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A critique of the European Commission's Impact Assessment on the legislative package for electricity and gas

by

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1. Introduction

In September 2007, the European Commission published a new proposed package of legislative measures aimed at establishing a Single European Energy Market. The package included two proposed Directives: ‘Common rules for the internal market in electricity’ (COM (2007) 528)¹; ‘Common rules for the internal market in gas’ (COM (2007) 529)². It also included three proposed Regulations: ‘Establishing an Agency for the Cooperation of Energy Regulators’ (COM (2007) 0530)³; ‘Cross-border exchanges in electricity’ (COM (2007) 0531)⁴; and ‘Access conditions to the gas transmission network’ (COM (2007) 0532)⁵. The Commission also published an ‘Impact Assessment’ (IA) on these proposals⁶. This paper reviews the Impact Assessment drawing on a number of previous publications by Public Services International Research Unit (PSIRU), which examine the European Commission’s attempts to create a Single European Energy Market (see Annex 1 for a list of these publications).

2. Identified problems

In its Impact Assessment, the Commission identified five main issues that revisions to the Directives would be expected to solve. These were (IA, p 14):

- Market concentration and market power;
- Vertical foreclosure (in particular the inadequate unbundling of network and supply);
- Lack of market integration (including lack of regulatory oversight for cross border issues);
- Lack of transparency; price formation mechanisms; downstream markets for gas;
- Balancing markets; and
- Liquefied natural gas (LNG) markets.

However, it stated that by far the most important problem was (IA, p 14): ‘linked to the existence of vertically integrated companies, which not only control essential facilities (such as electricity transmission systems, gas transport networks or main gas storage facilities) but also enjoy significant market power in the wholesale and sometimes retail markets’. It might be expected therefore that the revisions to the Directives would focus particularly on reducing this perceived market power of vertically integrated companies.

3. The Commission’s claims for the success of the Directives

The Commission makes a number of claims for the Directives that it is worth examining.

3.1. Efficiency improvements

It claims that (IA, p 19): ‘Liberalisation has clearly led to some efficiency improvements in energy supply and delivered savings to customers, particularly in the initial phase.’

This is a claim that the Commission continues to make but it has never provided convincing evidence to support this assertion. It appears to rely on two pieces of evidence: improvements in labour productivity and its evaluation of the performance of network industries (EPNI), which draws heavily on a report it commissioned from Copenhagen Economics.

On the former, Thomas wrote⁷:

‘... the European Commission’s analysis of labour productivity changes [shows] apparently impressive improvements in labour productivity from 1995-2001. However, there are a number of reasons why it would be inappropriate to attribute these changes to improved efficiency resulting from competition.

First, increased labour productivity is not a worthwhile objective in itself. All things being equal, improving labour productivity is a desirable outcome but higher labour productivity is useful only if it reduces the cost of electricity. Consumers want cheaper electricity not electricity that requires fewer person-hours per kWh.

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0528:EN:NOT>

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0529:EN:NOT>

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0530:EN:NOT>

⁴ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0531:EN:NOT>

⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007PC0532:EN:NOT>

⁶ http://ec.europa.eu/energy/electricity/package_2007/doc/2007_09_19_impact_assessment_en.pdf

⁷ S Thomas (2006) ‘Recent evidence on the impact of electricity liberalisation on consumer prices’, p 13-14.

Second, there are a number of ways apparent labour productivity can be improved without improving the real efficiency of the workforce, for example, activities can be contracted out. Short term cost savings can also be achieved, for example by cutting maintenance or reducing R&D activity, which, in the long-term, will be to the detriment of consumers.

Third, in the period covered to 2001, only the Scandinavian countries and the UK had implemented retail and wholesale competition, so if there were improvements in productivity in the other countries, it was not the direct result of competition.

The analyses do not investigate how far other factors unrelated to liberalisation, for example, the availability of new combined cycle technology which uses far fewer personnel than coal-fired plants, could have accounted for the changes in labour productivity. The problems of placing too much emphasis on a partial and imperfect indicator of efficiency like labour productivity are well illustrated by Eurelectric's subsequent report, which shows that gains in labour productivity were at the expense of intermediate input productivity and were accompanied by a deterioration in capital productivity.

Even if these productivity improvements really did reflect increased overall efficiency, there is no analysis to show whether they are one-off changes that have already been carried out or whether they show that the electricity industry has been placed on a new, more dynamic productivity trajectory.

Clearly improvements to the overall efficiency of the electricity are desirable and there are measures available that would better reflect the efficiency of the industry. For example, a measure such as the non-fuel avoidable cost per kWh sold would reflect better how efficiently the industry controls the costs that it has a strong influence over.

The problem with the EPNI study was not so much the Copenhagen Economics study⁸ as the interpretation of the results made for it by the Commission. The EPNI report claims for the results of this study: 'real-term price reductions of 8 per cent in the electricity sector due to opening markets to competition'. However, the Commission presents this as the results of analysis of data (its table is headed 'Quantification of the impact of market opening on performance') whereas, it is actually a forecast (as is made clear by CE's presentation of the same data, 'Results of the forecast analysis'). This figure of price reductions of 8 per cent is one that the Commission relies on heavily in its Impact Assessment.

The Commission also seems to believe that efficiency improvements under the old industry structure did not occur. In fact they did and it is likely that, like any mature industry, the energy sector was improving its internal efficiency by perhaps 1-2 per cent per year. The question is therefore not whether efficiency has improved since the passing of the Directives, but whether efficiency has improved at a faster rate than would have occurred under the old structure. If the Commission is to justify claims that the Directives have improved efficiency more than would have been achieved in the absence of any reforms, it must produce evidence, using valid indicators of efficiency, showing the rate of change of efficiency before and after the Directives were effectively implemented in each country.

Looking in more detail, it is clear that the 'benefits' that the Commission claims for liberalisation occurred before 2002, before liberalisation had been imposed in most countries and before the 2003 Directives were passed. Since then, prices have risen significantly and the Commission acknowledges (IA, p 19):

'However, recent increases in wholesale electricity and gas prices have, to a greater or lesser extent, fed through into the bills of end-users and now offset some of the earlier reductions, particularly for the very largest industrial energy users. **It is highly questionable that gas and electricity prices are the result of a truly competitive process rather than being the direct result of decision of companies with market power.** (Emphasis added) This is confirmed by the recent London Economics study on wholesale electricity markets, which states that these prices "are significantly higher than would be expected on perfectly competitive markets" even after taking into account the rise in generation fuels.'

This is an extraordinary interpretation of the outcome. It is not clear what mechanism would lead to benefits accruing from a policy *before* it was imposed. The fact is that, since it was imposed, the impact has been to increase prices. An alternative, more plausible interpretation of the data was that the price reductions that occurred up to 2002, before the original Directives were widely implemented and before the 2003 Directives had even been drafted, had little or nothing to do with liberalisation. For example, the Commission has never

⁸ Copenhagen Economics (2005) 'Market Opening in Network Industries'. Published in 3 parts - Part I: Final report http://europa.eu.int/comm/internal_market/economic-reports/docs/2005/part_i_final_report_en.pdf; Part II: Sectoral Analyses. http://europa.eu.int/comm/internal_market/economic-reports/docs/2005/part_ii_sectoral_analyses_en.pdf; and an Explanatory Note to Part II of the Final Report. http://europa.eu.int/comm/internal_market/economic-reports/docs/2005/explanatory_note_to_part_ii_en.pdf

rigorously examined how far these price reductions were due to changes in world fossil fuel prices, which, as the Commission acknowledges, are not influenced by liberalisation processes in Europe. The price increases that have occurred since then are the result of the weaknesses of the liberalisation process, for example, the tendency towards oligopoly, the high costs of competition, becoming apparent. Another possible interpretation is the price reductions that occurred were one-off price reductions, for example cutting R&D and training and cutting back on maintenance, made because the companies' public service obligations were implicitly reduced because they were operating in a free market, not as a regulated service provider. In the long-term, this cost-cutting will be counterproductive, diminishing the quality of service and raising prices because new, cost-reducing innovations were not being produced.

The Commission seems to have chosen its own particular interpretation of the impact of the Directives based on its prior beliefs, not on the weight of evidence. Other, equally plausible, interpretations are not investigated because they do not accord with the Commission's world view.

3.2. Consumer choice

The Commission also states that its objective is (IA, p 18): 'every EU consumer has the actual possibility to choose his or her electricity and gas supplier freely between any EU company'. As Thomas has argued⁹, the freedom to choose energy supplier is not one that the public has ever asked for. Especially for a standard product, choice is a means, not an end in itself. If having choice provides a more expensive or a less reliable service, it is highly unlikely that consumers would want it.

Evidence of actual experience of retail competition for small consumers is now accumulating and backs up the belief that retail competition is not something residential consumers can use to their advantage.

Energiea Energienieuws (26 October, 2007), a Dutch energy publication reported:

'Very few Dutch small consumers consider changing supplier (27%). This is a decline from 34% according to data of the Dutch regulator DTE. The preparedness to switch is seen as an important indicator of the free energy market as consumers can force companies to change policy or gain lower prices by voting with their feet. Reasons according to DTE: users are satisfied with their provider, they fear administrative work. But the most significant is financial. The Dutch user puts the threshold to switch at 180 euros per year. But that is not possible: for electricity the maximum is around 70 euros savings and for gas this is 20 euros.'

In a detailed UK behavioural study, Waddams-Price¹⁰ found that, amongst a sample of about 400 consumers who switched supplier, 42 per cent of those switching ended up paying more, 14 per cent were paying the same, while only 44 per cent actually made savings. These figures should be seen in the light of the reasons consumers express for switching. Ofgem found in 2004, that 65 per cent of consumers that switched said that their main motivation was cost-saving.¹¹ So it appears consumers are trying to reduce their costs, but they lack the skills to achieve this.

Also for the UK, in 2007, Wright¹² found that, using data published by British Gas:

'the supply cost for household gas was £30 per customer per year. In 2002 it jumped to £56, in 2003, 2004 and 2005 it was respectively £49, £68 and £55, before dropping precipitously to £16 in 2006. The same cost for electricity was £62 in 2001, £57 in 2002, £62 in 2003, £62 in 2004, £58 in 2005 and £88 in 2006.

These supply cost movements tell us three things. First, as should be anticipated, liberalisation increases aggregate supply costs for domestic customers (increased marketing costs, duplicated billing infrastructure, switching costs etc). Second, the level of these costs can be unrelated to the actual cost of supply as energy companies defend or increase their downstream profit margins. Third, while supply costs for gas and electricity should not be too different (the billing process is the same), in 2006 they were only £16 for gas, but jumped to £88 for electricity – providing a clear indication that a squeeze on gas supply margins brought about by the rising wholesale cost of UK gas was compensated for at the expense of electricity customers.'

A more useful choice for consumers may well be whether or not they actually have to choose their energy supplier. But this is a choice that the Commission denies them. Consumers may well want to avoid the

⁹ S Thomas (2006) 'Understanding European policy on the internal market for electricity and gas: Evaluation of the Electricity and Gas Directives' EPSU, Brussels, p 10.

¹⁰ Waddams-Price, C (2004) 'Spoilt for Choice? The Costs and Benefits of Opening UK Residential Energy Markets'. CCR Working Paper 04-1. Also published as University of California Energy Institute Working Paper CSEM WP-123

¹¹ Ofgem (2004) 'Domestic competitive market review', Ofgem, London.

¹² P Wright (2007) 'Energy liberalisation leads to higher prices', Financial Times, 21 October 2007.

unrewarding and tedious task of frequently checking the price of their energy service and switching in the optimistic hope that they can save money. So the issue is not choice but whether liberalisation provides a more reliable and a cheaper supply of energy than the previous industry structure and whether the principles of equity that underpin provision of public services can be maintained if the service is supplied through a competitive market.

3.3. New investment

The Commission claims that (IA, p 20): 'New investment is clearly responding to the price signals in wholesale and balancing markets where these are allowed to function properly'. This appears to be a statement of belief rather than a claim based on evidence. The Commission presents no evidence to substantiate this claim.

3.4. Diversification

The Commission claims (IA, p 20): 'Competitive markets also encourage diversification since flexibility to react to market conditions is encouraged.' While this may be the text book response to competition, all evidence from the markets that the Commission believes are functioning well suggests this is not true. In Britain since 1990 when the market was liberalised, all major power stations chosen by private companies without subsidy or cost guarantees have been gas-fired combined cycle gas turbines. Experience in other EU countries is similar. Far from creating diversity, it seems that wholesale competition in electricity creates a 'herd' instinct where it is seen to be safer to follow the crowd. Adopting a technology choice that might be a good one in some years but which will lose money in other years is seen by the companies as too risky a strategy.

3.5. Summary

Overall, the Commission's view of the success of the Directives seems to be based not on reality, but on what it hopes the market will evolve into. Its view is based on unsubstantiated assertions, for example, that efficiency has improved, that consumers want choice of energy supplier and that investment is responding to price signals, or on assertions that contradict actual experience, for example on diversification.

4. Policy choices

4.1. Policy options not pursued

In a number of areas, the Commission has chosen not to pursue options that were mentioned in its previous analyses. Probably the most significant is that the proposal to require distribution system operators to be ownership unbundled has been abandoned. In addition, the exemption from the requirement for legal unbundling for distribution companies serving fewer than 100,000 customers is not now to be removed. Other proposals not taken up are for a single European regulatory body, although there is a proposal for a European regulatory body with limited powers (see below), and for a standard market design.

4.1.1. DSO unbundling

The Commission's proposal to require full ownership unbundling of DSOs received almost universal opposition both from politicians, industry, trades unions and independent analysts. The main arguments were that:

- Existing arrangements on unbundling, which were not mandatory until July 1 2007, had not been tested and therefore not proven to be inadequate;
- The scope for discrimination between market players in distribution systems was limited and controllable by a properly functioning regulatory body;
- Unbundling DSOs would be expensive and the costs would not be justified by any savings;
- Forcing existing companies to divest their networks would create a risk that distribution networks would be owned by investors with inadequate skills and no long-term commitment to the sector.

The Commission seems to have had little option but to bow to the pressure. It states (IA, p 59): 'Reinforced powers of national regulators may help to counter the problem of cross-subsidies and of information flows within vertically integrated DSOs'. It is not clear why 'reinforced powers of national regulators' would not also be sufficient in the case of TSOs obviating the ownership unbundling here.

4.1.2. Exemption from legal unbundling for small distribution/retail companies

Those arguing against the removal of this exemption said that forcing unbundling would make such small companies sub-critical in size and would lead to further concentration in the sector, taking away a category of companies with an excellent record. They also said it was implausible that such small companies would be able effectively to exploit the large companies that dominate the sector. The Commission states: ‘.. small DSOs with relatively few employees are likely to suffer over-proportionately from a loss of synergies if the network operation is entirely separated from the other business activities’. Nevertheless, the Commission suggests that strengthened regulation is needed.

4.1.3. A single regulatory body and a standard market design

The proposals on a single regulatory body and a standard market design were criticised as being over-centralising and would have gone against the principle of subsidiarity. A standard market design is not mentioned in the Impact Assessment as an option, while the single regulatory body is considered but rejected in favour of a strengthened EU coordinating body for regulators (see below).

4.2. Public ownership of TSOs

In earlier presentations, there was some ambiguity over whether a national government could own a transmission company and companies active in retail and in wholesale gas supply or electricity generation. This would have raised the issue of whether the Commission was exceeding its powers by effectively requiring governments to privatise assets it owns (the Treaty is neutral regarding the nature of property). This is clarified in the Impact Assessment where the Commission suggests that in such cases, companies would be responsible to different ministries.

An alternative possibility was mooted by Neelie Kroes, the Competition Commissioner, who suggested¹³:

‘Where the State is the owner of an integrated company a possible solution is to transfer the shares and/or rights of either the network operator or the supply company to a foundation which is a separate legal person. In any case, where state-owned companies are concerned, the outcome must be that the decision processes of network operators and supply companies are entirely separate.’

These apparently contradictory suggest that the Commission had not thought through the consequences of its proposals and was offering ill-thought through options to save its proposals from collapse.

It is a little difficult to understand why the Commission believes that full ownership unbundling was required to prevent privately owned network companies from unfairly discriminating in favour of affiliates, while simply reporting to different ministries would be sufficient to avoid this risk for publicly owned companies. Leaving aside the implausibility of a foundation being an appropriate body to own a company operating in what the Commission hopes will be a highly competitive market in either generation or retail supply, Kroes’s suggestion is also unsatisfactory and dangerously close to the Commission requiring Member States to privatise their assets. Placing control of companies in a foundation is a *de facto* privatisation as there is little point in the state owning an asset if it has no means of influencing its policies. From a policy coherence point of view, it also makes little sense. If, for example, a country had an energy ministry making national policy decisions on energy issues, what sense would there be, for example, in having the network company reporting to a different ministry which was not closely connected with energy policy priorities?

Nevertheless, the admission that the Commission is not going to force privatisation is welcome, although the Commission’s attitude to public ownership, especially in market-driven activities is ambiguous. In the macro-economic studies, it uses the extent of privatisation as an indicator of the degree of liberalisation and, for candidate countries, its progress reports use the existence of privatisation programmes as a positive indicator. It seems clear that while the Commission has no right to require member states to privatise, it does favour private ownership over public ownership. The one exception seems to be for TSOs, where the Commission seems to look favourably on public ownership. This may be because, if integrated companies cannot own TSOs, the alternatives, such as venture capitalists are even less desirable.

¹³ N Kroes (2007) ‘Building a competitive European energy market’ Speech to the Madrid Energy conference (in homage to former Commission Vice-President De Palacio) Madrid, 1st October 2007.
<http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/07/582&format=HTML&aged=0&language=EN&guiLanguage=en>

4.3. Ownership unbundling of TSOs

The main proposal is for full ownership unbundling of transmission system operators (TSO). An option for countries that do not wish to do this is for the assets and control of the assets to be separated. Ownership of the assets by an integrated company (i.e., one active in wholesale or retail energy markets) would be allowed, albeit with legal unbundling of the network company from any retail, wholesale gas and electricity generation activities. Control of the assets would be through an independent system operator (ISO), which would have to be fully independent at an ownership level from retail, gas wholesale and electricity generation companies.

TSO ownership unbundling is clearly regarded by the Commission as the main measure needed to create efficiently working energy markets. As evidence that the current situation, a requirement for legal unbundling, is not working, the Commission states (IA, p 24):

‘in many cases, experience suggests that the effectiveness of regulators is frequently constrained through a lack of independence from government and sufficient powers and discretion. For example, the country reviews have revealed that there are many issues for which regulators do not have the necessary effective ex-ante powers such as establishing rules on functional unbundling or on non-tariff access conditions. In other cases, regulatory duties are split between the specific regulatory authority and a ministry or the competition authority.’

In its analysis of impacts, the Commission makes several claims for TSO ownership unbundling, including:

- Experience from several Member States demonstrates that ownership unbundling is conducive to infrastructure investment, thus correcting the distorted investment incentives of vertically integrated companies which have no incentive to develop the network in the overall interest of the market with the consequence of facilitating new entry at generation or supply levels;
- Unbundling the transmission networks will lead to lower market concentration in competitive activities such as electricity generation;
- Unbundling transmission networks will lead to higher investment in LNG terminals

These are a remarkable set of claims that should be examined in detail.

4.3.1. Ownership unbundling is conducive to infrastructure investment

The Commission’s analysis is based on a fundamental misunderstanding of the forces that lead a network company to invest. The Commission claims that: ‘vertically integrated companies have a disincentive to invest in their networks; “congestion revenues” are often higher than expected profits from building new links’. However, not carrying out sufficient investment in the network makes no business sense for a network company. Under-investing in the network would tend to lead to poorer network reliability. Allowing this to happen would be extremely risky for the network company as it would invite severe sanctions (fines and loss of reputation) from the regulator and perhaps ultimately risk having the concession to own the network taken away. Any competent regulatory body would be monitoring congestion revenues and would be asking serious questions of the network owner if there were no plans to invest sufficient to dramatically reduce excessive congestion revenues

Regulated network companies make investments for two main reasons: to improve the reliability of the network; and because under most forms of regulation, the more money the company invests, the higher its profits. In addition, significant investment in the network almost invariably takes place with the explicit approval (generally ex ante) of the regulator. So the suggestion implicit in the Commission’s analyses that network companies take autonomous and independent decisions on how much to invest and in what facilities totally misrepresents decision-making in regulated network industries.

Network charges are typically calculated to allow the network owner to make a ‘fair’ rate of return on investment. A normal regulatory procedure would be for the regulator to require the network company to submit its investment plans for, say, the next 5-10 years. The regulator would critically review these plans, identifying areas where additional investment was needed or equally where proposed investment was not needed or the sum proposed was unjustifiably high.

One of the well-known risks of this form of regulation is that it gives the companies an incentive to over-invest (the ‘Averch-Johnson effect’), not under-invest. The more money the company invests, the higher the profit it is allowed to make. To counter this risk, regulators carry out ‘prudency’ tests to ensure that any investments made are needed and the money invested in new facilities is not more than is needed to build such a facility. Only once these tests have been applied is the network company allowed to add the asset to its ‘asset base’ and start making a return on its investment.

The Commission is particularly keen to stimulate investment in the transmission systems for cross-border capacity and in the distribution systems to allow small scale generation on to the system. However, inter connectors have no intrinsic value in themselves. For electricity, they have value if, for example, they improve system security or they allow a net reduction in energy prices. The latter might occur with two countries, one of which is dependent on hydro resources and the other is dependent on thermal resources. Interconnecting the systems would allow the hydro system to have a lower capacity margin to insure against shortages in dry years while the thermal system would be able to take advantage of cheap hydro power in wet years that would otherwise have not been used. There is clearly an issue of coordination between national regulatory bodies to ensure that cost-effective investments, ones that are the lowest cost way to improve security or reduce prices, are pursued. However, it is hard to see why this would not be resolved on a bi-lateral basis.

The issue of ensuring small-scale generators have access to the network at fair prices should also be readily resolvable by national regulators requiring that DSOs be obliged to connect small generation sources at a price that reflects the costs they actually impose.

The Commission's repeated emphasis on the need to stimulate investment is thus totally misconceived. A high level of investment is not a good thing *per se*. What is needed is a sufficient level of investment in facilities that will make a cost-effective way of improving service quality. The Commission's figures on the high levels of investment by unbundled network companies could as easily be an indication of regulatory failure as the positive effect of unbundling if the network company has successfully persuaded the regulator to sanction investment in facilities that were not needed.

4.3.2. Unbundling transmission leads to lower market concentration in competitive activities

While this claimed effect has some logic – if access to the networks is seen to be fair, new entrants will be more likely to come into the market - the Commission's evidence is totally unconvincing. It states that (IA, p 36-37): 'Market shares of the largest generator in the electricity market (as a percentage of total generation) are significantly higher in Member States with legal unbundling than in those with ownership unbundling.' It acknowledges (IA, p 37): 'it is true that this difference already existed to a large extent before some of the Member States concerned implemented ownership unbundling, the cases of Spain, Italy and Portugal demonstrate that the market shares of the largest generator dropped significantly following the implementation of ownership unbundling.' For gas the Commission states 'ownership unbundling has equally led to an erosion of the incumbents' market share. In particular in the UK and Spain, the wholesale market shares of the incumbent companies such as British Gas and Gas Natural have fallen below 50%.'

However, the implication that this reduction in market concentration in some way resulted from the decision to unbundle is a travesty of what actually happened. For electricity, in Italy, the government took a policy decision to unbundle the transmission network. It took an independent decision to reduce the market share of ENEL, to 50 per cent or less. It did this by requiring ENEL to sell some of its generating capacity in three packages. One of these packages was sold to the largest Spanish company, Endesa and as part of the deal, some of Endesa's assets in Spain to ENEL. The reductions in market concentration in both Italy and Spain were therefore solely due to a specific decision by the Italian government. Market forces played no part. Similarly, in Portugal, the government took an explicit decision to require some of the new capacity to be built by IPPs rather than the incumbent.

The use of the British gas market as an example is particularly misleading. The reduction in market share of British Gas completely preceded unbundling¹⁴. In 1990, in order to introduce competition in the industrial gas market, Ofgas asked British Gas to release sufficient gas to competitors to allow them to acquire 30% of the firm contract market by October 1993. In 1992, the Office of Fair Trading set British a requirement that it reduce its market share in the industrial market to 40 per cent by 1996, a target reduction it more than achieved. From 1997 onwards, retail competition for household consumers was introduced. The network was not fully unbundled at an ownership level, with no regulatory prompting, until November 2000. So market share reduction largely preceded unbundling and was again the result of government policy not market forces.

There must be strong suspicions that the Commission does not believe that 'atomistic' competition in wholesale and retail markets is either achievable or even desirable. The benefits of free markets will only be

¹⁴ S Thomas (2003) 'Gas as a commodity. The UK gas market: From nationalism to the embrace of the free market' in 'European Gas Markets in Transition' ed Maarten Arentsen & Rolf Kunneke, Elsevier, pp 181-212.

realised if there is an atomistic field of companies competing in the market, in other words, enough companies that market dominance is not an issue. Even in the UK electricity market, which the Commission holds up as an example of successful liberalisation, there are only six companies involved in generation and retail. Leaving aside the issue, discussed below, that the fact that these companies are integrated generator retailers, compromising the market structure, in most other markets, this would be regarded as too concentrated. However, the Commission states (IA, p 40):

‘in an integrated market, external suppliers would be more likely to be faced with a smaller number of large and powerful EU-wide energy companies rather than 27 small national ones. These companies would:

- have the financial strength to negotiate with external suppliers without needing to own the network,
- represent a very large portfolio of customers,
- have access to a wider range of alternative resources (LNG, North Sea gas etc.),
- be more efficient and commercially focused than state-owned national incumbents.

Apart from betraying the Commission’s dislike of public ownership, this does suggest that Commission is hoping for a European market dominated by a handful of players, inevitably based mainly in the large founder members of the Union such as RWE and E.ON (Germany), EDF and Suez (France) and ENEL (Italy). This reflects the stated attitude of the Commission competition authorities: ‘lots of products are supplied by oligopolies: we know how to handle oligopolies’. Of course, this begs a number of questions: does the Commission really know how to handle oligopolies; does the fact that other products are already supplied by oligopolies does justify allowing another product to fall into this category; and can as vital and strategic a product as energy, where market failure is intolerable, be regarded in the same light as other products supplied by oligopolies.

For most Member States, the tolerance of an oligopoly would mean that their energy industries will be largely in foreign hands. The UK seems indifferent to the ownership of its energy industries, but other countries are much less sanguine about ownership of strategic assets and are unwilling to surrender the sector to foreign companies who, they fear, may be less amenable to influence by the government if important national strategic decisions are needed to safeguard security of supply.

4.3.3. Unbundling transmission networks will lead to higher investment in LNG terminals

The Commission claims (IA, p 35): ‘With respect to investment, it is also important to note that the main Member States in which LNG terminals are in an advanced stage of planning or are being built by companies other than integrated energy companies are the Netherlands, the UK and Spain, i.e. countries in which the gas networks are ownership unbundled. Moreover, in these three Member States the number of LNG terminals being close to construction phase or being constructed has been significantly higher than in countries in which the gas TSOs are still part of integrated companies.’

The first thing to note is that for a number of Member States, LNG terminals are not feasible because these countries have little or no coast-line. Building LNG terminals has no intrinsic value especially given, as the Commission acknowledges, LNG is likely to be more expensive than pipeline gas. LNG terminals have value if, by diversifying the source of gas supplies, they improve security of supply. Europe has in the past two decades been supplied primarily by five pipeline suppliers, Algeria, Russia, Netherlands, UK and Norway. Of these, the UK production is now falling, while there may be little scope to expand Dutch production. Major new sources of pipeline gas are in prospect when pipelines from the Middle East through Turkey are completed. The issue for a country is therefore a cost benefit one of whether an LNG terminal represents the most cost-effective way to improve security of supply. A more cost-effective alternative may be to build additional storage.

The decisions by Spain and UK to build LNG terminals probably reflect the fact that they are furthest from most of the likely pipeline sources, making the economics of LNG better. How far also the Dutch decision to build an LNG terminal reflects a strategic security of supply issue and how far it reflects purely commercial considerations, for example, using its vast storage capability to make it a gas import ‘hub’ for much of Europe is not clear. Again, the Commission’s evidence seems flimsy.

4.4. Creation of a new regulatory body

One of the main proposals is for a new European regulatory body, the European Agency for the Cooperation of Energy Regulators, which would have enhanced powers compared to the existing coordinating body, European Regulators Group for Electricity and Gas (EREG), established in 2003. The new body is expected to have a staff of 40-50 and an annual budget of €6-7m (covered by Community grants). It would

be managed by a Board of 12 members, 6 of whom would be appointed by the Commission and the other six by the Council. The Agency would have four main tasks:

- Providing a framework for national regulators to cooperate;
- Regulatory review of the cooperation between transmission system operators;
- Individual decision powers;
- General advisory role.

ERGEG is regarded as inadequate for this job as it does not have the power to take binding decisions and it relies on each individual national regulator to implement the recommendations adopted by ERGEG. The Commission's concern appears to be that some national regulators do not have adequate powers or competence. It seems illogical to go to the expense and the reduction in national sovereignty that setting up such an agency would entail, before there is a proper evaluation of whether the increased powers and competences the Commission is requiring for regulatory bodies will be sufficient to remedy the perceived problems.

4.5. Restrictions on ownership of networks by companies from third countries

The Commission proposes that energy networks should be majority owned by persons established in a Member State of the European Community. This proposal was unexpected as it was not foreshadowed in any of the reports leading up to the new proposed legislation and it is not mentioned in the 'problem definition' section of the Impact Assessment. Note, there is some ambiguity in the Impact Assessment about whether the term networks covers both transmission and distribution as the documents refers only to 'networks'. However, the proposed legislation makes it clear that by networks, the Commission is only talking about transmission. In fact, in the UK, a number of distribution networks are already owned by third country companies and requiring these companies to divest their assets when they have not failed in their duties would be problematic.

This unexpected provision begs at least three questions: what concerns led to its adoption; will it be enforceable; and what forms of company are appropriate to own network assets?

What concerns led to its adoption? The Commission claims that, outside the EU, for ownership unbundling 'it will be difficult, even impossible for the Commission to prove that the unbundling rules are properly applied and implemented for supply companies investing in EU transmission system operators'. This seems an unnecessarily restrictive provision that could have been handled by imposing strict licensing and reporting conditions that would have minimised the scope for discrimination. However, elsewhere in the impact assessment, it becomes apparent that the concern specifically concerns gas and the possible entry of Russian companies. It states (IA, p 28):

'More generally, the concern is that the EU is vulnerable to a strategy of third countries to dominate the EU markets not only in terms of supply but also by acquiring the networks. As this strategy would give third countries an influence on network operation and development, the EU objective of diversifying gas supply could be put at risk. Since long-term supply agreements and the acquisition of network assets are usually concluded with the individual EU companies and have a national focus, there is a risk that the individual companies and Member States do not stand up to political pressure to agree to these deals even if security of supply considerations may speak against these deals.'

Annex VIII, 'Participations of 3rd country investors in EU gas infrastructure', is the only evidence on investment by third countries in European transmission systems and specifically lists Gazprom's shareholdings in European transmission system operators.

This is symptomatic of what appears to be paranoia, unsupported by any evidence, that Russian companies are waiting in the wings, ready to 'pick off the large European energy companies one-by-one. The concern with ownership of TSOs by third countries contrasts strangely with the lack of any measures to ensure that EU-based companies have the appropriate expertise and motivation to own the networks.

The Commission acknowledges the strategic importance of energy networks, but its priority should surely be to place strong requirement on regulators to ensure that owners of networks are fit and proper organisations to carry out such a task. Network owners must have strong technical, commercial and financial skills and must be required to prove a long-term commitment to the sector. Arbitrarily excluding companies from outside the EU will be seen by the victims of such a policy as provocative evoking a 'Fortress Europe' mentality and will invite retaliation. Rigorous checks on the credentials of prospective

owners of networks, regardless of their nationality will be much more effective in sending ‘a strong message that the European Union will defend its interests.’

Will it be enforceable? The Commission is clearly aware that this measure is potentially hugely controversial. In 2005, it sent out a request under the General Agreement on Trade in Services (GATS) to 46 countries requesting that they open their energy sectors to foreign ownership¹⁵. This smacks of double standards. The Commission is unwilling to allow non-EU-based companies to own networks, yet it is pressuring developing countries to remove restrictions on ownership of electricity industry companies. It could also be seen by European companies with investments in energy companies, especially transmission assets, outside Europe as counterproductive. For example National Grid Transco (UK) owns much of the transmission network in New England and if the US authorities decided to take equivalent measures to those of the EU preventing third country ownership of transmission, this could lead to them being forced out of the USA, unless the EU can come to some form of agreement on reciprocity. European companies are now looking to move into Russia and this measure is unlikely to be popular with the Russian government, who may be tempted to retaliate.

What forms of company are appropriate to own network assets? The trend for venture capital and other similar funds to move into energy networks is also noted by the Commission. Thomas¹⁶ questioned whether such organisations were appropriate bodies to trust ownership of the networks to. The Commission only deals with this issue under protection of workers stating:

‘Regarding the protection on the workers, there is a possibility that networks assets which are quite attractive for the investments funds can be taken over by private funds, which may give priority to short term profitability over long term investments. This would however be in complete contradiction of such funds, which usually acquire these assets because of their long term regulated profits outlook.’

This is a rather vague statement but does reflect a realisation by the Commission that not allowing integrated companies to own the networks, means the networks will be owned either by diversified companies with no previous experience in this sector or by rather small companies. As the Commission says, venture capital and other investment funds are now showing an interest in buying utility networks. How far this reflects a desire to invest in relatively low risk, long-term businesses and how far it reflects a belief that such companies are undervalued, can be starved of investment in the short-term and can be sold on at a profit – a motive the buyers clearly would not admit to – is not clear. Establishing the nationality of such funds would be a far from trivial issue.

Apart from being vague, the Impact Assessment does not assess the possible impact of private equity ownership on workers. The Commission must be aware of such concerns as it has been addressed on this by the European Trade Union Confederation and political parties. An important concern is the lack of transparency in private equity owners particularly on long term goals. Private equity funds rarely enter into agreements with trade unions over employment protection or respect for Corporate Social Responsibility standards. The Commission fails to assess the consequences of the accumulation of power in the hands of such funds, or how such funds could have cross-ownerships that could influence their decisions.

Overall, while the recognition that the transmission networks are perhaps the most strategically important part of the energy sector is welcome, this measure is confused, likely to antagonise countries outside the EU and perhaps unenforceable. The new legislation has nothing to say on what should be the priority, ensuring that Member States take appropriate measures to ensure ownership of the networks is in the hands of fit and proper organisations. Without compromising its duty to be neutral as far as ownership goes, the Commission could make a recommendation that the ownership of the transmission networks is considered a strategic asset and that public ownership should be considered seriously by member states.

¹⁵ S Thomas & D Hall (2006) ‘GATS and the Electricity and Water Sectors’ PSIRU, March 2006. Under the GATS procedures, markets are opened voluntarily but members of GATS can request another member to open up a sector to foreign entry.

¹⁶ S Thomas ‘Unbundling of electricity transmission networks: Analysis of the European Commission’s position’, July 2007.

4.6. Transparency

The Commission has proposed measures on increasing transparency of wholesale markets and on access to networks. The issue of terms of access to networks appears to be another relatively straightforward regulatory matter.

However, transparency of wholesale markets is more complex. Unless the provisions include requiring the publication of the terms of long-term contracts and the transfer price of energy from the wholesale to retail divisions of integrated companies, this will have no impact. Wholesale purchases on the visible spot markets account for typically 2 per cent of energy purchases, the rest is accounted for by long-term confidential contracts and self-dealing by integrated wholesale/retail companies. No amount of data from the visible market will shed any light on the invisible market. The visible market will remain untrusted by market participants and integrated companies will have a strong incentive to ensure that the visible market does not produce reliable prices as this would facilitate entry from new competitors.

4.7. Macro-economic impacts

The Commission evaluates the macro-economic impacts of its proposed changes using two macro-economic models, QUEST and WorldScan (IA, p 60-67). While macro-economic models are immensely complex, in principle, their operation is simple. If the cost of a major factor of production is reduced by whatever mechanism, whether it be the price of energy, steel, chemicals etc, there will be employment and economic benefits. The cost of producing goods will go down, so consumers have more disposable income to spend on other goods and this produces higher GDP from the impact of the new products bought. So if it is assumed that the price of energy goes down, macro-economic models will inevitably forecast an increase in GDP. The validity of the assumptions going into the model should be the focus, not the results.

For the QUEST model, the Commission uses the ECB estimate that further regulatory reforms to the electricity sector could lead to price reductions of about 20 per cent. Depending on how this is input to the model this would result in an increase in GDP after five years of 0.5-0.6 per cent and a change in employment of between -0.05 to +0.4 per cent.

The ECB (presumably European Central Bank) study is not referenced so it is not possible to evaluate the extraordinary claim that prices will fall by 20 per cent. The Commission states (IA, p 61):

'The Commission services have undertaken two such simulations. The starting point of the first simulation is the ECB estimate for EU 15 that further regulatory reforms in the EU electricity sector could lead to price reductions of about 20%. This result is based on the assumption that all EU 15 Member States align their regulatory conditions to those of the 'best practice' country and that prices adjust accordingly.'

Given that the estimates are for the 'EU15', it may be that the study pre-dates the 2004 expansion of the EU and, more importantly, effectively pre-dates the 2003 Directives and the large energy price increases that have occurred since then. The Commission does partially acknowledge that a 20 per cent price reduction is implausible stating (IA, p 64):

'Thus, while the simulations based on the ECB estimations should illustrate the upper-end estimations of macroeconomic effects of a further energy-market liberalisation, the simulations based on Copenhagen Economics should be interpreted as the more central or conservative estimations.'

For the WorldScan model, the Commission uses the forecast it derives from the Copenhagen Economics study, that over 10 years, TSO ownership unbundling would reduce prices by 8 per cent. With this assumption, the increase in GDP over 10 years is 0.2-0.25 per cent and the change in employment is small. However, as discussed earlier, the 8 per cent assumption is not based on analysis of outcomes of liberalisation, it is simply the Commission's projection of what it hopes will happen.

The Commission's evidence on macro-economic impacts therefore has no value. The results are trivial because they are the inevitable result of input assumption on energy prices, which are not based on analysis of actual experience. In the past five years, liberalisation appears to have increased energy prices. If the logic of macro-economic models is accepted, this will have reduced GDP significantly below the level it would have been if prices had not increased. So at the very least, liberalisation will have to first make up the ground lost in GDP in the past five years, when prices have increased by much more than 8 per cent in many countries before there will be a net benefit from the introduction of the Directives. If the trend is not reversed, there will be a further decline in GDP below the level it would have reached in the absence of the Directives.

5. Areas not adequately covered

There are three areas of concern that the Commission does not address directly: the issues of integration of retail with gas wholesale and electricity generation, and the weakness of national regulatory bodies.

5.1. Integration of retail and wholesale

The Commission is concerned about the level of concentration in wholesale and retail activities, but it fails to address the feature of the market, integration of retail with gas wholesale and electricity generation, which is likely to cement the positions of the dominant companies. Increasingly across Europe, markets are being dominated by integrated wholesale retail companies active in both electricity and gas markets. There are two important problems with such companies. First, these companies have no incentive to use wholesale markets. They generate electricity or import/produce gas for their own consumers and this energy does not pass through the visible wholesale markets. If the market is dominated by such companies, the liquidity of the visible wholesale markets will be negligible, as is the case in the UK where six integrated companies dominate energy markets.

Second, the barriers to entry for new retail and gas wholesale/electricity generation companies will be insurmountable. If there is no liquid wholesale market, a new generator or gas importer would have nowhere to sell its product and a new retailer would have no market in which to buy supplies.

One of the major findings of the DG Competition Preliminary Report of February 2006¹⁷ was the problems created by 'vertical foreclosure' of markets. For gas, the report concluded on vertical foreclosure:

'Lack of liquidity and limited access to infrastructure prevent new entrant suppliers from offering their services to the consumer. The network of long term supply contracts between gas producers and incumbent importers, makes it very difficult for new entrants to access gas on the upstream markets. Additionally, certain features of these contracts limit incentives for incumbents to provide liquidity on traded markets. Gas infrastructure (networks and storage) is to a large extent owned by the incumbent gas importers, and the insufficient separation of this infrastructure from supply functions results in insufficient market opening. Despite EU rules on third party access and legal/functional unbundling, new entrants often lack effective access to networks, the operators of which are alleged to favour their own affiliates.'

And for electricity:

'Vertical integration of generation, supply and network activities has remained a dominant feature in many electricity markets. Vertical integration of generation and retail reduces the incentives to trade on wholesale markets. Low levels of liquidity are an entry barrier. The strong links between supply and network companies reduces the economic incentives for the network operators to grant access to third parties. Many respondents are highly critical of the efficiency of existing unbundling obligations, believing that discrimination in favour of affiliates continues, and calling for stricter measures.'

This factor was much less prominent in DG Competition's final report¹⁸:

Another form of vertical foreclosure [apart from integration of networks and retail/wholesale] was found to exist by way of the integration of generation/imports and supply interests within the same group. This form of vertical integration reduces the incentives for incumbents to trade on wholesale markets and leads to sub-optimal levels of liquidity in these markets. In particular, the prevalence of long-term supply contracts between gas producers and incumbent importers makes it very difficult for new entrants to access gas on the upstream markets. Similarly, incumbency generation assets are in the hand of a few incumbent suppliers or are indirectly controlled by them on the basis of long-term power purchase agreements (PPAs) giving the incumbents control over the essential inputs into the wholesale markets. Low levels of liquidity are an entry barrier to both gas and electricity markets.'

However, no action was recommended to combat this problem and the impact assessment is silent on this issue. However, Kroes did refer to this problem again in a speech in September 2007. She said¹⁹: 'New

¹⁷ European Commission (2006) 'Sector Inquiry under Art 17 Regulation 1/2003 on the gas and electricity markets: Preliminary Report' European Commission, Brussels.

http://ec.europa.eu/comm/competition/antitrust/others/sector_inquiries/energy/execsum.pdf

¹⁸ European Commission (2007) 'Inquiry pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors (Final Report)' {SEC(2006) 1724}, Brussels. p 6.

¹⁹ N Kroes (2007) 'Building a competitive European energy market' Speech to the Madrid Energy conference (in homage to former Commission Vice-President De Palacio) Madrid, 1st October 2007.

<http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/07/582&format=HTML&aged=0&language=EN&guiLanguage=en>

players face considerable problems when trying to enter the markets – not least because markets lack liquidity. Such foreclosure effects can be aggravated by vertical integration of generation and supply and by long-term contracts. Both reduce trade on wholesale markets.’ But again, the issue is not taken up and Kroes has nothing to say on what steps the Commission is going to take to remedy this problem.

If this problem is not addressed, markets will become increasingly concentrated as existing players merge or are taken over with no possibility of new entry. It is not clear why the Commission has not addressed this problem. The explanation that the Commission does not recognize this problem is not plausible. The issue has been addressed in many liberalisations around the world. Indeed, the reforms introduced in the UK in 1990 seemed to severely restrict this form of integration. The problem was also identified clearly by the EC’s own Competition Commission report and reiterated in 2007 by the Competition Commissioner Kroes.

An alternative explanation is that it expects unbundling of networks to be so effective that new entrant generators and retailers will now be motivated to enter the market. As argued above, this is implausible. In integrated markets like the UK, there is no suggestion that barriers to access to the networks are what is preventing new generators and retailers entering the market. Despite the fact that access to the networks is acknowledged to be entirely fair to all, the UK market is getting more concentrated and dominated by the integrated companies.

Another possibility is that it believes the power of the dominant handful of companies is such that there no realistic possibility of them having the political muscle to force the companies to unbundle retail and generation. A third is that the Commission’s priority is not to create efficient energy markets and it is happy, for other reasons, to allow European energy markets to slide into oligopoly. The suspicion must be that the Commission’s main objective is not to create real competition, but to wrest control of energy issues from national governments and create a small number of large European energy companies that it can nurture and have a dialogue with.

The final possibility is that the Commission has realised that efficient energy markets will mean that security of supply cannot be guaranteed. In a competitive wholesale market, there would be free entry and exit, and governments and regulatory bodies would thus not be able to predict in advance supply. If a government, foreseeing a shortage of electricity generating capacity, commissioned the construction of a new power plant, its impact could be negated by the retirement of an existing plant. Indeed, existing generators would have a strong incentive not to invest because shortages would lead to higher prices. At least in an integrated company, gas wholesalers and electricity generators would have an incentive to ensure that their final consumers would enjoy a reliable, affordable supply of energy. However, this would mean that the impact of the Commission’s reforms would have been to transform energy supply from a regulated public service to an unregulated oligopoly.

5.2. Weakness of national regulatory bodies

It is clear from the Impact Assessment and other related Commission documents that the Commission has a low opinion of the capabilities of many of the national authorities, blaming them, for example, for allowing discriminatory network access. The Commission has proposed measures to strengthen and harmonise national regulatory powers that should be sufficient to deal with these issues. However, it is also taking measures, such as forcing ownership unbundling and setting up a European regulatory body that are likely to prove unnecessary once effective regulatory bodies have been established.

One area that the Commission continues to fail to address is the representativeness, accountability and legitimacy of the regulatory bodies. If companies, consumers and industry workers are to have confidence in the decisions of the regulatory bodies, they have to be representative of society as a whole. However, most regulatory bodies are composed of unknown businessmen with no representation from consumer bodies, trades unions, environmental groups, independent experts etc. The implicit assumption, that regulatory decisions are value-free judgments based on business practice, is an illusion.

The Commission also continually stresses the need for regulatory independence and while few would disagree that regulatory bodies should be independent of the companies they regulate, the suggestion that they must be entirely independent of government is anti-democratic. Governments have legitimacy because they are elected and are ultimately responsible for government decisions. If regulators are making poor decisions or decisions that are not in the national interest, governments have an obligation to overrule these decisions and, ultimately, replace regulators who are doing a poor job. This does not mean that governments

should regularly and arbitrarily overrule regulators, but that measures to remove regulatory bodies from legitimate government oversight are misconceived.

The issue of 'regulatory capture' is a serious one that cannot be solved once-and-for-all, it is one that requires constant vigilance to ensure regulators are impartial. Regulators can be 'captured', in other words, unduly influenced by the companies they regulate, given that they have to work on the basis of data provided by the industry and are in daily contact with the companies they monitor. These companies have the resources to respond to the consultations of the regulators whereas other groups do not. Making the membership of regulatory bodies more diverse and less dominated by industrial interests would be a useful step to reducing the risk of regulatory capture.

5.3. Volatility of energy prices

The Commission acknowledges that wholesale energy prices are volatile and that this is likely to cause problems to consumers, especially energy-intensive industry and poor consumers (IA, p 29):

'experience to date has demonstrated that wholesale energy prices exhibit considerable volatility. This raises the question of whether and how end-user customers, including vulnerable customers, should be exposed to such fluctuations.'

There are clear fundamental reasons why this volatility is inevitable. Elasticity of energy demand is low, in other words, in the short term, consumers cannot easily adjust their demands so if there is a shortage of supply, prices are likely to go very high because consumers do not react price signals. Equally, if there is a surplus of supply, prices could collapse because producers have low avoidable costs (the costs they could save by not producing) and will bid down to this level just to cover their costs. The Commission poses the question of 'whether and how end-user customers, including vulnerable customers, should be exposed to such fluctuations'

The Commission concludes that their concerns can be addressed: 'either through the present directive (article 3 on public service obligations) or by the means of specific national measures which have to be compatible with EU competition law (ex (sic) special scheme for energy intensive users with long term contracts between the supplier and the big customers). It is not clear whether in this context, 'ex' means excluding or example, but if the concerns are to be 'addressed', this means that large consumers would be taken out of the market. Ironically, this is exactly what happened in Norway, acknowledged to be one of the most successful electricity reforms. In 1991 when the Norwegian electricity industry was liberalised, energy intensive industry was deliberately taken out of the market by giving it long-term contracts (mainly 15 years) supplied by the government-owned generator and at low prices. Now these contracts are nearing their end, energy-intensive industry in Norway is becoming very concerned about the price volatility it will be exposed to once it has to buy from the market. It seems highly unlikely that it will be politically acceptable for the Norwegian energy intensive industry, which is one of the main-stays of their economy, to be destroyed simply so that Norway can have an electricity industry based on competition.

Taking energy intensive industry and vulnerable consumers out of the market makes good sense in some respects. Clearly, an energy intensive industry, where energy costs could represent 50 per cent or more of total production costs, cannot operate if the price they pay for energy fluctuates on a daily basis and, at peak times, could increase in cost several fold. This is a damning indictment of the EU's Directives. If the markets produce such unreliable prices that those most exposed to the cost of energy have to be taken out of the market, this is surely a sign that a competitive market is not an appropriate way to deliver such a vital service.

The issues for poor residential consumers are rather different and have to be seen in context of the Commission's approving statements on the introduction of 'smart' meters (IA, p 59). 'Smart metering will help to reduce energy consumption, increase transparency and thereby increase switching rates and competition.'

However, this rather benign description of how the impact of smart meters masks their real dangers. As argued above, residential consumers' demands for energy tend to be inelastic because heat is needed when it is cold and light is needed when it is dark, so price signals need to be very large to have a short-term impact. Prices would be highest and therefore the benefits of reducing demand highest in the middle of winter when it is unusually cold. So installing smart meters would only be effective in forcing consumers to reduce their consumption if residential consumers were exposed to very high prices at times when they need their energy

most²⁰. The social consequences of poor consumers not being able to afford to heat their homes on the coldest days would be immense.

There is also the issue of cost. Smart meters have not been introduced because the costs are prohibitive. The meters themselves are comparable in cost to normal meters but the cost of maintaining an 'always-on' line to a data collection centre where half-hourly demand readings can be collected and the cost of processing this data, allocating each data reading for each consumer to the corresponding supplier is huge.

The Commission's evidence on smart meters is also misleading. It states (IA, p 59): 'Smart metering has been introduced on a larger scale in Italy and Canada (Ontario), Australia (Victoria) and Sweden'. This is a highly misleading statement. Retail competition for small consumers has not been available in Italy and Ontario so there is no experience of the data processing problems. The Swedish smart meters are read only monthly so there is no scope for time-of-day pricing here and it is debateable whether meters used in this way can be categorised as 'smart'. No information is given on the experience in Victoria but the programme did not commence until 2006 and only affects new consumers so that by 2013, it is expected that one million consumers will have smart meters. So there is no little experience of the operation of smart meters here. In short, there is no significant experience of using smart meters for small consumers in a competitive electricity market.

6. Conclusions

A continued problem with the evaluations and assessments of the Commission remains that negative impacts of the internal market are never seen as a result of liberalisation, inherent in competition in this sector. The solution to any perceived problems is always to remove 'market imperfections'. There are strong practical reasons why achieving competitive markets in network delivered energy will not be possible. These include the lack of substitutes, and the difficulties of storing energy. These issues have been identified in numerous PSIRU reports on the Commission's energy Directives²¹, but the Commission ignore these arguments. The Commission continues to fail to give realistic assessments of the costs of creating competition. Even if competition can be created, it will only be a sensible policy choice if the benefits of replacing monopoly by markets outweigh the huge additional costs imposed by introducing competition.

The contradiction between Kroes and the Impact Assessment on whether national governments can control network companies and retail/wholesale companies suggests that the Commission's policy on ownership unbundling is in some disarray.

The lack of proposed action on the issue of integration of wholesale and retail activities, which the Competition Commission investigation identified and which Kroes re-emphasised in September 2007, is also worrying. If integration of wholesale and retail is allowed without restrictions, competitive markets will not be created and the main point of the Directives will be lost. Yet the Commission's new proposed legislation has nothing to say on this issue.

²⁰ S Thomas 'The 2006 Reviews of the Electricity and Gas Directives', March 2007.

²¹ See for example S Thomas 'The European Union Gas and Electricity Directives', October 2005, pp 50-54.

Annex 1 PSIRU Publications on the European Commission's Energy Directives

S Thomas 'A critique of the European Commission's evidence of the need for ownership unbundling of energy networks', July 2007.

S Thomas 'Unbundling of electricity transmission networks: Analysis of the European Commission's position', July 2007.

S Thomas 'The 2006 Reviews of the Electricity and Gas Directives', March 2007.

S Thomas 'Corporate concentration in the EU energy sector', March 2007.

D Hall 'Private equity and infrastructure funds in public services and utilities' November 2006

S Thomas 'Recent evidence on the impact of electricity liberalisation on consumer prices', September 2006.

S Thomas 'Understanding European policy on the internal market for electricity and gas', September 2006.

D Hall 'Evaluating network services in Europe', March 2006

S Thomas 'The European Union Gas and Electricity Directives', October 2005.

S Thomas & D Hall 'Blackouts: Do liberalisation and privatisation increase the risk?', December 2003.

All of these publications can be downloaded from the PSIRU web-site (www.psiru.org).

Annex 2 Compliance with the 2003 Directives

In July 2007, the European Commission published its annual report on the application of European Union law in member states, including the application of the 2003 Electricity and Gas Directives²². This showed that in the majority of Member States, the Directives had not been implemented to the satisfaction of the Commission. It found the following.

The analysis of notified national legislation led to a "package of infringements" whereby 27 letters of formal notice were sent to 17 Member States in April 2006, followed by the 26 reasoned opinions to 16 Member States in December (Austria, Belgium, the Czech Republic, Germany, Estonia, Spain, Finland, France, Greece, Ireland, Italy, Lithuania, Latvia, Poland, Sweden, Slovakia and the United Kingdom).

In only two cases, Finland for electricity and Austria for gas, the arguments put forward by the Member States were satisfactory on all issues and enabled the Commission to close the case. For the remaining 26 procedures, 19 alleged grounds for infringement were dropped. The vast majority, 58, remains.

In addition, letters on formal notice were sent to Portugal and Slovenia in June 2006 and to Hungary in October for the wrong transposition of the electricity directive. During its examination of the conformity of the national legislations, the Commission focused in particular on those aspects which form the principal elements of market regulation and guarantee competition. These are: the extent to which the markets are opened up, a real possibility of changing supplier, and the emergence of new market entrants with non-discriminatory access guaranteed by strong, independent regulators.

The main deficiencies observed in transposition of the new internal market directives are the following:

- Regulated prices preventing entry from new market players
- Insufficient unbundling of transmission and distribution system operators which cannot guarantee their independence
- Discriminatory third party access to the network, in particular as regards preferential access being granted to incumbents for historical long term contracts
- Insufficient competences of the regulators
- No information given to the Commission on public service obligations, especially as regards regulated supply tariffs
- Insufficient indication of the origin of electricity, which is essential in particular for the promotion of renewable energy.

In addition to the conformity checks, the procedures for non communication of transposition measures launched in 2005 led to the ECJ to state against:

- Luxembourg for a general failure to transpose both the gas and electricity directives on 19 May 2006.
- Spain for failure to transpose the gas directive on 16 November 2006 (the infringement for failure to transpose the electricity directive is also before the ECJ).

²² European Commission (2007) '24th annual report from the Commission on monitoring the application of Community law: Situation in the different sectors' COM(2007) 398 final, SEC(2007) 976, European Commission, Brussels.