

# Quarterly Report on European Electricity Markets



## ● MARKET OBSERVATORY FOR ENERGY

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Dear readers,

Let me first start by thanking you for the welcome and for the great number of encouraging messages you have sent to us regarding the first *Quarterly Report on European Electricity Markets*. The success of the *Report* reinforces our determination to cover, as accurately as possible, the latest developments in electricity markets throughout Europe.

You have in front of you the second issue of the *Report* for the months July to September 2008, a period rich in events – from the Beijing Olympic Games and the conflict in the Caucasus to the turbulence in our banking and financial sectors.

As the prospect of a global slowdown becomes clearer and mid winter approaches, end consumers are starting to worry about their energy bills. This issue looks at the electricity prices paid by the most modest consumers as they may be one of the most vulnerable groups. The *Focus on* topic is dedicated to energy poverty.

During the third quarter of 2008 the drivers of the European wholesale price of electricity have been shaped by uncertainties in the global market; yet prices have also reacted to some factors specific to the power industry – available capacity, weather conditions and the level of consumption during the summer holiday period. For each market we point out the effects of specific and common price determinants.

We are happy to start reporting on the Romanian wholesale power market, the first market from the South Eastern European region to be represented in our new publication for which we hope to extend geographic coverage over time.

Enjoy your reading over a hopefully peaceful holiday season.

Yours sincerely,



## QUARTERLY REPORT ON EUROPEAN ELECTRICITY MARKETS

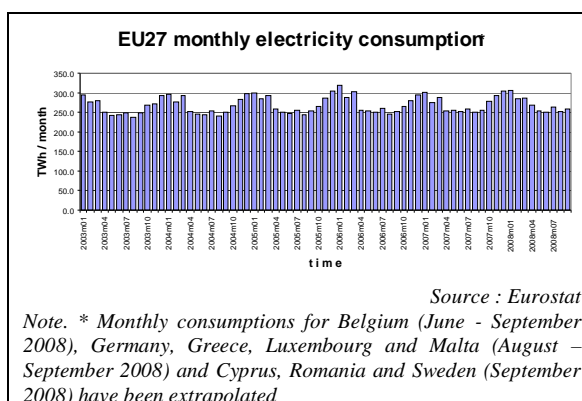
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### A. Recent developments in the electricity markets across Europe

#### A.1 Wholesale markets

Wholesale electricity prices across Europe continued to grow during the third quarter of 2008. On average, prices were 10 – 20 % higher than those of the second quarter<sup>1</sup>. Wholesale prices have more than doubled from Q3 2007 levels.

Power generators continued to factor in the effects of the recent rally on energy commodity prices. European electricity consumption remained stable within the established seasonal pattern, experiencing marginal increases for the months of August and September.



<sup>1</sup> With some notable exceptions across the European electricity regions.

#### Disclaimer

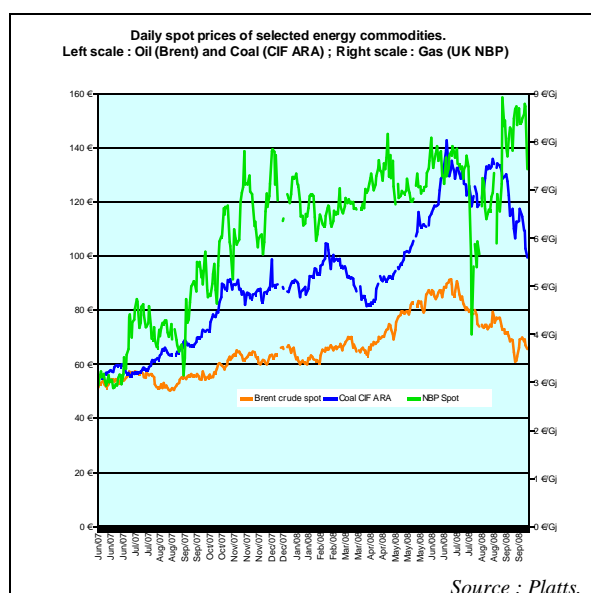
This report prepared by the Market Observatory for Energy of the European Commission aims at enhancing public access to information about electricity prices within the Members States of the European Union. Our goal is to keep this information timely and accurate. If errors are brought to our attention, we will try to correct them. However the Commission accepts no responsibility or liability whatsoever with regard to the information contained in this publication.

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The prices of the basic energy commodities have started to ease off with the prospect of a global economic slow down. After reaching a price of more than €90 per barrel, the Brent contract traded at €65.51 at the end of the quarter. Bears also dominated the coal markets with falling freight tariffs and fears of slowing demand, except for a small run during the month of August.



Natural gas prices followed a different evolution. Two independent events have kept the gas price at very high levels. Geopolitical tensions were high in the Caucasus after the conflict between Georgia and the Russian Federation broke out in the beginning of August 2008. A couple of weeks later, uncertainties over gas supply were reinforced after a major undersea pipeline was closed in the Nordic region following a technical problem.

Market participants with aged / inefficient coal power producing units had to be careful about the number of working hours of their plants. The EU directive on large

combustion plants forces them to respect the quotas during the grace period (ending in 2015) or to invest in flue gas desulphurisation equipment so that the plant can run at any time.

### A.1.1 Day ahead

#### EU wholesale markets

At a level of €95.83 per MWh, the average September 2008 *Platts Pan European Power Index (PEP)*<sup>2</sup> has set an all-time high, beating the previous reference from June 2008 by more than €12.

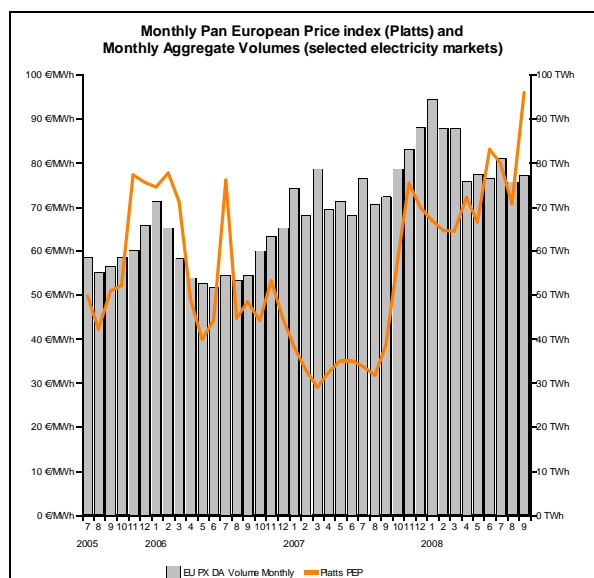
The September bull run should be seen against a background of low levels of spare capacity from conventional plants, and a high pressure weather system in continental Europe which affected negatively precipitation levels and wind conditions.

The total volume traded on the day-ahead segment of the selected countries<sup>3</sup> eased down after the traditionally strong winter months to stabilise at 235.32 TWh for the third quarter of 2008. This represents almost 32.4 % of the 2008 Q3 gross

<sup>2</sup> Platts Pan European Power (PEP) index is a demand weighted average of the mid-points of Platts' day-ahead assessments on the day. The PEP includes all European power markets (UK, Spain, Germany, France, Belgium, the Netherlands, Switzerland and Austria). In the case of Spain, as there is no day-ahead assessment the last week-ahead assessment of the previous week is used instead.

<sup>3</sup> These are for the time being: Sweden (SE), Finland (FI), Denmark (DK), Germany (DE), the Netherlands (NL), France (FR), Belgium (BE), Austria (AT), Italy (IT), Spain (ES), Poland (PL), the Czech Republic (CZ), Romania (RO), the United Kingdom (UK) and Norway (NO)

electricity consumption of selected countries<sup>4</sup>, a slight increase from the Q2 levels of 31.54 %.



The selected European electricity markets are : Nordpool Spot A.S; European Energy Exchange (EEX); Amsterdam Power Exchange (APX Power NL); Powernext Day Ahead S. A.; Belpex Spot; Energy Exchange Austria (EXAA); Gestore del Mercato Elettrico (IPEX); Mercado de Electricidad (OMEL); Operator trhu s elektrinou (OTE); Towarowa Gielda Energii S.A. (PolPX); APX Power UK and Operatul Pietei de Energie Electrica din Romania (OPCOM);

Episodes of occurring rises in the *PEP* index during a global bear market could also be linked to hedging activities of financial investors when stocks fall. On the other hand, the alarming sequence of bankruptcies and bailouts that began during the month of September seems to have produced a downward effect on liquidity on the forward segment of European electricity markets.

<sup>4</sup> 712,6 TWh. Source : Eurostat.

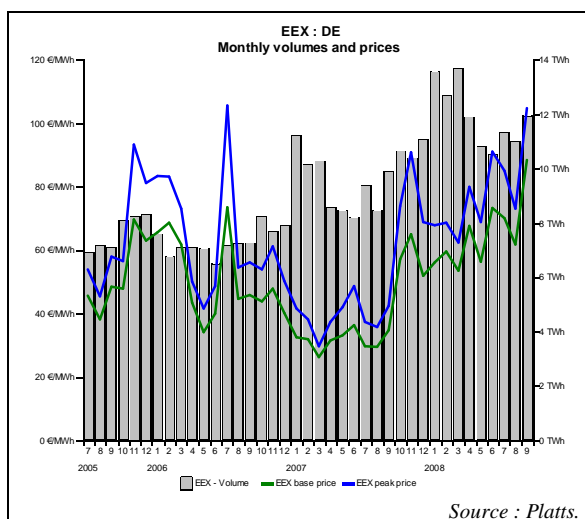
## Regional markets

### Central Western Europe

After clearance from the European Commission, transmission system operators (TSOs) from the Central Western European region have set up a joint allocation services company<sup>5</sup>.

It is expected that similar initiatives would spur the development of a secondary market for transmission rights. This would help participants to manage their risk exposure and increase liquidity.

### Germany



<sup>5</sup> The Capacity Allocation Service Company (CASC-CWE) is a Public Company Limited by shares (SA); its shareholders are the 7 TSOs of the CWE region. <http://www.casc-cwe.eu/en>

The purpose of the company is to harmonize long term auctions of transmission capacity by creating a one stop shop for the market participants, improving efficiency and fostering the cooperation between the TSOs.



EEX average prices in July 2008 were around €70 / MWh for the baseload and €85 / MWh for peakload, which is slightly lower than prices in June. After a further drop during the month of August, wholesale prices rose significantly in September to reach levels of €88 / MWh and €105 / MWh respectively.

Factors that could explain these developments were power plant availability, prices of input fuels and consumption.

According to the German federal statistics office, the primary energy demand rose by 3% year-on-year with gas demand up by 9.5% and electricity demand up by 1.5%. The modest increase in electricity consumption could be explained in part by a more efficient use of energy from the industrial consumers. Another possible explanation is that starting from Q3 2008 the German producing sector was already in recession<sup>6</sup>.

During the month of August 2008, the return of two nuclear power plants to the grid, and the expectations of high wind input<sup>7</sup>, kept prices at low levels. This period similarly saw the price of energy commodities starting to decrease.

The high level of rainfall has also boosted the hydro stocks in France and Switzerland.

German prices have found a support level at around €62 / MWh (baseload) and €73 / MWh (peakload): at these levels buying

interest picked up preventing further decreases.

During the whole period strong buying interest from a big French producer has kept the average French price at a premium in relation to the German price.

At the beginning of September market sentiment changed. Low power plant availability coupled with expectations of a drop in lignite production, put upward pressure on prices.

The clean dark spreads<sup>8</sup> have stayed close to zero or were negative for the first half of the period, and the clean sparks spreads<sup>9</sup> have also experienced an episode in the negative territory (see Figures below). This has also reinforced the bull run in September.

<sup>8</sup> Dark spreads are reported as indicative prices giving the average difference between the cost of coal and the power price. Spreads are defined for a coal-fired plant with 35 % efficiency.

Dark spreads are given for UK and Germany, with the coal and power reference price as reported by *Platts*.

Clean dark spreads are defined as the average difference between the price of coal and carbon emission, and the equivalent price of electricity.

The evolution of dark spreads is represented on page 10.

<sup>9</sup> Spark spreads are indicative prices showing the average difference between the cost of gas and the equivalent price of electricity. The spark spreads are calculated for gas-fired plants with standard efficiencies of 50% and 60%. This report uses the 50% efficiency.

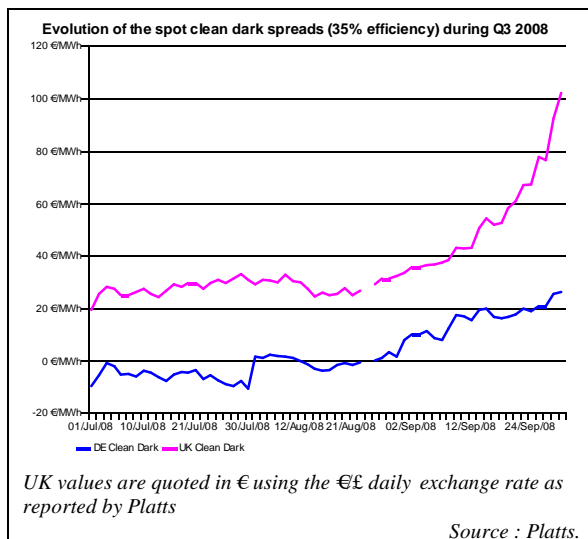
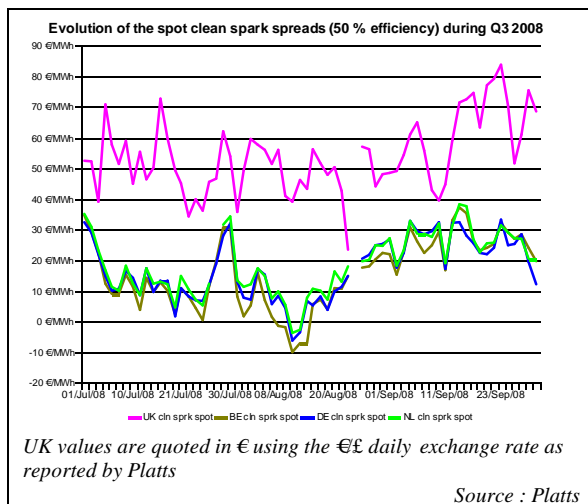
Spreads are quoted for the UK, German and Benelux markets.

Clean spark spreads are defined as the average difference between the cost of gas and emissions, and the equivalent price of electricity.

<sup>6</sup> <http://www.ifo.de/portal/page/portal/ifoHome/a-wininfo/d2kprog/10kprogifo>

<sup>7</sup> Germany has 22 000 MW of installed wind generation capacity.

While the coal price, such as CIF ARA<sup>10</sup> can affect the electricity price<sup>11</sup>, market operators seem to be more and more aware that a strong bullish sentiment in the power market can also influence the primary fuels markets as the coal market.

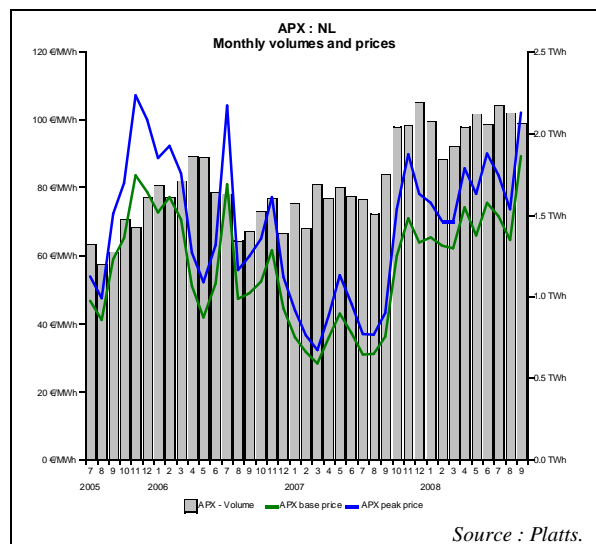


<sup>10</sup> The prompt price of a metric ton of coal delivered in the Amsterdam-Rotterdam-Antwerp area (ARA).

<sup>11</sup> Coal (lignite and hard coal) is still the most important fuel providing nearly half of generated electricity.

The increasing trends that are observed for the spreads as at the end of August can be explained in part by a drop in the input fuel prices coupled with stable and increasing electricity prices.

## The Netherlands



Dutch wholesale prices were strongly influenced by the German market as well as gas, coal and emission prices. In general, the Dutch contract traded at a premium to the German contract, with the spread narrowing when trade activity was strong.

The level of French demand during the holiday period, the wind input, and the disruption of flows over the NordNed cable also made an impact.

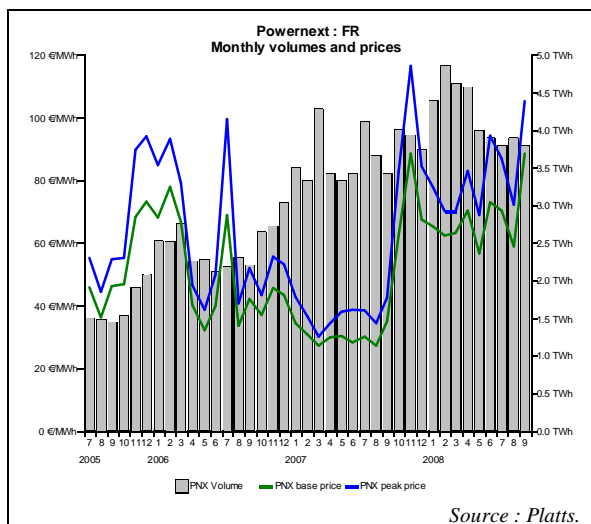
Turbulences in the Benelux banking industry (beginning of September) have also affected trading on exchanges and on the OTC market.

The average baseload price for the third quarter of 2008 (€74.94 / MWh) was 4.6

% higher than the price of the second quarter (€71.61 / MWh). Year-on-year, the baseload price has increased by more than 130% (€ 32.49 for the baseload in Q3 2007).

During the observed period, the companies operating the day-ahead<sup>12</sup> and the forward<sup>13</sup> electricity market in the Netherlands have signed a transaction agreement. The merger, if approved by the Dutch Ministry of Finance, will create an integrated energy exchange trading power and gas in the Netherlands and the United Kingdom.

## France



The holiday period is traditionally associated with modest demand<sup>14</sup> and electricity producers led by EDF used this opportunity to put a number of plants offline for maintenance and refuelling.

<sup>12</sup> APX B. V

<sup>13</sup> European Energy Derivatives Exchange (EDEX N. V.)

<sup>14</sup> According to Eurostat data, monthly consumption in France for August 2008 dropped to 35 TWh from 38 TWh for the month of July 2008.

Spare capacity stayed low with 12 to 15 of the 58 nuclear plants offline. The revisions of nuclear availability seem to continue to affect the market.

During the observed period French prices were very close to German prices. Large rainfall and low demand during the holiday period helped the French contract to be traded at discount to the German contract.

Starting from the mid period, a massive buying (both on *Powernext* and *EEX* as well as on the OTC market) has kept the French forward prices above the German ones. More energy intensive heating in France could explain why the French contract is traded with a premium over the German one during the autumn and the winter.

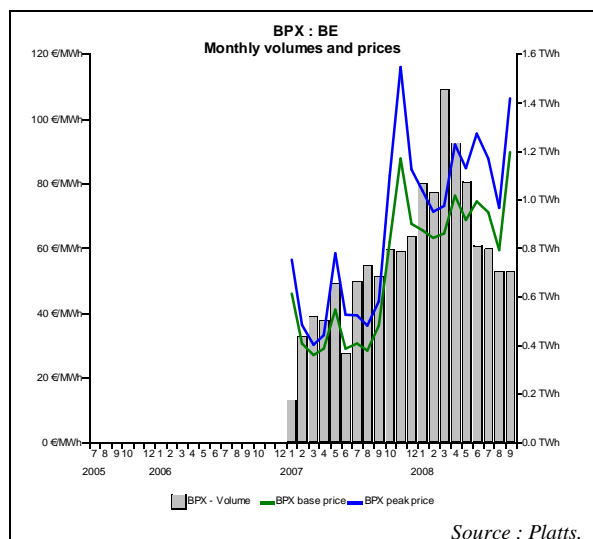
Plans of the grid operator to raise investment from € 850 million / year to above € 1 billion per year have fuelled expectations that the network tariffs will rise.

During the observed period it was also announced that TaRTAM<sup>15</sup> tariffs will be extended to 2010. This was met with mixed sentiment from market participants.

<sup>15</sup> The TARTAM tariffs (*le Tarif Réglementé Transitoire d'Ajustement du Marché*) give an option for coming back to the customers that have left their electricity supplier (and also to the customers that have left the regulated tariff environment).



## Belgium

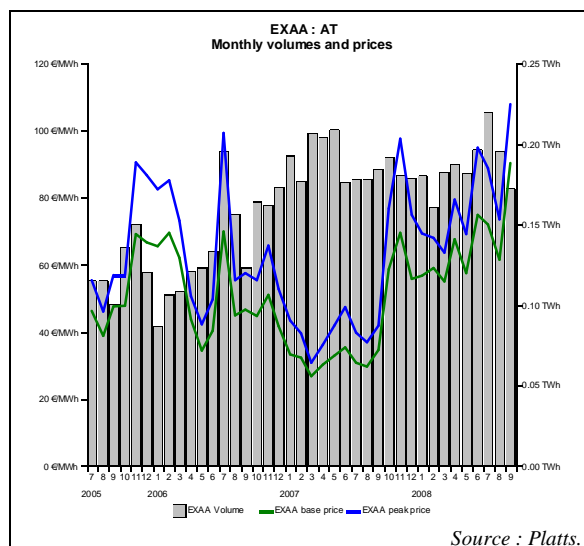


Wholesale prices in Belgium in Q3 2008 (€ 73.10 / MWh for the baseload) were on average very similar to those of the previous quarter (€ 72.94 / MWh baseload). Year-on-year, the increase was 132 % (average baseload in Q3 2007 traded at € 31.43 / MWh). However, the monthly variations were much more pronounced.

Traded volumes stayed low during the holiday period. Moderate temperature forecasts and weak demand kept the price down during the month of August.

September prices were strongly influenced by price developments in France and Germany, as well as turbulences from the Belgian and Dutch banking industry.

## Austria



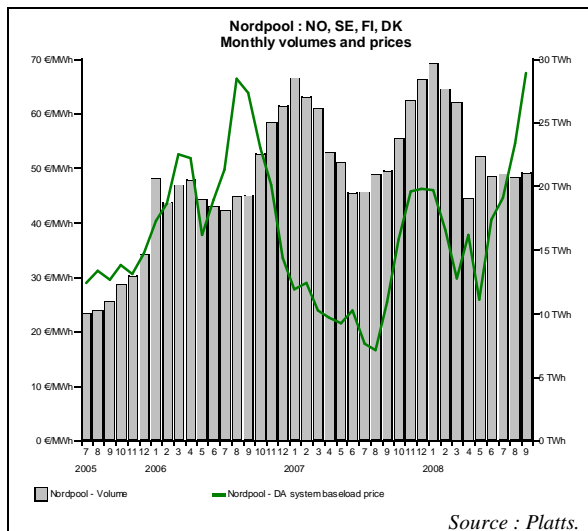
Austrian wholesale prices have mirrored continental trends during the third quarter of 2008 – a modest decrease in July which accelerated in August before a bull run in September.

The average Q3 baseload price (€ 74.45 / MWh) was 12% up compared to the previous quarter (€ 66.37 / MWh), year-on-year the increase was 136 % (€ 31.54 / MWh for the Q3 2007 baseload).

Factors that could explain these developments were weak demand, plant availability and strong precipitation in the Alpine region<sup>16</sup>.

<sup>16</sup> Rain levels have more to do with forward prices than spot prices.

## Northern Europe

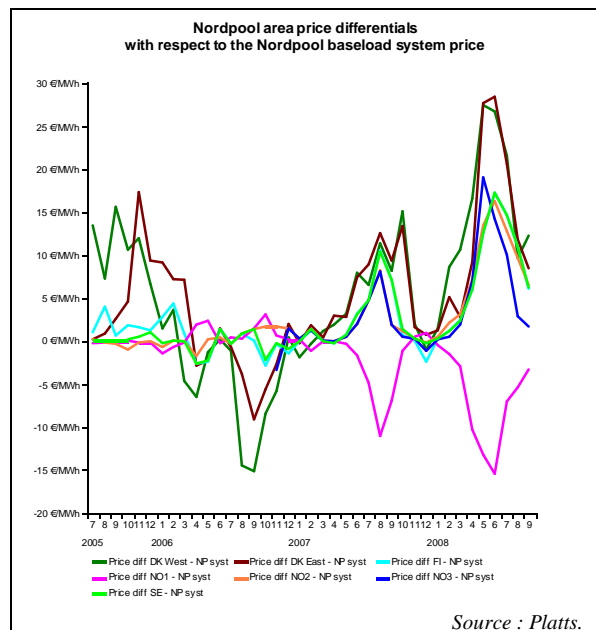


Prices in the Nordic region have increased significantly to levels never seen after the Q3 of 2006. With respect to the previous quarter, the average baseload price has jumped 47.6% (from €39.65 / MWh in Q2 2008 to €58.52 / MWh in Q3). On a yearly basis, the increase is 158% (Q3 2007 average baseload at €22.68 / MWh).

Whereas the high levels of wholesale prices in 2006 could be explained by the modest volume of hydro stocks in the Nordic region (see the next figure), the current situation has more to do with availability of nuclear and hydro power plants in Sweden and Finland and the bull run on gas prices following the shutting down of a major undersea pipeline in Kvitebjorn, Norway.

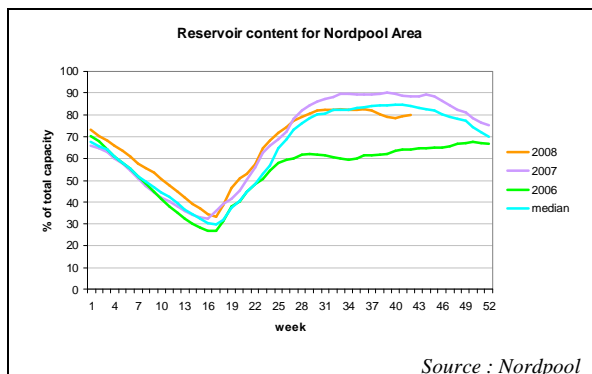
Another reason for the high level of prices seems to be the breakdown of an interconnector between Southern Norway and Sweden – limiting transmission from Norway to Sweden and to Finland and

increasing area prices in these countries. The line has been out since the spring and will eventually come back in May 2009. During summer and fall the capacity between Norway and Sweden has varied causing also area price differences.



Market Coupling between Denmark and Germany was introduced on the 29<sup>th</sup> of September and was temporarily suspended ten days after the introduction. It is not yet clear when market coupling will restart, probably in the first quarter of 2009.

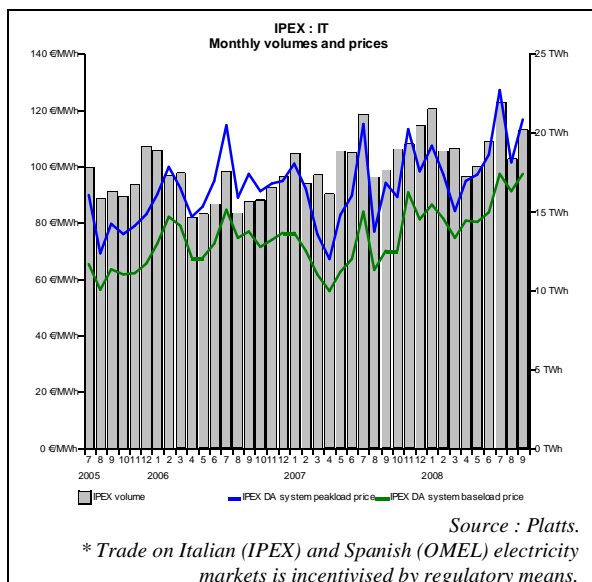
Market participants are expecting that the mechanism will increase transparency and financial liquidity on both sides of the border.



During the observed period *Nordpool* has received an approval from the US Commodity Futures Trading Commission (CFTC) to set up a US-based platform for trading in the *Nordpool* area.

## Apennine peninsula

### Italy \*



In the third quarter of 2008 Italian wholesale prices (€95.17 / MWh for the baseload) have increased 17 % from their level in Q2 2008 (€ 81.4 / MWh) and 31.8% from their levels a year earlier (€

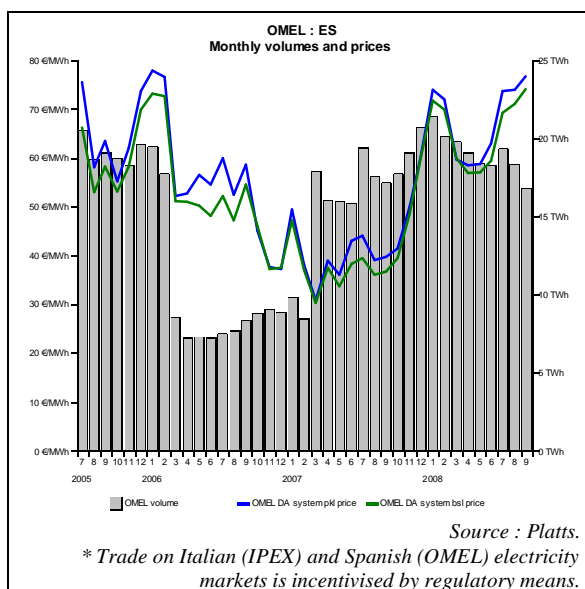
72.23 / MWh). This represents the smallest year-on-year increase for the observed power markets in Europe. On the other hand, Italian wholesale prices are traditionally among the most expensive in Europe.

As of July 2008, the monthly electricity consumption has increased to 33.2 TWh. During the previous month it was at 29.6 TWh. For August and September the consumption was 28 and 33.3 TWh<sup>17</sup> respectively.

The consumption hikes correspond to price peaks in July and September at €97.32 and €97.23 per MWh respectively.

## Iberian peninsula

### Spain \*



For the third quarter of 2008 factors that could explain the Spanish prices were plant

<sup>17</sup> Source : Eurostat.

availability and the severe draught conditions during the whole period: Hydroelectric reserves were very low, with capacity 5-6% lower than the usual level.

Average baseload prices in Q3 were 24% and 91.6% higher than their respective levels in Q2 2008 and Q3 2007 (€71.4, €57.58 and €37.26 / MWh for Q3 2008, Q2 2008 and Q3 2007).

During the month of August, there was a drop in the hydro and wind inputs, and a nuclear power plant went off grid.

According to grid operator Enagas, natural gas demand for power production rose by 32% from July 07 – July 08.

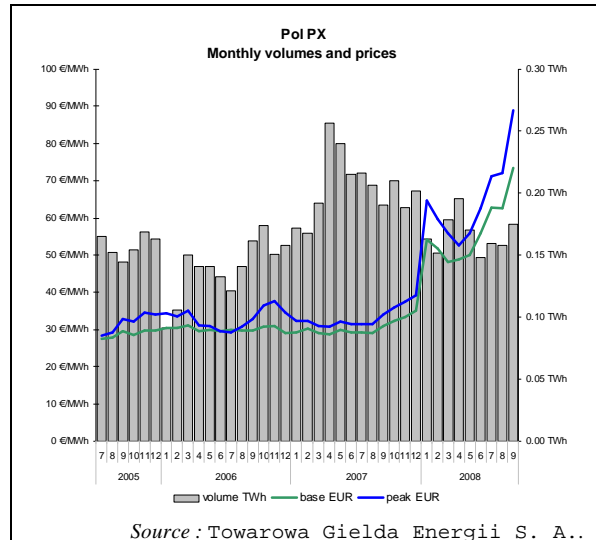
Throughout the period the liquidity stayed thin and the market reacted slowly to price developments in Continental Europe.

## Central Eastern Europe

### Poland

Wholesale prices in Poland have continued to catch-up with German prices during the Q3 2008, reaching record levels. The average September 2008 baseload and peakload levels stood at € 73.44 and € 88.90 per MWh respectively.

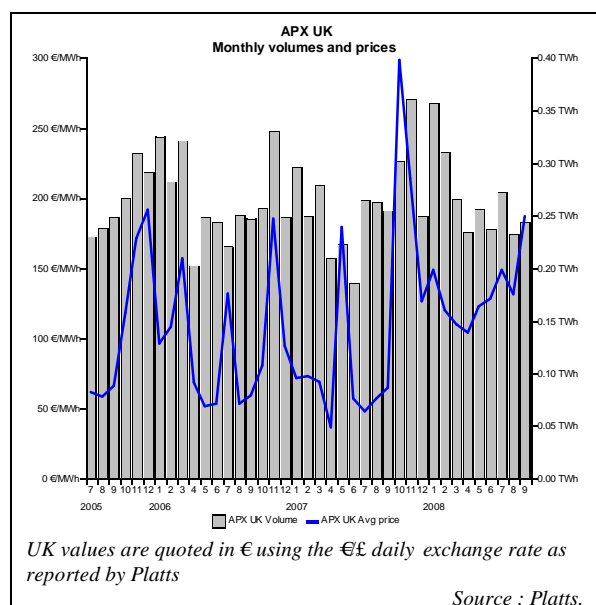
Traded volume was modest during the holiday season.



Among the factors influencing the price were coal and emission prices, as well as input from wind-generated power from neighbouring countries.

## British Isles

### UK



Wholesale prices in the United Kingdom evolved in the €130 – €190 interval per MWh for the baseload, well above the average prices observed in the previous quarter (€117.99 / MWh) or year (€56.47 / MWh for Q3 2007)<sup>18</sup>.

Not surprisingly, at such levels, the spreads were well inside the positive territory: clean sparks frequently above €40 and clean darks above €20 (see figure on p. 5).

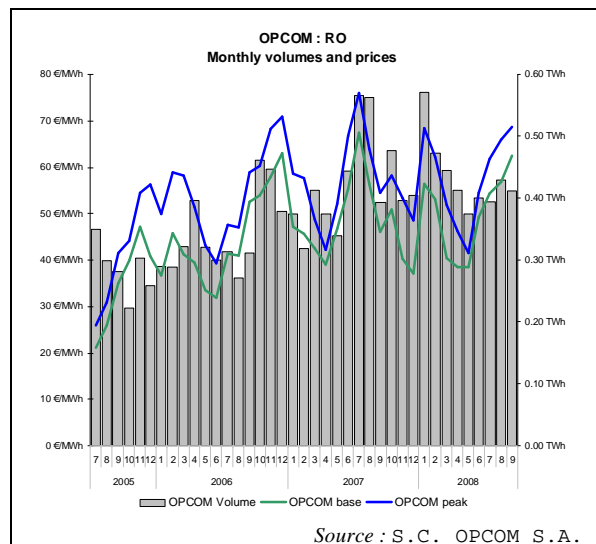
Prices were affected by the evolution of the forecast on the minimum margin of spare capacity.

At the beginning of the period, production halts on a number of coal fired plants as well as nuclear and gas generation outages, created upward pressure on prices. By August the return of coal plants resulted in bearish moods. At the end of the period, the spare capacity was increasing. However, a bull run on gas prices was triggered by a major Nordic gas pipeline forced to stop for a significant period of time.

There were ongoing negotiations for a deal over British Energy between the UK Government, EDF and Centrica as RWE, Suez, Vattenfall and Iberdrola withdrew their earlier bids. By the end of the quarter EDF had agreed to take over BE for over 12.5 billion.

## South Eastern Europe

### Romania



During the third quarter of 2008, the average baseload price on the Romanian exchange was traded at €57,85. This represents a 37,5 % increase from the average price for Q2 2008 but only a 28,6 % increase from the same period of the previous year.

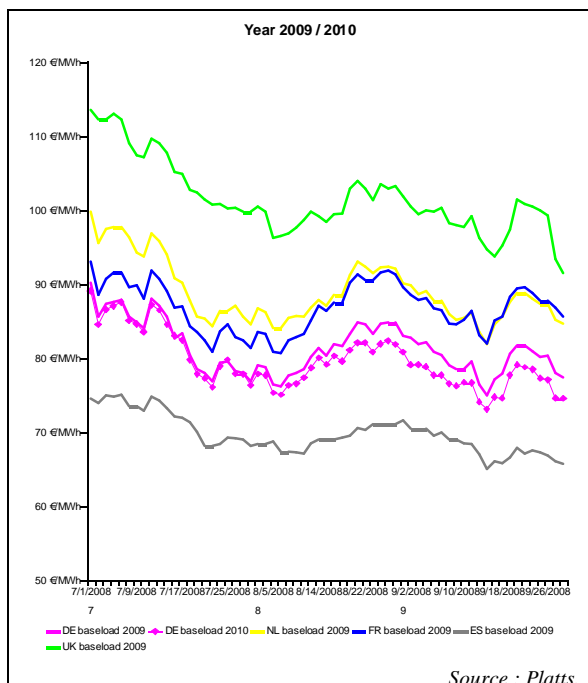
<sup>18</sup> UK values are quoted in € using the £ daily exchange rate as reported by Platts

### A.1.2 Forward markets

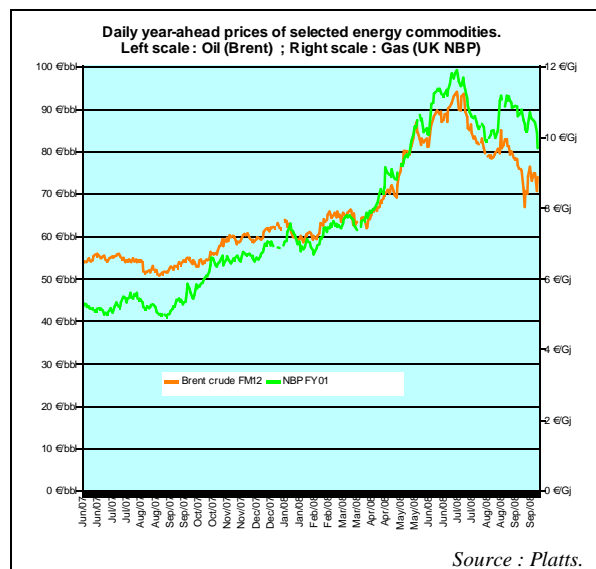
Market participants were in a bearish mood during the third quarter of 2008 as energy commodity prices started to deflate and the prospect of a global slowdown was becoming more concrete.

Fears of recession and decreased electricity demand from industrial consumers have contributed to send prices in the downward direction. Market participants seem to believe that there will be no major difficulties on the margins of spare capacity.

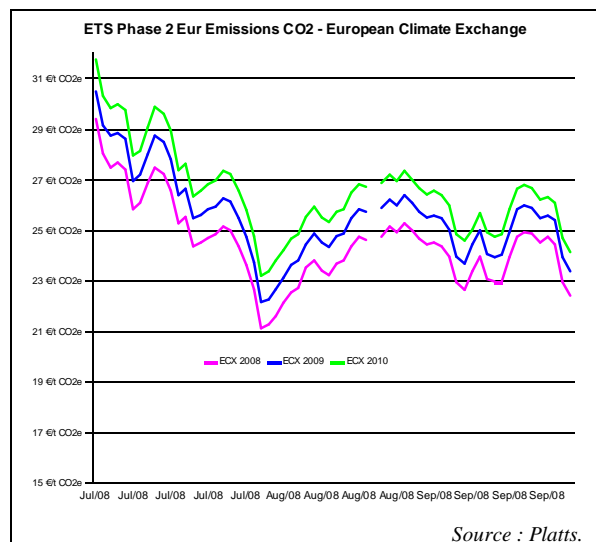
The calendar 2009 baseload contract started the period at €90 / MWh, by the end of September it was traded at €80 / MWh at EEX. Other European market places have experienced similar developments. Monthly and quarterly contracts evolved in a similar fashion (see figure on page 14).



As can be seen from the next figure, prices for the future contracts of *Brent* and natural gas were also downward oriented during Q3 2008.



Bears also dominated the trading on the future contracts for emissions. The 2009 contract started the quarter at levels above €31 / t CO<sub>2</sub>e , by the end of September 2009 it finished below €25 / t CO<sub>2</sub>e.



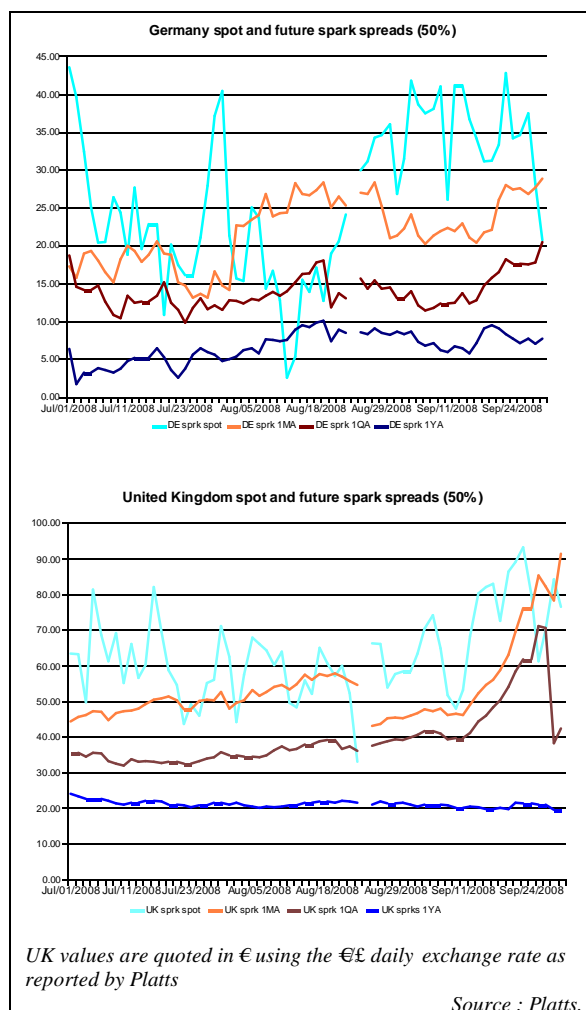


The forward curve stayed in contango throughout the period reflecting expectations that the price of the carbon will rise.

The volume of trading has increased significantly on the *Energy Climate Exchange* of London (ECX) : September daily average volumes are at 12 million m.t.

Emission trading was also increasing in EEX/Eurex<sup>19</sup> and the *Nordpool* carbon market<sup>20</sup>.

Liquidity could further be increased if plans to connect the EC greenhouse gas emission registry to the UN CO<sub>2</sub> registry become operational by December 2008. If this is the case, companies will be able to transfer CER (Certified Emission Reductions) issued under UN CDM (Clean Development mechanism) to their accounts in EU MS registers.

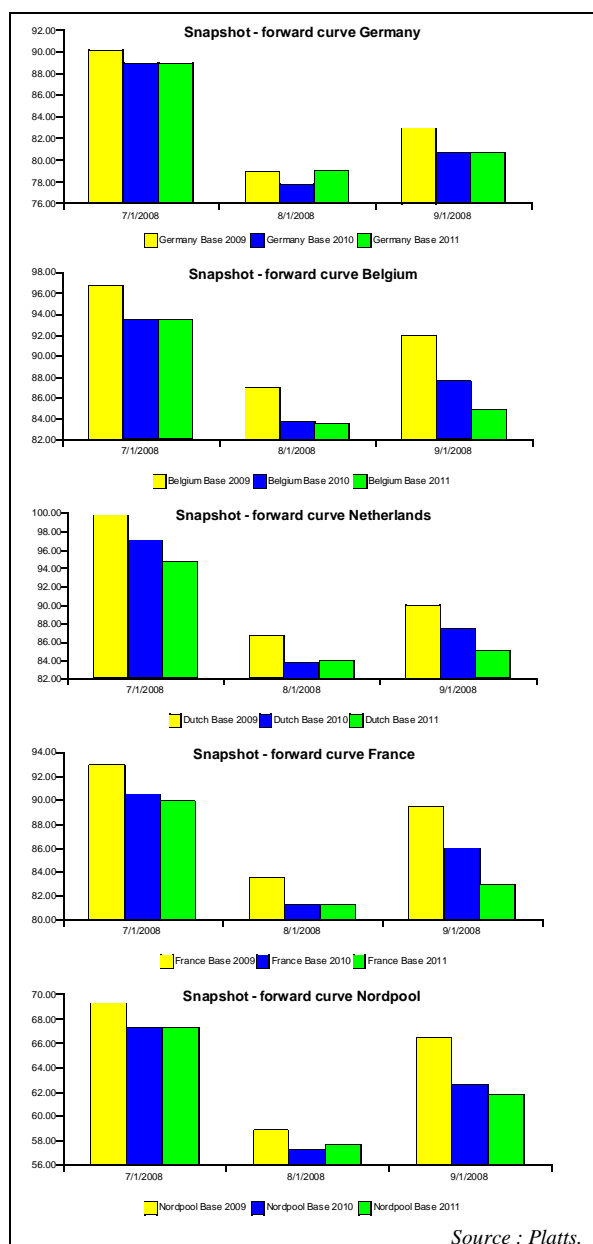


Market participants seemed more reserved as to the level of future spreads. The next figure indicates that longer deliveries were traded in backwardation – yearly spreads, be it spark or dark were lower than the quarterly spreads (which in turn were lower than the monthly spreads).

The spot level of the spreads during the third quarter of 2008 (see page 5) appears far from of these developments.

<sup>19</sup> Trade increasing 5 fold to 27.01 million m.t. in the 1<sup>st</sup> half of 2008 in comparison to the same period of 2007.

<sup>20</sup> More than 73.3 million m.t traded during the 1<sup>st</sup> half of 2008



## A.2 Retail markets

### A.2.1 Prices by Member state

According to the German federal statistics office, energy spending by households in Germany has increased by more than 50% over the period 2002 – 2008.

In France, residential gas and electricity tariffs were up by 2% and 5% respectively, starting from 15.08.08. During the current year tariffs have risen already three times for gas. According to analysis of the French regulator CRE, electricity tariffs may rise to factor in the increase in network charges.

Retail electricity prices in the UK have also gone up in all areas of the six major companies<sup>21</sup>. The Energy Supply Probe conducted by Ofgem in October 2008 looks into these price rises as well as customer segmentation and company behaviour.

To assist vulnerable customers, the UK Government has introduced a £ 1 bn. package to help households save on energy bills<sup>22</sup>. Suppliers have also agreed to increase their spending on social programmes for vulnerable customers by a collective £ 225 million over the next three years<sup>23</sup>.

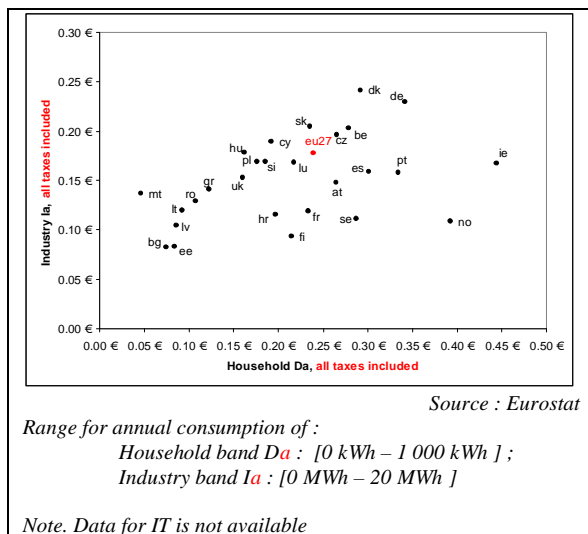
<sup>21</sup> Energy Supply Probe - Initial Findings Report, Ofgem, October 2008, page 71 (*forthcoming*).

<sup>22</sup> News Release

<http://www.defra.gov.uk/news/2008/080911a.htm>

<sup>23</sup> Energy Supply Probe - Initial Findings Report, Ofgem, October 2008, page 121 (*forthcoming*).

The next two figures represent the end consumer price for the most modest industrial and household consumers of electricity in each Member State, as well as Croatia and Norway. Each country is represented by a point, with the corresponding prices for household and industrial consumers on the horizontal and vertical axis. The first figure shows the final prices with all taxes included. The second figure illustrates only the energy component of the final retail price.

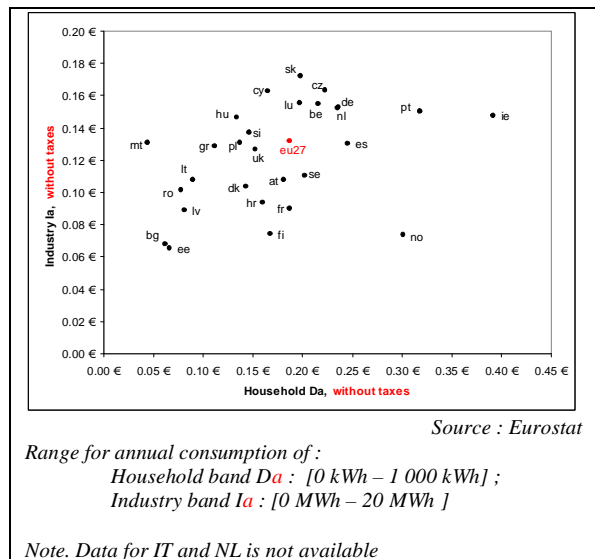


End consumers are facing different situations across the European Union – a typical Irish consumer from band *Da* is paying almost eight times more for their energy than a similar consumer from Malta. Estonian industrial consumers from band *Ia* are enjoying a price almost three time cheaper than the one paid by a similar consumer in Slovakia.

According to Eurostat data, *Da* and *Ia* consumers from Belgium, the Czech Republic, Denmark, Cyprus, Latvia and Hungary are paying less per kWh of energy with respect to prices from the

second half of 2007. Prices have increased in Estonia, Ireland, Slovenia and the UK, while other Member States demonstrate more or less stable prices for the same bands of consumers.

The diversity of retail price across Member States remains strong after factoring out taxes from the final price.

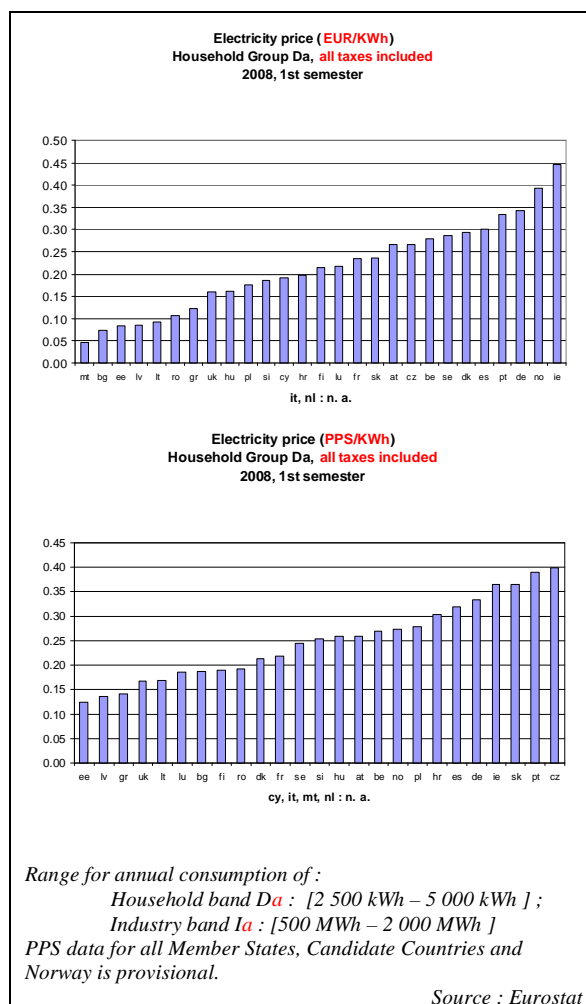


### A.2.2 Cross-panel data on household electricity consumption

Similarly, the ranking of Member States differs substantially with respect to the counting unit (Euro or purchasing power standards).

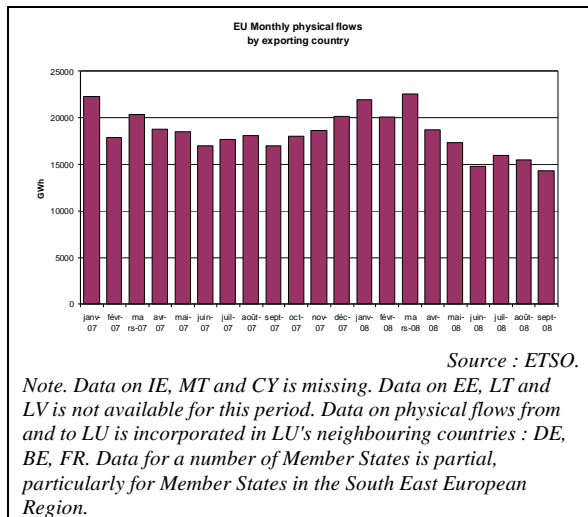
For example, as what regards household consumption category *Da*, five out of the ten most expensive countries are New Member States or Candidate Countries if PPS is used. Eight out of the ten countries with cheapest prices in Euro are from the New Member States.

Rankings tend to differ with respect to the consumption category. As a rule, the most vulnerable consumers are subjected to special regulated tariffs in all Member States. However, the definition of this group of consumers is not the same from one Member State to another (see the "Focus on ..." section of this *Report*).



## B. Building the internal market for electricity: cross border flows and trade

Cross border flows in Europe are evolving in a similar pattern to that of electricity consumption (see the first page of this report). However, the volume of energy physically transiting European borders has been low during the third quarter. For example, the September 2008 volume was 15 % lower than the volume of the same month in 2007.



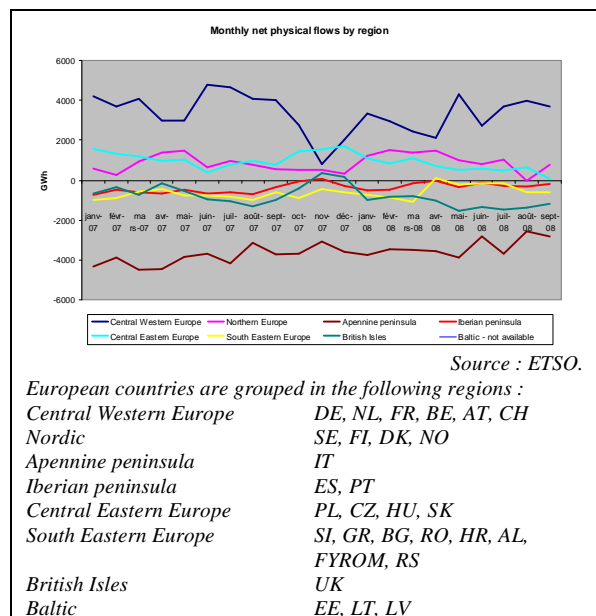
As illustrated in the next figure, a decrease in volume can be partially explained by the lower amount of energy exported by countries in the Central Eastern European and Nordic regions.

Plant outages and weather conditions unfavourable to power production from

wind generators could be among the possible reasons for this slow down in energy flows.

Alternatively, the reduced volume may result from capacity restrictions on the interconnectors, or from the introduction of export fees on a number of borders.

The establishment of independent Auction Offices coordinating the allocation of cross border capacity across the regions, is expected to seriously improve transparency and contracted energy volumes as well as the competition for cross border capacities.



### C. "Focus on ... Energy poverty"

Energy poverty manifests in an unreliable and intermittent supply or a lack of access to commercial fuels and electricity. An alternative definition involves an additional measure; a basic energy *consumption threshold*. Energy poverty is determined using the *poverty ratio* of fuel costs (usage multiplied by price) divided by income. This equates to the level at which a household would need to spend 10 % or more of its income on *all* fuel use to provide an adequate standard of warmth (21°C in the living room and 18°C in other lived-in rooms, recommended by the World Health Organisation). Surveys indicate that the majority of EU citizens have satisfactory access to electricity supply services (European Commission, 2007). Despite this, increasing numbers of energy poor households have been observed and in some member states each 10% increase in energy price is expected to put a further 0.7% of the population into energy poverty. Households with lower income and/or in rural areas continue to spend proportionally more on energy than households with higher income and/or in urban areas.

In areas of Eastern Europe, energy poverty predominantly represents underinvestment in transmission and generating capacity, as well as rising energy prices and climatic extremes. In contrast, energy poverty in the United Kingdom largely represents economic issues. Although the UK operates as one of the most competitive energy markets in Europe (fifth cheapest for electricity and cheapest for gas), progress reports note a consecutive annual rise in energy poor households, attributed to increasing consumer energy prices. In 2006 approximately three and a half million households were fuel poor (The UK Fuel Poverty Action Plan, 6th Annual Progress Report (BERR and Defra 2008)).

Protecting customers by reducing energy poverty is likely to remain difficult with increased import dependency and rising wholesale prices. The economic down turn may cause over supply of energy leading to momentarily reduced prices, yet the ramifications for energy poverty are unclear. Social welfare programmes may be a more effective way of addressing energy poverty than subsidies to the fuel themselves (OECD/IEA, 2006). Improving the housing stock of the fuel poor is thought to be the most cost effective means of reducing both energy bills and carbon emissions.

One method to collect information on how many Europeans are affected by energy poverty is to conduct household surveys. The European Commission, together with Member States, is currently considering a pilot project in this field.