

Energy Viewpoints

Developing Energy Markets

Issue 6 - Spring 2006



Developing Energy Markets

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This regular, quarterly survey, sponsored by APX and produced in association with EFET, summarises expectations about future energy market prices based on responses from senior market participants, analysts and policy influencers from 13 countries across Europe. The survey has been devised and conducted by Moffatt Associates, an independent research and energy market consultancy based in London.

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Prompt Action Needed on Market Transparency.

Dear Reader,

The importance of transparency to the development of a competitive European energy market is highlighted by the European Commission's inclusion of this issue as one of the five key barriers to a fully functioning internal energy market, in its ongoing Sector Inquiry. ERGEG, Eurelectric, ETSO, EuroPEX, EFET and other associations like EnergieNed have all contributed to proposing a strategy to promote the availability of key data in the power and gas markets. There is a widespread consensus that as well as providing prospective market participants with the information that they legitimately need to make informed investment and trading decisions, enhanced transparency is needed for competitive and liquid markets to function effectively.

Transparency is a crucial part of a broader issue namely improved market quality. Often, it is assumed that the existence of a market will provide us (consumers, producers, others) with added benefits compared to the sort of central planning in energy that existed before. The good news is: such added value will certainly be there, provided that market quality is good enough. The bad news is, of course, that the added value will not be there if the market quality is insufficient. In the worst case, one could end up with the situation that has neither the advantages of the central planning (having been discarded in favour of the market), nor the advantages of the market (for lack of quality of that market)...

Is this gloomy prospect a risk for the European energy market? Not necessarily. The jury is still out. Almost a decade ago, Europe embarked on the road to an internal energy market because of the economic

benefits: Europe would be more competitive in the world; therefore we needed the internal market. Now, if we are not able to achieve the right market quality, it is not only the European energy market that suffers, but the position of Europe as a whole. The current complaints from industrial end-users relate to their own situation, but they may signal a broader problem.

So my opinion is that market quality (and market transparency as part of that) is not an issue to be taken lightly. It is not just something on the wish list – it is essential. Only by implementing the right measures in our *internal* market will we eventually achieve the objective of improving Europe's role in the *world* market.

How do we achieve this? To be positive: everyone seems to recognise the need for greater transparency. Our latest survey of European Energy Trends reveals near unanimity amongst respondents in seeing insufficient transparency as a serious problem for the continental European power and gas markets. However, whilst there is a wide-ranging agreement on the objective of achieving transparency, there are differing options on how best to achieve it. Publishing more data will create additional responsibilities for operators – be they producers, TSOs, energy exchanges or other industry stakeholders – charged with monitoring and accurately publishing sensitive data. And market participants will only provide more data if everybody else does. So there are possible problems with implementation.

One of the main issuess is that "asymmetry" in the information levels between Member States, which could impede cross-border business, is to be avoided, as stressed by Austrian regulator E-Control in its contribution to this issue of *Energy Viewpoints*. Similarly, there are concerns about the potential for the disclosure of information to facilitate collusion or - under certain conditions – predatory pricing strategies on the part of incumbents towards competitors forced to disclose an exposed commercial position in the interests of transparency.

However, as pointed out by EFET in its guest article, whilst this may justify temporary and transitional arrangements in those national markets which are most isolated and illiquid, it does not mean that the progress should be set at the pace of the slowest markets. EFET stresses that more ambitious targets, for example, can be set for the more mature power markets of continental Western Europe.

Central to the implementation process is the question of whether to aim for a "common denominator" across Europe, or for a more decentralised approach with progress being made at a regional level, leading to an eventual wider convergence in standards. There are arguments in favour of both options, and our latest survey shows that market opinion is split evenly on the issue. A key principle which will underpin progress under either strategy, however, will be the adoption of "best practice" taken from benchmark markets across Europe. This is the approach taken by the national regulators of the Netherlands, Belgium and France in preparation for the coupling of the three countries' power markets.

With the EU's deadline for full energy market liberalisation in 2007, and stakeholders due to meet at the Florence Forum this Autumn, the current debate on how best to achieve increased transparency is likely to intensify. However, we should ask ourselves if we can afford further delay in implementation, because of the high stakes involved. For this reason, APX favours the "decentralised" or "best practice" pro-active approach, rather than the principle of the common denominator because the latter is likely to lead to the process being delayed or even stalled for long periods.

Another argument for for a stepwise regional approach comes from the financial world. Many of the contracts we trade are, or should be subject to the same guidelines and rules that apply in the financial sector. The MiFID introduction will highlight this. Clearly, the current rules on market transparency and disclosure of price sensitive information in the energy market do not come close to the rules in the financial world (except for those markets with a better score, such as the UK and Scandinavia). This discrepancy is hard to defend.

What happens if one disregards this principle as has been illustrated recently by the CO2 emissions trading scheme (ETS). The lack of clarity on the principles of calculation, metering, reporting and disclosure have led to great uncertainty which has impacted not only on the carbon market but also the prices for electricity futures, and to some extent stock market prices. All the more worrying is the size of the effects, and the fact that one fairly new and insufficiently regulated market can give rise to such distortions in other more mature energy markets – a case of the tail wagging the dog.

For these reasons, APX advocates and supports the enhancement and improvement of market transparency and disclosure of price sensitive information and is also willing to facilitate clear initiatives from the

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market participants. We are committed to working with the market to get it done. Many of the current problems faced by the European energy market are not caused solely by the market itself. For example, the transparency problem is aggravated by the fact that the European market is fragmented in to many geographical sections, with too few market players in each section. This clearly results from structural problems emanating from past political decisions and policies. The remedy for this is market integration, which APX is pursuing wherever possible. For this to work we all have to work together.

So in our view, pro-active initiatives and co-operation are the way forward. There is little time to lose if we wish to achieve our European goals. With that in mind, I hope you enjoy this edition of Energy Viewpoints and if you have any comments please contact us at apx@apxgroup.com.

Bert den Ouden CEO

Mapping the Route to **Market Transparency**

Increased transparency is widely seen as key to an integrated, liquid and competitive European market for power and gas, Moffatt Associates' latest European Energy Trends survey reveals. Differences arise, however, on the issue of how best to achieve this objective.

The importance of transparency

The issue of market transparency is one of the major challenges facing the EU as it tries to achieve an effective single energy market. The survey of our panel of experts in this edition of Energy Viewpoints shows general agreement about the importance of transparency in achieving an effective single energy market in Europe, although there are differing views about how best to arrive at this objective.

Market participants need access to accurate and timely information so that they are able to make key strategic decisions. Data such as production and transmission availability, cross-border energy flows and gas storage are all regarded as crucial, as is information on levels of demand. There is a consensus that ensuring the release of this kind of information is essential for the development of an integrated and efficient energy market which will be trusted by industry stakeholders, thus promoting liquidity.

Market players, especially traders, need to know what is driving prices in the market if they are to have the confidence to trade. New players need information to facilitate decisions on when and whether to enter the market. Consumers also need data to allow them to participate in the trading markets and to make an accurate assessment of their demand strategy. Industrial users in energy intensive sectors such as the iron and steel industry have complained vigorously about a lack of transparency on the European electricity and gas wholesale markets as prices have soared in recent months. Energy producers,

suppliers and Transmission Service Operators (TSOs), all require adequate market information to ensure efficient power and gas supply flows.

Our Panel of experts surveyed for this issue of Energy Viewpoints generally agreed that the data that should be made available should include information on production and transmission, including plant outages, interconnectors and transmission availability in general, and gas storage.

Improving information release should ensure non-discrimination and the equal treatment of all market participants. At present the situation in the gas sector, where there is limited information on access to gas storage, is a particular concern.



Participants in the Madrid regulatory forum for gas believe that the current low level of transparency is an obstacle to the development of a competitive market.

Gas price formation is not transparent because by being set largely by reference to oil prices, prices fail to reflect the supply-demand balance. Long-term contracts based on oil prices also show a lack of volatility relative to gas hub prices and this is seen as a disadvantage because by failing to reflect the fundamentals of gas supply and demand, oil-linked gas contracts harm the market's ability to provide the right price signals for investment in new transport and storage infrastructure. In the case of power prices, the European Commission has fewer fundamental concerns than it does for gas, but the Commission has nonetheless identified a lack of trust amongst electricity users in the way prices are set.

Regulatory action

The issue of improving market transparency is the subject of wide-ranging discussions at a European level. Eurelectric, the association representing the European electricity industry, the European energy regulators' association ERGEG, the energy traders association EFET and the

transmission system operators' association ETSO all want to see greater market transparency in the energy market and have published several documents on the issue.

At the European Commission, DG Competition (DG COMP) and the energy directorate DG TREN both believe that liberalised and competitive markets help security of supply by sending the right investment signals to industry participants. However, the market needs to be transparent and predictable if this competition is to work effectively.

In its report on progress in creating the internal gas and electricity market, published in November 2005, DG TREN declared that appropriate rules on transparency, together with obligations to disclose important information such as available generation capacity, must be in place. A situation in which only the incumbents have the information necessary to trade effectively in the market is deemed unacceptable. The Commission's increasingly forceful approach to perceived market abuses is part of a renewed effort to achieve a fully liberalised market in which all participants have access to timely and accurate information to make informed choices.



The 2003 EU electricity directive (2003/54/EC), the EU gas directive (2003/55/EC), the 1228/2003 regulation on cross-border electricity exchanges and guidelines on congestion management all already contain requirements to publish information, and ERGEG is seeking to ensure that these requirements are implemented. However, there are no specific transparency requirements for energy production, and there is also a lack of clarity about the regime governing access to gas and electricity networks. Both of these are recognised to be key barriers to competition.

In March of this year ERGEG launched a public consultation on the issue of improving information and transparency on the electricity markets for large industrial consumers. Draft guidelines outlined by the group as part of this process aim to establish a minimum level of transparency for the provision of market-related information to wholesale market participants.

Other industry initiatives

Some further initiatives have already been taken at a European level. For example ETSO now publishes certain key data relating to interconnection capacities, grid availability data, planned outages on the network, and load data. ETSO also publishes information on generation, including expected planned outages and energy stored in hydro reservoirs.

Some market players are also taking initiatives to increase transparency. For example, four large power producers in Germany, E.ON, RWE, Vattenfall and EnBW, are now presenting previously unpublished ex ante and ex post data concerning the availability of German power stations through the power exchange EEX's web site.

Although it could be alleged that the initiative is a response to recent accusations in Germany that these companies are abusing their dominant market position, the move has been welcomed by EFET Germany as a limited step in the right direction, and other market participants may themselves decide to voluntarily release information. However, in order to ensure a level playing field across Europe, obligatory, EU-wide rules still seem to be the most likely way forward.

In a position paper on the issue, published in February 2006, Eurelectric provided a detailed list of relevant information that it believes should be disclosed. This includes information on transmission and access to interconnectors, such as a day-ahead forecast of available commercial capacity on borders between price areas, as well as planned maintenance and its impact on day-, week- and month-ahead available capacity. As far as generation is concerned, the document states that information on available generation capacity by fuel type should be published.

Transparency is not the only barrier to the development of competition in the market. Other key issues include industry concentration, the slow implementation of the EU's liberalisation directives, low liquidity, and vertical integration. Nonetheless, there is a general consensus among EU



authorities, energy suppliers, producers, traders and consumers that a lack of market transparency is one of the key problems which must be resolved if the EU single energy market is to become a reality.

Creating a level playing field

One of the main challenges is how to ensure a level playing field in terms of market transparency, since progress on ensuring information release varies greatly between national European markets.

Although some of our respondents believe that transparency has declined in the UK recently, most agree that the UK and Scandinavia are examples of fairly open and transparent markets, with the regular publication of maintenance schedules and outages at power plants and transmission facilities.

In contrast, markets in other countries are less transparent. The overwhelming majority of our respondents feel that the need to improve transparency is greatest in continental Europe, with France often cited as an example of a country where there is a lack of published data. Several members of our panel believe that the dominance of a few leading energy utilities in particular markets does not help to ensure market transparency.

Although some member states have already established rules on market transparency, there is no overall framework across the EU, an issue that the European Commission is keen to address. In February of this year, DG COMP produced a preliminary report detailing results of its energy sector enquiry. This provided indications that concentration and market power, vertical integration and a lack of transparency may be all contributing to a low level of market competition and high prices and restricting

choice to consumers. DG COMP found that as many as 83% of power market participants are not content with current levels of transparency.

Possible pitfalls

However, in implementing transparency there are legitimate concerns that commercial confidentiality should be protected, for example that specific outage plans should not be released to the market in advance. According to ERGEG, "this could motivate some market participants to withdraw additional generation capacity at those times, in order to create artificial scarcity and boost prices." However, the association also declares that the general aim should be to offer to the market all the detailed information needed and where necessary, "impose additional ring fencing and/or regulatory measures to prevent misuse."

Some observers have warned that greater information release will promote collusion between dominant market participants. However, the application of existing EU and national competition laws should help to prevent this. In addition, as more players enter the market, the opportunities for a small number of players to collude will decrease.

The way in which the information is published still has to be worked out. There are several possibilities, including the involvement of the energy exchanges, as well as the TSOs. EFET has proposed that Gas Infrastructure Europe (GiE), the gas market's equivalent of ETSO, should produce and keep up to date an on-line map where users can click on each border point and see all the information required via links to the appropriate TSO web sites in consistent format and units.

A regional or EU-wide approach?

The question of how to facilitate an increase in market transparency, whether by regional development or by imposing EU-wide standards, elicits differing views. Both Eurelectric and ERGEG, however, are proposing a regional step-by-step approach to integrating the EU electricity market rather than the alternative route of imposing standards across Europe and then raising them at a uniform rate.

Both Europe-wide and regional processes have their advantages and their disadvantages. In its February 2006 position paper on market transparency, Eurelectric declared that Europe-wide regulation is "a tried and tested route with clear and well understood governance arrangements." However, it could potentially take longer to establish, and there is the risk that by adopting a single uniform requirement,

given the different stages of market development across the EU, "the slowest/least developed market could end up setting the pace".

In contrast regional arrangements "have the advantage of tailoring the transparency requirements and determining appropriate priorities in the light of current practices." The danger is that this may distort trade between regional markets, but Eurelectric believes that this can be avoided by ensuring that all involved parties coordinate their activities to deliver the required changes in a timely fashion.

As part of the European regulators' programme, ERGEG is proposing 7 European macro-regions which would serve as the building blocks for a single EU energy market. The 7 macro-regions are set out in Table 1.

Table 1. ERGEG's seven Regional Energy Market projects for electricity:

Region	Countries	Lead regulator
Central-West	Belgium, France, Germany, Luxembourg, Netherlands	Belgium
Northern	Denmark, Finland, Germany, Norway, Poland, Sweden	Denmark
UK and Ireland	France, Republic of Ireland, UK	UK
Central-South	Austria, France, Germany, Greece, Italy, Slovenia	Italy
South-West	France, Portugal, Spain	Spain
Central-East	Austria, Czech Republic, Germany, Hungary, Poland, Slovakia, Slovenia	Austria
Baltic	Estonia, Latvia, Lithuania	Latvia

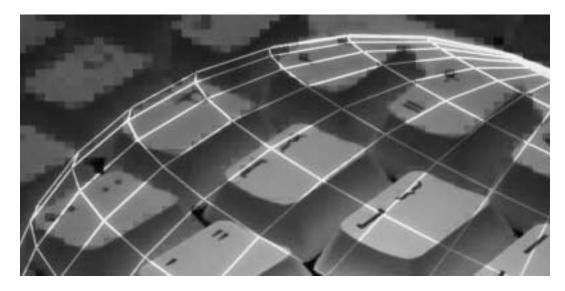
Source: ERGEG

Our Panel of experts interviewed for *Energy Viewpoints* hold differing views on whether a regional or pan-European strategy is best, although there is a clear majority in favour of making the process mandatory rather than voluntary.

Next steps

The transparency issue will continue to be the focus of debate in the months to come. The ERGEG consultation will end on 10 May 2006, and the group is then expected to present new guidelines for transparency to the meeting of the Florence electricity regulatory forum in the autumn. It is possible that Eurelectric, ERGEG and the European Commission may present a common proposal on market transparency at this event.

With the 1 July 2007 deadline for full energy market liberalisation approaching, the final reports by DG TREN and DG COMP on the functioning of the energy market are both scheduled to be published by the end of 2006, and both are expected to address possible remedies for the transparency issue.



Market Transparency – Pushing for a Breakthrough

Raising levels of transparency in the European wholesale energy market will not be without risks, at least during the transitional phase whilst some smaller, illiquid, national markets are still heavily dominated by incumbents. This notwithstanding, the process should be accelerated in those markets where current market depth and liquidity allows early progress, argues Peter Styles, Member of the Board of the European Federation of Energy Traders (EFET).

The present situation

The European energy market is currently in a difficult and sensitive phase. Core legislation, which aims to bring more competition and complete the EU electricity and gas liberalisation endeavours, had to be transposed into national laws by July 2004. However, some Member States have been reluctant to implement the legislation as required and are now accused by the Commission of undue delay or inadequate transposition. This resistance to implement the Directives is aggravated by disagreements about how actually to achieve a competitive European energy market and by disputes concerning mergers, which might reinforce or create "national champions".

The more mature liberalised European markets are to be found in Scandinavia for electricity and in the UK for electricity and gas. A strong regulator and some ownership unbundling have helped develop competition in the Netherlands in power and more recently in wholesale gas too. Germany made rapid progress in opening its electricity sector in the late 1990s and has arguably now the most liquid wholesale power market in Europe.

Certainly numerous and significant obstacles to wholesale and retail market entry remain in most continental countries. One

of these obstacles is a lack of transparency of information about the utilisation of infrastructure.

Current data disclosure practices

The deficiency in the provision of data about utilisation of infrastructure is most notable with regard to gas imports, transportation and storage. And yet because the gas sector on the continent suffers from so many more pernicious barriers to competition, ironically the impediments to disclosure of power sector data currently produce a more serious limiting effect on market entry. Potential new entrants at least perceive that they cannot enjoy equal access to information, compared with incumbent generators and suppliers.

There is increasing recognition by regulators and Transmission System Operators



(TSOs) of the legitimacy of demands for the publication of information about power transmission capacity availability and capacity utilisation (i.e. actual flows ex post.) In the case of electricity generation data, the majority of network operators and power exchanges do not release ex ante data about individual plant availability; many do not even offer aggregated information by fuel type across a given geographic market, nor prompt (H+1 or H+2) ex post electricity production data. This absence of publication allows certain market participants - in particular vertically integrated companies - to retain for themselves crucial advance information about, and immediate historic data pertinent to, the likely supply curve for generation output.

A lack of information on gas flows, outages, congestion, and available transportation, storage and processing capacity is still a major obstacle for gas traders shipping gas on continental pipeline networks. The deficiencies are similar to those in the power sector, albeit with differing

emphasis depending on the TSO and/or the country concerned. Poor practices range from simple non-publication of historical flows on the main pipeline interconnections and of daily system demand, through to a failure to provide information about how available capacities have been calculated.

Overall the level of information at present published about utilisation of infrastructure in European energy markets is unsatisfactory. Only a few markets, such as those in Nordic and UK power, are highly transparent, with transmission system or market operators publishing data, about both generation and transmission availability on a daily, even hourly, basis. It is no coincidence that these are among the most competitive and liquid markets in Europe.

It is almost impossible to summarise briefly but accurately the nature of the data, which will facilitate competition and liquidity in gas and power wholesale markets, but the following table gives at least a comparative approximation.

Table 2 Summary of data requirements

Gas Electricity

- Aggregate demand levels and the level of line pack
- Cross-border transmission capacity availability ex ante
- Charges for balancing services
- Pipeline flows ex post
- Maintenance and outages of pipelines and storage facilities
- Gas storage capacity availability and flexibility
- Gas allocation factors
- Congestion management methodologies in force
- Supply and demand forecasts used by transmission system operators

- Aggregate demand levels
- Cross-border transmission capacity availability ex ante
- Charges for balancing services
- Ex post transmission flows and generation by plant
- Ex ante generation availability aggregated by fuel type
- Plant maintenance schedules
- Plant and network outages promptly upon occurrence
- Congestion management methodologies in force
- Supply and demand forecasts used by transmission system operators

Dealing with arguments against ex ante disclosure of power plant availability

EFET explained at some length in its major 2003 paper "Transparency and Availability of Information in Continental European Wholesale Electricity Markets" the benefits of wider and more prompt dissemination of data by TSOs and generators. Since then ETSO, the association representing European TSOs, has responded positively to the challenge of establishing EU standards for transmission system information disclosure. On behalf of generators, Eurelectric has proved more hesitant in agreeing the appropriate standard and in proposing a timetable for improvements in disclosure.

Part of the difficulty with publication of advance information about generation plant availability revolves around two arguments:

- The idea that publication may allow especially larger generators at least tacitly to collude in setting prices
- The risk that smaller generators may be exposed to exploitative trading strategies from large competitors if an outage shows that they are short

The European Regulators Group for Electricity and Gas (ERGEG) has in March this year issued a consultative document proposing guidelines for good practice in transparency throughout the EU. The ERGEG document suggests that individual national regulators may judge that publication of data could facilitate *collusion*.

With regard to this danger, EFET in 2003 concluded that, collusion could indeed be a problem in concentrated markets. But we went on to advocate that a concentrated industry structure should be a matter for longer term political resolution, whilst in the meantime the behaviour of dominant market participants was best addressed by either financial regulators (responsible for new market abuse legislation relevant to commodity derivatives trading) or competition authorities, on a case-by-case basis. Specific instances or risks of collusion could not constitute a justification for an overall failure to release the types of information required by a competitive market.

Nearly all traders remain of the opinion that the benefits of information release still outweigh any potential detriment, largely because collusion can be an equal – if not a greater – problem in opaque markets and because greater transparency at least makes it easier to identify, police and respond to instances of collusion. Using concentration and collusion as grounds to withhold information therefore risks creating a vicious circle, where competition is stifled because of the absence of information,



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but information is not released, effectively owing to the lack of effective competition.

In a liquid, competitive wholesale power market, the *commercial* detriment to any particular market participants from requiring generators to release *ex ante* generation information to other and potential market participants is likely to be limited. Larger, vertically integrated players with a portfolio of generation assets, customers and wholesale traded positions (physical or indeed financial) can surely look after their own potential exposures when releasing purely physical asset related data.

However, in illiquid markets, revelation of unplanned outage information can potentially damage the commercial position of smaller players. For example, a single site generator is less likely to have access to a portfolio of assets and contractual purchases (including options) to cover its unforeseen outages, making it more likely that a requirement to reveal outage information will reveal its overall exposed commercial position to the market. In such illiquid markets, smaller generators may thus have to buy in power at short notice or resort to balancing arrangements - at prices controlled by their larger competitors or alternatively countenance high premiums in buying options to cover potential outages in advance. The actual exposure will of course depend on what is the fuel type of the price setting plant in the particular geographic market during the hours of outage in question.

There may therefore be a case for temporarily differentiating the *ex ante* and immediate *ex post* disclosure obligation of small, independent generators in isolated, illiquid national markets. However, this difficulty need not stand in the way of rapid improvements in the disclosure regimes

across the more mature power markets of continental western Europe.

Next steps

EFET will suggest in its imminent updated position paper on transparency that ERGEG take a more proactive and determined approach to publication for the market of ex ante and ex post generating plant availability data. In a December 2005 joint roadmap for reforms in the prospectively linked French, Belgian and Dutch wholesale power markets, the three countries' national regulators CRE, CREG and Dte mentioned that most respondents to their consultation exercise pleaded for a higher level of market transparency.

These regulators have promised to publish a detailed list of transparency items by 1 August 2006. This list will contain a common benchmark for implementation by market participants (including TSOs) by 1 July 2007 at the latest. The three regulators will strive to aim for the "best practice" transparency of the three countries by way of a minimum benchmark, but will also take into account best practices in other areas, including apparently the Nordic countries.

It is understandable that ERGEG as a whole may not be in a position to adhere to the precise timetable envisaged by CRE, CREG and Dte, but a commitment to the fast implementation of improvements, utilising the framework of the planned regional wholesale power Mini-Forums, would be appreciated.

And if real improvements in information disclosure are finally realised across the whole continental power sector, at least the gas sector will receive an indication of the standards it should aspire to.

Data Disclosure Needs in the European Electricity Market

Regulators are playing a central role in defining what will be the data disclosure requirements in the new European markets for power and gas. Tahir Kapetanovic, Director of Electricity at Austrian energy regulator E-Control outlines progress to date and the next steps for achieving transparency in the power market.

What the electricity market needs and why

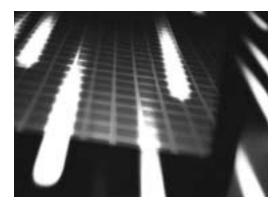
The establishment of a clear pan-European framework for information management and transparency is of the utmost importance for the development and functioning of a competitive electricity market. The availability of and access to information, both across and between Member States, at all levels of the electric power supply value chain is vital to market efficiency. In some instances the lack of sufficient and transparent information is considered to be undermining competition and hampering market development.

Furthermore, the holding or dissemination of market information itself, if done in an asymmetric or discriminatory manner, is likely to damage wholesale market confidence significantly, deter new entry to the market and hamper the competitive process. Information gaps and inconsistencies related to trade across borders may have a significant effect on cross-border trade and investment and therefore ultimately on the development of the Internal Electricity Market (IEM).

Electricity wholesale markets are dynamic environments, with suppliers, generators, traders and demand customers taking

operational decisions, within various timescales. The availability of relevant ex ante information on key issues, such as expected levels of demand, network investment and capacity allocation, forthcoming generator and network outages, clearly has the potential to impact upon a market participant's decision. For example, timely access to relevant demand forecast data, in varying timescales, will support a supplier in portfolio management and in reducing the costs of imbalance.

Equally, the availability of timely and accurate ex post information is important in helping market participants to understand past market activity and thus to predict future behaviour, which can be achieved within a market based environment. Market participants depend heavily on their access to such



information and its absence is likely to lead to inefficient decisions being taken and increase the risk faced by market participants. Any such shortfalls are likely to have a negative impact on price formation, trading and investment decisions and competition.

The importance of access to, and adequate management of key electricity market data has been emphasised elsewhere too:

- The energy sector inquiry by the European Commission's Directorate General for Competition (DG COMP) stressed the importance of transparency ('Issues paper', 15 November 2005), highlighting the lack of transparency on wholesale markets and the general perception that generation data in particular is being shared first by incumbents with affiliates, which undermines confidence in wholesale trading.
- The Commission's DG for Transport and Energy (DG TREN) in November 2005 published a Report on progress in creating the internal gas and electricity market which stated that appropriate rules on transparency together with obligations to disclose important information, such as available generation capacity, must be in place. This report noted further that a situation where only the incumbents have the information necessary to trade effectively in the market is unacceptable.
- The European Regulators Group for Electricity and Gas (ERGEG) is particularly aware of complaints raised by market participants and stakeholders, concerning the lack of adequate

transparency resulting in restricted market liquidity and the development of a competitive market.

• At the 12th Florence Forum on electricity regulation, a number of stakeholders stressed the need for greater market transparency. In their statements the stakeholders called on European energy regulators to secure the release of more information about, amongst other items, transmission, demand and generation in European electricity markets, concluding that further information release will improve wholesale market competition, remove entry barriers and underpin the acceleration of European liberalisation.

The need for consistency

At present, arrangements for providing market participants with information related to electricity markets vary considerably across the EU Member States. As we move towards the IEM with increased cross border activity, there is a clear need for consistency in available market information between Member States to ensure that disparity of information does not impede cross-border activity. This means that at least general principles on information transparency shall be adopted. Furthermore, it is also considered appropriate that a set of required information is identified to provide guidance to regulators and industry on this important issue.

A framework of sufficient transparency needs to be set accordingly and monitored by regulatory authorities. A common, coordinated approach of relieving information "asymmetry" through disclosing necessary data and information on all components of the electric power supply value chain – generation,

transmission, distribution, supply, balancing, etc. – in a consistent and compatible manner will also significantly contribute to maintaining and improving the operational security of European power supply networks.

Minimum requirements on information transparency

The information available to the market should include at least the following components and contents:

- Load information including actual and forecast load per control area, margins.
- Transmission and interconnections including grid expansion projects, maintenance, capacities.
- Generation including installed and available generation, forecasts of intermittent generation.
- Balancing including volumes, bids and pricing in the balancing market.
- General wholesale market issues including supply/demand relationships, prices, volumes.

A more detailed description of these requirements is contained in the ERGEG Guidelines of Good Practice on Information Management and Transparency, presently published and available for public consultation at www.ergeg.org.

Lessons learned and future prospects

A closer view on the more mature electricity markets like those in the UK or the Nordic countries, reveals some common "good practices" in dealing with transparency and information management, like maximising the scope and quality of information accessible to the market, consulting market participants and interested parties on their real needs, paying particular attention to the management of information between and within grid operators and market participants, as well as a timely and up-to-date contents management of whatever data requirement is being addressed.

While several years of ongoing discussions on voluntary release of the necessary information to the European electricity markets by different information "owners" have resulted in some improvements, these are by far not sufficient. This is also due to obstacles such as differing data privacy laws, resistance to change on the part of those market participants who might benefit by a "privileged" information access, as well as differences in regulatory framework and market design.

It seems therefore that a coordinated, pan-EU way forward, with a common framework – possibly of legal nature – would be the most efficient and effective means of achieving the necessary improvements in transparency in the European electricity market. It is in that context, that ERGEG intends to contribute to progress with its pending public consultation on best practice as outlined above.



Trends in European Energy **Quarterly Survey (Spring 2006)**

This edition of *Energy Viewpoints* includes the results of our latest quarterly survey researching trends in the European energy markets.

This regular survey is run in association with **EFET** (the European Federation of Energy Traders) and is conducted by Moffatt Associates, an independent market research and business strategy consultancy based in London.

The objectives of this research programme are to canvass views on trends in market prices and energy market developments, and to monitor changes in market perceptions over time.

Results are based on the views of an established Panel of leading market participants and policy influencers. The survey itself consists of an in-depth telephone interview, and is conducted on a strictly confidential and non-attributable basis. Respondents were interviewed in March and April 2006.

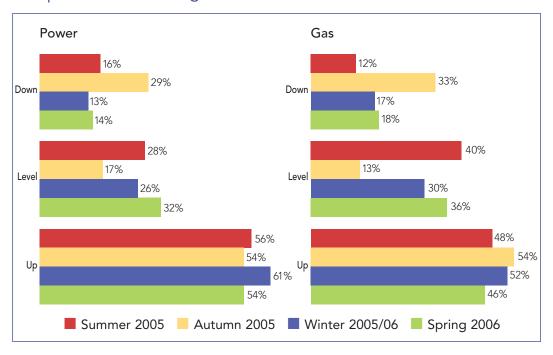
This quarter we received contributions from 25 senior market participants from 13 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Poland, Spain, Switzerland and the UK).

The key findings are as follows:

Market Trends

• There are only relatively moderate changes in market outlook compared with last quarter. For power, a reduced majority of respondents expect a rise in spot prices in the next 12 months (54%, compared with 61% last quarter), with

What will be the underlying trend for spot energy prices across Europe over the coming 12 months?



most of the change accounted for by a rising share of respondents expecting stable prices (32%, compared with 26% last quarter). A rising number of respondents, meanwhile, expect a fall in forward power prices over the next 12 months¹ (now 21% of respondents, compared with just 4% previously). Almost two-thirds of respondents however continue to anticipate a rise. For **gas**, the largest number of respondents (46%) still expect spot price increases, although their share of responses is down from last quarter. With regard to forward gas prices,

The next section of our survey examines price expectations for four regional markets:

however, the share of those expecting a

rise has jumped from 43% to 61%.

- Germany, Scandinavia, the UK and the Netherlands. Looking at power in the four regional markets covered in-depth by the survey, expectations of a rise in prices continue to prevail for Germany. In Scandinavia and in the UK, views remain somewhat more evenly divided by comparison, whilst in the Netherlands a rising share of respondents expects price rises in the order of over 3%.
- For gas, a somewhat increased majority of respondents expect German prices to firm in the short term; for Scandinavia

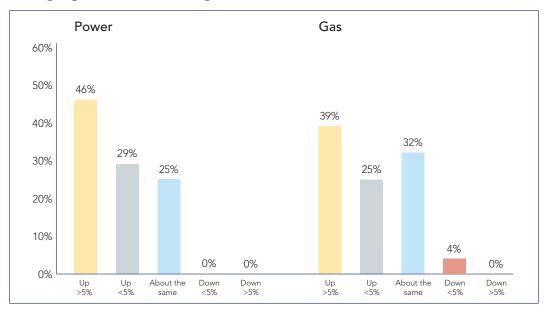


respondents expecting a rise in prices continue to outnumber those anticipating a fall, although the largest single group sees prices remaining steady. In the **UK**, even following the recent sharp rises in gas prices, fully 50% of respondents anticipate further increases. In the **Netherlands**, a rising number of Panel members anticipate a sizeable rise in prices.

- Respondents were asked to identify key issues for the energy market over the next 6-12 months. The pending National Allocation Plans for the second phase of the EU's Emissions Trading Scheme (ETS) are being closely watched. Regulatory action to spur on the opening of European energy markets is another hot topic, whilst an emerging concern is the ongoing wave of mergers and acquisitions in the European energy sector. Increasing interconnection between markets (e.g. the trilateral coupling of the Netherlands, Belgium and France) remains a key issue for several respondents.
- Of five factors exerting pressure on energy prices submitted to our Panel for consideration, movements in fossil fuel prices and environmental pressures remain those perceived as most important and expected to exert an upward push on prices. Industry consolidation is judged to be the next most important issue, and is likely to exert upward pressure on energy prices in the opinion of most Panel members. Market liberalisation and infrastructural developments are seen likely to remain lesser influences on prices over the next 5 years.

(1): Starting with this edition of Energy Viewpoints, Panel participants are being asked for a 12-month regional view of prices, instead of a 6-month view as in previous quarters' surveys.

How much do you see market trading activity across Europe changing over the coming 6 months?



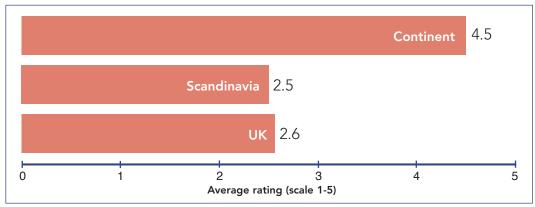
- On average, respondents said that 33% of their company's traded volumes were cleared in the previous quarter, up from 17% at the time of our last survey.
- The share of respondents expecting an increase in market trading activity has increased for power (75% overall, compared with 67% last quarter) and declined for gas (64%, down from 76%).

Special topic: Market transparency

Each quarter a different special topic is examined, with additional questions put to the Panel. Last quarter power auctions were looked at in-depth, and this time our focus is on energy market transparency.

Respondents were near unanimous in seeing a lack of transparency as a problem seriously affecting the continental European power and gas markets. By comparison, the Nordic markets and the UK are seen as considerably more transparent, although in the words of one respondent, even in these markets "there is always room for improvement." The situation in the UK, which scored slightly worse than the Nordic market in terms of perceived transparency (see chart) evoked particularly mixed responses, with

Importance of raising transparency in the following regions:

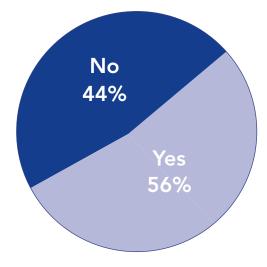


some panellists echoing the view that "the UK was a transparent market, but this has significantly reduced in the last few years." Moreover, several Panel members see a need for increased transparency in the gas markets of both the UK and Scandinavia.

• Asked whether Europe's regional and national energy markets, with their differing degrees of development should all be held to a common standard of transparency, our Panel were split, with a slight majority inclined on balance to agree. A key argument voiced in support is that "there should be the same standard, so that there is a level playing field for everyone." Those doubtful of the viability of a single standard point out that "there is no one right answer," and that "markets at different stages [of development] need different levels of transparency."

Is a single standard right for all markets - even immature ones?

(Shares estimated from survey responses)



• Our Panel members were prompted to indicate what data is most needed to **improve transparency**. Their responses focus on a wide range of production,

transmission, capacity and demand data. For power, amongst other variables the following were highlighted: availability of generation capacity, outages, availability of transmission capacity, including interconnectors; and information on load. On the gas side, respondents called for more information on gas field production, LNG vessel movements, storage levels, third party access to infrastructure and availability of pipeline capacity.

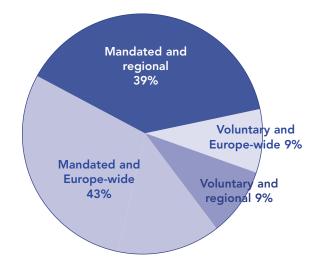
- Respondents were divided over whether or not to be **optimistic that progress** will be made over the next 12 months. The pessimists cited resistance on the part of major energy companies to increasing transparency, as well as inaction by government and regulators. Optimists however see gradual improvement, and focus on steps recently taken by some major power generators – notably in Germany – to improve transparency.
- We concluded by asking our Panel what they believe is the best route to achieving transparency - specifically, whether the process should be mandated or voluntary, and whether minimum standards should be set at a Europe-wide or at a regional level.

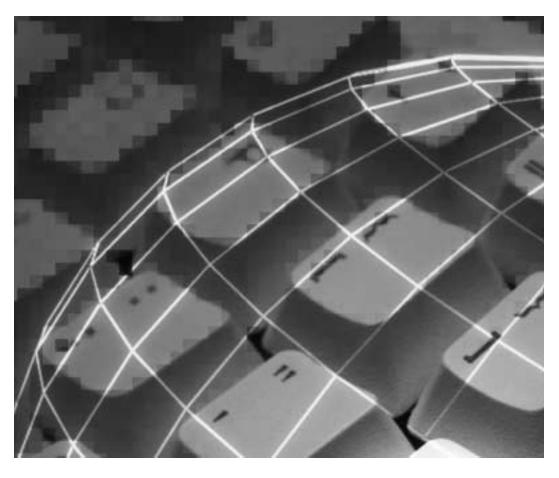


The results of the survey reveal a strong preference, at over 80% of respondents for a mandated approach (see chart). Among the minority in our Panel who favour allowing industry operators to drive the process themselves, one expert reflected that "in an ideal world, the industry would embrace this as a real challenge and recognise that unless they get their act in order, they will suffer severe pains of regulation in the longerterm. Management should take a much more long-term view." Among those favouring the lightest regulatory approach of all - i.e. regional and voluntary targets – one panellist pointed out that "there is a lot of bad [market] data on web sites, and mandatory publication would exacerbate this." The majority of respondents favouring a mandated approach were split almost evenly on the issue of whether standards should be set at a regional or Europewide level. "Getting all of Europe to agree is impossible," argued one supporter of regional targets.

What is the best means to further transparency?

(Shares estimated from survey responses)





APX News

APX Group sees volumes grow strongly in Q1 2006

APX Group exchanges have seen strong growth in volumes traded.

Dutch power exchange APX reached an all time quarterly record volume of 4,997 GWh, an increase of 21% from Q1 2005. In March, the Amsterdam-based exchange achieved a record monthly volume of 1,710 GWh.

A record was also reached on APX Power UK (formerly known as UKPX) with volumes of 2,561 GWh for the first quarter, marking a year-on-year growth of 19%. In January, the UK exchange saw 880 GWh traded, the second highest monthly volume on its spot and prompt markets since its launch.

APX Gas UK's On-The-Day Commodity Market (OCM) recorded a Q1 trading volume of 32,516 GWh, amounting to an increase of 12% from the same guarter in 2005. APX Gas NL's first guarter reached 104 GWh while APX Gas ZEE's volumes amounted to 5 GWh. As the Dutch and Belgian Day Ahead Markets started in February 2005, and both continental



Within Day Block Markets only started in mid-April of last year, a comparison with Q1 2005 is not applicable.

APX Group Summer event in co-operation with Montel Powernews

APX Group and Montel Powernews, the Scandinavian energy news provider, will jointly hold a one-day markets conference at the Maritime Museum in Amsterdam on Tuesday 20 June.

Among the topics to be addressed are:

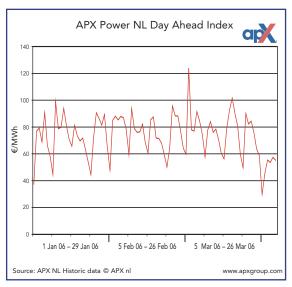
- The impact of global markets on European energy fundamentals
- Transparency what can be learnt from the Nordic market
- The outlook for renewable energy
- Latest developments in the CO2 market
- The outlook for prices

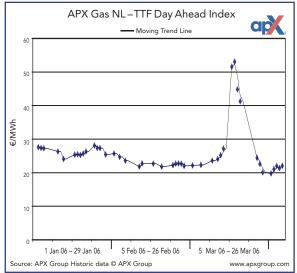
Speakers include Kenneth Rotvig Dupont, Sales Manager at Nord Pool Denmark, Nigel Harris, Principal Consultant, Kingston Energy Consulting, Phil Hare, Principal Consultant, ILEX Energy and Peter Niermeijer, Ecofys and RECS International.

The conference will conclude with a canal cruise, dinner buffet and evening reception.

The seminar is open to the public. For registration details, please visit www.apxgroup.com or www.montelpowernews.com

APX Indices





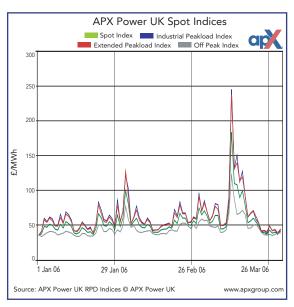
APX Power NL Day Ahead Average Prices

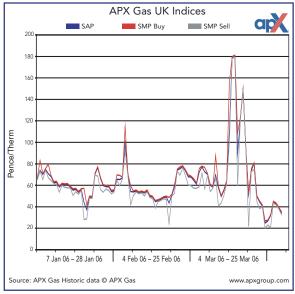
The APX published average prices are comprised of base load, off peak and peak load (07.00-23.00) prices based on the average price (in Euro/MWh) of Dutch power traded every day on APX for delivery the next day. Weekend prices are only comprised of base load prices and volumes.

APX GAS NL TTF Day Ahead Index

The Index is a volume weighted average price (VWAP) of all day-ahead trades executed and matched on APX at the TTF gas hub between 06.00 and 18.00 CET (05.00 and 17.00 UK time) for delivery the next day.

APX Indices





APX Power UK Spot Indices

The APX Power UK Spot Indices are based on the APX Power UK Reference Price Data (RPD) which is a half hourly price derived from the volume weighted average price of all Half Hour, Two Hour and Four Hour Block contracts traded within seven calendar days of market closure on APX Power UK.

Spot Price Index (base load) -

The average of the RPD prices for all 48 half hour settlement periods.

Peak Load Index - The average of the RPD prices for half hour settlement periods between 07.00 - 19.00.

Extended Peak Load Index -

The average of the RPD prices for half hour settlement periods between 07.00 - 23.00.

Off Peak Index - The average of the RPD prices for the Off Peak half hour settlement periods, between 23.00 - 07.00 and 19.00 - 23.00 in the same EFA day.

APX Gas UK Indices

SMPbuy is the highest price that gas was traded (buy or sell) by Transco in its Network Code balancing role for delivery that gas day. In the event of no Transco action, the SMPbuy is calculated by a default setting of 0.0287p/kWh (0.8411p/therm) from the prevailing SAP.

SAP is the volume weighted average price of all trades on the OCM platform.

SMPsell is the lowest price that gas was traded (buy or sell) by Transco in its Network Code balancing role for delivery that gas day. In the event of no Transco action, the SMPsell is calculated by a default setting of -0.0324p/kWh (-0.9496p/therm) from the prevailing SAP.

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