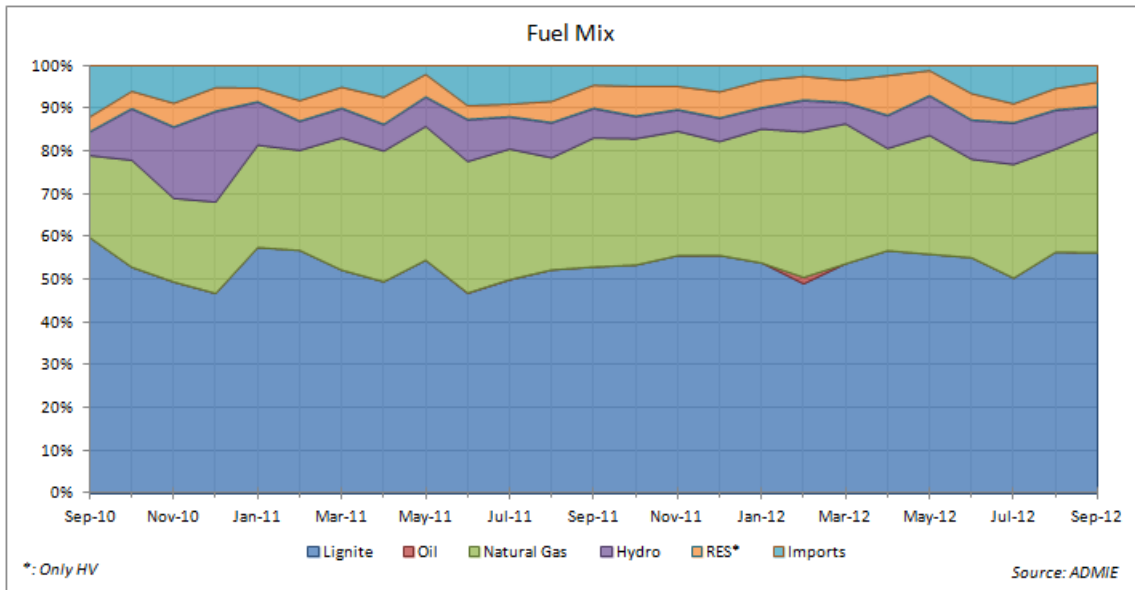


Time series of the different electricity consumption categories can be found in the next diagrams:

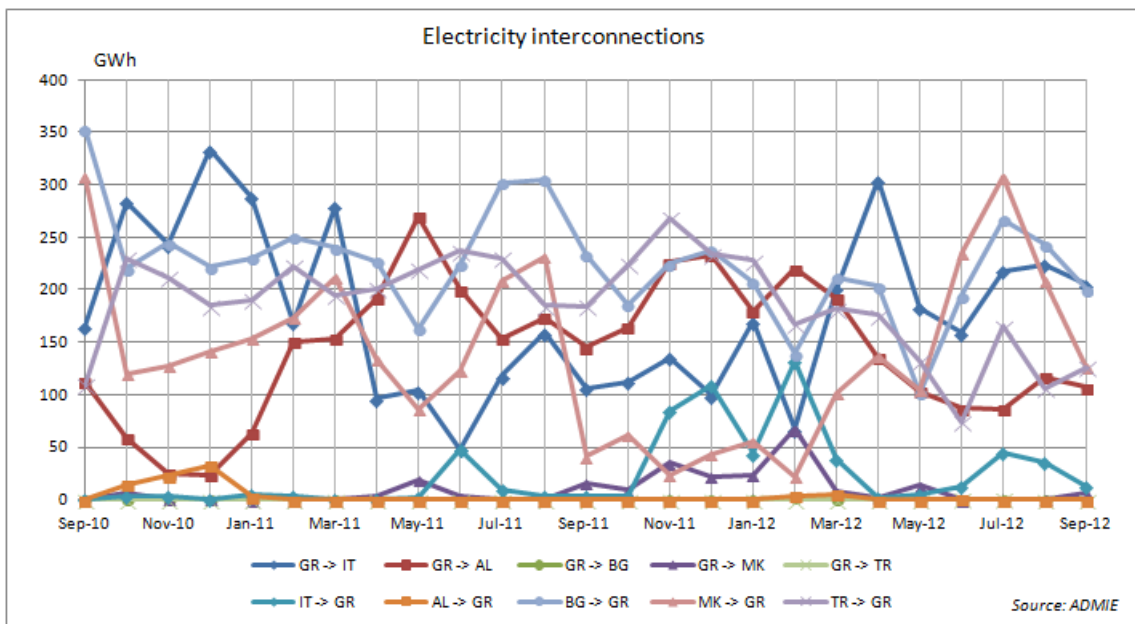


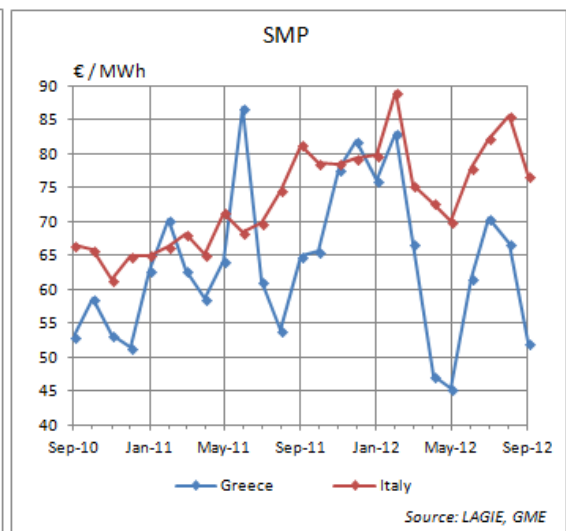
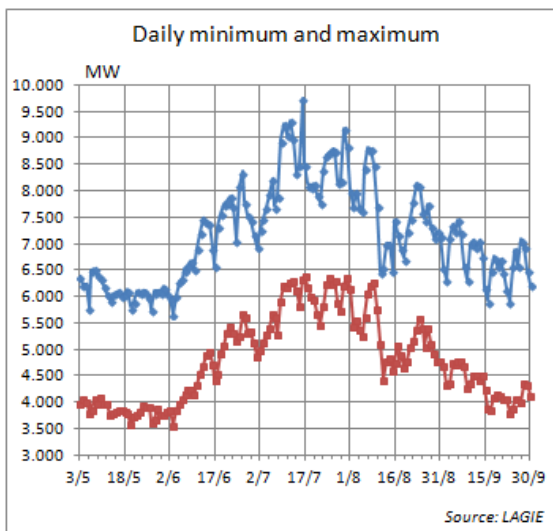
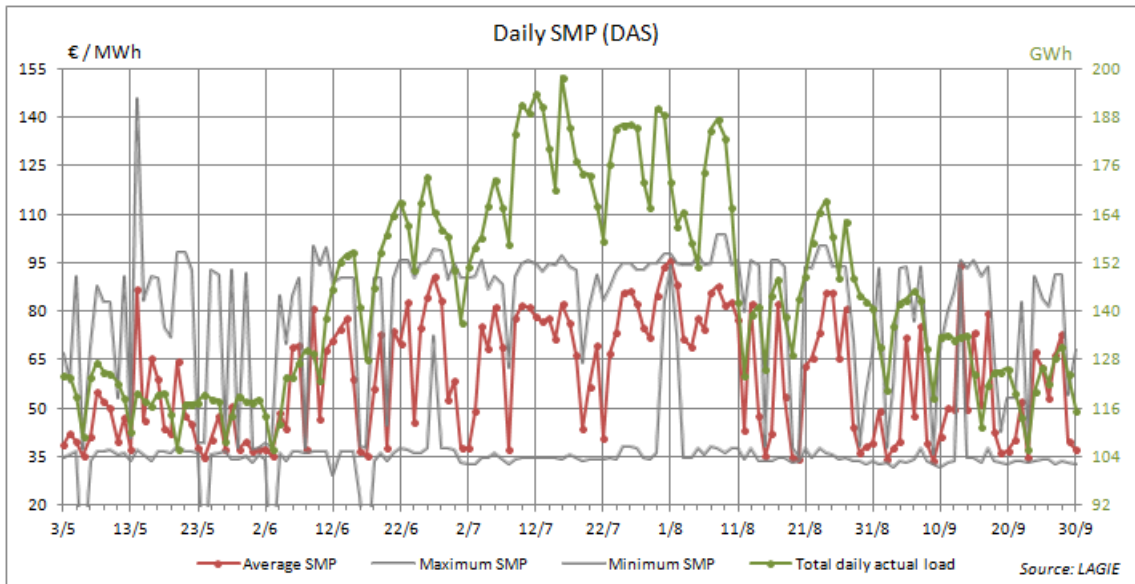
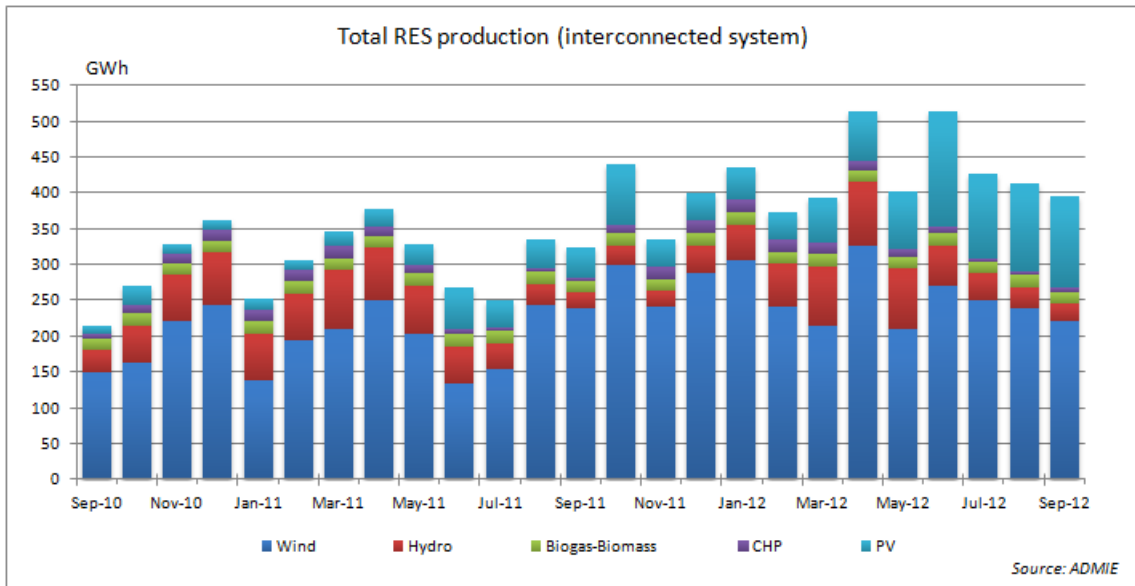
Time series of the electricity production categories can be found in the next diagrams:



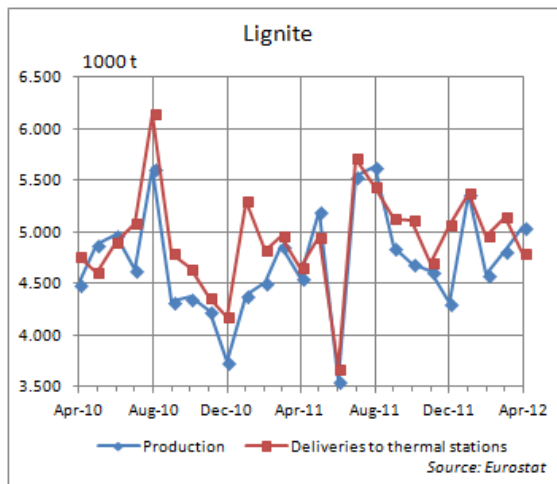


In September, most of the electricity imports originated from Bulgaria (200 GWh), FYROM and Turkey (126 GWh for each country). Exports were made mainly to Italy (205 GWh) and Albania (107 GWh).

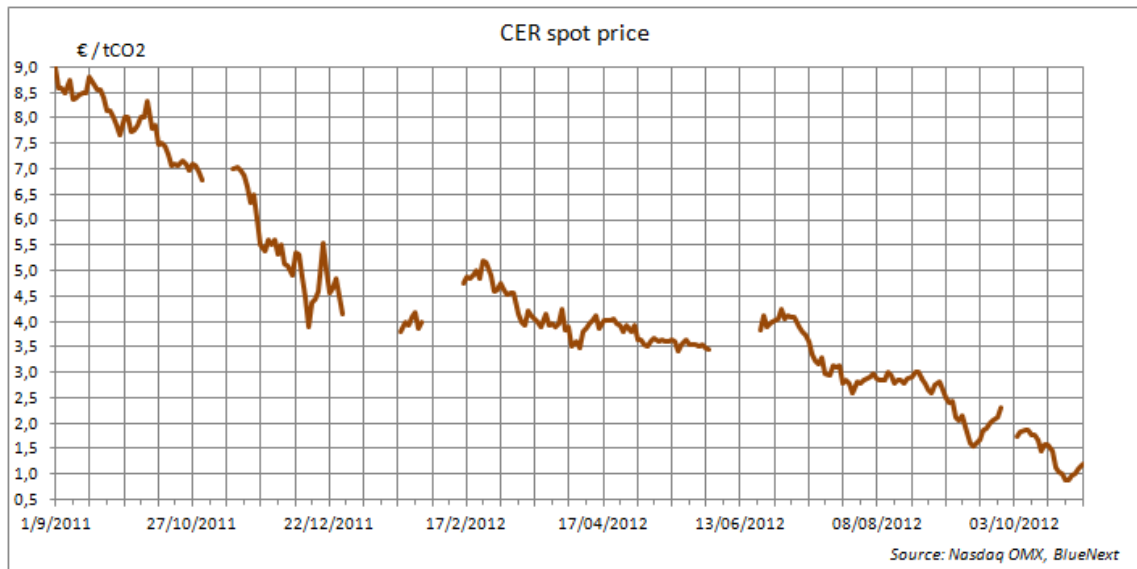
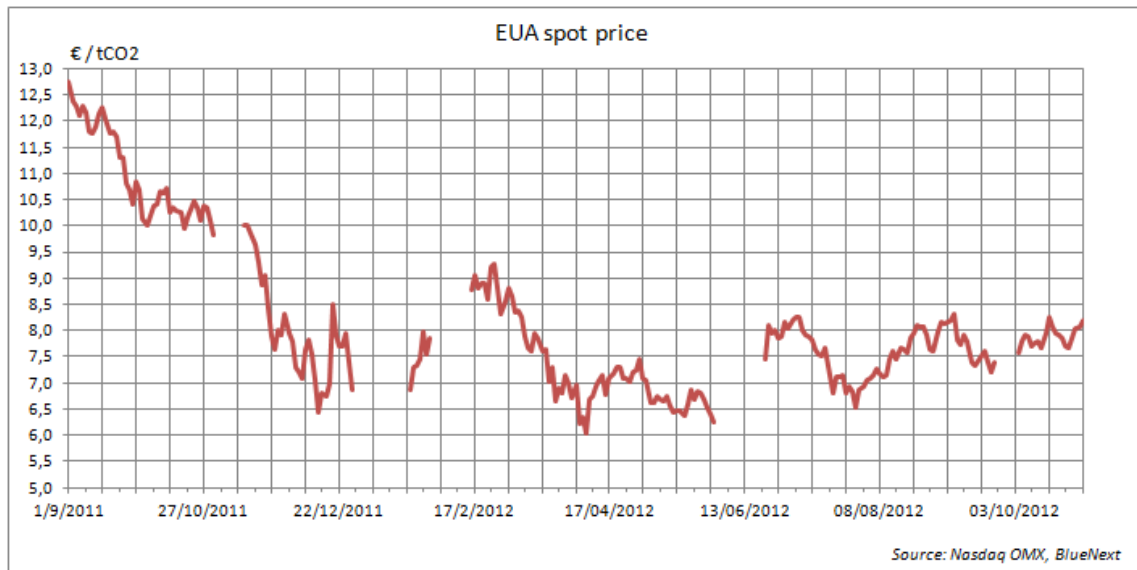




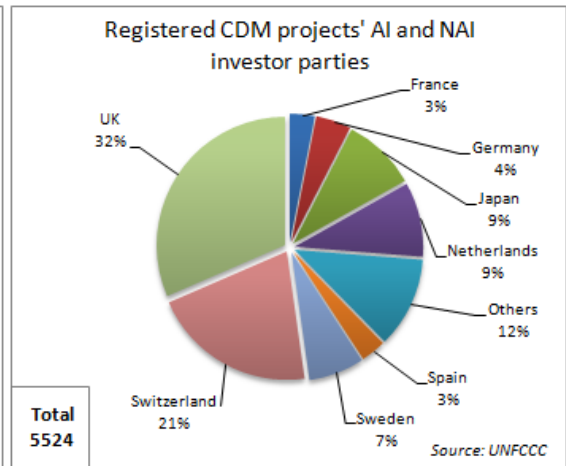
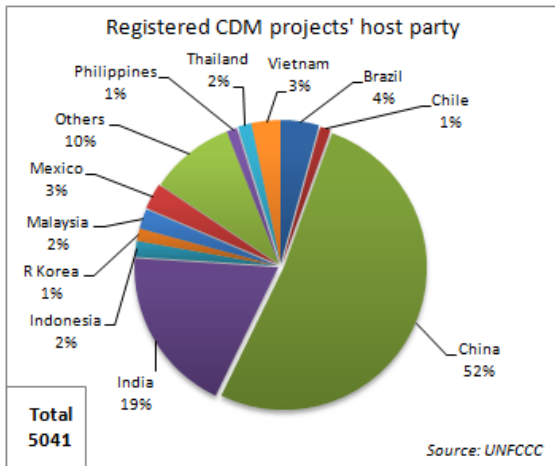
In the next diagram, monthly production and deliveries of lignite to public power plants are depicted.



CO₂ Emissions



Registered CMD projects reached the number of 5041, with a respective expected production of 2.189 million CERs until the end of 2012. China and India host 71% of the projects, while UK and Switzerland are the countries from which 53% of the investor parties come from (with host countries' parties not counted in).



Energy Units

Prefixes

m (Milli)	k (Kilo)	M (Mega)	G (Giga)	T (Terra)
10^{-3}	10^3	10^6	10^9	10^{12}

Abbreviations

- Toe: Ton of Oil Equivalent
 Boe: Barrel of Oil Equivalent
 b/d: Barrel per Day
 Mcm: Million Cubic Meters
 Bcm: Billion Cubic Meters
 Tcm: Trillion Cubic Meters
 Cal: Calorie
 BTU: British thermal unit
 Wh: Watthour
 J: Joule

Conversions

1 tonne of oil → 7,3 barrels of oil

1 ft³ → 0,0283 m³

	TJ	Gcal	Mtoe	MBTU	GWh
TJ	1	238,8	$2,388 \times 10^{-5}$	957,8	0,2778
Gcal	$4,1868 \times 10^{-3}$	1	10^{-7}	3,968	$1,163 \times 10^{-3}$
Mtoe	$4,1868 \times 10^4$	10^7	1	$3,968 \times 10^7$	11630
MBTU	$1,0551 \times 10^{-3}$	0,252	$2,52 \times 10^{-8}$	1	$2,931 \times 10^{-4}$
GWh	3,6	860	$8,6 \times 10^{-5}$	3412	1

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