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IMPACT ASSESSMENT

Accompanying document to the

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on energy market integrity and transparency

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Table of content

1	Introduction	3
2	Procedural Issues And Consultation Of Interested Parties	4
3	Problem Definition.....	5
4	Objectives.....	20
5	Policy options and enforcement design choices.....	23
6	Analysis of impacts	29
7	Other Issues.....	42
8	Conclusions – the preferred options.....	45
9	Monitoring and evaluation	47
10	List of Annexes	49

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1 INTRODUCTION

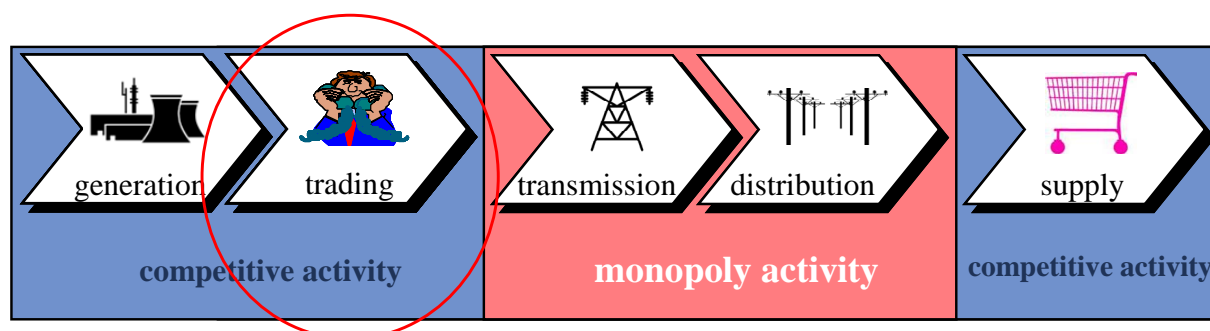
European energy policy aims to give Europe's citizens access to competitive, secure and sustainable energy supplies. The creation of a true internal market in energy is crucial to each of these elements. Integrated markets bring competitive pressure to a sector which has historically been characterised by national markets often dominated by incumbents. Integrated markets allow consumers to benefit from a pan-European choice of diverse energy resources. In addition, harmonised cross-border market operation together with strong and efficiently operated networks will give the depth needed to allow the integration of new renewable energy sources at least cost.

Experience in the liberalisation and integration of energy markets, and electricity markets in particular, has demonstrated the importance of liquid European wholesale markets. The development of power exchanges (or other organised markets) and broker facilitated markets in standardised over-the-counter (OTC) contracts has created liquidity for market participants. This is a positive and beneficial outcome of over a decade of successive European energy liberalization packages. Although liquidity in traded gas markets still lags behind electricity, it is catching up steadily.

Beyond generators and suppliers, wholesale energy markets now attract a wide range of actors including utilities, large energy users, pure traders, financial institutions and other trade facilitators. These players have an important role in the price formation process and creating liquidity. Important derivative markets have arisen around markets in the underlying energy products. This means that energy wholesale markets have become increasingly hybrid physical and financial ones.

Prices established at the level of wholesale markets not only affect market participants, they also serve as the benchmark for retail prices for household consumers and industrial users. Equally importantly, by showing where energy prices are high and where they are low these markets send important signals for future investments in energy infrastructure. For this reason it is crucial that citizens, business and national authorities can have confidence in the integrity of such markets. This integrity can be put in question in case market participants engage in abusive practices and market misconduct. In energy markets, their hybrid physical and financial nature give rise to important regulatory challenges when it comes to ensuring market integrity.

Figure 1: Trading function located in the overall electricity value chain



2 PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

The 3rd Energy Market Liberalisation Package establishes a new institutional framework for the gas and electricity sectors, ensuring non-discriminatory access to networks, enhancing regulators' powers and independence and establishing new European bodies to create harmonised network and market operation standards like the Agency for Cooperation of the Regulators (ACER) and the European Network of Transmission System Operators for Electricity and Gas (ENTSOs)

However, it does not define specific conduct rules for wholesale energy trading. As a first step in addressing concerns regarding market integrity. It does define transaction record keeping obligations and a generic regulatory duty to monitor the level of competition on retail and wholesale levels. After the publication of the Commission's Third Package proposals the Directorate General for Energy and Transport and the Directorate General for Internal Market and Services issued a joint mandate to the Committee of European Securities Regulators (CESR) and the European Regulators' Group for Electricity and Gas (ERGEG), seeking advice on issues concerning record keeping and transparency of transactions in electricity and gas supply contracts and derivatives.

Since then, and in particular since the final report from CESR/ERGEG in January 2009¹ and the adoption of the Third Package in July 2009, DG TREN has worked closely with stakeholders with the aim of developing a proposal for an efficient, effective and coherent oversight regime specifically designed for energy markets to ensure market integrity and transparency. DG TREN organised a workshop in May 2009 to collect stakeholders' views and discuss the way forward. It was agreed that the Commission will develop its initiative and organise dedicated workshops to take interested market participants' input on board. Seeking the industry's support and generating attention for the subject, the Commissioner for energy Mr. Piebalgs, invited senior management of key energy trading companies, brokerages, energy exchanges together with regulators in September 2009 for a Roundtable debate.

Building on the orientation of the CESR-ERGEG work and encouraged by the consensus in the Roundtable debate, DG TREN organised a second workshop in October 2009 with wide industry participation and presented the basic building blocks of its planned sector specific market integrity regime, followed by comments and input from stakeholders and regulators. Following this, the Commission issued a draft discussion paper² which was presented and discussed in the December 2009 Florence Forum (for electricity) and in January 2010 in the Madrid Forum (for gas). Finally, the Stakeholders were asked to submit their proposals and views on the presented policy options by February 2010.

In order to ensure that all interested parties are able to contribute to this important debate a full public consultation was organised from the 31 May 2010 to 23 July 2010. The consultation was addressed to energy companies, companies in the financial sector and companies covered by the Emissions Trading Scheme as well as consumer organisations, representatives of small and medium enterprises, representatives of regional bodies and organisations affected by the development of the internal market in energy.

¹ CESR and ERGEG advice to the European Commission in the context of the Third Energy Package, Three separate documents (Ref: CESR/08-527, CESR/08-998, CESR/08-739).

²http://ec.europa.eu/energy/gas_electricity/doc/forum_florence_electricity/meeting_17_5_commission_non_paper_on_market_integrity_and_transparency.pdf

All information on the consultation process, the documents and presentations used in the stakeholder meetings have been made available on the website of DG ENER.

http://ec.europa.eu/energy/gas_electricity/consultations/2010_07_23_energy_markets_en.htm

All stakeholder comments have been assessed in detail and the summary of responses is attached in Annex. The Commission's requirements for stakeholder consultation have been fully met.

DG ENER set up an inter-service group³ that met on 18 June 2010 and on 26 July 2010. The services cooperated particularly closely in the preparation of the draft consultation document.

The draft Impact Assessment was submitted to the Impact Assessment Board (IAB) on 2 August 2010. The IAB meeting took place on 8 September 2010. The IAB adopted its opinion on the draft on 10 September 2010. The present Impact Assessment takes full account of the Impact Assessment Board's opinion as follows:

- The Assessment includes clarifications with regards to the scope of the initiative, i.e. how the market misconduct rules will be formulated in Chapter 5
- More analysis was added to underpin the strong price linkages between traded energy markets in form of additional correlation analyses and figures on historical trade volumes in addition to further evidence on the occurrence of market abuses and their Community dimension in Chapter 4
- Chapter 4 also includes additional description on current market oversight responsibilities in different Member States
- In the same chapter further descriptions were added to put in context the relevance of increased energy costs for households, in general and for groups subject to potential social exclusion, in particular. The section on administrative impacts of Option 1a includes further assumptions on the content and volume of data to be reported. In addition the administrative costs for all options are presented in summary tables allowing for better overview
- Finally, the annex with the summary of the public consultation was extended

3 PROBLEM DEFINITION

Liquid traded wholesale markets send crucial signals for where future investments in energy infrastructure are needed and are key to the transformation of the European energy landscape. Deep wholesale markets give confidence to businesses entering into long term contracts that they will be able to respond flexibly to changes in the markets – vital as tomorrow's low carbon economy will require long term contracts to underwrite high capital costs in nuclear generation and new renewable infrastructure. Prices established on wholesale markets serve as the benchmark for retail prices for household consumers and industrial users.

³ Participants were invited from DG COMP, DG ECFIN, DG ENTR, DG MARKT, DG CLIMA, DG ENV, DG EMPL, Legal Service and the Secretariat General.

Because they are crucial to the well being of Europe's citizens, and to the competitiveness of Europe's businesses, as well as to the success of the EU's energy policy, it is of central importance that citizens, businesses and national authorities can have confidence in the integrity of energy markets. Unless effectively addressed, the potential for unfair trading practice undermines public trust, deter investment (particularly outside companies home bases), increases volatility of energy prices and may lead to higher energy prices in general. This in turn may also reduce competitiveness of other sectors and industries e.g. energy intensive industries. As made clear in their advice to the Commission, financial regulators and energy regulators cannot effectively address concerns regarding market abuse because of a combination of informational failures and incomplete regulation.

The underlying drivers of this failure lie in the particular nature of gas and electricity as commodities which are discussed below.

Nature of gas and electricity as commodities

Electricity cannot be stored on an industrial scale. It must be produced in the moment it is consumed. This means that market prices are highly sensitive to the availability of generation – and the expected availability of generation. To a lesser extent, the same concerns apply to gas markets. As a result targeted use of generation and production can easily distort spot and derivatives prices.

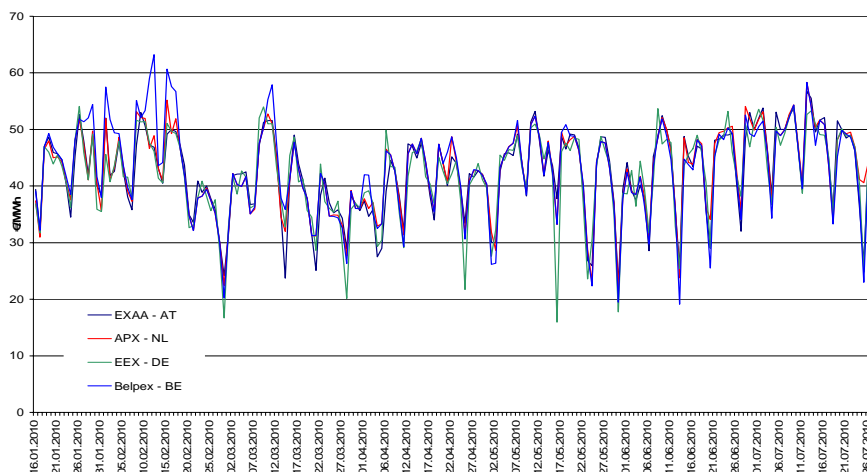
Gas is an important fuel, widely used in power generation, often delivering the marginal electricity needed to meet demand. Any changes of gas prices will influence electricity prices (and vice versa). Manipulated gas (or electricity) prices will distort electricity (or gas) prices. The supply of electricity and gas is tied to a smoothly operating network. Bottlenecks or limitations in the transport infrastructure will have a great impact on prices. Artificially creating congestion at interconnectors, or making it appear that congestion exists, or is likely to exist, will lead to price distortions between Member States or price areas.

Energy markets are increasingly cross border

EU energy markets increasingly cross national boundaries in terms of where trading takes place and where production and consumption takes place. This is a positive development and reflects the dynamic benefits brought by the internal market. As a result price setting is not tied to a particular market as prices are set based on supply and demand in several countries. If prices go up in the one country market participants would buy electricity in another and export it to a higher-priced area bringing differences in supply and demand into a regional balance. This is supported by the high correlation between prices of neighbouring countries, many of them relatively well interconnected and apply fairly similar market arrangements (market time frames, gate closures, etc.). As far as day-ahead prices concern, the Dutch-German price correlation increased from 0.57 (2004) and 0.67 (2005) to 0.85 and 0.91 in 2008 and 2009, respectively. French-German price correlation was high with 0.91 (2004), 0.85 (2005) and have remained stable at levels of 0.88 and 0.83 in 2008 and 2009, respectively; between Germany and Austria even higher price correlations can be observed.⁴ Figure 2 shows how closely day-ahead power prices follow each other in Central-Europe.

Figure 2: Day-ahead power price developments in The Netherlands, Germany, Belgium and Austria

⁴ The Electricity Wholesale Sector – Market Integration and Competition; ESMT Competition Analyses, Berlin; page 7.



Source: EEX, APX, Belpex, EXAA

Price correlations between forward prices are even higher and they are also strong between interrelated commodities, especially electricity and gas. The PWC Study finds that "...in both spot and futures trading [...] the relation between gas and electricity is quite strong, with the correlation being particularly high for futures contracts (e.g. EEX 0.978, Nordpool 0.923)."⁵

DG ENERGY's own calculations, based on the data available to EMOS, the Energy Market Observation System confirm the above findings. As Figure 3 shows, correlation between different geographical gas markets is even higher than between different electricity markets. This is because gas is storable (as opposed to electricity) thus events like short term system disturbances or unavailabilities of generation capacities in certain areas which create short term regional price differences are not prevalent. Correlation is also relatively high between gas futures markets in the US and Europe. This is, in our understanding, generally due to Atlantic LNG arbitrage possibilities.

The introduction of market coupling between power exchanges across EU⁶, which is envisaged to be in place by 2015, will reinforce this development. Likewise the move to hub based trading in gas and entry/exit gas transmission tariffs, will have a similar effect.

What this means is that energy bids and offers in one country affect prices in each of its neighbours. These bids and offers are not easily visible to those charged with market oversight. Even where information can be exchanged between countries, the process is cumbersome and does not lend itself to early and efficient identification of suspicious trading patterns.

⁵ Impact Assessment for an Initiative on Transparency and Integrity of traded European wholesale markets for electricity and gas, Final Report, July 9 2010, Price Waterhouse Coopers.

⁶ Presentation to Florence Forum "Target Model for Interregional Congestion Management", 10 December 2009, http://ec.europa.eu/energy/gas_electricity/forum_electricity_florence_en.htm.

Figure 3: Covariance analysis: 1 January 2007 – 30 June 2010

Electricity					Gas						
Day-ahead	Correlation	APX_NL	BPX_BE	EPEX_DE	EPEX_FR2	Correlation	GPOOL_DA	NBP_DA	TTF_DA	ZEE_DA	
	APX_NL	1.000000				GPOOL_DA	1.000000				
	BPX_BE	0.952043	1.000000			NBP_DA	0.979555	1.000000			
	EPEX_DE	0.864549	0.838692	1.000000		TTF_DA	0.994495	0.986917	1.000000		
	EPEX_FR2	0.842050	0.913859	0.874453	1.000000	ZEE_DA	0.986344	0.992595	0.993072	1.000000	
Front month	Correlation	NL_FM01	BE_FM01	DE_FM01	FR_FM01	Correlation	GPOOL_MA1	NBP_MA1	TTF_MA1	ZEE_MA1	HH_MA1
	NL_FM01	1.000000				GPOOL_MA1	1.000000				
	BE_FM01	0.978225	1.000000			NBP_MA1	0.992454	1.000000			
	DE_FM01	0.988709	0.984077	1.000000		TTF_MA1	0.997934	0.996156	1.000000		
	FR_FM01	0.923299	0.968931	0.946145	1.000000	ZEE_MA1	0.994547	0.997849	0.997646	1.000000	
Cross Commodity											
Day-ahead	Correlation	APX_NL	EPEX_DE	TTF_DA	GPOOL_DA						
	APX_NL	1.000000									
	EPEX_DE	0.934750	1.000000								
	TTF_DA	0.823945	0.767754	1.000000							
	GPOOL_DA	0.820875	0.767319	0.994495	1.000000						
Front month	Correlation	NL_FM01	DE_FM01	TTF_MA1	GPOOL_MA1						
	NL_FM01	1.000000									
	DE_FM01	0.991772	1.000000								
	TTF_MA1	0.944266	0.924443	1.000000							
	GPOOL_MA1	0.940587	0.921709	0.997934	1.000000						

Source: Platts, EMOS

Electricity exchanges: EPEX spot DE, EPEX spot FR, APX, Belpex ; Gas hubs / exchanges : NBP, TTF, Zeebrugge, Gaspool, Henry Hub

Note: The time series for EPEX Spot FR exclude values for two specific days as outliers (15/11/2007 and 19/10/2009)

In one of the most well known instances of the breakdown of an Energy market, the experience in California in 2001, Twomey, Green, Neuhof and Newberry have commented that "market surveillance concentrated on the local market and failed to monitor developments in the interconnected Pacific Northwest. An awareness of the interdependence of related markets is therefore important for timely and effective market surveillance and may well suggest improvements elsewhere"⁷ While EU markets have not replicated the experience of California, the level of interdependence between different markets or regions in Europe is evident

This creates possibilities for cross-border market abuses without having the need to conclude a single transaction between two countries. Here a simplified demonstration of such an abuse using Germany and France (as example) which could be possible between any two countries with highly integrated and interdependent wholesale markets.

Box: Example of abuse

Because of a high level of price interdependence, a shortage of generation capacity in France will increase German electricity prices. Depending on the duration of this outage, prices of short and longer dated (derivative) contracts will be affected. This applies whether the shortage is a result of fundamental conditions when the increase in German prices is efficient or market abuse when it is not. Take a market participant who creates an artificial shortage of generation in France but also holds significant "long" derivative positions on the German market

- In France he can credibly argue that this resulted in losses for him.
- In Germany he can credibly argue that he had taken a legitimate proprietary position – he did not act in any way on the German market to cause the increase in prices.

Only by combining knowledge of the market participant's actions on both the French and German markets, can the market abuse be detected.

In reality, the transactions will be more complicated – the long position on the German market will be contracted using both on and off-exchange derivatives, some of which will be transacted outside Germany. Part of the transaction may be using "spread" contracts on the German French price differential. There may also be ways to hide the cause of the artificial shortage in France.

The Commission has indeed investigated instances of possible generation capacity withholding based on its experience gained through the Sector Inquiry⁸. In its preliminary assessment of E.ON's market practices in 2008, it raised the concern that the German power generator would have abused its position on the wholesale market by the short term withdrawal of available

⁷ Twomey, Green, Neuhof and Newberry A review of the Monitoring of Market Power: the Possible Role of TSOs in Monitoring for Market Power in Congested Transmission Systems. Centre for Energy and Environmental Policy Research 2005 .

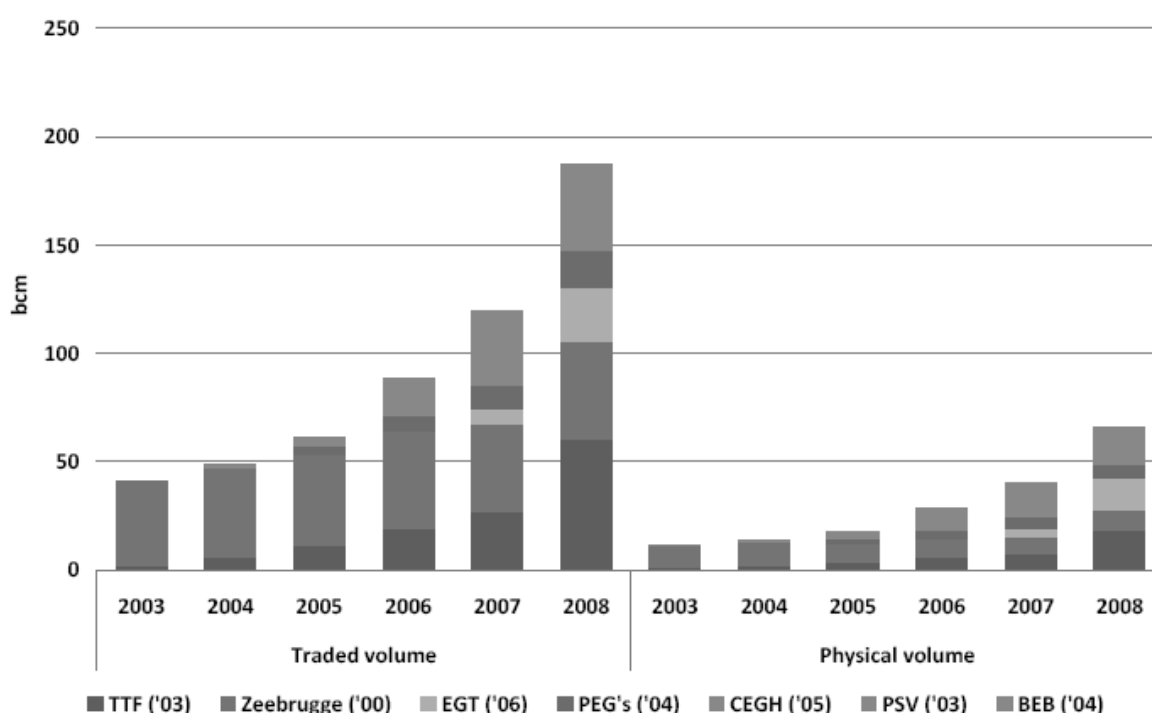
⁸ Inquiry into the functioning of gas and electricity markets of 2005, pursuant to Article 17 of Regulation 1/2003 EC - <http://ec.europa.eu/competition/sectors/energy/inquiry/index.html#final>.

generation capacity⁹. The case was settled with E.ON's commitment to divest its entire transmission network and 4,800 MW of its generation capacity to competitors.¹⁰

The Commission decision closing the case also found that the referred abusive practice has an important cross-border implication by stating that "...the Commission considered that the practices in question could have an effects on trade between Member States given that the consequences of this alleged behaviour do not only effect customers who need electricity as an input for their industrial activity on the German markets but also customers in other European markets as higher prices on the German market diminish the scope for exports to other markets"¹¹ The existing interconnections between Member States' energy markets and the possibility to channel energy to higher priced markets through cross-border infrastructure makes it evident that market abuses occurring on a specific market will not be confined to on Member State but will inevitably impact all interconnected markets in Europe.

For market misconducts to occur there has to be a certain traded volume there allowing for positions to be built up and dispositions to be made with ease. Traded volumes both in electricity and gas have developed well in the last years with traded volumes reaching a multiple of physically transported molecules and electrons. Figure 4 shows the development of the hubs except for the NBP, comparing the traded volumes to the physical volumes that are transported by the TSOs over these hubs

Figure 4: Development of traded gas volumes in the EU (excluding NBP)



Source: IEA, Natural Gas Market Review 2009

⁹ See: Commission Decision of 28.11.2008 relating to cases COMP/39.388 – German Electricity Wholesale Market and COMP/39.389 – German Electricity Balancing Market.

¹⁰ Commission MEMO/08/132 of 28.2.2008.

¹¹ Page 15 of the referred Commission decision.

Energy markets are increasingly cross platform

Successive European energy liberalization packages have led to the development of power exchanges (or other organised markets) and broker facilitated markets in over-the-counter (OTC) contracts which allow market participants to trade with each other. From the point of view of market participants these options serve the same function and are used for equivalent purposes. Access to a range of trading venues presents advantages for market participants. While the share of trade conducted via organised power exchanges has increased, OTC still dominates in most EU markets, and there is little prospect of this changing.

Companies trade based on agreements to physically deliver electricity and gas (either bilaterally or using power exchanges), and using derivatives products based on prices on a power exchange or a pool. For market participants these two types of trading are economically equivalent – a Contract for Difference based on a reference price on a market or energy pool fulfills the same function as a contract for the sale or purchase of energy. Both organised market places and OTC platforms are used to trade in products based on physical delivery and in derivative products. As Figure 5 below shows the majority of trade in the main EU markets is brokered on the OTC markets where 74% of total traded volumes is traded in derivatives. Because the underlying contracts are equivalent in economic terms, market abuses in one marketplace is likely to immediately impact prices on all other trading platforms or the price level of bilateral transactions.

Figure 5: Volumes of electricity traded in the EU's main markets in 2009 (in TWh) ¹²

	Brokered OTC		Exchange		Total traded volumes
	forward	spot	futures / forwards derivatives	spot	
Germany	4,109.9	38.2	257.0	135.0	4,540.0
Nordic	1,100.0	0.0	1,195.9	285.5	2,581.4
UK	1,020.8	39.9	0.0	12.6	1,073.4
France	500.7	11.7	28.0	52.6	593.0
The Netherlands	205.8	2.3	34.0	29.1	271.2
Spain	168.1	1.5	0.0	201.0	370.6
Czech Rep	82.6	1.1	24.3	3.0	111.0
Italy	72.0	0.0	0.0	213.0	285.0
Belgium	71.1	0.4	8.4	10.1	90.0
Hungary	38.7	0.4	3.5	0.0	42.6
Poland	31.3	0.0	0.0	2.8	34.1
Romania	6.9	0.0	11.5	6.3	24.7
Total traded volumes	7,407.8	95.6	1,562.6	951.0	10,017.0
Total in %	74.0%	1.0%	15.6%	9.5%	100.0%

Source: Argus Media Limited, GME, EEX, APX, PXE, Polpx, Opcom

The difficulty in accessing data related to market behaviour on neighbouring markets is exacerbated by trading of gas and electricity, particularly brokered OTC markets, at venues or through intermediaries located outside the country where the electricity or gas is to be delivered. Much of this trade is currently carried out through brokers based in London¹³. This parallel trading using different trading channels or platforms located in different Member States means for example that electricity for delivery in Germany can be traded in form of

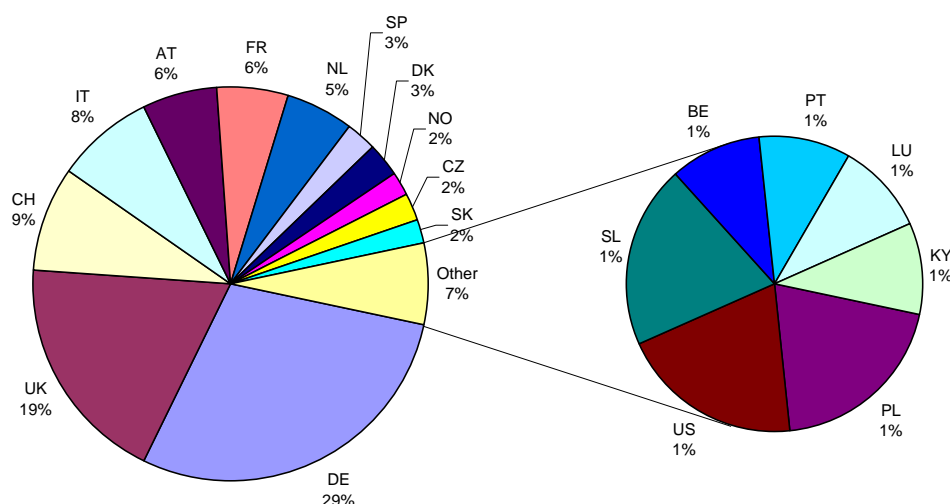
¹² According to market participants an additional 10% of standard transactions are conducted purely bilaterally without engaging any intermediaries.

¹³ LEBA – Reply to EU Commission: Public Consultation by DG Energy on measures to ensure transparency and integrity of wholesale markets in electricity and gas, 31 May 2010, Annex 1.

derivatives through brokers located in the UK, but also as futures via EEX, a regulated marketplace in Germany. The same or similar contracts can also be traded bilaterally between market participants registered anywhere in or outside the EU without using any organised market place or relying on a broker's service. As Figure 5 shows, less than 6% (257 TWh) of all observable derivative (forward and futures) transactions for delivery in Germany take place through a marketplace located in Germany (EEX) while 94% (4,109.9 TWh) of the volumes are traded using intermediaries located outside the country.

Regulatory data capturing is further complicated by the fact that trading participants who trade a particular energy market are usually established in different Member States. Figure 6 shows, as an example, the geographical distribution of participants trading German power derivatives on EEX. We can assume that the participants trading German OTC spot and/or derivatives, which make up the large majority of overall German contracts, are similarly distributed.

Figure 6: Geographical distribution of participants trading German power derivatives on EEX according to their country of establishment



Source: EEX

Market conduct rules applying to energy markets.

The Market Abuse Directive¹⁴ (MAD) only partly covers energy markets as it is designed for the financial markets. It applies to financial instruments admitted to trading on a regulated

¹⁴ Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) and Commission Directive 2004/72/EC of 29 April 2004 implementing Directive 2003/6/EC of the European Parliament and of the Council as regards accepted market practices, the definition of inside information in relation to directives on commodities, the drawing up of list of insiders, the notification of managers' transactions and the notification of suspicious transactions.

market, whether these are traded on such a market or on multilateral trading facilities (MTFs) or OTC. Physical energy market products (e.g. spot market products) are not covered and energy derivatives markets products are covered only if they are admitted to trading on a regulated market. Figure 5 shows that the segment (Exchange – Futures/ forward /derivatives) covered by MAD made up some 16% of the total volumes traded in 2009.

Since the regulated segment only accounts for a minority of overall trades in energy, the scope of MAD does not properly address market integrity issues in the electricity and gas markets. In addition, the relevant definition of inside information is not specific and is therefore difficult to apply for electricity and gas markets¹⁵.

The Markets in Financial Instruments Directive¹⁶ (MiFID), regulating investment services, fair and orderly trading and appropriate transparency on regulated markets, applies to commodity derivatives. However, there are only relatively high level transparency obligations with regard to exchanges listing commodity derivatives as part of their basic organizational requirements to ensure fair and orderly trading. Also the definition of financial instruments in the Directive does not cover the spot market and physically settled OTC transactions which are non-standardized. Its basic objective of ensuring “financial stability and investor protection” seems less relevant for energy since energy derivatives are typically not investment products but are primarily used as hedging instruments for mitigating price risks of energy market participants (e.g. some utilities).¹⁷

Some other rules may exist on the level of Member States but they are only limited in scope, often relating only to a single trading platform and covering a single Member State. This finding was also confirmed by a dedicated study on which the present initiative builds. It found that " In Czech Republic, the Czech National Bank is competent to oversee the Czech financial market. The Czech National Bank oversees Energy Derivatives together with the ministry of finance and the ministry of industry and trade. The ministry of industry and trade (and not the NRA [*National Energy Regulatory Authority*]) is competent for supervising Commodities.

In Belgium, the NSA [*National Securities Authority*] is competent for supervising Energy Derivatives [...], whereas the NRA is competent for supervising wholesale exchanges of Commodities along with the energy ministry, having certain powers in respect of the Belgian PX, Belpex. In the field of EA [*EU Emissions Allowance*] in Belgium, beside the NRA and the NSA, regional authorities (three) might be competent for oversight of EA.

[...] in Germany, PXs [*Power Exchanges*] /Regulated Markets are overseen by the exchange supervisory authorities of the Länder (“Börsenaufsichtsbehörden”). The German PX (EEX) is overseen by the exchange supervisory authority of Saxony.

¹⁵ CESR and ERGEG advice to the European Commission in the context of the Third Energy Package, Ref: CESR/08-739.

¹⁶ Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC (OJ L 145, 30.4.2004, p. 1–44).

¹⁷ See e.g. advice by the European Securities Markets Expert Group on commodity derivatives business, p.59ff http://ec.europa.eu/internal_market/securities/docs/esme/commodity_derivatives_en.pdf.

Complex competency divisions might create legal uncertainties and a lack of effective/efficient collaboration between competent authorities, as well as gaps and contradiction in oversight. The German NSA indicates that a clear division of competencies between all involved authorities is required to enhance oversight."¹⁸

Internal energy market legislation (in particular 3rd liberalisation package with Directives 2009/72 and 2009/73) defines obligations for Member States to provide for competitive and non-discriminatory market arrangements, but does not set out standards to ensure the integrity of such markets. Supply undertakings are required to keep records of their transactions, but the Directives do not define specific conduct rules for wholesale markets and their participants.

Summary of the problem

Based on the above analysis the rules governing energy markets are insufficient to ensure their stable and orderly functioning. The rules only capture a fraction of relevant transactions and do not provide for consistent or easily applicable definitions of acceptable practice. The lack of rules and the divergence of rules regarding reporting of data do not allow for the totality of markets to be monitored and specific misconducts, such as cross-border, cross-commodity and cross-market misconducts to be effectively detected. This view is supported by sectoral regulators in their advice to the Commission, and by the respondents to the Commission's consultation. As the European Federation of Energy Traders (EFET) states¹⁹: "... based on the above-mentioned regulatory gaps and shortcomings - a sub-optimal oversight of energy wholesale markets exists, which hinders further market development. The current regulatory situation does, in particular, not take into account the factual situation that energy wholesale markets are increasingly characterized by a wide range of actors (including utilities, pure traders, financial institutions and other wholesale trading market participants and platforms), cross-border trade, important derivatives markets around markets in the underlying energy products and increasing liquidity in energy wholesale trading activities. Various different national regimes and authorities do not fit to such an EU-wide wholesale trading market."

Other responses to the public consultation showed widespread agreement with this analysis by Member States, regulators, power exchanges and market participants.

The Amaranth case description

In the following we develop a case study which we use further below in chapter 'Analysis of Impacts' to demonstrate the impact of market misconduct. For this purpose we use the *Amaranth* case which involved the manipulation of several natural gas markets in the U.S. in 2006 (for the essence of the case see the Box below). The *Amaranth* case was a particularly severe case of manipulation, however, it is also important to bear in mind, as ERGEG note in their response to the public consultation that "in many cases market misconduct would not result in huge impacts on market prices (e.g. price spikes) but rather in smaller deviations

¹⁸ Report on the Competencies and Powers of National Regulation Authorities and National Securities Authorities by Philippe & Partners & R. Feltkamp, annexed to this document.

¹⁹ Response of EFET to Public Consultation by the Directorate General for Energy on measures to ensure transparency and integrity of wholesale markets in electricity and gas. Some Member States responses also highlighted actions taken at the Member States level.

from a 'fair and orderly' price. However the impact of this behaviour on the well functioning and trust in the markets should not be underestimated".

Box: The Amaranth case

A hedge fund, Amaranth Advisors LLC, manipulated the U.S. natural gas market in 2006 on several instances. Amaranth accumulated massive natural gas holdings in the form of derivative contracts on NYMEX, an organised marketplace for trading commodities in the US, spanning five years, from 2006-2010. Amaranth's 2006 accumulation of such large positions and trading of such large volumes of natural gas had a direct effect on U.S. natural gas prices and increased price volatility on the whole natural gas market. The larger than usual differences between winter and summer futures prices that prevailed during the spring and summer of 2006 were largely the result of Amaranth's large-scale trades rather than the normal market interaction of buyers and sellers. Purchasers of natural gas during the summer of 2006 for delivery in the following winter months paid inflated prices due to Amaranth's trading practices.

Amaranth accumulated natural gas futures positions on NYMEX with the view to sell these contracts in a very short period of time right before the futures contract in question expire and go in delivery. In fact, it sold large amounts of contracts on February 24, March 29, and April 26, 2006, the days on which the respective futures for March, April and May expire. The transactions were designed to produce artificially low "settlement prices". Considered in isolation, this trading would be economically irrational because by driving down the settlement price, Amaranth made less on the sales of these contracts. However, Amaranth had previously taken positions several times larger in various financial derivatives on ICE, an organised marketplace in the US, and in the over-the-counter trade the value of which increased as a direct result of the decrease in the settlement price of the NYMEX natural gas futures contract. Thus, for every dollar lost on its sales of the NYMEX natural gas futures positions, it would gain several dollars on its derivative financial positions. According to a report²⁰ of the Federal Energy Regulatory Commission of the US, Amaranth profited by a total of *at least* \$59,000,000 and perhaps as much as \$168,000,000 on these three settlement days as a direct result of the manipulation.

Lesson learnt from the Amaranth case

Amaranth's abusive conduct not only caused direct and indirect economic damages to consumers and market participants but also highlighted an important regulatory issue. Amaranth's distorting trading strategy concerned two distinct marketplaces, NYMEX and ICE, and also involved OTC derivative transactions²¹. Having regard to the inconsistencies in the oversight of Europe's traded energy markets, it is doubtful that a Amaranth-style misconduct would have been efficiently detected if it had happened in Europe.

²⁰ 120 FERC ¶ 61,085, UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION, Order to show cause and notice for proposed penalties; Docket No. IN07-26-000, issued July 26, 2007.

²¹ OTC derivatives include next to different "options" so called "basis swap". Basis swaps are derivative instrument whose value is based on the difference between the settlement price of the NYMEX gas futures contract for a given contract month and natural gas transactions for delivery in different locations.

The involved marketplaces in the U.S. were located in different States and part of the transactions concerned derivatives relating to natural gas deliveries in different geographical locations within the U.S.. In the EU, without rules specified on EU level, they would be subject to different supervisory and market monitoring regimes²². Market supervisors, whose jurisdiction is defined by the location of the marketplace, would only be able to see fragments of a trading strategy making the detection of complex cross-platform and cross-border misconducts difficult²³. The detection of the market misconduct is made even more difficult if it involves OTC transactions, as it was the case with Amaranth, which are not coherently monitored throughout Europe.

These regulatory shortcomings suggest that economically equivalent transactions and transactions that relate to deliveries in several interrelated markets should be monitored in one to allow for a complete view of the market, irrespective how and where the trades are conducted. This does not detract from the obligations on those who operate organised market places, and those who supervise organised market places.

Likely evolution of the problem

In their advice to the Commission, CESR and ERGEG state that "Due to the lack of a full and in-depth market monitoring exercise, as well as the unavailability of the required information for regulators, the extent to which such [abusive] practices take place cannot be evaluated by CESR/ERGEG. As long as the necessary information is not available to regulators, abusive behaviour will remain difficult to detect. However, so long as regulators do not have the data they require to evaluate the possibility for market abuse to take place and to take appropriate action to prevent it, it is likely that the conditions that currently exist, which could allow market abuse to go undetected and/or unprosecuted, will remain unchanged. As a result, CESR and ERGEG remain concerned about the potential for such abuses to take place."

At present there are nascent attempts at the national level to implement oversight of energy markets.²⁴ Given the organisation of energy markets, it will be difficult for individual member states to ensure they have access to the necessary range of data to ensure that market abuse is detected and deterred. Moreover, without action at the EU level these initiatives could proliferate and risk exposing market participants to conflicting and uncoordinated regimes.

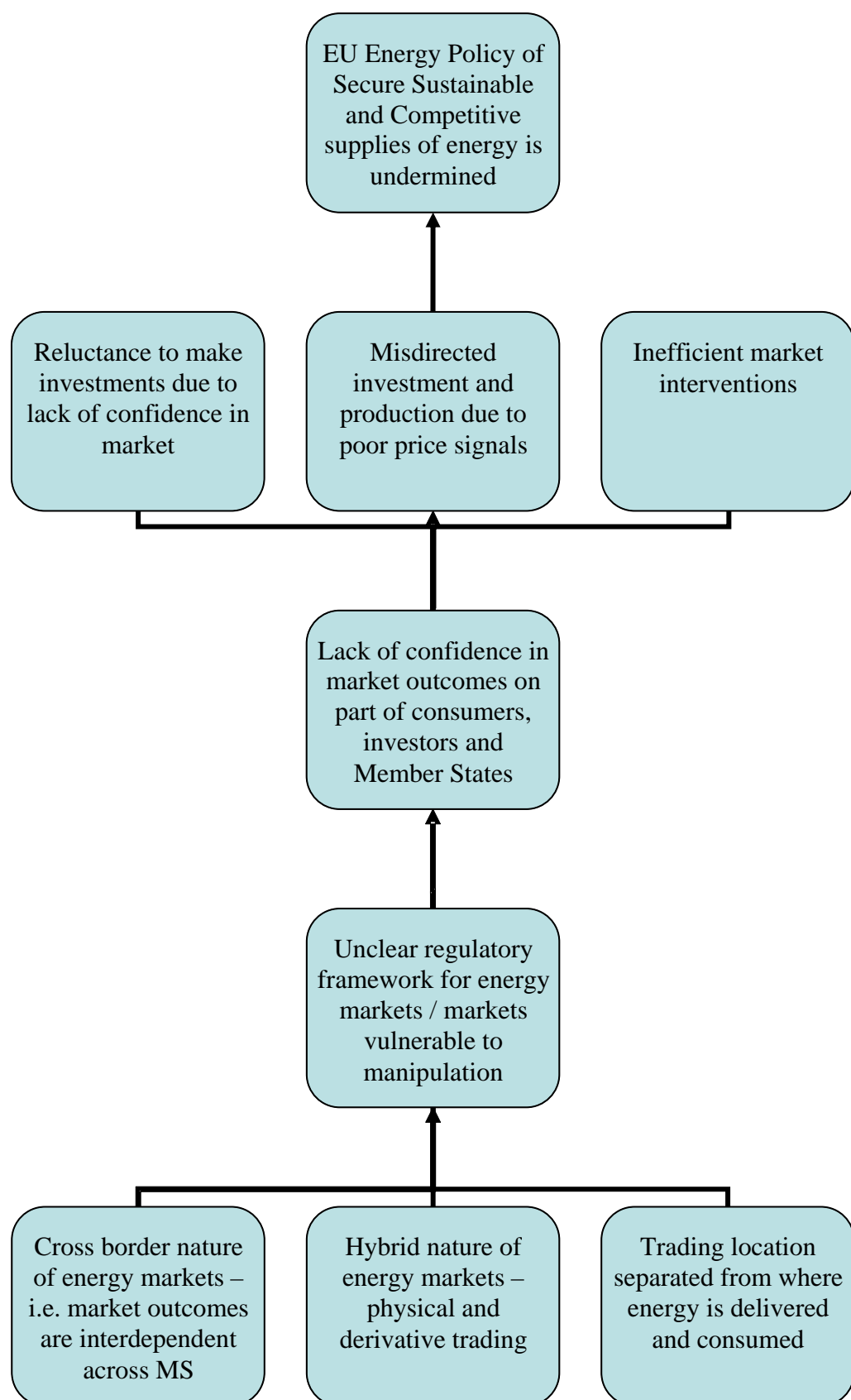
The graph below sets out a problem tree showing how the particularities of energy markets and cross-border and cross platform trading with energy and energy derivatives could undermine the EU Energy Policy if energy markets are not properly regulated at the EU level.

²² In the U.S. the case took place in Louisiana and the impact on prices took place in New York.

²³ An exchange of transactional data between competent regulators is not likely to fully alleviate these shortcomings.

²⁴ The French energy regulator (CRE) has broad powers to oversee wholesale markets (including spot and OTC derivative transactions) and began to request transactional data relating to French markets from market participant across Europe. The German Monopolkommission has demanded the establishment of an independent market monitor in Germany being able to access on and off-exchange transactions for delivery in Germany. In March 2009 Ofgem, the UK energy regulator issued a paper on preventing market abuse.

Figure 7: Problem tree



Right of the EU to take action

Action aimed to ensure market integrity clearly and directly contributes to ensuring the functioning of the energy market, in line with Article 194²⁵. It also has a positive indirect impact on ensuring security of supply, promoting energy efficiency and the interconnection of energy networks by facilitating cross-border trade and encouraging the most efficient use of the resources.

Action to ensure market integrity does not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply.

Given the cross-border nature of the problem, it is clear that EU action has a key role to play in ensuring the integrity of European energy markets. Some level of EU wide coordination is clearly required to ensure that the benefits of the internal market in energy are not lost as a result of market behaviour which undermines the confidence of citizens and business in the price formation process, when the behaviour occurs in a different Member State to where its effects are felt.

Market monitoring is not a monopoly function; European level monitoring does not prevent Member States reviewing market data. Member State authorities not only have a direct interest in the outcomes on their markets, they also bring an important understanding of the evolution of market outcomes in their jurisdiction. Therefore respecting the subsidiarity principle will be key to ensuring the effectiveness of EU action in this area.

²⁵

Article 194 of the Treaty on the Functioning of the European Union states:

1. In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to:

- (a) ensure the functioning of the energy market;
- (b) ensure security of energy supply in the Union;
- (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and
- (d) promote the interconnection of energy networks.

2. Without prejudice to the application of other provisions of the Treaties, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall establish the measures necessary to achieve the objectives in paragraph 1. Such measures shall be adopted after consultation of the Economic and Social Committee and the Committee of the Regions.

Such measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2)(c).

4 OBJECTIVES

General objectives

The Green Paper "A European Strategy for Sustainable, Competitive and Secure Energy"²⁶ defines the EU's overarching energy policy objectives of safe, sustainable and competitive energy markets. Robust and reliable wholesale markets play a central role in delivering these objectives.

The purpose of the present initiative is to create a framework which ensures that Europe's traded energy markets function properly, i.e. their outcomes are not distorted by abusive market behaviour, but truly reflect market fundamentals. This shall generate an increased level of trust of all stakeholders, which in turn will lead to higher participation, more depth and liquidity and lower transactional costs.

Delivering deep, liquid and integrated energy markets fits into Europe's 2020 strategy to reach a smart, sustainable and inclusive growth in Europe. This goal requires among others "well-connected markets where competition and consumer access stimulate growth and innovation"²⁷. The strategy document also estimates that "further progress with the integration of the European energy market can add an extra 0.6% to 0.8% GDP"²⁸

Creating a proper framework for the integrity and transparency of Europe's traded energy markets will foster the desired market integration and underpin overarching European policy objectives.

Specific objectives

Trust in the functioning of traded energy markets can only be created if there is a framework which appropriately governs the conduct of market participants. This framework needs to define rules that are complete, consistent, adapted to the specifics of energy markets and be designed to effectively detect and deter market misconduct. This is fully in line with the advice of energy and financial regulators which recommends "... that the Commission should consider developing and evaluating proposals for a basic, tailor-made market abuse framework in the energy sector legislation for all electricity and gas products not covered by MAD"²⁹

A. Consistent and complete rules

The rules need to effectively capture energy specific market misconducts, such as: trading on insider information, withholding of energy production facilities from the market and

²⁶ COM(2006) 105 of 8 March 2006: "A European Strategy for Sustainable, Competitive and Secure Energy".

²⁷ COM(2010) 2020 of 3 March 2010: "Europe 2020 – A strategy for smart, sustainable and inclusive growth", page 19.

²⁸ COM(2010) 2020 of 3 March 2010: "Europe 2020 – A strategy for smart, sustainable and inclusive growth", page 13.

²⁹ CESR and ERGEG advice to the European Commission in the context of the Third Energy Package, Response to Question F.20 – Market Abuse, Ref: CESR/08-739; E08-FIS-07-04, page 26.

distortion of prices. Rules need to be consistent throughout Europe so as to ensure that traders are able to apply the same compliance standards and are not faced with diverging rules and requirements when trading in different Member States.

The rules have to be also complete and cover all relevant transactions, including spot and derivatives and on- and off-exchange transactions. In general, economically equivalent transactions should be subject to the same set of market conduct rules.

B. Adaptable and compatible rules

Sector specific rules need to be compatible with applicable financial regulation to which some of the energy market participants are also subject. At the same time financial regulation needs to be adaptable to the needs of energy markets. In addition tailor made rules need to be created to fully capture energy specific market misconducts. The overall rulebook applicable to energy trading should be designed with a view that no overlaps are created but also no regulatory gaps are left.

More concretely: the concepts of insider trading and market manipulation have already been well established in MAD. The Directive is currently under review and it is considered that its scope could be enlarged to cover important energy derivatives markets. The present initiative will therefore, on the one hand, introduce these concepts for energy market segments which remain outside the current and envisaged scope of the MAD and, on the other, establish a framework within which an energy specific meaning of insider information or market manipulation can be practically established. For the latter it is envisaged that the detailed 'rulebook' will be specified in a separate implementing legislation based on technical guidelines prepared by ACER. Once developed, the proposed detailed rules will be subject to a separate impact assessment.

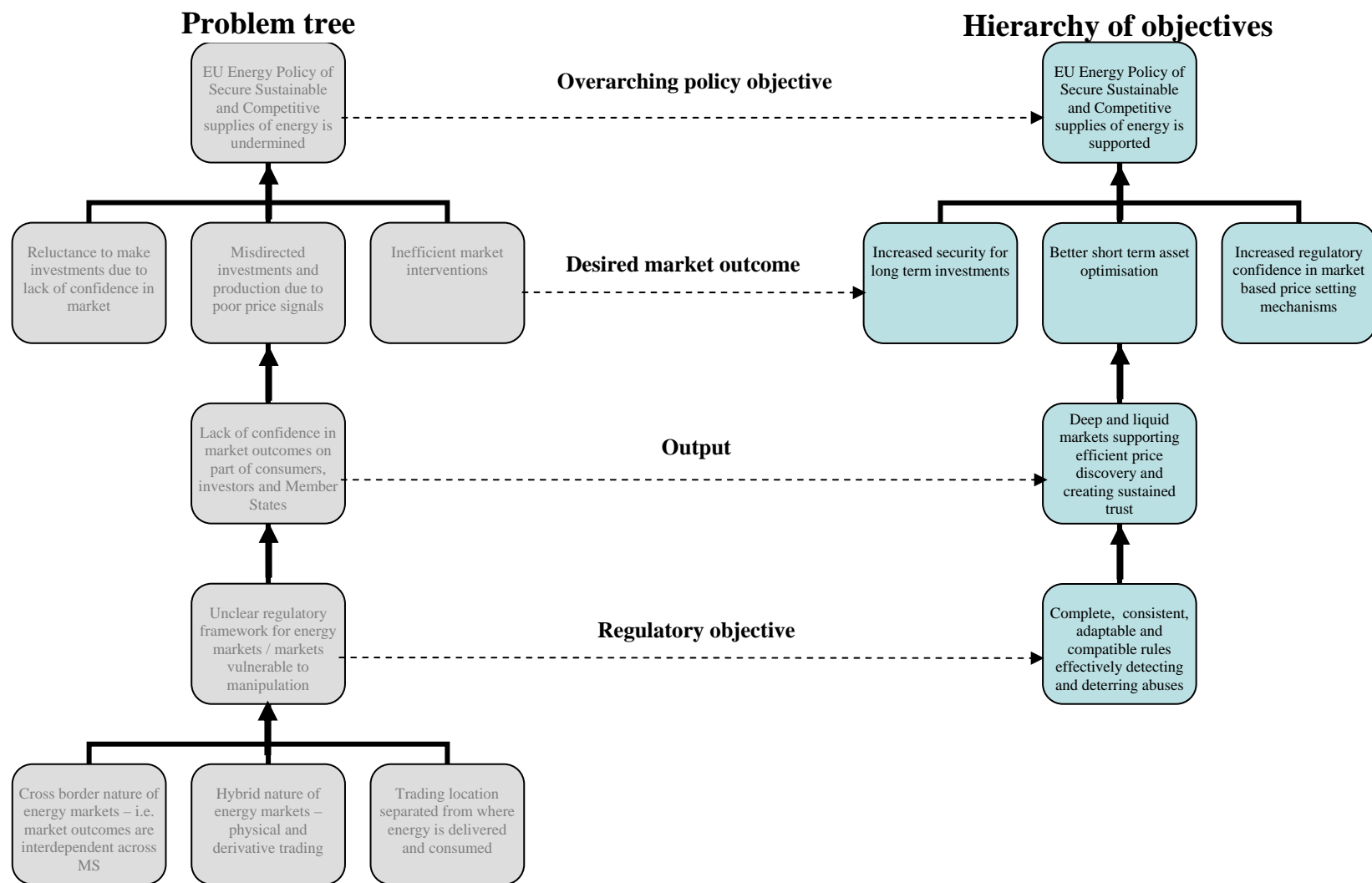
C. Measures for effective detection and deterrence

In order for market misconduct to be detected, wholesale energy markets need to be regularly monitored³⁰. To this end, an effectively functioning market monitor would need to have timely access to complete and verified sets of transactional data. The monitored data should have an appropriate commodity and geographic coverage so as to enable the detection of cross-commodity, cross-platform and cross-border market abuses.

Once market misconduct is detected, compliance with the rules needs to be enforced. For this purpose, competent enforcement authorities need to be defined who can effectively investigate and prove instances of market abuses on energy markets. They would need to have effective sanctioning powers to deter market participants from future misconduct.

³⁰ The need for monitoring was explicitly raised as a consultation question. Almost all respondents agreed that monitoring was an important element in ensuring market integrity. The exception was Statoil which considered that "if guidance and legislation is sufficiently clear most participants will seek to operate within the rules as applied... Ex ante monitoring will take up a lot of resources... It may therefore be better to correct abusive behaviour than continually monitor markets".

Figure 8: Deduction of Objectives from the identified Problems



5 POLICY OPTIONS AND ENFORCEMENT DESIGN CHOICES

This chapter gives an overview of the policy options considered when drafting the regime. Apart from the Baseline scenario which is maintaining the status quo, the remaining options assume sector-specific rules established at EU-level. All those options, except option 4 envisage enforcement of rules at the level of the Member States.

Option 0: Business as usual

This option constitutes the business as usual scenario (BAU); under this option no sector-specific initiative is taken, financial and/or energy regulatory authorities supervise only some parts of the traded market. There are no market conduct rules agreed at EU-level which could be coherently implemented in Member States. The supervisory frameworks are different between each Member State, and, although national energy regulatory authorities will increasingly cooperate within ACER, there is no established process of data access and exchange for market monitoring purposes. Therefore, market misconducts taking place in several markets and involving different but interrelated products/commodities are difficult if not possible to detect.

A scenario without EU action does not mean that no actions will be taken on Member State level. In the absence of a comprehensive EU-level market integrity and supervisory framework national legislators have already started filling this gap and introduced national measures including transactional data collection, regulatory monitoring and reporting schemes: The French energy regulator (CRE) has, for example, the power to monitor all physical and derivative electricity and gas transactions (including OTC derivatives) for delivery in France. For this purpose it collects transactional data from all traders and/or intermediaries in the EU. As another example, the German Monopolkommission called in its special report of 2009³¹ for the establishment of an independent market monitor in Germany which should be able to access and screen on and off-exchange transactions for delivery in Germany. These schemes, though clearly increase the scope of regulatory supervision, will inevitably remain incomplete. By monitoring transactions relating to a single Member State, the cross-commodity and cross-border aspects of traded energy markets remain uncovered and certain market manipulations will go undetected.

Option 1a – Rules defined at EU level, Member States monitor and enforce

This option foresees market misconduct rules to be defined on EU-level. As pointed out in 'Specific Objectives' these rules should be tailored to the needs of traded energy markets and capture all electricity and gas products not covered by MAD. Markets are monitored on the Member State level based on decentralised transaction reporting to competent regulatory authorities. National Regulators would assume monitoring responsibility for transactions that are delivered in (or related to) the Member State in which they have jurisdiction³². Transactions are reported to each Regulator separately by traders or via brokers or other third parties. Traders and/or brokers would report all their wholesale energy transactions to the

³¹ Strom und Gas 2009: Energiemärkte im Spannungsfeld von Politik und Wettbewerb; Sondergutachten der Monopolkommission gemäß § 62 Abs. 1 EnWG.

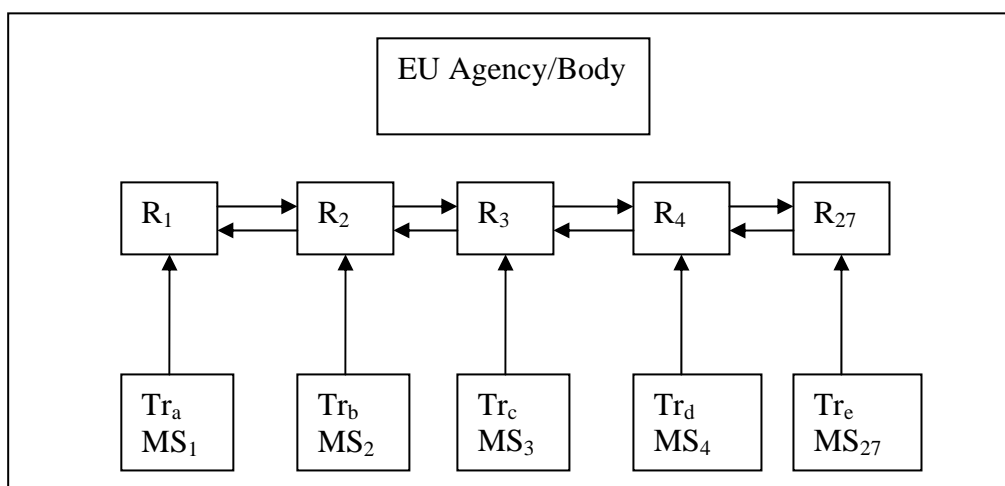
³² If a trader established in Country A engages in a transaction with another trader established in Country B concerning electricity for delivery in Country C, the Regulator of Country C would assume monitoring responsibility.

Regulator where they are established irrespective where the delivery takes place³³. Reported transaction details and data formats are defined on EU-level. Transactional data are stored in different ways, in separate systems of the 27 national regulatory authorities. As we have discussed under 'Problem Definition' the country of establishment of the counterparts will in many cases differ from the country where the traded contract is delivered. Therefore the Regulators will operate a decentralised data exchange mechanism which will enable them to monitor all transactions which are delivered in their jurisdiction and enforce the tailor-made market conduct rules. In case the transactions concern a number of Member States (e.g. contracts for location price differences), appropriate rules and coordination mechanisms would have to be put in place. Such rules and mechanisms would also define enforcement responsibilities and obligations to cooperate. Such cooperation can be supported by an EU body (e.g. ACER). Main features are the following:

- market misconduct rules, reporting obligations and formats, monitoring and enforcement responsibilities defined on EU level;
- Market monitoring is decentralised and at MS level. Each MS Regulator will be in charge of the monitoring and enforcement;
- Transactions are reported to each Regulator separately by traders and/or brokers or a third party operators);
- Each Regulator has its own systems in place to record the reported transactions;
- Regulators operate a decentralised data exchange mechanism
- For misconducts concerning more than one MS appropriate rules would need to be put in place, governing coordination and enforcement between national Regulators, making use of the support of an EU body (e.g. ACER)

Figure 9 shows how the traders (Tr) in Member States (MS) and the regulatory authorities (R) interact with each other:

Figure 9: Schematic picture of data flows and interactions under Option 1a



³³

If a trader established in Country A engaged in transactions which are delivered in (or relating to) Country B, C and D it would have to report these transactions to the Regulator having jurisdiction in Country A.

Option 1b – Rules defined at EU level, Member States report, monitor and enforce, EU Agency process data and monitors cross-border and cross-commodity misconduct

In this option, just like under Option 1a, market misconduct rules, reporting obligations, data formats and monitoring and enforcement obligations are defined on EU-level. However, when comparing with Option 1, there are two differences.

Firstly, while competent authorities of the Member States continue monitoring transactions for which they assume responsibility, there is an additional layer of monitoring introduced on EU level. This monitoring function would concentrate on the detection of market abuses of cross-border and cross-commodity nature.

Secondly, instead of operating a decentralised data exchange mechanism, Regulators directly send the transactional data they receive from market participants to the EU Agency. The EU Agency collects all the data and sorts them by place of delivery. The sorted data sets are then sent back to the respective competent Regulator in the 27 Member States. A copy of all received data remains with the EU Agency enabling it to monitor the referred market abuses.

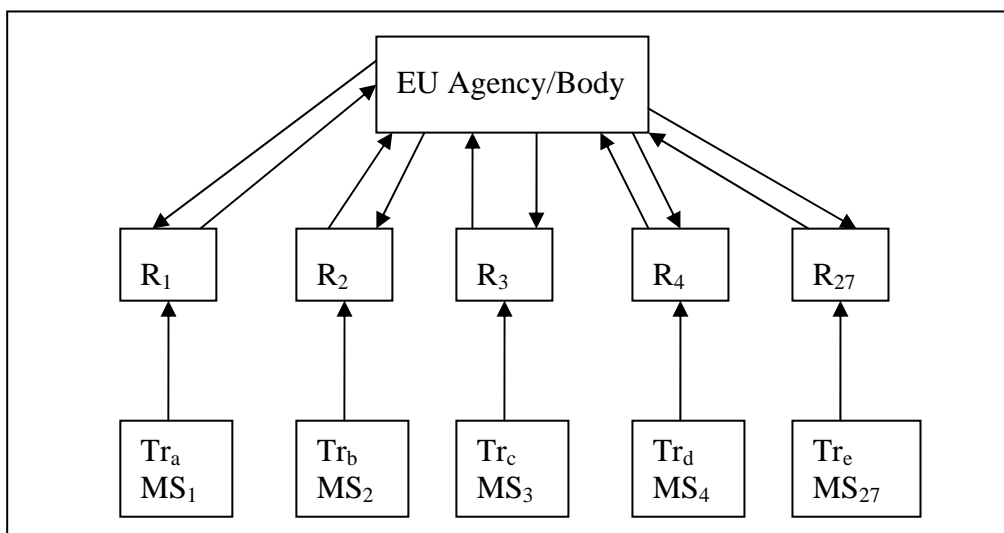
If the EU Agency suspects misconduct through its regular monitoring it establishes whether 1) the misconduct concerns transactions delivered in (or related to) a single Member State or, 2) several Member States (e.g. in case of a location spread).

In the first case the Agency informs the concerned Regulator which has the obligation to enforce the market conduct rules. In the second case appropriate rules for the cooperation of the concerned Regulators have to be put in place, including the possibility for the EU Agency to take action, if the concerned Regulators decide to do so. The Regulator may also detect misconduct within its boundaries on its own.

In summary, this option implies the following:

- market misconduct rules, reporting obligations and formats, monitoring and enforcement responsibilities defined on EU level;
- Responsibility for market monitoring is shared between EU and MS level. MS Regulators will be in charge of enforcement;
- Transactions are reported to each Regulator separately by traders and/or brokers or a third party operators;
- Each Regulator has its own systems in place to record the reported transactions;
- Regulators send all transaction data to EU Agency. As a service, the EU Agency sorts the transactions according to the place of delivery and sends the dedicated batches back to the respective regulators
- For misconducts concerning more than one MS appropriate rules need to be put in place, governing coordination and enforcement between national Regulators, making use of the support of an EU body (e.g. ACER)

Figure 10: Schematic picture of data flows and interactions under Option 1b



Option 2 – Rules defined at EU level, shared monitoring in a unique EU Agency and Member States, enforcement by Member States

In this option market misconduct rules are defined on EU-level. Details of European wholesale transactions are reported to the EU Agency by traders or via brokers or other third parties. No direct reporting to Regulators is foreseen, but national authorities have access to the data held by the EU body. In the same process as described under Option 1b, the EU Agency sorts the transactions according to their place of delivery and sends the dedicated data sets back to the respective regulators. This enables them to monitor transactions falling in their jurisdiction without having to collect data by themselves.

Again, just like under Option 1b, monitoring responsibility is shared between MS and EU level, with the EU Agency concentrating on the detection of market abuses of cross-border and cross-commodity nature. Regularity, format and details of data to be reported are defined on EU level. Reported data are stored in a central database.

In case the EU Agency identifies an alleged misconduct through its regular monitoring the same procedure applies as under Option 1b.

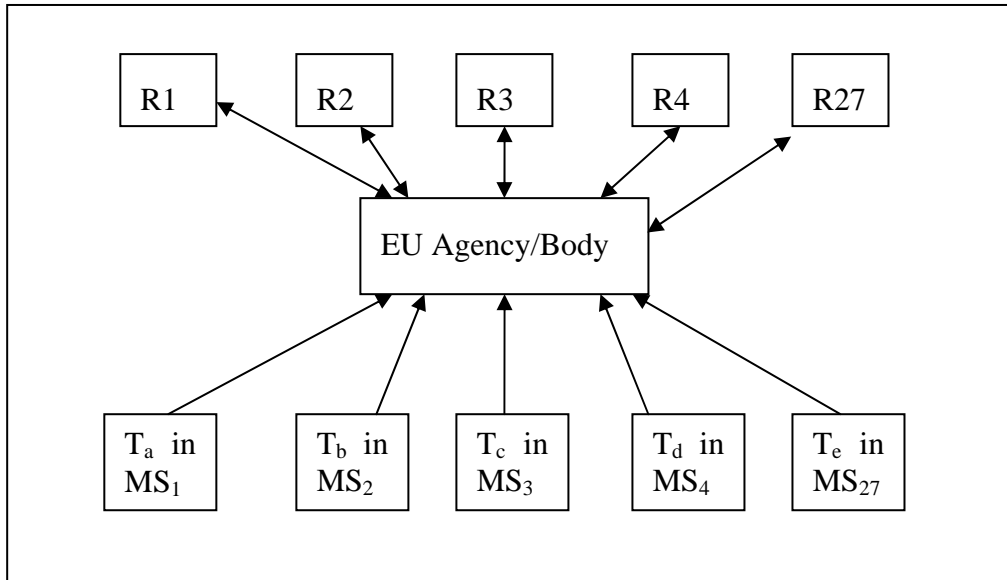
In summary, this option implies the following:

- market misconduct rules, reporting obligations and formats, monitoring and enforcement responsibilities defined on EU level;
- Responsibility for market monitoring is shared between EU and MS level. MS Regulators are in charge of enforcement;
- Transactions are reported centrally to the EU Agency by traders and/or brokers or third party operators. No reporting on MS level foreseen
- EU Agency sorts the directly reported transactions according to the place of delivery and sends the dedicated data sets back to the respective regulators

- For misconducts concerning more than one MS, appropriate rules need to be put in place, governing coordination and enforcement between national Regulators, making use of the support of an EU body (e.g. ACER)

Figure 11 shows the interactions:

Figure 11: Schematic picture of data flows and interactions under Option 2



Option 3 – Rules defined at EU level, shared monitoring by ACER and Member States, enforcement by Member States

This option is equivalent to Option 2, however, all functions and competences of the EU level body are assumed by the European Agency for the Cooperation of Energy Regulators (ACER) which was recently established by the 3rd Internal Energy Market Package and will be located in Ljubljana, Slovenia³⁴. While market oversight is not among its competences its powers could be expanded to cover the monitoring of traded energy markets with the view to detect and deter energy specific market misconducts..

Option 4 – Rules defined at EU level, monitoring and enforcement by ACER or unique EU Agency in cross-border cases

This option is equivalent to Options 2 and 3, however, in all cross-border cases of detected misconduct, ACER or the EU Agency would assume exclusive responsibility for the enforcement of rules. This option is however discarded for further analysis because the Commission has no reason to believe that in case a misconduct is detected, Member States would not be able to enforce rules as efficiently as the Agency or ACER. It is therefore maintained that in case of a detected misconduct national authorities shall take enforcement action in accordance with the subsidiarity principle.

³⁴ The basis for its establishment is Regulation 713/2009 of the European Parliament and the Council of 13. July 2009.

Option 5 – Self-regulation of the markets.

This option assumes that there will be no action undertaken by public authorities at the EU level or by Member States, neither regarding definition of rules nor regarding monitoring. It is assumed that the industry itself will agree upon some market integrity rules. In case misconduct would become known, national Courts or public authorities on level of general market oversight could get involved in enforcement of such rules. It cannot be excluded that in some ways the industry would agree to establish market misconduct rules. Monitoring and enforcement of such rules would be expected however, *a priori* ineffective as the incentive to transfer data by market participants and have them monitored by other market participants or private companies without the level of independency of public authorities will be limited. Weak monitoring is likely to result in an ineffective market integrity regime³⁵. For these reasons this option is discarded.

Option 6 – Extension of MAD and MiFID (No tailor made approach)

Extension of financial market legislation to cover all relevant energy markets would bring these markets within the financial regulatory framework. This framework, in particular MAD, is designed to establish a genuine single market for financial services. Notwithstanding, the close links between energy markets and some financial markets, the requirements of financial market supervision differ in important ways from energy market oversight. Explicitly extending MAD to cover all energy markets would undermine the focus and effectiveness of MAD. This was recognised by CESR/ERGEG in their advice to the Commission where they state "A mere extension of the scope of market abuse regulations...in MAD to physical products is not recommended... [it] would bear the risk of leading to an inappropriate application of MAD in other areas"³⁶. This means, including physical energy markets and defining prohibitions of energy specific misconducts (e.g withholding of energy production assets) within MAD is not desirable and would only fragment its overarching character and applicability. This could have a detrimental effect on the internal market in financial services, and wider EU policies relating to financial stability.

In the light of the strong advice from financial and energy regulators, and the distinct scope of MAD, this option was not considered in detail. This, however, does not mean that the scope of the MAD could not be enlarged to cover a wide range of energy derivatives and marketplaces where such derivatives are traded. In fact, the Commission services are reviewing the MAD, with proposals due in December 2010. Options under consideration include extending the scope of the Directive to financial instruments traded only on MTFs and to market manipulation through OTC derivatives which can impact the prices of instruments traded on regulated markets or MTFs. The revision of the definition of inside information for commodity derivatives is also under consideration. The MAD review shall ensure that the derivative side of energy markets is properly covered. However, these reviews and proposals will be made in the light of the goals in relation to financial markets.

The tailor made market integrity measures will have to ensure that they interact well with applicable financial regulation with rules which do not overlap but also do not leave any gaps.

³⁵ For further reference on the inefficiency of self-regulation see: 'The Self-regulation of Commodity Exchanges: The case of Market Manipulation', S.C. Pirrong, University of Michigan, in *Journal of Law and Economics*, vol. XXXVIII (April 1995).

³⁶ CESR ERGEG advice to the European Commission – response to Question F.20 – Market Abuse.

6 ANALYSIS OF IMPACTS

The aim of this chapter is to assess positive and negative economic, social and environmental impacts of each of the defined options set out above. The outcome of this analysis will be further used when it comes to the choice of the preferred option.

Option 0: Business as Usual (BAU)

As already explained, under this option no EU-level sector-specific initiative is taken. Traded markets remain without comprehensive and coherently implemented rules with a risk that national initiatives proliferate and risk exposing market participants to conflicting and uncoordinated regimes. As a result of fragmented rules and uncoordinated oversight structures the likelihood of occurrence of market misconducts remains high and the probability of detection stays low.

Economic impacts

Market manipulations distort prices and dilute the essential price discovery and hedging function that traded energy markets supposed to provide. These functions depend on prices resulting from orderly trading truly reflecting supply and demand fundamentals, i.e. prices should not be perverted by abusive trading schemes which disconnect them from fundamentals.

Such distortions have both short and long term economic consequences. Looking at futures markets in isolation, the consequences for investors in the short run are of only redistributive nature. This is because trading in futures is a zero sum game, i.e. price changes result in gains of an investor on its derivatives positions which equal to losses on the same derivatives of other investors. However, long term, price distortions lead to suboptimal production and consumption decisions resulting in either underemployment of production assets or waste of valuable energy resources.

Markets exposed to manipulation reduce market participants' trust in market outcomes and makes them reducing their trading activity. This leads to lower levels of liquidity and less deeper markets resulting in increased transaction costs. This is because financial intermediaries, essential to the efficient functioning of wholesale markets, when faced with less liquidity on markets are likely to increase the risk premium they charge for holding open positions. This means that, *ceteris paribus*, producers will receive less for the electricity or gas they produce and consumers including companies will pay more for their energy consumption. Low levels of liquidity can itself cause market participants leaving the marketplace. This, in turn, increases the risk of a downward liquidity spiral and carries the danger of a market disruption.

The direct impacts identified for the BAU scenario are developed by applying the Amaranth case. It is reconstructed and transformed to fit the size of European gas markets and price levels³⁷.

³⁷ This analysis uses figures and calculations made by PriceWaterhouseCoopers (PWC Study) in support of the present Impact Assessment in combination with assumptions made by the Commission's services. The PWC Study is annexed to the Impact Assessment.

If a trader were to trade UK Natural Gas contracts on the Intercontinental Exchange (ICE-Europe), Europe's most liquid natural gas exchange, in the same way as Amaranth did, the traded volume at the ICE-Europe would go up at 34,419 contracts to a total number of contracts of 42,594. The price would be increased by 41.20%, from 0.3659 EUR/therm (1.25 EUR ct/kWh) on 09 April 2010 to 0,5166 EUR/therm (1.76 EUR ct/kWh). This gives an increase of 0.51 EUR ct/kWh or 5.1 EUR/MWh of the market price. If a trader had traded the same volume on ICE-Europe in London as Amaranth did on NYMEX in New York, the total volume on ICE-Europe would have increased by 321%.

The increase in the wholesale gas market price would subsequently lead to an increase of customer prices, both industrial and household, as those prices are directly or indirectly derived from wholesale price quotations. If artificially high prices would last for at least a month before returning to their normal levels, the total impact on UK gas users would be some 404 EURm/year³⁸. This, however, would somewhat overestimate the impact, since prices for consumers and small businesses follow rolling average price trends, while prices of industrial and large business users are fixed for at least a year. Under the simplified assumptions that a) fixed priced contracts are continuously renewed during the year, b) fixed price deals make up 50% of all supply contracts and c) household and small business rates remain unchanged, the price impact would be some 202 EURm/year.

However, the UK gas market cannot be seen in isolation. On the one hand, North-west European gas prices closely follow UK prices and, on the other, electricity prices are highly correlated with gas prices, gas being often the marginal fuel used in electricity generation. This means that the impacts of manipulation on a single market place are directly felt across markets and commodities. It is assumed that an Amaranth-style market manipulation would inflate gas and electricity bills of European businesses and industrial users by some 1 EURbn. This amount would further increase by a price impact on households' and small businesses' bills. While the increase is certain, the magnitude is difficult to quantify, since suppliers procure for this group of customers gradually, often over a number of years.

On top of the direct impact on energy users the occurrence of a similar market manipulation (and the likelihood of this) would also lead to indirect impacts. An increase of risk premia that wholesale market intermediaries charge to other market parties effect participants through two paths:

Firstly, as a result of the market manipulation prices would change abruptly leading to higher volatility. On a volatile market intermediaries feel less comfortable with holding buying and selling offers close to each other, since they could easily lose out on their open positions if prices were to change suddenly. As a result they would add a premium leading to higher bid-offer spreads³⁹.

Secondly, because of the possibility of a manipulation (and the lack of effective market oversight regime) market participants would price in the likelihood of a renewed occurrence in their trading decisions. In addition, the weakened trust in the proper functioning of the marketplace could cause liquidity to drop, leading to higher risk premia charged⁴⁰.

³⁸ This assumes a flat monthly gas consumption of 79.17 TWh in the UK.

³⁹ The bid-offer spread is a difference between the best selling and buying offer on the market.

⁴⁰ See: 'The Cost of Transacting', The Quarterly Journal of Economics, Vol 82, No 1 (Feb., 1968), page 41.

To be able to quantify the immediate effect of increased risk premia we use bid-offer spreads as a proxy. Assuming:

- a) an increased price volatility for the duration of one month following a market manipulation,
- b) an increased bid-offer spread by 20 EUR ct/MWh,
- c) that every gas contract passes through an intermediary at least once before it is delivered⁴¹,
- d) that fixed priced contracts are continuously renewed during the year,
- e) that fixed price deals make up 50% of all supply contracts and
- f) that household and small business rates remain unchanged,

this would add an additional 8 EURm/year to customers' energy bills in a market similarly sized to the UK. For North-Western Europe, an area around the most actively traded gas markets in Europe, the figure would be some 25 EURm/year⁴². We expect that possible price distortions on traded electricity markets would have similar impacts but would be felt wider, since traded electricity markets are more developed than gas markets. Under similar assumptions, a widening bid-offer spread by 20 EUR ct/MWh (a realistic figure for the most liquid German benchmark contract⁴³) would result in a price impact on large electricity users of 25 EURm/year.⁴⁴ This is a conservative assumption, since the bid-offer spreads on less liquid markets like France, could go up to as much as 1 EUR/MWh.

The above calculations assume that after a period of high volatility caused by the manipulations markets would return to normality. However, as we refer to it above, in the aftermath of market manipulation(s) the marketplace it is likely to lose attractiveness and liquidity, resulting in intermediaries charging higher risk premia. The negative impact of it would be felt permanently with transaction costs increasing for all market participants. While we are certain about the effect, it is more difficult to quantify it, since no empirical values are available to us.

Instead, Figure 12 below shows how sensitive European electricity consumers' bills are to 1 EUR ct/MWh increase in bid-offer spreads over a number of years, giving an impression about the impact's order of magnitude⁴⁵.

⁴¹ This is a conservative assumption.

⁴² Assuming yearly gas consumption of 1,500 TWh for industrial and large business users in UK, France, Belgium, The Netherlands, Denmark, Germany.

⁴³ According to information received from traders, the most liquid German calendar contracts trades under normal circumstances at a bid-offer spread of 5 EUR ct/MWh while the less liquid French equivalent at 25 EUR ct/MWh. In a stressed market the German spread could go up to 25 ct/MWh and the French spread to as high as 1 €/MWh.

⁴⁴ Assuming yearly electricity consumption of 1,500 TWh for industrial and large EU business users.

⁴⁵ A similar approach was also used by the UK government in: 'Regulatory Impact Assessment', The Financial Services and Markets Act 2000 (Market Abuse) Regulations 2005, and the Investment Recommendation (Media) Regulations 2005, HM Treasury, Feb. 2005. We calculate with a volume of 9.000 TWh of traded electricity derivatives (forwards and futures) in Europe.

Figure 12: Increase in cost of trading electricity as a function of increased spreads and the duration of the persistence of higher risk premia (in EUR million)

Increase in bid-offer spread in EUR ct/MWh	Number of years with increased bid-offer spreads									
	1	2	3	4	5	6	7	8	9	10
1	90	180	270	360	450	540	630	720	810	900
2	180	360	540	720	900	1,080	1,260	1,440	1,620	1,800
3	270	540	810	1,080	1,350	1,620	1,890	2,160	2,430	2,700
4	360	720	1,080	1,440	1,800	2,160	2,520	2,880	3,240	3,600
5	450	900	1,350	1,800	2,250	2,700	3,150	3,600	4,050	4,500

Figure 13 summarises the above presented figures and gives an overview of the monetary impact of market abuses under different scenarios.

Figure 13: Summary of monetary impacts of market abuses

Amaranth's profit earned on the three settlement days of 24 February, 29 March, 26 April 2006	USD 59,000,000 - USD 168,000,000
Direct impact of an Amaranth-style market abuse on European business and industrial energy users	~ EUR 1,000,000,000
Indirect impact of an Amaranth-style market abuse on North-West European business and industrial gas users through increased risk premia	~ EUR 25,000,000
Indirect impact of an Amaranth-style market abuse on European business and industrial electricity users through increased risk premia	~ EUR 25,000,000
Impact of an additional 1 EUR ct/MWh risk premium on electricity trading participants' transaction costs in Europe due to reduced confidence over a periode of 2 years	EUR 180,000,000

It is also relevant to note, that the baseline scenario does not mean that nothing will happen in the legal landscape. As we already mentioned, we can legitimately assume that in the absence of an EU level initiative for a consistent and coherent supervisory regime, potentially incompatible national measures will mushroom.

Although national measures have the potential to increase regulatory supervision and with that the likelihood of detection of market abuses, their reach will inevitably remain limited. At the same time they are likely to cause increased administrative burden to both, regulators and market participants. As regulators step up their monitoring activates they will increasingly rely on and ask for timely available market data. This means that in an extreme scenario trading participants and/or operators of trading venues will be faced with 27 national data reporting request, all differently designed covering different data items. Especially internationally active market participants, often operating via a single trading vehicle, may be

exposed to a plethora of diverging regulatory reporting schemes causing high compliance costs.

Social impacts

The undesired social impacts follow from the likely scenarios we developed when we assessed the economic impacts. High occurrences of market manipulation distort market outcomes leading directly and indirectly to higher costs for customers. Higher prices reduce consumers' disposable income and reduce businesses' competitiveness leading to lower levels of employment. Markets vulnerable to manipulation are likely to see less trading and liquidity suggesting fewer jobs also at banks and trading entities.

Increase in energy prices may cause the deepening of "energy poverty" and social exclusion of most vulnerable groups. This is because housing costs (of which energy costs make up a significant part⁴⁶) account for a considerable part of households' disposable income. Any increase of energy prices hit poor people disproportionately since their housing expenditure, relative to their disposable income, is higher than in the average population. The Commission's Joint Report on Social Protection and Social Inclusion 2010 finds that "On average in the EU the share of housing costs in total disposable income, net of housing allowances, is 19 % [...]. The issue of affordability is particularly problematic for the at-risk-of-poverty population: in the EU as a whole, the impact of housing costs is more than twice as important for the poor as for the non-poor population (33 % vs 17 %) and this ratio is over 2.5 in FI, AT, FR, CY, SI, LU and SE, where poor people spend three times more on housing, relatively to their income, than non-poor people."⁴⁷

Despite these impacts no impact on job equality or job rights are expected.

Environmental impacts

We believe that the BAU scenario has no direct environmental impacts, i.e. the pure lack of market misconduct rules or the absence of regulatory supervision will not impact the environment. However, leaving markets vulnerable to abuses could have indirect impacts. Persisting price distortions on traded energy markets may change the absolute level of fuel prices and/or the relative price of one fuel to another.

For example, if a gas producer were to withhold the production of gas, this would drive up the price of gas relative to coal. This, in turn, would make power producers to switch to more polluting coal as the fuel of their choice, resulting in higher emissions. If the price manipulations were to last over a longer period of time they could also distort market participants' investment decisions potentially resulting in more polluting power generation facilities.

Market manipulations could, of course, work in the way around, leading to more gas burnt than coal. The size of the indirect environmental impact of the BAU scenario is therefore difficult to assess. It will not only depend on the nature of the potential abuse but also on the duration of the price distortion.

⁴⁶ We estimate that on average energy costs make up some 40% of households' total housing cost in the EU.

⁴⁷ Joint Report on Social Protection and Social Inclusion 2010, European Commission, Directorate General for Employment, Social Affairs and Equal Opportunities, Units E2 and E4.

Option 1a: Rules defined at EU level, Member States monitor and enforce

This option envisages a scenario without direct EU intervention in monitoring and enforcement. The EU, however, will lay-out specific legislation on electricity and gas market misconduct rules (market manipulation, insider trading, etc.), leaving to Member States' competent Regulators to monitor markets and enforce market conduct rules.

Economic Impacts

A coherent and complete set of market conduct rules defined at EU-level and their harmonised application by Member States would have the potential to reduce the occurrence of market abuses and result in increased trust in market outcomes when compared with the BAU scenario. As such cases will less likely to occur, the impact on price fluctuations and therefore the risk of negative impact on households and companies and their competitiveness is reduced. This is because the rules would be comprehensively covering energy markets and national Regulators would have a common rulebook based on which they could better use their enforcement powers.

The introduction of a new EU market misconduct framework and having MSs monitor and enforce the rules through national Regulators will generate positive impacts on both regulatory transparency and integrity of the markets against the BAU scenario.

There are, however, several forms of misconduct behaviours that might remain undetected by national Regulators, particularly when occurring outside each single Regulator's jurisdiction. These possibilities are mainly regarding:

- Cross-commodity, cross-border and cross-platform abuses may remain undetected if Regulators will only monitor energy transactions in their own jurisdiction;
- Effectiveness in monitoring for all 27 Regulators. It is likely to assume that not all national regulators will perform identically due to different monitoring approaches. This might generate systemic issues given the interdependencies of each national market and each commodity.
- The timely preparation of complete and verified sets of transactional data sorted by the place of delivery might be problematic through a decentralised iterative data exchange mechanism

Administrative impacts

Because all 27 MS Regulators would need to get regular access to transactional data, the cost of reporting will potentially be higher than in the BAU scenario. Each market participant would have to install a data reporting interface to its home Regulators and prepare data for reporting. We estimate the order of magnitude of data volumes to be submitted to the Regulators at some 10,000 data lines per day. This includes details of all relevant wholesale transactions that go through broker's trading platforms and energy exchanges. The information contained in a data line will at least include: name of counterparties, product name or code, beneficiary of the transaction, volume, prices, place of delivery, time stamp.

Data reporting assumes IT investment for both market participants and Regulators. As for traders, the PWC Study estimates different software implementation costs according to the size of the trading operation. They estimate installation cost of EUR 600,000 for large traders

and EUR 110,000 for small traders. Assuming a simplified world with a depreciation period of ten years and no interest rate, this would add up for the whole trading community to a total cost of 21.3 EURm/year. If exchanges and brokers were to report on traders behalf the comparable figure would be 5.4 EURm/year. However, we have to note that the two reporting channels would not result in exactly the same data reported, since not all energy transactions are channelled through brokers and exchanges. Additional IT costs for 27 Regulators related to data handling would amount to 1.35 EURm/year. In addition Regulators would need to install and operate a data exchange mechanism which is able to sort the transactions which the 27 Regulators receive individually according to the place of delivery and dispatch the sorted data batches to the competent Regulators in a decentralised way. The cost of the installation and operation of such a system could not be assessed by us.

The PWC Study has not assessed the need for additional human resources needed to operate the reporting scheme and the monitoring exercise. It is difficult to come up with well founded estimates. We estimate that the monitoring of reported transactions would require the equivalent of an additional 50 employees for all national regulators. This estimate takes into account that some regulators already carry out some market monitoring activities. The work and resources between the national authorities will not be evenly distributed, since some Member States boast very actively traded energy markets while trading is still in its infancy in others, requiring different levels supervisory attention. We assume that market participant's data reporting would require little extra manpower since reporting will be highly automatic. We calculate with an equivalent of an additional 50 employees for the industry. This results in a total extra manpower of 100 employees. Calculating with a cost of 100,000 Euro/employee/year, the additional manpower related cost of operating the reporting and monitoring scheme would amount to 10 EURm/year. The following Figure summarises the costs of the reporting scheme:

Figure 14: Annualised costs of the initiative under option 1a

	EURm/year
Software implementation and IT installation cost for the trading community (annualised assuming a ten year depreciation period)	21.3
Alternatively, if reporting was to be handled by brokers and power exchanges (annualised assuming a ten year depreciation period)	(5.4)
Software implementation and IT installation cost for 27 Regulators (annualised assuming a ten year depreciation period)	1.35
Data exchange mechanism between Regulators	n.a.
Cost of monitoring and data handling for 27 Regulators (human resources)	5.0
Cost of data manipulation and reporting for the trading community	5.0

The above cost estimates both for IT and human resources are conservative. This is because the reporting exercise is likely to benefit from already existing reporting schemes governed by financial regulation. MiFID companies have already been reporting details of certain energy derivatives transactions to financial regulators. This obligation is expected to be enhanced soon to cover most of the relevant OTC derivatives transactions. Once this in place, investments directly attributable to this initiative will only incur to participants who do not fall under financial regulation and/or trade energy products only bilaterally.

Social Impacts

Direct social impacts are not significant. The creation of few jobs with Regulators and market participants related data reporting and market monitoring is not significant. More important are the indirect impacts. Under this option the negative effects emerging in the BAU scenario on job losses related to decreased competitiveness of EU industries (e.g. energy intensive industries) resulting from increased or more volatile energy prices are less likely to occur.

On contrary, markets which better reflect supply/demand fundamentals are likely to generate other indirect positive impacts on the electricity and gas consumers. A generally more stable market means lower probability of market shocks and price spikes. Similarly, a more trusted market will indirectly benefit consumers.

No impacts on job rights, job equality or job legislation are expected.

Environmental Impacts

We consider that Option 1a has no direct environmental impacts, i.e. the mere existence of market misconduct rules or increased regulatory supervision will not impact the environment. However these measures are likely to reduce the vulnerability of markets to abuses and the potential negative indirect environmental impacts, as described under the BAU scenario, are less likely to occur.

Conclusion

This option represents a clear improvement over the BAU scenario. The introduction of new market misconduct rules and expanding the Regulators' competences to monitor markets and enforce the rules will carry significant benefits for the electricity and gas markets and their participants. Overall market stability will improve and abusive operations are more likely to be identified and prevented in time.

Economic impacts	
Market stability	+
Impact on prices of households and firms	+
Administrative costs	-
Social impacts	
Jobs in the industries	+
Environmental impacts	+

The option will nonetheless leave an important issues unresolved. Since Regulators only monitor transactions relating to their own jurisdiction they would not be able to fully capture market misconducts of cross-border and cross-commodity nature.

Option 1b – Rules defined at EU level, Member States report, monitor and enforce, EU Agency process data and monitors cross-border and cross-commodity misconduct

This option involves the EU body stronger in the process of data collection and monitoring exercise as in Option 1a and introduces a shared responsibility of market monitoring with the Member States. The EU Agency monitors transactions with potential relevance of cross-border and cross-commodity misconducts and calls appropriate Regulators for action in case the misconduct takes place in their jurisdiction. The national Regulators are also receiving all data on wholesale transactions from market participants established in their jurisdiction. The Regulators forward collected data to the EU Agency whereas format and details of data to be reported are defined in an EU-level regulation.

Economic impacts

Similar as in option 1a a coherent and complete set of market conduct rules defined at EU-level would have the potential to reduce the occurrence of market abuses and result in increased trust in market outcomes. Price fluctuations and the risk of negative impact on households and companies and their competitiveness are reduced.

The collection of complete sets of transactional data will allow for the EU Agency and also Regulators of the Member States to gain a clear view of traded energy markets. This will enable it understand and detect market abuses of cross-border, cross-platform and cross-commodity nature and engage in preventing misconducts from happening.

We consider that the creation of an EU Agency implementing regular monitoring across traded European energy markets will not just improve the detection of market misconducts but also deter market participants from attempted market abuses. Thus its operation will improve market stability (e.g. limited price fluctuations and reduced risk premium for market participants), and lead to increased regulatory transparency and availability of information (e.g. centrally verified and compiled set of data).

Administrative impacts

The administrative impacts under this option will be similar when compared with Option 1a with two distinctions:

First, due to the introduction of an EU level market monitoring additional costs will incur such as ICT installation and operation costs and cost related to additional human resources in the EU Agency. Under the above assumptions, the PWC Study estimates software implementation costs at 0.5 EURm/year. For the personnel needed to run a dedicated new monitoring Agency we estimate twenty five employees with a total cost of 2.5 EURm/year. This will be on top of the 50 new employees we mention in option 1a, since the EU Agency would share the monitoring responsibility with national regulators who would continue using resources for monitoring transactions falling in their jurisdiction.

Our view is that the introduction of an EU level data handling will not only enable an EU level market monitoring but it has the potential to increase the efficiency of the work of

national market monitors. Matching, verifying and sorting of data in one go can be safer and speedier than the operation a data exchange mechanism on a decentralised manner. Under this option regulators would only have to receive the data and dispatch it to the EU Agency without additional handling. In exchange they would get access to a complete set of transactions they need to fulfil their monitoring duty. As a result no cost of installing and operating of a decentralised data exchange mechanism will have to incur. The following Figure summarises the costs of the reporting scheme:

Figure 15: Annualised costs of the initiative under option 1b

	EURm/year
Software implementation and IT installation cost for the trading community (annualised assuming a ten year depreciation period)	21.3
Alternatively, if reporting was to be handled by brokers and power exchanges (annualised assuming a ten year depreciation period)	(5.4)
Software implementation and IT installation cost for 27 Regulators (annualised assuming a ten year depreciation period)	1.35
Cost of monitoring and data handling for 27 Regulators (human resources)	5.0
Cost of data manipulation and reporting for the trading community	5.0
Software implementation and IT installation cost for the EU Agency (annualised assuming a ten year depreciation period)	0.5
Cost of monitoring and data handling for the EU Agency (human resources)	2.5

Social Impacts

We expect similar kind, though more positive indirect social impacts when compared with Option 1a. This is because the probability of market misconducts would further decrease yielding benefits for energy users.

No impacts on job rights, job equality or job legislation are expected

Environmental Impacts

As in option 1a, prices better reflecting fundamentals of gas and electricity may make these energy sources more attractive as the more polluting coal. As already explained in Option 1a, increased market monitoring and more stringent enforcement are likely to reduce the vulnerability of markets to abuses. When compared with the BAU scenario and Option 1a, the

measures in Option 1b have the potential to further reducing the possible negative indirect environmental impacts (as described under the BAU scenario).

Conclusion

This option proves to be a significant improvement compared to the baseline scenario. Much improved regulatory transparency and integrity are the results of the introduction of a new EU level body dedicated to active monitoring of traded electricity and gas markets.. The probability of detection and prevention of misconducts will significantly improve when compared with the BAU scenario or Option 1a, because the regular screening and analyses of the totality of relevant wholesale transactions will enable to EU Agency to better capture energy specific market misconducts.

Economic impacts	
Market stability	++
Impact on prices of households and firms	++
Administrative costs	-
Social impacts	
Jobs in the industries	+
Environmental impacts	+

Option 2 – Rules defined at EU level, shared monitoring in a unique EU Agency and Member States, enforcement by Member States

Economic impacts

Similar as in option 2 a coherent and complete set of market conduct rules defined at EU-level would have the potential to reduce the occurrence of market abuses and result in increased trust in market outcomes. Price fluctuations and the risk of negative impact on households and companies and their competitiveness are reduced.

Under this option we expect similar economic impacts as in Option 1b, provided the data sharing is effective.

Administrative impacts

In comparison to Option 1b, the overall reporting costs should be lower since national regulators do not have to install extra communication interfaces to reporting participants. Instead, transaction data would be captured once, directly by the EU Agency. This would also simplify and speed up overall data handling by reducing the number of data supply routes from 3 (Trader → Regulator → EU Agency → Regulator) to 2 (Trader → EU Agency → Regulator). This is also likely to reduce the occurrence of data transmission and handling errors. In this option all other cost items we included under Option 1b, including the cost for the equivalent for 50 employees with national regulators remain valid. This is because national regulators will share monitoring responsibility with the EU Agency. The following Figure summarises the costs of the reporting scheme:

Figure 16: Annualised costs of the initiative under option 2

	EURm/year
Software implementation and IT installation cost for the trading community (annualised assuming a ten year depreciation period)	21.3
Alternatively, if reporting was to be handled by brokers and power exchanges (annualised assuming a ten year depreciation period)	(5.4)
Software implementation and IT installation cost for 27 Regulators (annualised assuming a ten year depreciation period)	1.35
Cost of monitoring and data handling for 27 Regulators (human resources)	5.0
Cost of data manipulation and reporting for the trading community	5.0
Software implementation and IT installation cost for the EU Agency (annualised assuming a ten year depreciation period)	0.5
Cost of monitoring and data handling for the EU Agency (human resources)	2.5

Social Impacts

Under this option we expect similar social impacts as in Option 1b.

No impacts on job rights, job equality or job legislation are expected

Environmental Impacts

Under this option we expect similar social impacts as in Option 1b.

Conclusion

Similar conclusions as for Option 1b, with additional gains due to improved operational efficiency

Economic impacts	
Market stability	++
Impact on prices of households and firms	++
Administrative costs	-
Social impacts	
Jobs in the industries	+
Environmental impacts	+

Option 3 – Rules defined at EU level, shared monitoring by ACER and Member States, enforcement by Member States

This option is equivalent to Option 2, however, all functions and competences of the EU level body would be assumed by ACER.

Economic Impacts

A market monitor located at ACER will be able to detect and prevent market misconducts with higher effectiveness than a newly created EU Agency. This is because ACER will have built its own energy expertise and had access to specialist knowledge of national energy regulators sitting in its Board. Such an expert knowledge is indispensable for the EU monitor to understand complex market outcomes. A higher detection ratio will also likely to better deter future misconducts which will have a beneficial impact on market stability and the credibility of market outcomes. A newly established body would have more difficulty to build up the required expert knowledge and had presumably less convenient access to national energy regulators.

Administrative impacts

We assume that the market monitor at ACER would not only be more effective but could also be run at lower cost than a dedicated new Agency. This is because the market monitor had access to ACER's existing facilities (ICT, office space, manpower, etc.) and share overhead costs with ACER's existing operation⁴⁸. For this reason we mark the administrative costs with an (*) in the table presented under 'Conclusion'. We estimate that the market monitor located at ACER could be run with fifteen employees at a cost of 1.5 EURm/year which is 1 EURm/year less than the cost of monitoring in a newly established dedicated EU Agency. In this option all other cost items we used under Option 2, including the cost for the equivalent for 50 employees with national regulators remain valid. This is because national regulators will share monitoring responsibility with the EU Agency. The following Figure summarises the costs of the reporting scheme:

Figure 17: Annualised costs of the initiative under option 3

	EURm/year
Software implementation and IT installation cost for the trading community (annualised assuming a ten year depreciation period)	21.3
Alternatively, if reporting was to be handled by brokers and power exchanges (annualised assuming a ten year depreciation period)	(5.4)
Software implementation and IT installation cost for 27 Regulators (annualised assuming a ten year depreciation period)	1.35

⁴⁸ For this reason we mark the administrative costs with an (*) in the tables of impacts for this option.

Cost of monitoring and data handling for 27 Regulators (human resources)	5.0
Cost of data manipulation and reporting for the trading community	5.0
Software implementation and IT installation cost for ACER (annualised assuming a ten year depreciation period)	0.5
Cost of monitoring and data handling for ACER (human resources)	1.5

Social Impacts

Same as Option 2

Environmental Impacts

Same as Option 2

Conclusion

Option 3 would be favourable to Option 2, since It can be expected that ACER would work more efficiently in terms of the overall cost of its monitoring exercise and more effectively regarding the expertise it has available, than a newly created EU Agency.

Economic impacts	
Market stability	+++
Impact on prices of households and firms	++
Administrative costs	_*
Social impacts	
Jobs in the industries	+
Environmental impacts	+

7 OTHER ISSUES

Elaboration of sector specific rules

Effective oversight requires that issues such as insider dealing and other forms of market misconduct cover all aspects of traded wholesale markets in electricity and gas. These should be consistent across Europe to prevent situations from arising where the same market conduct would be deemed as in line with rules on the one market but would be found as infringing the rules in another. Because important venues for energy trading are already covered by MAD, definitions relating to market misconduct specifically covering the physical energy markets will need to interact very well with MAD.

However, it is essential that a tailor made regime take account of the specific characteristics of energy markets, in particular, their high level of susceptibility to significant changes in price as a result of economic or physical withholding of capacity. Similarly, the impact of network congestion on prices in several national markets brings about particular issues, which do not arise in global financial securities markets or indeed in other global commodity markets.

Respondents to the public consultation were specifically requested their views on the appropriateness of basing market abuse definitions applicable developed as part of an energy specific regime on the MAD definitions and accounting for energy markets specifics through guidance. The majority of respondents warned against attempting what was often termed a one to one take over from MAD. Nonetheless there was also widespread acceptance that the principles under MAD should form the basis for a definition of Market Abuse. In this context the response of E.ON is particularly illuminating – it specifically raised the issue not of the definitions in MAD, but of subsequent implementing legislation adopted under the Comitology procedure. The European Federation of Energy Traders proposed a multi layer model, in which the ACER (though potentially another body) would consult with market participants to draw up guidelines. These could then be made binding through implementing legislation adopted by the Commission. This suggestion was reflected in the majority of industry responses.

This represents a sensible approach for each of the options requiring EU level rules. It fits in with the approach taken in financial sector regulation under the Lamfalussy arrangements, and would therefore also aid interaction between financial regulation and sector specific regulation. It also allows the need for flexibility to be combined with market participants calls for legal certainty, which were clearly expressed in the consultation responses. Where an EU agency is responsible for monitoring, and the elaboration of more detailed guidelines, the most appropriate form for the basic act would be a Regulation.

Commodity scope

Electricity and gas markets are interlinked with other commodity markets, in particular with markets for primary energy products and for emission allowances (EUAs) within the EU Emissions Trading System (EU ETS).

Coal is an important primary fuel used in power generation, while oil and oil product prices influence electricity prices through their role as reference in long-term gas supply contracts. The understanding of these markets and the trading behaviour of their participants are therefore essential for any market monitor to be able to explain changes in wholesale electricity and gas prices. However, these markets are globally traded with major participants established in third countries. An isolated, EU-level market monitoring would remain incomplete and misconduct rules partly unenforceable. This means that designing a regime which encompasses oversight of such markets would require a strategy for global regulatory cooperation to provide real benefits to Europe. To ensure the integrity of traded oil and coal markets, globally agreed monitoring and enforcement schemes would be needed which is beyond the scope of the present initiative. This approach had overwhelming support in the public consultation.

This is, however, different in case of the emission allowances. Emission trading under the EU ETS is by definition European in scope. With its introduction, carbon became central to European electricity markets. The power generation sector is the single largest emitting sector

in the EU, representing around 40% of the emissions under EU ETS. The supply of emission allowances impacts generators' fuel choice and, with that, the demand for different fuels; just like relative price developments of fuels influence plant dispatch and, as a result, determine the demand for carbon. The two markets are therefore mutually interdependent. They also share, to a large extent, the same trading participants and trading venues. Although the aim is to see the EU ETS linked up with compatible emission trading systems in other parts of the world, notably in the USA, the EU ETS is currently limited to the European Economic Area. Consequently, price formation on the energy market is driven by the actions of EU ETS actors based in Europe.

Recognising these interlinkages and the growing importance of traded carbon markets the Commission has decided to initiate an in depth review into how best to ensure the integrity of these markets. The results of the review are due in 2011.

Interactions with third countries

It has long been recognised that the potential for trading to migrate can undermine the effectiveness of the oversight of markets. In principle, there is nothing to prevent the use of brokers, or even organised markets, located outside the EU for the trading of energy or energy related products for delivery inside the EU. Such transactions could be relevant for understanding attempts at market manipulation within the EU, just as transactions brokered in one EU country relating to energy delivery in another.

In order to prevent third countries being used to make transactions which parties wish to hide from the authorities within the EU, the obligation to report transactions in products covered by the scope of the present initiative (i.e. electricity and gas markets related to delivery within the EU) should in the first instance lie with the parties to that transaction. Under normal circumstances, this obligation should be filled by the broker or exchange which acted as intermediary. However, in cases where third countries were used to carry out the transactions this would not relieve an EU based party from its reporting obligations.

Impact on SME's

During the public consultation some respondents raised concerns on the impact on Small and Medium Enterprises. For example the Energy Commodity Traders Group pointed out that monitoring must not put burden on small companies who do not have a strong ability to influence market. These concerns relate to the possible difficulties for SMEs to meet data reporting requirements. Although we do not expected a major number of SMEs being affected by this regulation the legislative proposal will take account of this by proposing *de-minimis* measures and/or measures, like less frequent reporting.

8 CONCLUSIONS – THE PREFERRED OPTIONS

Analysis of policy options focused on the following areas:

- Market Stability;
- Impact on prices
- Administrative costs
- Job Creation;
- Environmental Costs.

The table presented below summarises the impacts of each policy options, allowing for a quick comparison with the BAU scenario.

	<i>Market Stability</i>	<i>Impact on prices</i>	<i>Administrative costs</i>	<i>Job Creation</i>	<i>Environmental Costs</i>
BAU	Amaranth case scenarios possible	Price volatility, prices of energy may increase	Costs incurred by possible 27 regimes in the EU	Job losses due to higher energy prices	No direct effects identifiable
Option 1a	+	+	-	+	+
Option 1b	++	++	-	+	+
Option 2	++	++	-	+	+
Option 3	+++	++	-*	+	+

In general, options 1-3 examined proved to be better as the BAU scenario as they can, to varying degrees, detect better and deter market misconduct and reduce related costs to society. At the same time all of these options involve higher administrative costs. Policy options 1b, 2 and 3 have the significant advantage over option 1a that they better enable the detection of cross-border and cross-commodity abuses. Policy options 2 and 3 performed better in terms of economic/market impacts because they combine the advantages of an enhanced regulatory regime with lower administrative costs in comparison to options 1a and 1b. Option 3 has the advantage over option 2 that the energy market expertise and the special focus allows for ACER to detect market misconducts more efficiently than a newly created, dedicated EU Agency. In addition, by the time the present initiative takes effect, ACER will have already been established and could accommodate the market monitor more easily than a newly created EU Agency with less administrative costs because no additional overhead costs will be necessary.

In Figure 13 we presented different metrics to demonstrate the monetary impact of a market misconduct. It is, however, very difficult to compare the administrative costs incurred as the result of the present initiative with the concrete monetary benefits it would bring to society. While we have argued that the introduction of energy specific market conduct rules and stringent regulatory monitoring increases the likelihood of detection of market abuses and raises deterrence the quantification of the beneficial impacts is problematic.

Instead, to give an impression about possible benefits, we refer to Figure 12 which shows cost savings of trading participants as a function of decreasing bid-offer spreads, as a proxy for reduced risk premia and increased trust in market outcomes. If average bid-offer spreads on traded electricity markets were to decrease by a mere 1 EUR ct/MWh⁴⁹, which is a conservative estimate, total saving for all trading participants would amount to 90 EURm/year. This figure would increase by further spread savings on traded gas markets. This compares with the total cost of the integrity regime (option 3) of 34.65 EURm/year. To put this figure in another perspective: the "investment" in the market integrity regime pays off if the measures only manage to deter an Amaranth-style misconduct once in every 30 years.⁵⁰

As identified above the envisaged regulatory regime needs to support general EU energy policy objectives of competitive, secure and sustainable energy supplies. The proposed market conduct rules and measures need to be:

- A. complete and consistent
- B. adaptable and compatible rules
- C. effectively detecting and deterring abuses

In reference to these objectives in terms of efficiency of introducing each of the options and the overall balance of impacts, the options have been assessed regarding:

- Effectiveness in reaching the objectives
- Efficiency of introducing them
- Coherence in limiting negative impacts in comparison to BAU.

⁴⁹ See footnote 43.

⁵⁰ Estimating that an Amaranth-style manipulation would inflate customers' energy bills by some 1 EUR bn/year.

	<i>Effectiveness</i>	<i>Efficiency</i>	<i>Coherence</i>	<i>Rank</i>
BAU	None of the objectives can be reached	Costs of up to 27 separate regimes are likely	No positive impacts	5
Option 1a	Objectives A and B can be reached but C not	Costs of 27 agencies	Slightly positive impacts on market stability and prices	4
Option 1b	Objectives A, B and C can be reached	Costs of 27 agencies and the EU Agency	Positive impacts on market stability and prices but inefficiencies in the process	3
Option 2	Objectives A, B and C can be reached	Costs of a special EU Agency	Positive impacts on market stability and prices	2
Option 3	Objectives A, B and C can be reached but C will be reached more effectively	Costs of additional tasks within ACER	Positive impacts on market and prices and smaller costs of administration	1

The above table shows that option 2 and 3 match best the identified objectives. Option 3 is likely to detect and deter energy specific market abuses most effectively because of ACER's overall energy expertise and its special focus. As ACER already exists the administrative cost of running the market monitor attached to this agency will also be lower when compared to option 2 where a new Agency would need to be set up. Market monitoring in Option 1a is less effective than in Option 1b, 2 and Option 3, because national market monitors lack the comprehensive view of energy markets which they would need to effectively and efficiently detect and deter energy specific market abuses involving cross-border, cross-commodity and cross-platform transactions

Concluding from the above, option 3 is the preferred framework in which market misconduct rules are defined on EU-level, the wholesale market monitor is located at ACER and the rules are enforced by the Member States.

9 MONITORING AND EVALUATION

Ongoing evaluation and monitoring of the implementation of a tailor made regime for ensuring the integrity of energy markets will need to cover a number of areas including the appropriateness of market abuse rules covering energy markets, interaction with financial market regulation, the impact on MS level market oversight and how coordination of enforcement works in practice, the effectiveness of EU level monitoring, and the actual impact of transaction reporting on market participants. Each of these issues should be covered

in a dedicated review report from ACER to the Commission two years after the application of the measures.

Appropriateness of market abuse rules

The aim is to use implementing legislation or guidelines to specify in detail how market abuse rules should be applied in practice. It will be important that this process is subject to full public consultation. The need for a more or less detailed specification of how general market abuse rules should be applied to energy markets will have to be kept under regular review. However, this does not mean that these concerns should not form part of a more general review of the effectiveness of the initiative. In particular this should be reviewed in parallel with the interaction with financial market regulation.

Interaction with financial market regulation

Only after a number of years of application will it be possible to draw conclusions about how the implementation of a tailor made regime for energy markets interacts with financial market regulation. In the meantime other commodity markets may have developed more detailed sectoral oversight which will also need to interact with financial regulation and from which lessons may be learned. Just as the CESR/ERGEG report was crucial to the development of this initiative, it will be important that financial and energy regulators together review how it works in practice. Without prejudice to the need for ongoing cooperation, a proper joint review should take place after five years of the implementation of the new market integrity regime.

Impact on MS level market oversight and Coordination of enforcement

The public consultation showed strong support for an EU level initiative to ensure the integrity of energy markets, this was combined with a desire to improve the effectiveness of national level monitoring and the relationship between national regulators and their markets. Achieving this will be crucial to the effective implementation of an EU wide market integrity regime, as national regulators bring much expertise as well as a deep understanding of their national markets.

Our expectation is that this initiative will facilitate national level oversight, by providing more consistent and easy access to market data. It will also facilitate cooperation with other national regulators. Therefore ACER should report to the Commission after two years on the impact on MS level oversight of energy markets. This should be done following consultation with national level regulators. A follow up review should be undertaken in conjunction with the review on the interaction with financial market regulation.

Effectiveness of EU level Monitoring

The effectiveness of EU level monitoring should be reviewed on the approximately same timescale as interaction with financial market regulation and the impact on MS level market oversight. However, to be credible, such a review should be external to ACER. Therefore following the ACER report on the Impact on MS level market oversight and Coordination of enforcement, the Commission should prepare a report assessing the Effectiveness of EU level monitoring.

Impact of transaction reporting on market participants

One of the concerns which this initiative addresses is the risk of a proliferation of reporting obligations. Effective monitoring at an EU and MS level should be delivered by clear rules on transaction reporting which allow them to understand what is happening on the markets. However, easing the access to data by oversight authorities should not create an undue burden on market participants, if double reporting obligations are inadvertently created. In part this should be covered by a requirement to consult when defining in detail the information which needs to be reported and the modalities for actually reporting. Therefore the assessment of the impact of transaction reporting on market participants should be reviewed in interaction with financial market regulation and the impact on MS level market oversight.

Conclusions on monitoring and evaluation

We envisage a monitoring and review schedule along the following lines:

After two years a report from ACER to the Commission on

- Impact of new regime on MS level oversight
- Experience on the cooperation between national level authorities including in enforcement
- Impact of new arrangements on market participants, particularly with respect to transactions reporting.

Building on the ACER report, the Commission to review to effectiveness of EU level monitoring.

After five years, a joint review by ACER and financial regulators of the interaction between the tailor made integrity regime for energy and wider financial regulation at an EU and national level.

Based on the joint review by ACER and financial regulators, the Commission should then review the overall effectiveness of the tailor made market integrity regime.

10 LIST OF ANNEXES

I. Summary of responses to public consultation

SUMMARY OF RESPONSES TO THE PUBLIC CONSULTATION ON REGULATION ON ENERGY MARKET INTEGRITY AND TRANSPARENCY

The Public Consultation on the questionnaire attached below started on 23 of May 2010 and ended on the 23 of July 2010. Responses were received from a wide range of organisations including, Government ministries, Regulators, industry associations, individual banks and energy and financial trading companies (in total 51 responses).

Need for tailor made regime for energy markets

Almost all respondents agreed that there is the need for a tailored made transparency and harmonised market integrity regime for energy markets set at the EU-level. This includes governments of France, Germany and the UK, ERGEG and the main associations of industries (European Federation of Energy Traders (EFET), EURELECTRIC). EURELECTRIC pointed out that the increasing complexity of interactions between energy markets makes the current regulatory framework insufficient and a simple extension of existing framework applicable for financial markets is not appropriate. As the EFET states: "... based on the above-mentioned regulatory gaps and shortcomings - a sub-optimal oversight of energy wholesale markets exists, which hinders further market development. The current regulatory situation does, in particular, take into account the factual situation that energy wholesale markets are increasingly characterized by a wide range of actors (including utilities, pure traders, financial institutions and other wholesale trading market participants and platforms), cross-border trade, important derivatives markets around markets in the underlying energy products and increasing liquidity in energy wholesale trading activities. Various different national regimes and authorities do not fit to such an EU-wide wholesale trading market."

Majority of the answers stressed that a tailor made regime should be separate from the Market Abuse Directive (MAD) and Markets in Financial Instruments (MiFID) Directive but shall be consistent with these Directives and not contradict or overlap with them. This was recognised by CESR/ERGEG in their advice to the Commission where they state "A mere extension of the scope of market abuse regulations...in MAD to physical products is not recommended... [it] would bear the risk of leading to an inappropriate application of MAD in other areas". This reflected also the overall consensus about inappropriateness of fragmented, national schemes to fulfil the task of market oversight and the need to have a one-stop-shop place of reporting and avoid excessive administrative burdens on market participants.

Similarly, almost all respondents agreed that there was a need for detailed definitions of market misconduct taking into account the specificity of energy markets as well as differences

between gas and electricity markets. It was however stressed e.g. in response of Europex, that the MAD definitions are a good basis to develop those specific energy market definitions.

As regard the scope of possible misconduct it is important to bear in mind, as ERGEG note in their response to the public consultation that "in many cases market misconduct would not result in huge impacts on market prices (e.g. price spikes) but rather in smaller deviations from a 'fair and orderly' price. However the impact of this behaviour on the well functioning and trust in the markets should not be underestimated".

Several respondents underlined that the new regime shall take into account the recent developments of regulatory regimes on the national level (governments of Germany, France and Saxonia).

Only a minority of respondents (notably ENI, Exxon Mobile, Statoil) felt that the current framework is sufficient or that the update of rules shall take place within existing rules of MAD or MiFID.

Oversight architecture

There are two broad approaches how the oversight architecture shall look like. One, supported by the French, German and the UK governments proposes to define the applicable rules and provide for coordination of national regulators at the EU level. EnBW state that this could be combined with a European body responsible for the centralised collection of data and first analysis. According to this approach the national regulators play the main role in monitoring of the markets. The approach model supported by government of Sachsen and many industrial organisations and companies (EFET, EURELECTRIC, Bundesarbeitskammer of Austria, Oesterreichs Energie, Nordenergi, E.ON, Gas Natural Fenosa, Verbund,) foresees market monitoring on the EU level. Often the respondents supporting such solution agreed that ACER would be best placed to provide for such monitoring. Nordenergi underlined the importance between monitoring and enforcement. In their view enforcement will have to be dealt with by national regulatory bodies, even in the case of EU level rules for energy markets.

Energy Commodity Traders Group pointed out that monitoring must not put burden on small companies who do not have a strong ability to influence market. The data shall be collected from trading venues.

Independent of the views regarding market monitoring there was broad agreement that enforcement of the rules established on EU level shall take place on national level.

Scope of commodities covered

The respondents broadly supported the view that only gas and electricity markets shall be covered by the new regime. Coal and oil which have different scale and prices for these commodities are formed on the world markets shall be outside of the scope. E.ON pointed out that in the future coverage of oil and gas market could be useful but it is not needed now. Some respondent e.g. BDEW, argued that the energy specific integrity framework should be electricity, gas and CO₂.

However several respondents considered that ACER would be the appropriate body to oversee and monitor CO2 markets, including the London Energy Brokers Association, Gas Natural Fenosa and Verbund. France and ERGEG argued that the most efficient option would be to entrust financial regulators to supervise the CO2 markets and leave monitoring of this market to the national regulators. In justification of this statement, reference has been made to the findings of the Prada Commission Report (April 2010).

There was broad agreement, supported by EFET, EURELECTRIC and many other organisations, that the body overseeing the energy markets shall have access to all data on CO2 trading.