

# Greek Energy Newsletter

April 2012

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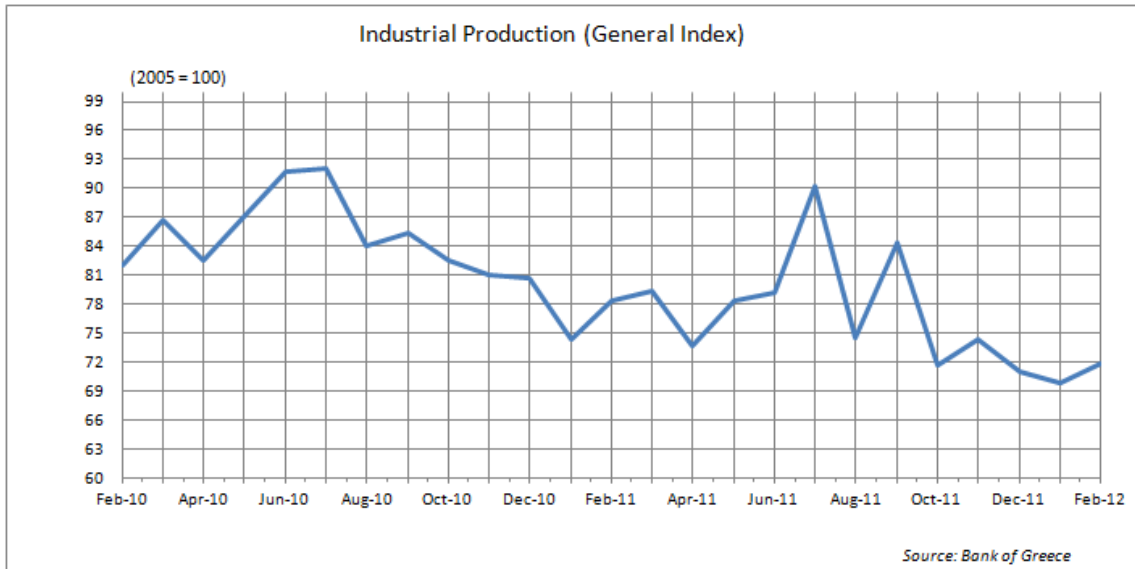
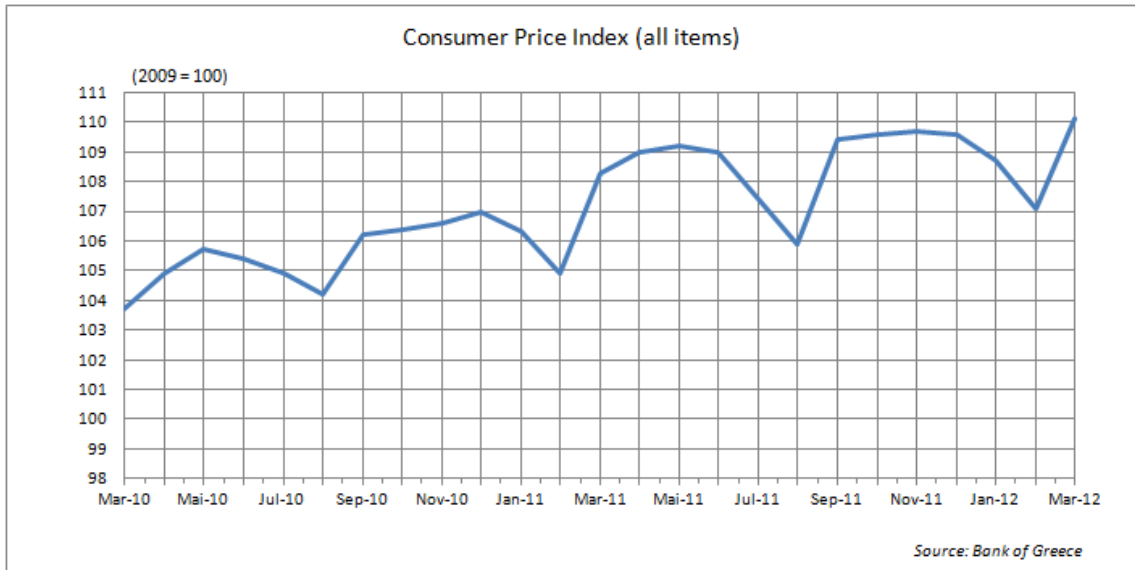
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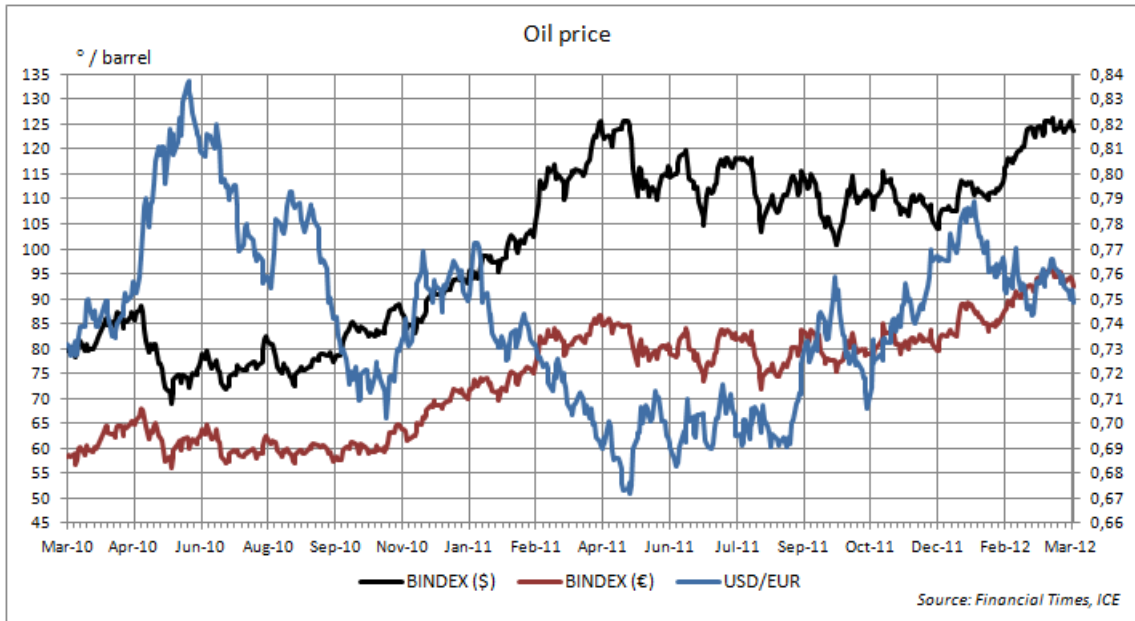
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# Greek Economy

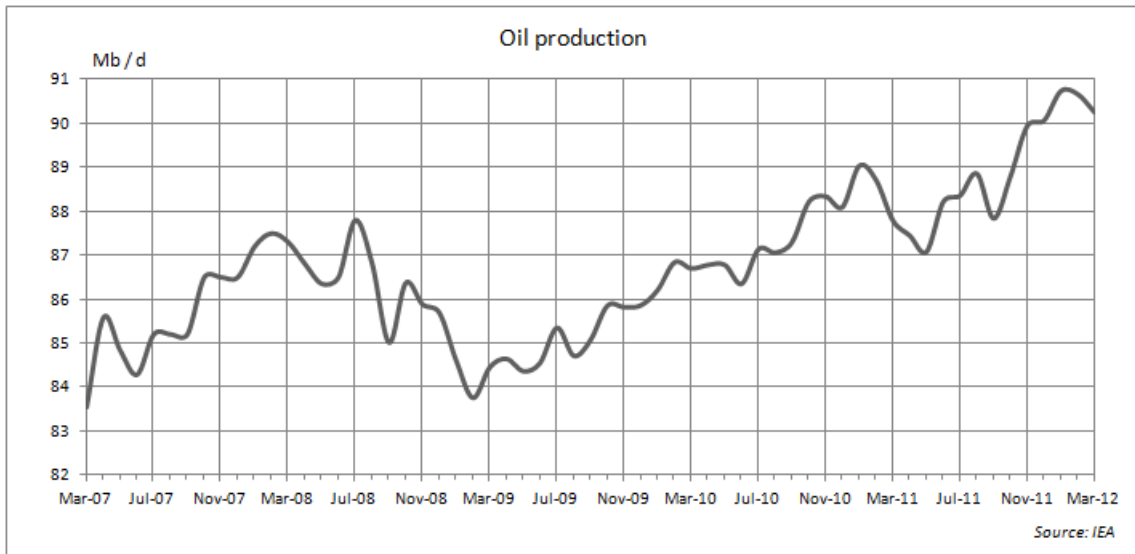


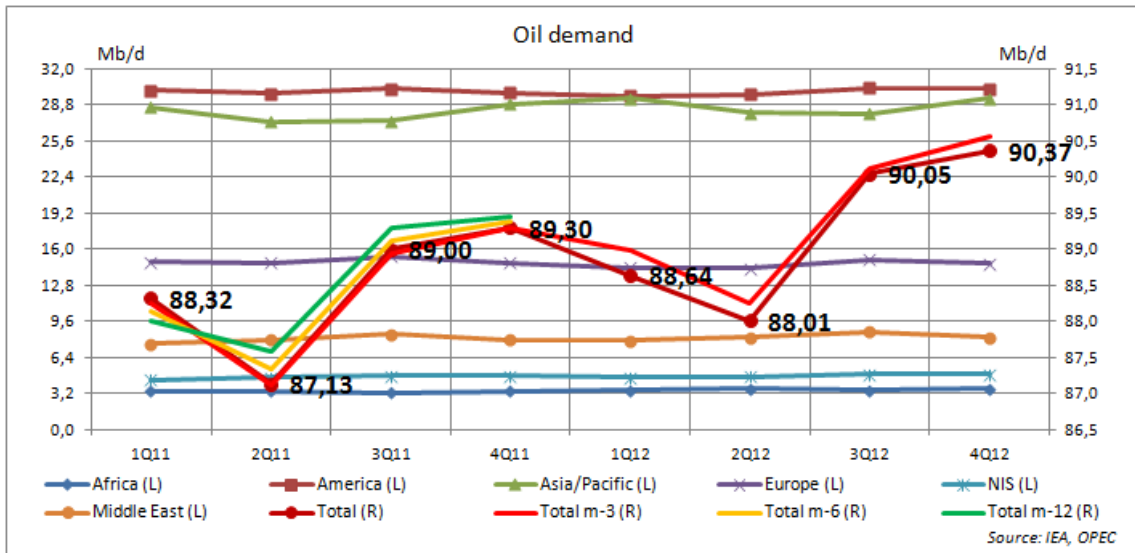
# Oil

In March 2012, price of crude oil reached the 125 \$/b zone.

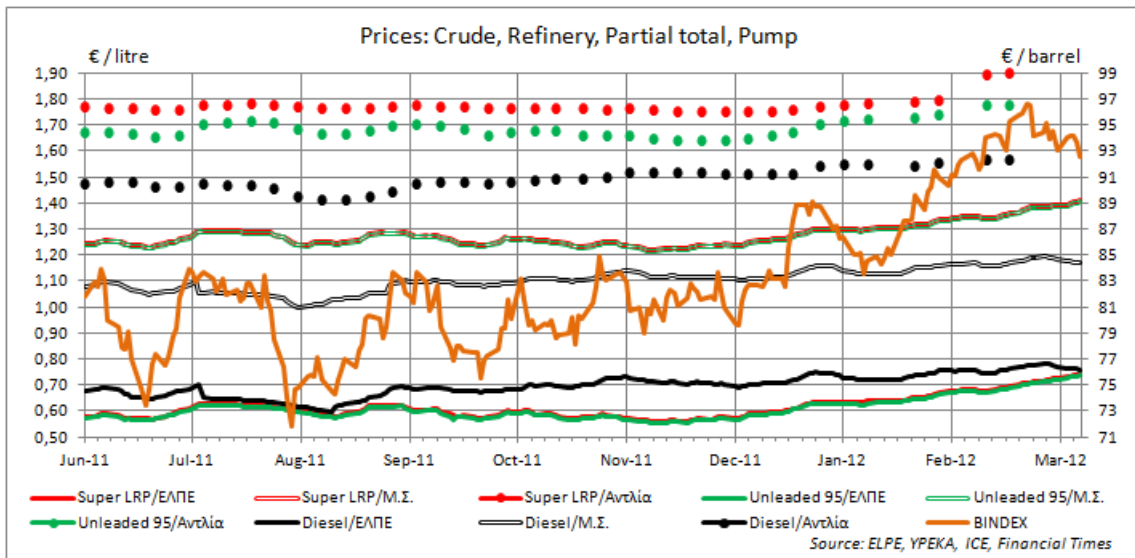


In the same time, crude oil production broke the 90 Mb/d mark. Estimations for crude oil demand, in 2012, are almost 1 Mb/d larger compared to demand in 2011 for all but the first quarter of the year. To allow for comparisons, estimations on oil demand made 3, 6 and 12 months ago, are included in the demand diagram.





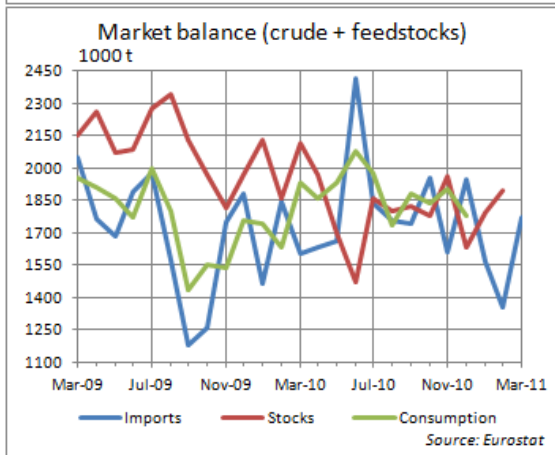
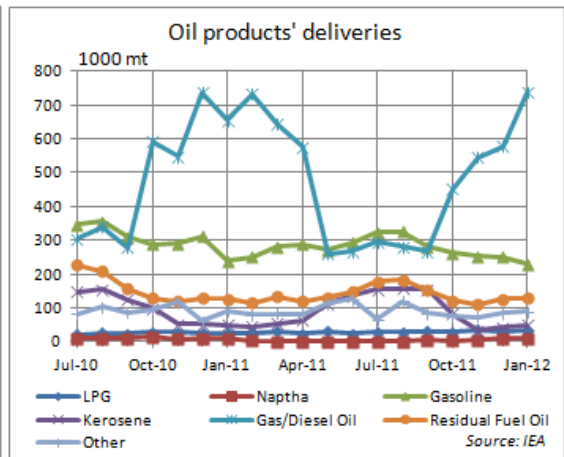
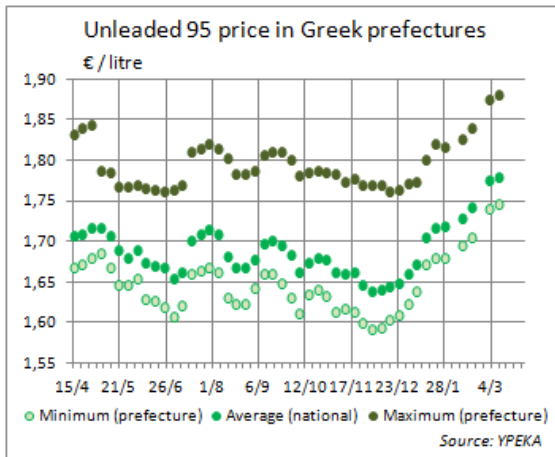
Price of gasoline was in the area of 1,70 - 1,80 €/lt (pump price), while the following diagram clearly depicts the effect of taxes and VAT in the final price of oil products.



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.

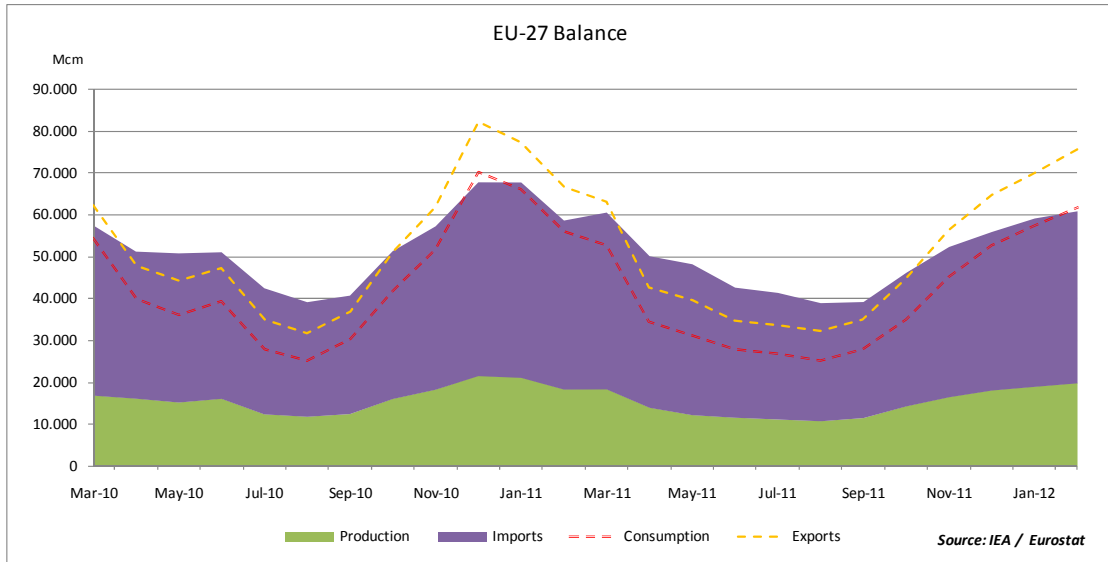
The following diagrams depict:

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

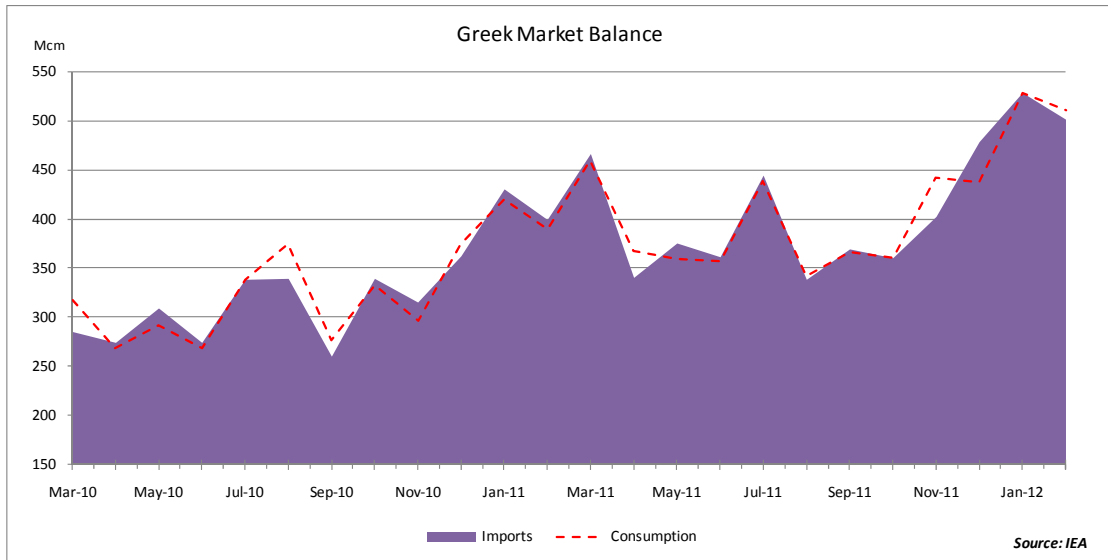


## Natural Gas

Natural gas demand has continued the increasing trend in February 2012, reaching 61.7 bcm, 7.5% higher than January. Consumption has also showed a significant year-to-year increase, 10% higher than February 2011. Gas production and imports were also increased, to 19.8 bcm (4.5% monthly increase) and 41 bcm (2.2% monthly increase), respectively. Exports have shown a large increase, to 14 bcm, 10.4% higher than January 2012 and 34.2% higher than February 2011. In total, 14.8 bcm were withdrawn from storage to cover demand and export needs.



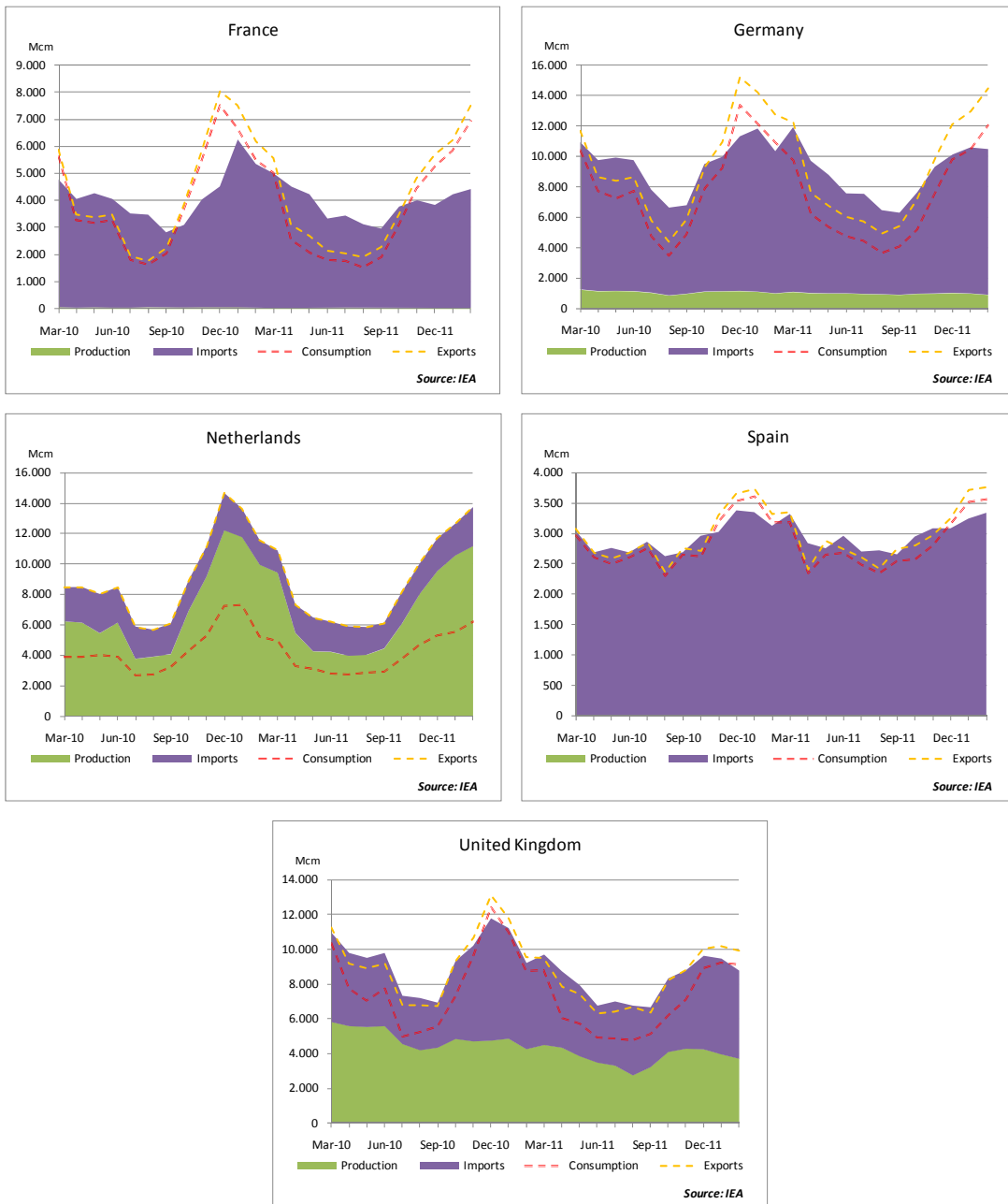
In Greece, gas consumption in February was 510 mcm, 3.4% lower than January, when the all-time peak demand of 528 mcm was reached. Imports showed a similar reduction, to 501 mcm. In comparison to last year, gas consumption increased by 30.8%, mainly as a result of the commissioning of new gas-fired thermal power plants.



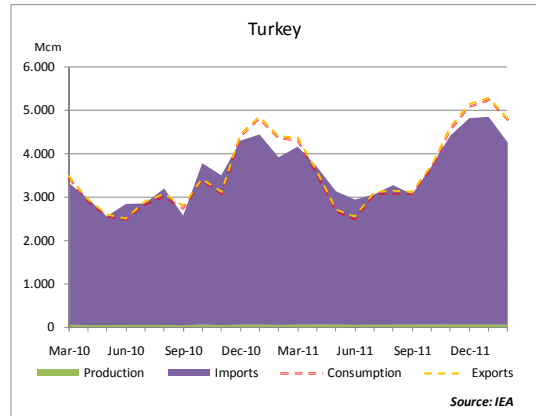
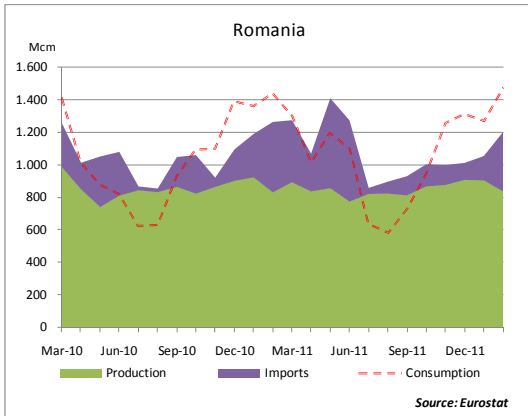
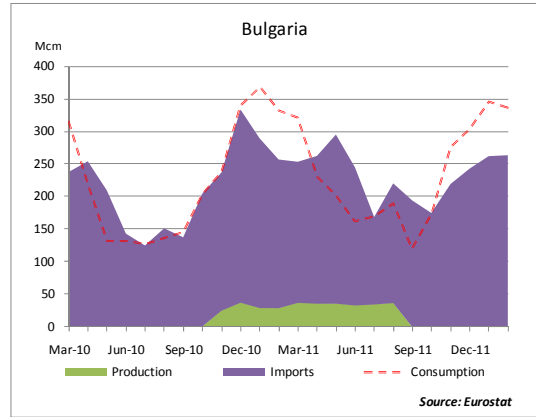
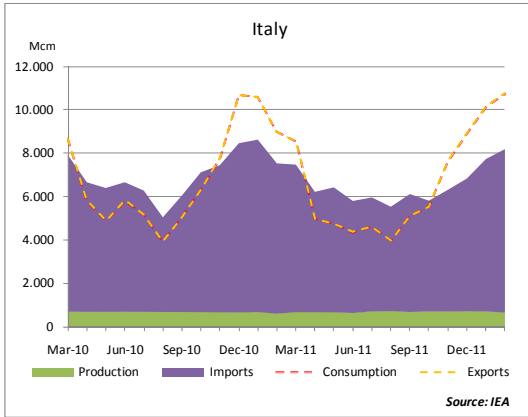
In most large Western EU markets, gas demand was increased in February compared to last month. In Germany consumption was increased by 15% to 12 bcm and in France by 19% to 6.9 bcm. Demand was also increased year-to-year, especially in France, where 26.3% more gas volumes were consumed. In the Netherlands

In S.E. Europe, Italy showed increased gas demand, reaching 10.7 bcm, 6% more than January 2012 and 19% more than February 2011.

### Gas balance of large Western markets



## Gas balance of neighboring markets



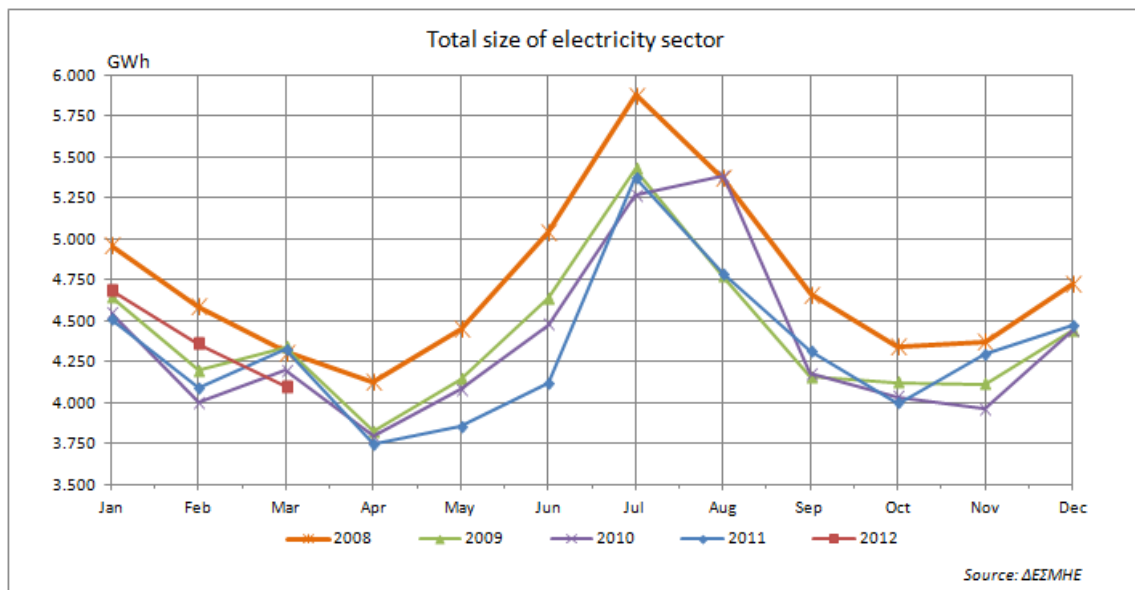


## Electricity & RES

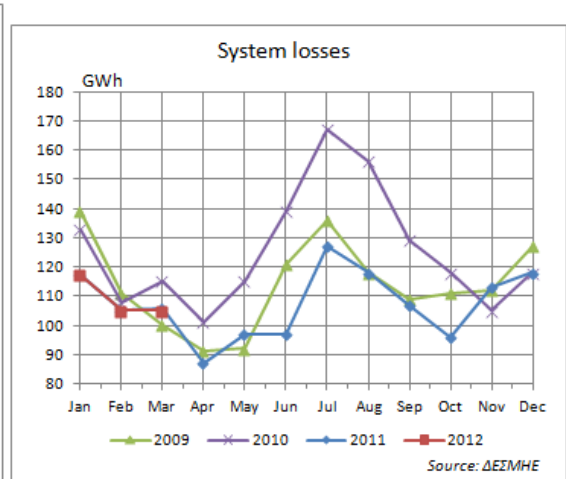
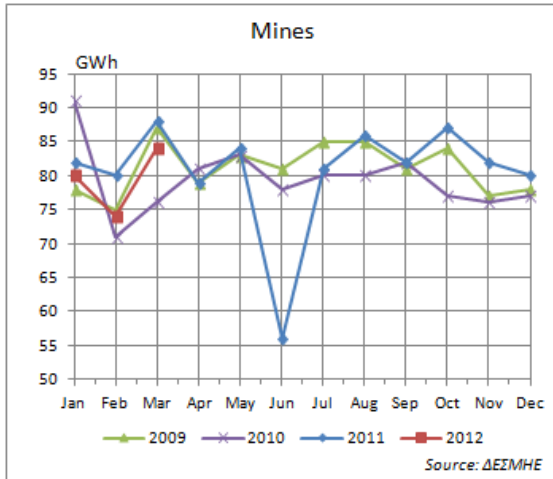
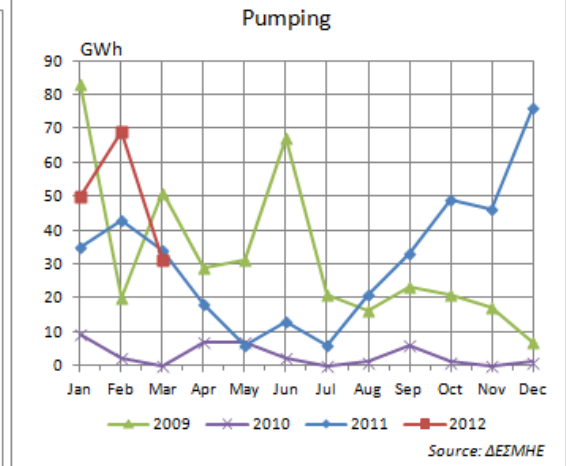
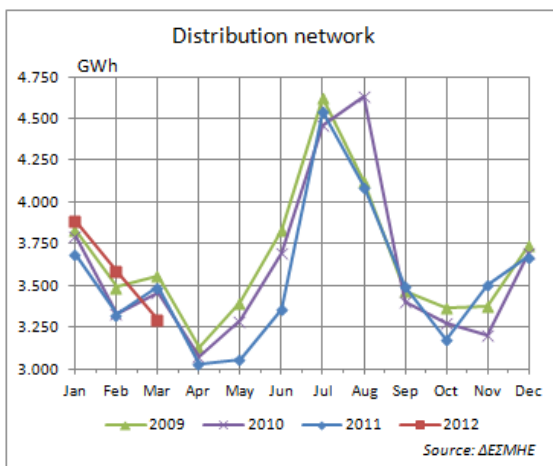
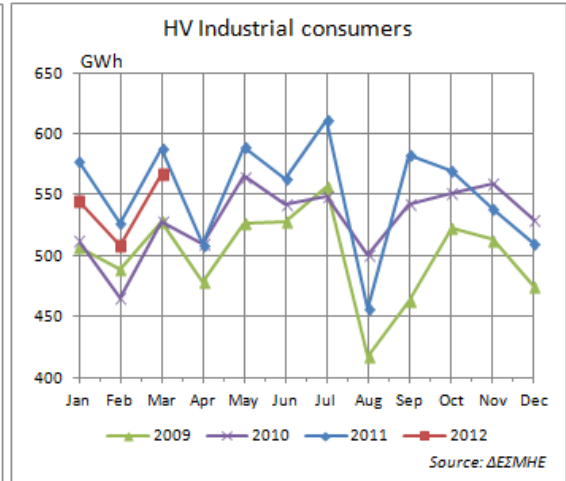
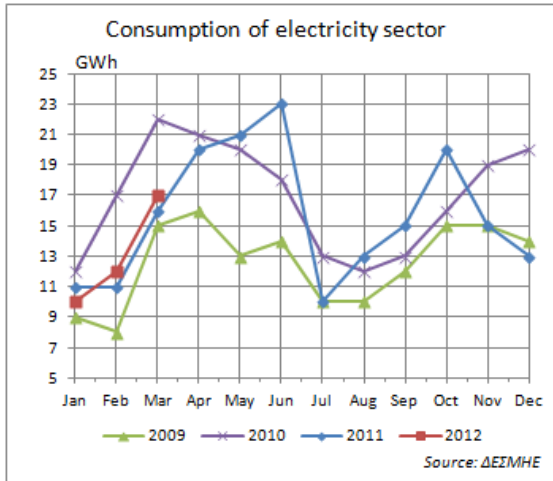
According to DESMIE/ LAGMIE/ ADMIE statistics, the total production/ consumption of electricity in March 2012 were:

MWh	03/2012	Previous year	
		03/2011	% change
<b>Production</b>			
Lignite	2.203.553	2.259.568	-2,5%
Oil	53	2	2550,0%
Natural Gas	1.344.792	1.340.073	0,4%
Hydro	199.716	296.559	-32,7%
RES & Other (HV)	213.265	210.737	1,2%
Imports	136.677	214.215	-36,2%
<b>Consumption</b>			
Electricity sector	16.761	15.963	5,0%
HV Industrial	567.226	588.152	-3,6%
Distribution	3.293.748	3.489.559	-5,6%
Pumping	31.430	33.597	-6,4%
Mines	83.808	87.570	-4,3%
System losses	105.083	106.313	-1,2%
<b>Total</b>	<b>4.098.056</b>	<b>4.321.154</b>	<b>-5,2%</b>

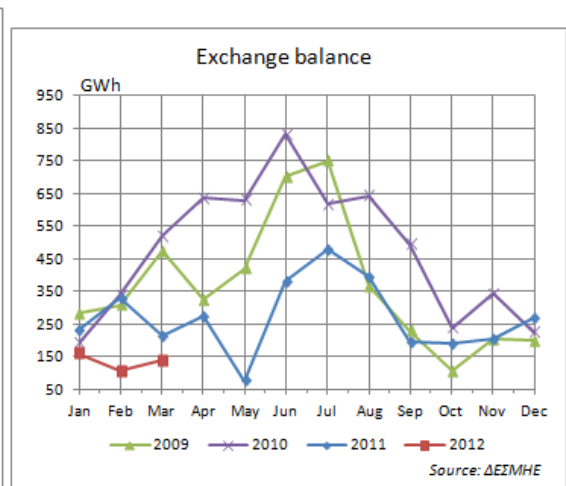
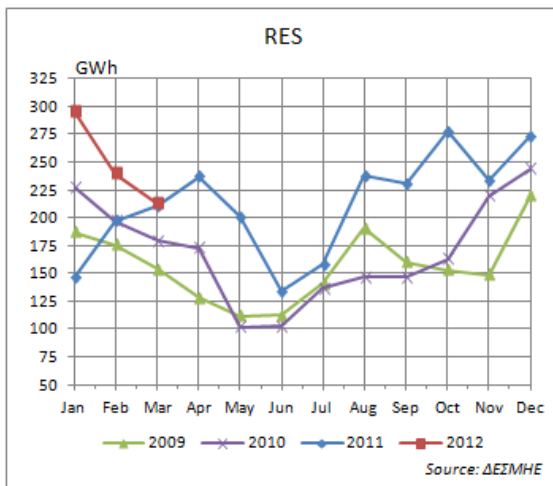
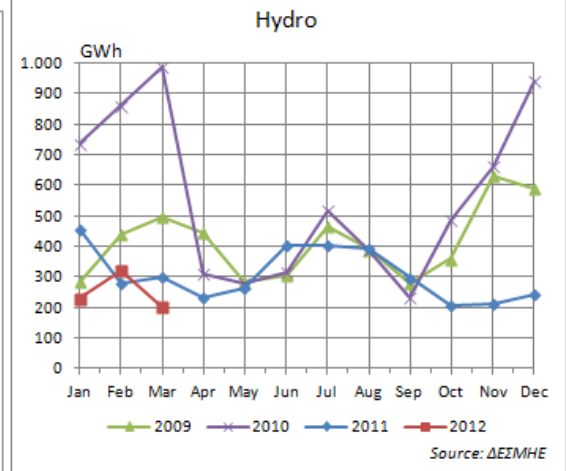
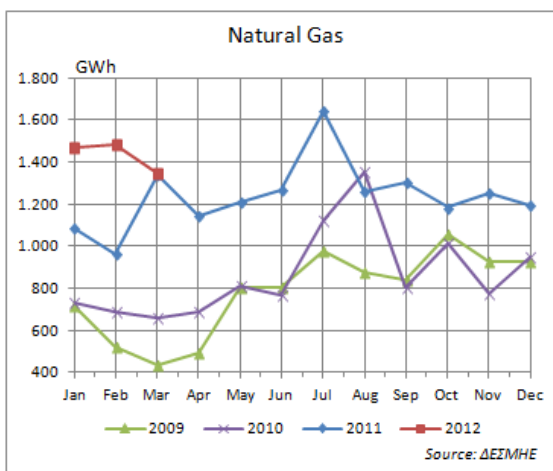
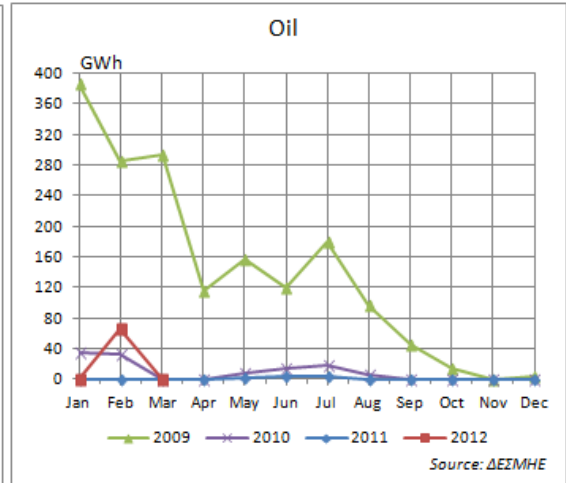
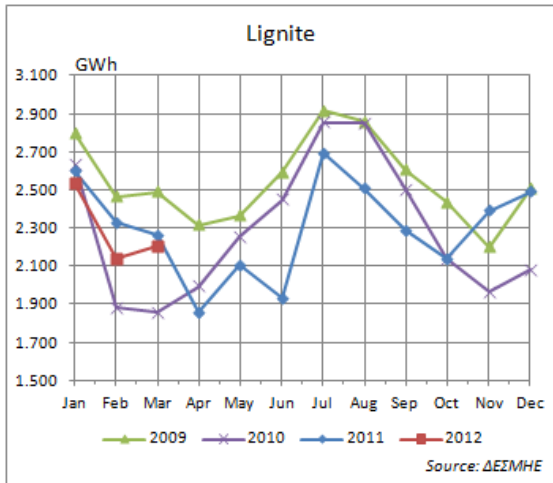
Total size of the Greek electricity sector is depicted in the next diagram:

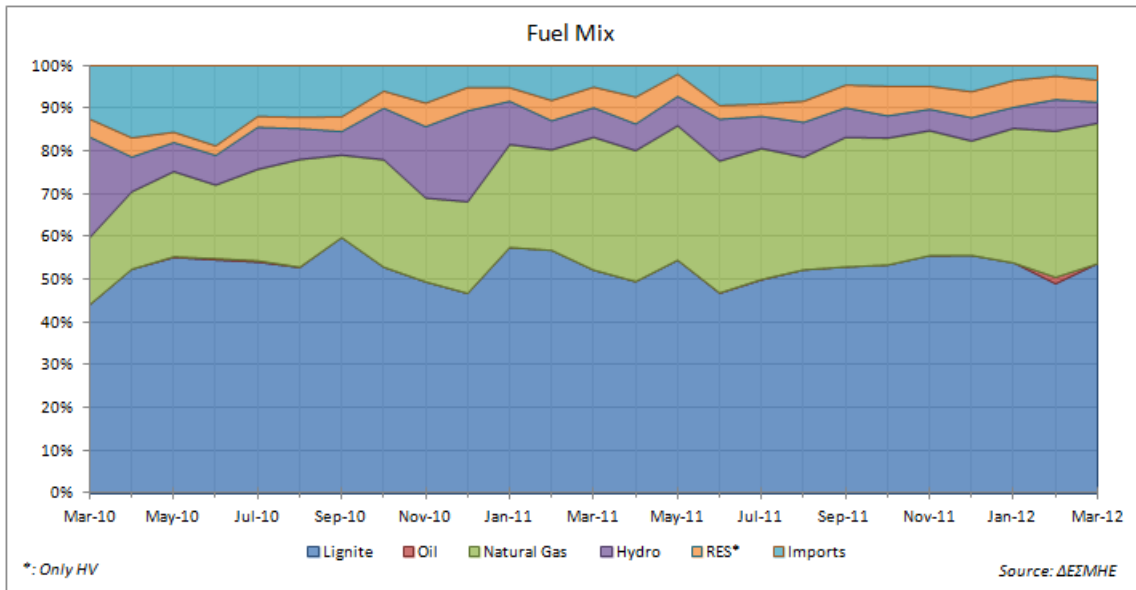


Time series of the different electricity consumption categories can be found in the next diagrams:

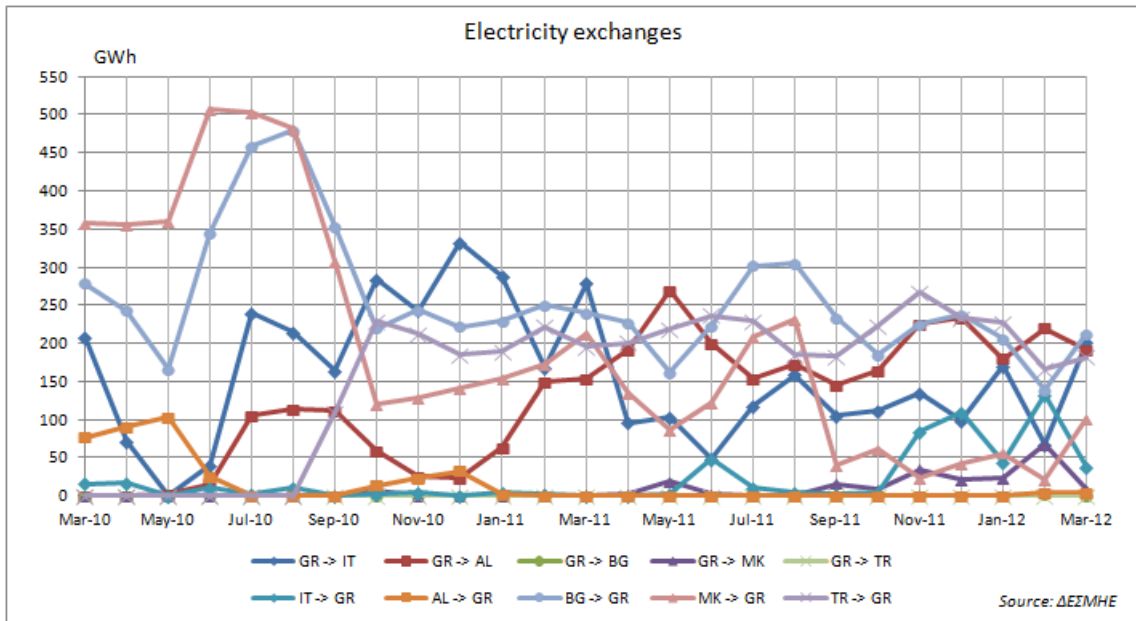


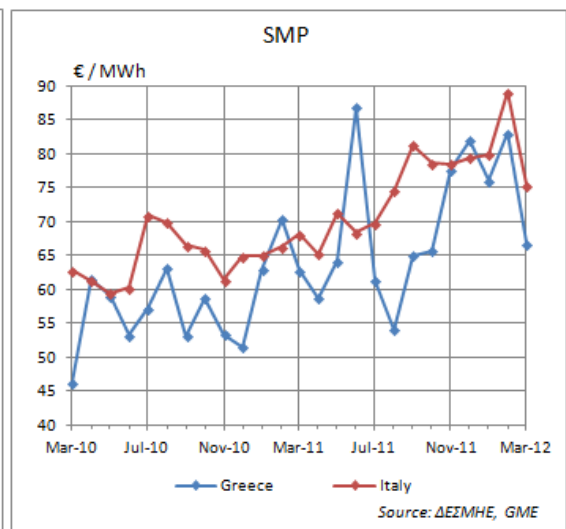
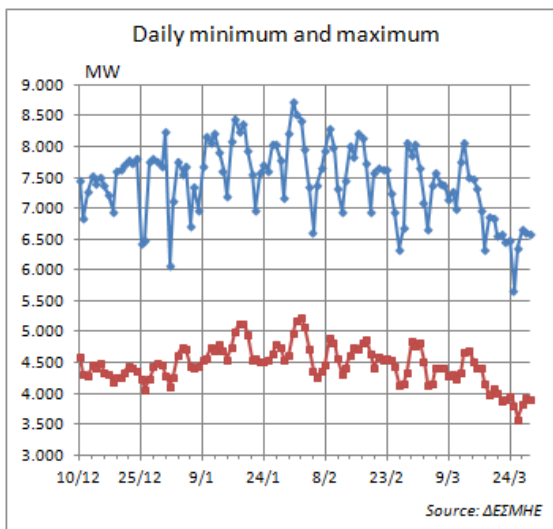
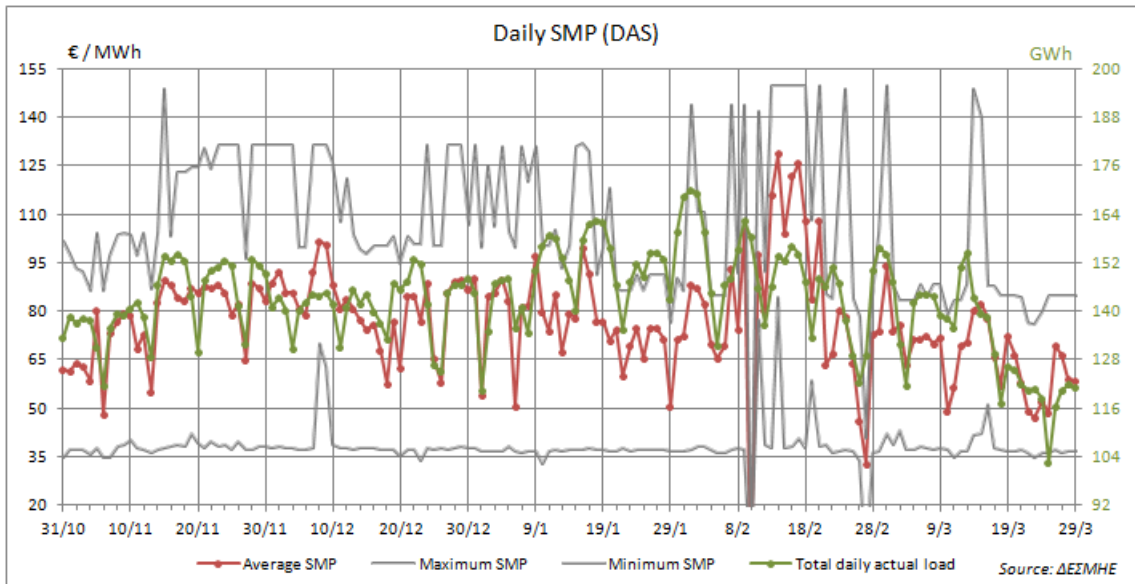
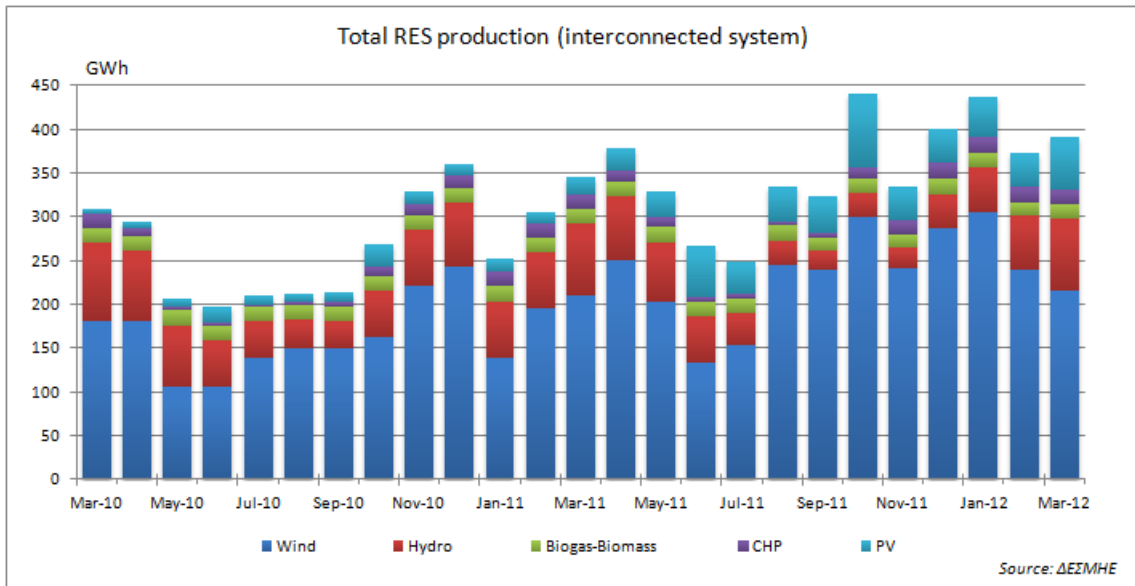
Time series of the electricity production categories can be found in the next diagrams:



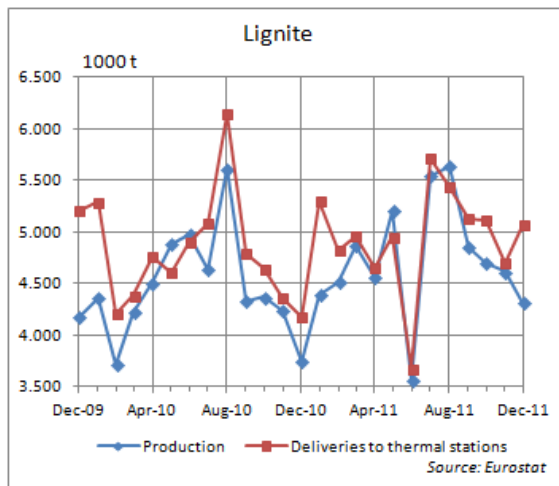


In March, most of the electricity imports originated from Bulgaria (212 GWh) and Turkey (182 GWh). Exports were made mainly to Italy (201 GWh) and Albania (192 GWh).

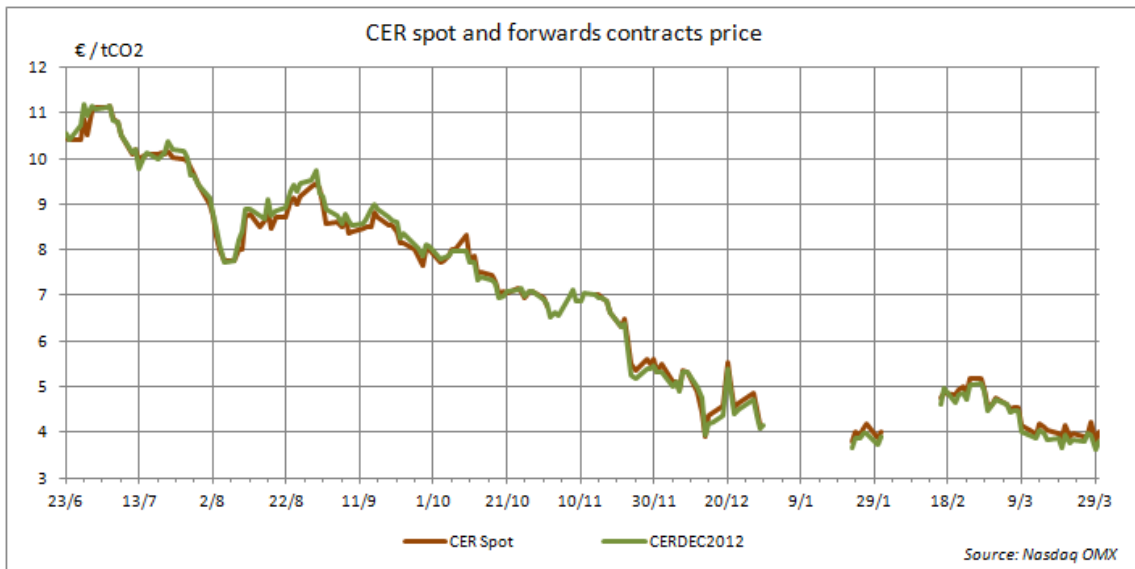
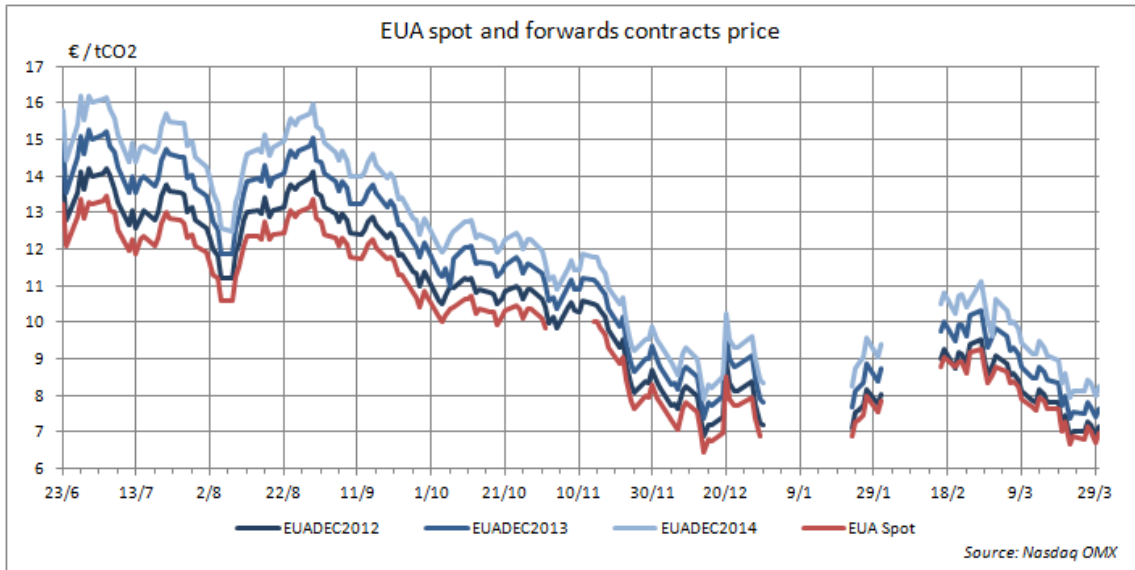




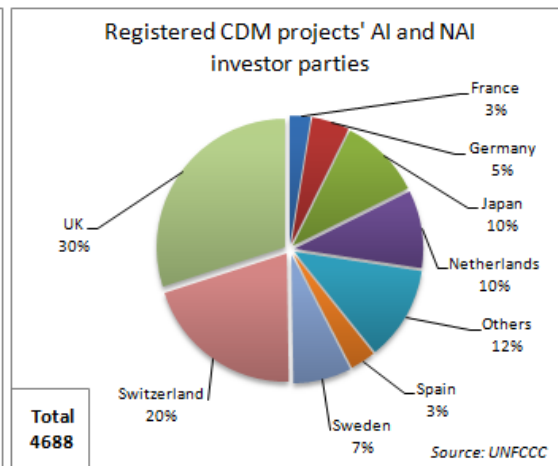
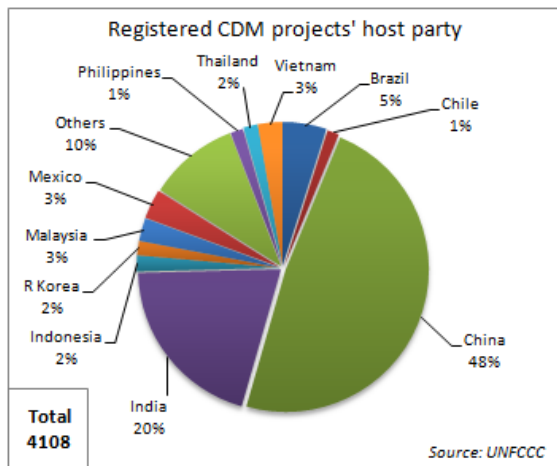
In the next diagram, monthly production and deliveries of lignite to public power plants are depicted.



## CO<sub>2</sub> Emissions



Registered CMD projects reached the number of 4108, with a respective expected production of 2130 million CERs until the end of 2012. China and India host 68% of the projects, while UK and Switzerland are the countries from which 50% 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 ft<sup>3</sup> → 0,0283 m<sup>3</sup>

	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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