



## **EPSU Contribution to the Progress Report on the Internal Market for Electricity and Gas**

### **State of Play**

#### **Steps for the Future**

### ***Contributing to the Lisbon Strategy Putting quality, reliability and security centre-stage, or how to bolster economic growth and competitiveness***

*Adopted by the EPSU Standing Committee on Public Utilities 7 October 2005*

EPSU welcomes the opportunity to contribute to the Commission evaluation of the internal market for gas and electricity. This evaluation is foreseen in the 2003 Directives (2003/54/EC and 2003/55/EC). The Director General Mr. Lamoureux has solicited the views of EPSU and many other organisations in April 2005. The Commission is to deliver a report at the end of the year. A similar invitation to present views and discuss options for the future was made by Commissioner Piebalgs at the Electricity Forum, on 1-2 September 2005.

#### **1. Introduction**

EPSU has long been critical of the internal market for electricity and gas, arguing that what the sectors needed and need are not more competition, but cooperation to:

- Sustainable development
- Reliability and Security of Supply based on a stable investment climate and predictable price development.
- Social equity, including secure employment, protection of vulnerable users, territorial and social cohesion.
- Democratic control of these universal services which are essential to modern societies.

The Directives will hinder efforts to achieve the requirements placed on Member States by the designation of electricity and gas as services of general economic interest.

Cooperation, public ownership and monopolies were a tested recipe in many countries that contributed to Europe's growth and competitiveness during many decades. It was based on solid economic theory that recognised the specific characteristics of the electricity and gas utilities, including the importance of the laws of physics, the long-term nature of its investments and most importantly that electricity, in particular, is a social good and not a purely commercial one.

This concept has been challenged and replaced by the notion that competition will deliver better results on the above objectives.

It was argued that an internal market for gas and electricity would bring benefits including:

- lower prices for domestic and large users,
- improved social equity, social and territorial cohesion, users protection,
- incentives for long-term planning, investment on research and development, contributing to system reliability and security of supply;
- employment growth in new services and in the economy at large,
- enhanced environmental protection.

The improved efficiencies would contribute to improve Europe's competitiveness. Completing the internal market for electricity and gas became part of the Lisbon Agenda.

Competition was introduced with the 1996 (electricity) and 1998 (gas) Directives, which only partly delivered what was expected. Governments agreed that more needed to be done as part of the Lisbon agenda. The Directives were amended by the 2003 Directives. These Directives do recognise the social nature of these services by strengthening public service obligations, user protection and oversight of the industry through regulators. A further recognition of the essential nature of electricity, was the Security of Supply directive. When introducing this directive, the Commission admitted that the market will not deliver security of supply. The SoS Directive was also a reaction to large black-outs in Europe (Italy), and the North East of the U.S..

## **2. A brief summary of the report**

To gain a better and independent insight in developments of Europe's electricity markets, EPSU commissioned a study on the state of play of Europe's electricity and gas markets. *Public Services International Research Unit of the University of Greenwich*, one of Europe's most renowned institutes researching services of general (economic) interest, was asked to do this for EPSU.

In its assessment of the Directives, it states:

- Implementation is not yet complete in all Member States;
- The Directives do not address market dominance;
- The conditions for a wholesale market have not been established in many Member States;
- The right to chose for individual consumers was the justification for market opening without guaranteeing an economic benefit to consumers;
- Consumer protection does not extend to pricing policy (eg. that tariffs should reflect cost, or that companies should not discriminate between classes of users);
- The security of supply provisions in the Directives are misguided. These are supplemented by the Security of Supply Directive. A big issue which remains, is that the Directive does not solve under-investment and does not address actual system reliability,
- Legal unbundling will probably lead to ownership unbundling, breaking the connection between the network company and users,
- The Directives do not ensure maintaining generation adequacy.

The report also analyses the different (regional) markets. In its assessment of the operation of the markets, the report argues that there is limited experience with market opening and competition in some countries, and already leading often to problems. There is a lack of investment in all markets. Liquidity of wholesale markets remains a concern. Switching happens less then needed for a proper functioning market. All markets experience market concentration, and vertical integration between generation and retail.

The two supposedly most successful markets, the Nordic region and UK (England, Wales, Scotland), experience problems.

### ***Nordic Region – electricity market***

The wholesale market is liquid. It arises though from particular history and is subject to specific conditions which make it vulnerable to the weather if left alone. There has been little long term investment in new capacity. Dry years can lead to rationing or other measures to be carried out in the market. Supply shortages can lead to very high prices for business and households, possibly driving business out of some countries. Wet weather and low prices could easily bankrupt fossil fuel power plants. While switching has happened to a larger extent than in the rest of Europe, there are differences between the Nordic countries. In general, consumers do not feel they are well informed, consumers are not eager to switch as price differentials are small, and vendors with the lowest prices do not want new customers. Prices for domestic, and to some extent, large users, are volatile and with high peaks, will trigger political debate over the reforms. The report also notes that public ownership is predominant and possibly has played a moderating role on profit maximisation.

### ***United Kingdom***

The report notes that the UK has long experience with liberalised markets. The Power Pool did not work, and liquidity on NETA (and BETTA) is very limited, not allowing it to play a price setting role. The prospect for new entry of generators is low. Investment goes in bursts and leaps and currently very little new capacity is under construction, possibly causing capacity problems. The report analyses the retail market in some detail and notes major problems leading to higher prices for consumers. *“Retail competition has so far failed to bring benefits to small consumers in Britain”*.

Both markets are considered as models and each has their problems. The report also analyses the other markets.

Most of this analysis is not new. It is shared by many other organisations and many in the Commission. What makes the report different is the thoroughness of its argument and reasoning, and addressing the crucial question can competition work?

## ***2.1 Can competition in electricity work ?***

In a separate chapter, the report explores if competition can work in the electricity sector. It notes a number of precise characteristics (economic, physical, social, environmental) which it says are wrongly ignored, or deemed no longer valid. The report concludes that a free market for electricity and gas, wholesale or retail, is not feasible.

It also notes that competition comes at a cost which is the risk premium on investment. It states that *“while shareholders pay if an investment fails, consumers always pay through the higher costs of capital”*. And then there are the costs of designing and operating the market. *“It seems highly implausible that the operation of competition through improving efficiency, and discipline on investment decisions, could be so effective as to pay for these extra financial and transaction costs”*<sup>1</sup>

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<sup>1</sup> A cost which not measurable is that in commercially operating systems a sense of public ethos or civic responsibility disappears that can not be captured by contracts and is difficult to express in monetary terms. In an integrated utility the engineer travelling to his work in a power plant might notice a tree which has over grown and risks touching a power line. He calls his colleagues in the company that maintains the lines and who organises that this get checked out. In unbundled companies these colleagues are no longer colleagues and have no relation to each other. A contract can not even start to capture these complex relationships. The selling and buying of companies makes this worse let alone that the maintenance crews might not be available, tree trimmers might be rationalised away. But that is another issue.

The report argues that the assumptions of functioning wholesale markets (reaction to coherent and timely price signals to stimulate the right amount of investment, to secure supply; and free entry and exit of generators) are not standing up to examination. Electricity treated as a commodity will behave as a commodity with hog-cycles. **It hardly provides a stable basis for manufacturing, chemical and other energy intensive industries, if the price of one of its key inputs and costs fluctuates so widely.** Generators will have a range of options to react to market conditions, and predicting shortages (or overcapacities) becomes very problematic. Separating retail from generation (California 2000) means generators have no direct responsibility to users.

There will not be a reliable reference of wholesale price. The onus falls on final consumers to impose competition by switching supplier frequently to the lowest offer in order to ensure prices reflect only costs. Small and household users do not have this incentive, they have no resources and no market power to negotiate better prices. Small consumers thus risk being exploited because of their lack of cost-sensitivity. Poor consumers are worst off. Finally the report argues that large integrated companies, regulated by a democratically accountable regulator, are an efficient answer in the electricity and gas market. Breaking these companies up will not be favoured by Member states.

## **2.2 Workers and the internal market**

EPSU has argued that the internal market has very negative consequences on workers in the sector. The report compiles the evidence from several studies, plus additional research on employment trends. The results are just devastating and confirm our position.

The internal market for electricity and gas has:

- Destroyed 300.000 jobs in 10 years (some figures indicate 330.000). While this job loss has contributed to an apparent increase in labour productivity, this was a one-off effect and it has brought no long term dynamic efficiency gains, undermining a central tenet of the competition theory.
- Reduced labour costs through income cuts of workers and their families. It is foreseen this will continue through outsourcing amongst others.
- Introduced more flexibility and insecurity for workers.
- Affected training, Research and Development, leading to skill shortages and technological stagnation. These skill shortages can impact on reliability and security of supply.

The studies are inconclusive regarding how the internal market has affected women compared to men. Some findings indicate that women are hit harder, especially in the New Member States, while other findings are neutral. No findings are positive.

Old and New Member States are equally affected. Similar consequences can hence also be expected for Bulgaria, Roumania and other countries in South East Europe. The difference is that in several of these countries unemployment is very high up to 30 % or even more, that social safety nets are not of the same nature as in the old EU states, and that the companies are less well-off.

The report notes that the benchmark reports of the Commission contain no information on employment, skills and training, and sees this as a significant omission. It further stresses that data for the gas industry are patchie,r and calls on the Commission to remedy this.

No detailed studies are known that show how the internal market for electricity and gas has created jobs elsewhere in the economy. What does exist, is based on econometric models that start by assuming that competition works, without taking account of the existing situation.

**The programme of the internal market did not contribute to a gain in welfare and well-being of workers and their families. More than any other factor, the negative employment effect can be related directly to the internal market for electricity and gas.**

**The European Commission has launched a study to evaluate the employment impact. EPSU and other social partners will participate in this study if done in an unbiased manner. The study will take a year to complete. We do not accept that, in this way, existing and readily available data are swept under the carpet to hide the fact that the internal market has had a negative impact. This needs to be included in the benchmark and evaluation reports.**

### ***2.3. What needs to be done according to the report***

The report argues that 6 problems need to be addressed.

#### **Generation and gas supply adequacy**

For the electricity generation and gas wholesale sectors, the Directive should be amended to require that accountable public authorities ensure that sufficient generating capacity is available and sufficient gas has been contracted. Such a duty is not compatible with free markets in electricity and gas, because in a free market, entry and exit cannot be controlled. The Single Buyer option for electricity, which existed in the 1996 Electricity Directive, albeit in a rather garbled and confused version, seems to offer a way of meeting such an obligation. Under the Single Buyer, competitive pressure on generators and gas wholesalers could still be exerted. For example, where new capacity or new gas supplies are required, there could be a competition to build the new capacity or contract for gas with the contract going to the company that offered the best terms. Existing generating capacity could be contracted for limited periods of time and would have to re-bid regularly to ensure the power supplied was produced at the lowest available cost.

#### **Retail competition**

Retail competition for small consumers clearly imposes more costs than could possibly be recovered by the operation of competition and it opens small consumers up to exploitation and higher than justifiable prices. The earlier versions of the Directives only required the retail markets to be opened for large consumers. The Directives should be amended to allow Member States to restrict retail competition to a third of the market, as under the first Electricity Directive. If retail competition for small consumers is not adopted, a properly regulated tariff must be introduced that does not allow the risk that small consumers would subsidise large consumers.

#### **Skills and employment**

The Commission needs to ensure that the detailed data on employment is collected to allow the situation for skills to be monitored, especially for the gas sector where data is particularly sparse. It needs to address low level of employment for women in the sector. It may also be necessary to revise the Directives placing responsibilities on companies to carry out training and to ensure that cost reductions are not carried out at the expense of the conditions of employment of the workers.

#### **Network reliability**

The regulatory regimes being introduced give strong corporate incentives for cost-cutting and puts pressure on regulators to impose cost reductions even where the long-term impact on reliability will be detrimental. A much better balance needs to be developed that still encourages companies to improve their efficiency, as they have done throughout the history of the electricity and gas industries, but requires companies to demonstrate that cost reductions will not adversely affect system reliability.

## **Sustainability**

The Directive must acknowledge that much of the new generation investment (including demand side measures) in the electricity industry will be the result of public policy objectives, not market forces. The Single Buyer option is well suited to ensuring that small electricity generation sources, such as renewables and cogeneration are exploited to the optimal extent.

## **Democratic control**

The role of the Regulator will be crucial in such a system. Most countries of the European Union now have well-resourced regulatory bodies, generally with a good level of competence in the sector. However, such regulators have seldom been selected on broad democratic criteria. They have generally drawn from a very narrow business-oriented community with a strong competition agenda. The regulatory bodies need to be opened up to much wider participation bringing representatives of the full range of interests, including environmentalists, consumer organisations and trade union representatives. Only in this way can they become the legitimate representatives of the public.

### **3. *Our conclusion from the report***

**EPSU concludes, from this report, that competition in Europe's electricity and gas markets, as advocated by the Directives, will:**

- Not function due to the economic, physical and social characteristics of electricity in particular.
- Threaten security of supply and the long-term stability of Europe's energy infrastructure.
- Leave domestic users open to the vagaries of the market.
- Further deteriorate employment, employment conditions, training and skills and workers' well-being.
- Negatively affect large industrial users risking their competitive position, reducing growth and employment.

**Contrary to what has become established dogma, the internal market for gas and electricity does not help the European Union achieve the Lisbon goals of becoming the world's most dynamic and competitive region.**

**The Directives and regulatory approaches need changes.**

### **4. *Our initial reaction to the DG Tren consultation***

EPSU has sent a first response on early August. In our response:

- We welcome the possibility for EPSU and other stakeholders to contribute to the discussion which is very much in line with the commitment made by Commissioner Piebalgs to EPSU, 23 March 2005;
- EPSU questions the appropriateness for the DG TREN Directorate of the Commission to evaluate the outcome of the internal market as there is a risk that the Commission will be biased in its evaluation. We have voiced this criticism on several other occasions (on the Methodological Note for Horizontal Evaluation; on the Horizontal Evaluation of Liberalised Network Industries);
- We call for a participatory approach regarding the evaluation and the benchmark studies. Again we welcome Mr. Piebalgs commitment to subject the outcome of the evaluation and possible conclusions to broad public consultation and debate. That debate needs to be wider and more inclusive than the so-called Florence, Madrid (and Athens) Forums;

- We request that the social dialogue committee for the electricity sector, and, when established, the social dialogue committee for the gas sector, will be consulted, before proposals are made, taking into account the more general commitment of the Commission to promote the social dialogue regarding sectoral policies (Communication on Restructuring and Employment COM(2005)120;
- EPSU suggests additional issues that should be included in the evaluation: most notably the impact on employment, equality, environment and social and territorial cohesion. We do not agree to postpone inclusion of some of the issues until further studies become available, when readily available material is on hand, especially with regard to employment. The internal market has clearly led to job losses, outsourcing and widening of skill gaps, with a mixed impact on female employment;
- We underline that the evaluation should also consider the impact of the internal market on implementing and promoting other energy policies, for example regarding CO<sub>2</sub> emissions. We refer to our comments on the 4<sup>th</sup> and 5<sup>th</sup> benchmark reports. The evaluation needs to take also appropriate levels of analysis into account, for example regarding prices. Not all price increases can be attributed to environmental levies and other additional charges. Fuel prices and regulatory action play an important role;
- EPSU requests that evaluation also considers distributional issues. Has the internal market contributed to more social equity or has it sharpened divides?
- We argue that evaluating is also comparing. There is an extensive literature which indicates that the fundamentals to create competition in the electricity and gas industry are not present. That body of literature appears to have greater explanatory power than the current theories on which the internal market in electricity and gas is based. Furthermore the physical characteristics of electricity are a further constraint – the laws of physics might not obey to the applied economics.

We raised 4 points that should play an important role in the discussion: “*How further ?*”

- Democratic control needs to be strengthened
- Social dimension should get more priority; or focus on the Public Service Obligations
- Market opening for domestic users in 2007 needs to be re-assessed.
- Prudent approach regarding unbundling.

In the next chapters we develop our approach further.

## 5. **Current consensus**

The current consensus in the industry, Commission, Parliament, Council and researchers is that the Internal market for electricity and gas has its faults. These faults can be overcome however through more competition and doggedly exposing ourselves to more competition.

**Patient:** “Doctor, the medicine IEM 1 you prescribed for my illness does not work!”  
**Doctor:** “I will increase your doses then”.  
**Patient** returns after two weeks: “Doctor, this medicine IEM II still does not work, and I have noticed severe side-effects.  
**Doctor:** “Do not worry. I will increase the doses. And these side-effects are temporary” .  
After a week the patient calls the doctor.  
**Patient:** “I had a black out and fell serious ill”.  
**Doctor:** “That is temporary. We will increase the doses and put in other medicines”.  
**Patient:** “But doctor, I read work of a distinguished professor who says that the problems I have are inherent in the medicine!”.  
**Doctor:** “That is an obscure theory. Do not believe all you are told”.  
**Patient** nods, leaves the medicine on the table and goes away.

Many organisations have proposed measures to make the market work and improve its functioning. The consensus appears to be to move from national markets to regional markets to one single European market to one single European regulatory space which covers South East Europe and even Ukraine, Moldova and Russia.

A sceptical attitude is hardly found except for the professional engineers. The views of UCTE, the organisation most concerned with ensuring reliability and security of the system (and thus one of the few organisations left which is charged with a public service mission in some sense), are interesting to note. In a presentation to the 12<sup>th</sup> Florence Forum, UCTE made a number of important observations that hardly can be called an endorsement of the internal market and the current strategy to continue to extend the European market:

- Referring to interconnection with South East Europe, Turkey and CIS countries, it notes that reliable grid infrastructure must not be sacrificed for each kind of system extension.

UCTE notes that the security of the system is challenged:

- Significantly increased electricity flows bring the grid to its limits.
- Congestion of interconnection spreads all over the system.
- Further developments of the IEM should consider security constraints and dependencies<sup>2</sup>.

The UCTE presentation argues ***that a stable regulatory framework with long term perspective and a security philosophy is urgently needed***. Or to say it in other words: the current internal market lacks a long-term perspective, lacks a security philosophy and lacks a stable framework. How more devastating can the evaluation of the internal market be? It is interesting that US engineering professionals are voicing similar concerns. We have reproduced a summary and recommendations of a very recent report related to the background of the large black-out in the US (August 2003) in an annex.<sup>3</sup>

**EPSU is in favour of a stable regulatory framework.** This used to exist, and a framework based on long-term planning capable of integrating political demands such as promotion of renewables, energy savings and cogeneration does not fit well with the current competition and profit driven approach. A stable regulatory framework that allows for cost based pricing under regulatory oversight will secure employment in the sector and beyond. But how do we achieve this now?

## **6. The EPSU approach to the internal market for electricity and gas**

EPSU has contributed previously to the discussions on the development of the internal market.<sup>4</sup> Our position remains critical.

- EPSU is fundamentally critical of the internal market for electricity and gas. It will not work in its present form and it does not deliver more benefits than the previous more cooperative approach while increasing risks.
- If the measures that are proposed by several organisations, and which speak from the vision of the European Commission's competition survey follow, this will lead to fragmenting the industry, increased risk and less consumer protection, fundamentally endangering the reliability of Europe's energy infrastructure.

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<sup>2</sup> The report also notes that the length of authorisation procedures for new lines does not keep up with market developments. We note that it would be strange if these procedures would need to be subject to market developments rather than allow democratic concerns to be expressed.

<sup>3</sup> *Contributions of the restructuring of the electric power industry to the August 14, 2003 blackout*, Jack Casazza, Frank Delea, George Loehr, Members, Power Engineers Supporting Truth, August 2005

<sup>4</sup> EPSU position on the European Commission Communication on "Recent Progress with building the internal electricity market" (Com 2000) 297 final 16/05/2000

- We expect further employment cuts from such measures, exacerbating the problem of the emerging skill gap, with a negative effect on equality and female employment (like in the New Member States), leading to increased outsourcing of services such as call centres, information technology and back-office services, meter reading, maintenance, cut backs in training and research & development etc. These services are often operated on lower pay and conditions. An effect on reliability can be expected.

Most organisations advocate that further progress to ensure competition is possible and needs to be made. **There is currently not a majority view for changes to a more cooperative approach which would be based on long-term planning and investment, focusing the energy of the electricity and gas industry and its users on addressing global warming, reliability and security of supply issues.** What is needed is a uniting of forces around a major European programme to reduce dependence on fossil fuels, and move Europe towards sustainable development and reduced emissions, for example based on a Hydrogen Economy, as Europe's political parties advocate.

We propose the following to get the European Union back on track towards a more cooperative approach:

- No new initiatives to promote the internal market and more competition in the electricity and gas sector. The implementation of the Directives needs to be completed and further experience gained, including how different Directives interact with each other. Certain groups continue to demand changes until the final results are in their favour. This will be at the expense of other groups and in particular domestic and vulnerable users such as the poor and elderly.
- No ownership unbundling – It is economically unnecessary. Oversight of non-discriminatory transmission access is provided by the regulators.
- All proposals of the Florence, Madrid (and Athens) Forums should be subject to Parliamentary approval. Many measures are proposed to make the internal market function in these Forums following a discussion between industry players, regulators and experts of the Commission and Member States. This process escapes democratic control.

A number of **opt-outs** of the internal market should be possible:

- The market for domestic users should remain closed for those countries that wish to continue to operate a regulated tariff for domestic users and with regulatory oversight, also after 1 July 2007; The PSIRU report says: *“Retail competition for small consumers clearly imposes more costs than could possibly be recovered by the operation of competition and it opens small consumers up to exploitation and higher than justifiable prices. (...) If retail competition for small consumers is not adopted, a properly regulated tariff must be introduced that does not allow the risk that small consumers would subsidise large consumers.”*
- Countries should be allowed to opt-out of the internal market, based on democratic decisions of their populations, for example through a referendum. Possibly one way of doing so, is by bringing back the different options in the 1996 and 1998 Directives, like the Single buyer Model;
- Member States should be able to opt-out of the 10% target by which there should be a certain % of cross border trade (import/ export) of electricity compared to installed capacity

These opt-outs are needed to ensure the democratic nature of the EU. Europe's citizens must be able to change decisions, especially if these are seen to have negative consequences. Without opt-outs, national governments cannot react to legitimate concerns.

New measures are needed:

- An amendment to the Directives and/or a regulatory approach is needed that defines that the electricity and gas utilities should have sufficient and well-trained staff to be able to fulfil their functions, including relations with customers and the capacity to react to unforeseen events (or “acts of God”).
- Targets should be established for both Research and Development, and, for investment, in training. These targets should be based on the three best performing utilities. Other companies would have 3 years to move to that level on a voluntary basis. Thereafter the targets become binding. National action plans on electricity and gas training should be developed with the social partners;
- Similar targets should be defined for investment in maintenance and repair, and with a similar consequence.

EPSU advocates the following approach for new measures. They should:

- Increase democratic control and strengthen the involvement of citizens in overseeing the utilities. A first concrete step is that before moving to regional markets, regulators should have a permanent structure for involvement of citizens and their organisation such as anti-poverty groups, trade unions, municipalities etc...The precise form can be different but it needs to be permanent and structured. Also poor users should be continuously asked to contribute their views. They might need support through so-called consumer advocates for example;
  - With each step in building the internal market it becomes more removed from citizens, and it escapes their control. The ERGEG (European Regulators Group for Electricity and Gas) is a poor substitute. This needs to be corrected. Lack of democratic governance is a major issue. It is not clear who will oversee the regional markets for example.
  - The PSIRU report contents: *“The role of the Regulator will be crucial in such a system. Most countries of the European Union now have well-resourced regulatory bodies, generally with a good level of competence in the sector. However, such regulators have seldom been selected on broad democratic criteria. They have generally drawn from a very narrow business-oriented community with a strong competition agenda. The regulatory bodies need to be opened up to much wider participation bringing representatives of the full range of interests, including environmentalists, consumer organisations and trade union representatives. Only in this way can they become the legitimate representatives of the public.”*
  - Strengthen Public Service Obligations.
  - Moving from national towards regional markets could weaken consumer protection. A direct measure to protect users is to define more exactly what a reasonable price and a reasonable rate of return are.
  - EPSU has argued on several occasions for a Frame work for Services of General Interest and for a European Observatory on Services of General Interest.
- Increase employment in the industry, improve working conditions, ensure training and contribute to equality.
  - As has been sufficiently demonstrated, workers have been negatively affected. The EU Treaty itself argues that the EU should be a space that contributes to improved living and working conditions. It does not say that the Commission should choose one group over another. The aim is that all groups move up.
  - The PSIRU report states *“The Commission needs to ensure that detailed data on employment are collected to allow the situation for skills to be monitored, especially for the gas sector where data is particularly sparse. It needs to address low level of employment for women in the sector. It may also be necessary to revise the Directives placing responsibilities on companies to carry out training and to ensure*

*that cost reductions are not carried out at the expense of the conditions of employment of the workers.”*

- Stable employment further ensures that the systems remain reliable and secure
  - New measures should prove a positive contribution to tackling unemployment in a direct and measurable manner;
- Improve Reliability and Security of the Electricity and Gas systems.
- Each new step should be thoroughly judged if it improves reliability or not. We should not ask: can we do this without compromising reliability, but: if we do this, will reliability improve? EPSU maintains that with a more fragmented system, with more players and more relationships between these different players each group and each individual in that group having particular concerns, reliability is compromised, and more difficult to monitor. A security and reliability philosophy in an internal market might well require moving from N-1 reliability to N-2.
  - The PSIRU report: *“The regulatory regimes being introduced give strong corporate incentives for cost-cutting and puts pressure on regulators to impose cost reductions even where the long-term impact on reliability will be detrimental. A much better balance needs to be developed that still encourages companies to improve their efficiency, as they have done throughout the history of the electricity and gas industries, but requires companies to demonstrate that cost reductions will not adversely affect system reliability”*
  - It also means that the effects on the fuel mix need to be considered. A balanced fuel mix contributes to security.
  - From the PSIRU report: *“For the electricity generation and gas wholesale sectors, the Directives should be amended to require that accountable public authorities ensure that sufficient generating capacity is available and sufficient gas has been contracted.*
  - Regulatory control and monitoring also needs to be improved with a move towards regional markets.
- Help Europe achieve sustainable development
- New measures needs to be judged on how these contribute to protecting the environment, promote renewables and reduce CO2 emissions for example
  - PSIRU's report: *“The Directive must acknowledge that much of the new generation investment (including demand side measures) in the electricity industry will be the result of public policy objectives, not market forces. The Single Buyer option is well suited to ensuring that small electricity generation sources, such as renewables and cogeneration are exploited to the optimal extent”*

We propose that these 5 tests become an integral part of further planning in the electricity and gas industry. Any new proposals should hold up to these 5 tests and deliver on all of them. If not compensatory measures are needed.

EPSU is the **European Federation of Public Service Trade Unions**. 8 million workers are organised through their 215 trade unions. EPSU is the largest federation of ETUC. We organise workers in public services such as local, regional, national and European administration, health and social services and utilities (electricity, gas, water and waste management).

EPSU affiliated trade unions organise workers in electricity and gas production, transmission/transport, distribution, retail and auxiliary services. Our members work with all kind of fuels (hydro, renewables, nuclear, oil, coal, gas...) Our members are active in public and private companies, in large multinational ones as well as in smaller municipal companies.

EPSU represents several hundred thousand workers in many hundreds of utilities located throughout the European Union, European Economic Area and South East Europe. EPSU members take an enormous interest in the issue of restructuring since their jobs and lives are at stake. EPSU members are also consumers and citizens. They understand the importance to the economy of providing gas and electricity at low prices in a safe and reliable manner. EPSU has expressed itself critically on the internal market for electricity and gas on many different occasions.

EPSU is represented in the electricity social dialogue committee with Eurelectric. We are engaged with Eurogas to develop a social dialogue. EPSU has also representatives in the European Energy and Transport Forum.

*For more information*

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Annex 1

**Constraints on electricity that make competition dysfunctional**

***Electricity is a public service and a social good***

The starting point of the EPSU position is that electricity services should be reliable, safe, affordable and sustainable. Electricity and Gas market reform should be judged on its contribution to realizing these objectives. The problems and even disasters resulting from market reform in many places in the world occur because these reforms have not been linked to the ultimate outcome. The reforms have lost sight of the social component of electricity services: their essential nature, contributing to development of economies and social and regional cohesion.<sup>5</sup>

The social component has political consequences as pointed out by South Australian Independent regulator Lewis Owen.

The market mechanism means passing on to consumers price increases of 50 or 100% or more, and saying this is a good and efficient outcome. Is naivete a necessary characteristic of being a market economist he wonders.<sup>6</sup>

To some extent the Directives have recognised this social characteristic by recognising that electricity is a public service, that Member States can impose public service missions and have to ensure affordable prices and that protection is to be provided for vulnerable customers.

The current discussion on the future of the internal market is not focused on how they will effect these principles.

***Dogmatic use of economic theory ignores established criticisms***

Secondly, much of the problems of electricity reform result from a faulty application of economic theory. The current neo-liberal theory questions the interventionist role of the state, and as a consequence state and municipal companies as instruments to realise the state's objectives. It seeks to undermine such models of economic management. There is an underlying mistrust of the state, ignoring that different states (and its agents such as state and municipal companies) actually have acted to the benefit of their citizens.

Policy conclusions drawn from models ignoring these facts are at best misleading and at worst pseudo-scientific renderings of the model-builder's ideological conviction against the state.<sup>7</sup>

Neo-liberal theory is a return to old laissez-faire thinking of a bygone age. It postulates that goods are traded in a competitive market. All information concerning such goods should be public knowledge between producers and users. We all know this is not the case in electricity. Producers know more about quality and quantity than do users. Information is asymmetric. The costs are very high for users to obtain full information. Users will be afraid that the companies, driven by profit-maximising behaviour, will cheat on consumers. That is

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<sup>5</sup> Ha-Joon Chang of the Faculty of Economics and Politics of the University of Cambridge points out that distributional considerations should be addressed more explicitly in the design of reform as well as the impact of regulation on dynamic efficiency (not just stopping at static efficiency (see also annex), Ha-Joon Chang' seminal work on The Economics and Politics of Regulation, in Globalisation, Economic Development and the Role of the State, Chapter 5, 2003.

<sup>6</sup> Lewis W. Owen, Mysteries of electricity pricing, speech to the Economic Society, 3 April 2001

<sup>7</sup> Ha-Joon Chang, p.33

why users prefer public companies where the profit maximising is either eliminated or reigned in.<sup>8</sup>

The critique of the laissez-faire thinking was well voiced by Keynes. John Maynard Keynes identified in the 1920s cost and demand conditions under which competition doesn't emerge. This seems largely forgotten. Keynes goes further, to explain how economists move from simplifying assumptions to abandonment of the actual facts, and to conclude that reality is what their model says it is.

"The beauty and the simplicity of such a theory [competition producing economic efficiency] are so great that it is easy to forget that it follows not from the actual facts, but from an incomplete hypothesis introduced for the sake of simplicity. Apart from other objections to be mentioned later, the conclusion that individuals acting independently for their own advantage will produce the greatest aggregate of wealth, depends on a variety of unreal assumptions to the effect that the processes of production and consumption are in no way organic, that there exists a sufficient foreknowledge of conditions and requirements, and that there are adequate opportunities of obtaining this foreknowledge. For economists generally reserve for a later stage of their arguments the complications which arise -- (1) when the efficient units of production are large relatively to the units of consumption, (2) when overhead costs or joint costs are present, (3) when internal economies tend to the aggregation of production, (4) when the time required for adjustments is long, (5) when ignorance prevails over knowledge, and (6) when monopolies and combinations interfere with equality in bargaining -- they reserve, that is to say, for a later stage their analysis of the actual facts. Moreover, many of those who recognise that the simplified hypothesis does not accurately correspond to fact conclude nevertheless that it does represent what is 'natural' and therefore ideal. They regard the simplified hypothesis as health, and the further complications as disease." (Keynes 1972)<sup>9</sup>

A report of a Dutch governmental advisory body (see below) has argued that the damage for users and business resulting from network problems are much larger than the value of the product. There are therefore macro-economic reasons to strive towards optimal reliability. This is a faint echo of the position of Keynes and again largely ignored.

### ***Physics of electricity***

Another set of reasons, and certainly not the least, why competition in electricity can not function is related to the physics of electricity. It is not a product that can be stored. To ensure that the system can function demand and supply need to balance at all times. Electricity can also not be stored. There are no stocks. Engineers are therefore usually quite skeptic about introducing competition in the electricity sectors.

### ***Large Industrial Users: Wholesale markets have failed***

The particularities of the electricity market are finally recognized by the large industrial users. They argue that the wholesale markets have failed. And if you do not have wholesale competition what is left is retail competition which makes up between 2-6% of the electricity bill. This margin has to be compared also to the costs to compete and to acquire new clients.

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<sup>8</sup> Is the government failure theory still relevant, Matsunaga and Yamauchi, p. 227-263, *Annals of Public and Cooperative Economics*, 75:2 2004. In addition companies argue, as does the Directive that certain information needs to be confidential for commercial reasons. The US Supreme Court has argued that society has a great interest in the free flow of information. It is the postulate on the basis of which competition theory is build. Allowing companies (that deliver essential services !) to keep information secret is in direct contradiction with the free market theories.

<sup>9</sup> Keynes, J. M. "The End of Laissez-faire" in The Collected Writings of John Maynard Keynes, Vol. 9, Essays in Persuasion, London, The Macmillan Press, 1972

What does the European organization of large industrial users IFIEC say in an electricity market design report<sup>10</sup>:

- Competition between European power generators and suppliers has virtually disappeared. Even large industrial users have no negotiating power when seeking new supply contracts, let alone domestic users
- The wholesale price has gone up with 50% on average since 2002.

IFIEC states that these price developments are harmful for competitiveness, especially because of risks and uncertainties related. IFIEC concludes that the wholesale market is dysfunctional. IFIEC members are now confronted with the same situation as domestic users and individual and small and medium-sized enterprises: the only part on which there is competition is the retail part (or trading margin). It has always been unrealistic to expect that individual users would have an effect on the price of balancing and supply contracts.

IFIEC complains of market dominance where producers and traders are often the same. The price signals are erratic, and there is insufficient liquidity in the forward electricity market. There are hardly any new producers. The existing producers use the wholesale trading market price as the reference point for contracts with industrial users. IFIEC claims that the electricity producing companies engage in price-setting. Financial institutions have not become more active. IFIEC claims this is due to the lack of a price reference like there would be in a commodities market. All kinds of contracts for risk management could then be linked to this price reference. And then comes the clincher: electricity can not be stored. Electricity spot markets serve to balance the actual physical supply needs (the market always needs to be in balance) There are thus no possibilities for arbitrage. Trading companies without physical assets have encountered catastrophic results and disappeared. IFIEC concludes that :

*“the failure to introduce electricity contracts on the important commodities exchanges is a good indication that the nature of electricity goods does not lend itself to tradition risk management. As a consequence, electricity trading exchanges do not, and will not in the near future, provide financial instruments in a manner that allows consumers sufficient options to manage and hedge their risks, as in the case of other commodity markets.”*

IFIEC states a *“total lack of predictability and the impossibility to anticipate and budget costs.”* There is *“excessive risk”* of users. Not just industrial ones as IFIEC focuses on, but also for domestic users in fully opened markets. And IFIEC warns us that there is a direct threat for the survival of a large number of industrial sites, and future investment in the manufacturing industry has to deal with risks and uncertainties.

One would expect that IFIEC would draw the conclusion that it is better to return to the regulated model with predictable prices including for large industrial companies.<sup>11</sup> But it prefers to prescribe us more of the same medicine.

### **Conclusion**

These powerful arguments against competition in electricity services have been ignored, and, as predicted by EPSU, the Commission and Member States now scramble to regulate in more detail.

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<sup>10</sup> “Electricity Market Design”, 29 September 2004, [www.ifiec-europe.be](http://www.ifiec-europe.be) See also “Wholesale markets have failed”, Power in Europe, issue 436, 25 October 2004, p.4

<sup>11</sup> EPSU has received information from its affiliated trade unions that an increasing number of large industrial users feels similar: a return to regulated tariffs is preferable. We are told that many dare not come out public on this.

Annex II

**CONTRIBUTIONS OF THE RESTRUCTURING OF THE  
ELECTRIC POWER INDUSTRY TO THE  
AUGUST 14, 2003 BLACKOUT**

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Members, Power Engineers Supporting Truth

August 2005

**III. Executive Summary**

Deregulation and the concomitant restructuring of the electric power industry in the U.S. have had a devastating effect on the reliability of North American power systems, and constitute the ultimate root cause of the August 14, 2003 blackout. Specifically, deregulation and restructuring have led to:

- Changes in focus from long-term optimization and inter-system coordination and reliability to total dependence on immediate profits and the efficacy of “the market”.
- Change in technical qualifications of those holding management positions in electric power organizations and government policy makers and regulators; this change affects entire organizations.
- Reductions in personnel at electric power organizations and companies.
- Failure to make adequate technical analyses including risks when setting government policies.
- Increased complexity of operations because of separation of generation and transmission functions, the large increase in the number of organizations involved, and the establishment of additional levels of responsibility in the operation/control process.
- Dilution of management responsibility, including too many entities in the management structure with veto power.
- An almost fundamentalist reliance on markets to solve even the most scientifically complex problems.
- Decreased emphasis on the importance of strong reliability standards, and a trend toward lower standards; this is most pronounced in the very organization charged with maintaining reliability –NERC – aided and abetted by FERC.
- Dispersed, fragmented control of the bulk power system in the Midwest.
- A patchwork quilt of overlapping jurisdictions among marketing areas, Independent System Operators/Regional Transmission Organizations (ISOs/RTOs), and regional reliability councils in the midwest.
- Reductions in, or outright elimination of, training including training of operators.
- Continuation of the historical problem of geo-electrically small control areas in the Midwest, despite the creation of the MISO, which, in the context of operations on August 14, 2003, appeared to be little more than a toothless shell.

Unless the root causes of the August 14, 2003 blackout are addressed and the trend toward lower standards reversed, the likelihood of future blackouts will increase.

The DOE/Canadian report demonstrates the dominance of market participants and lack of government concern about the root causes of the blackout.<sup>12, 13</sup> Both are also clearly illustrated by the almost two-year delay in the investigations, and discussions that are taking place through the competition and reliability study of which this paper is part.

Despite its “spin”, the Energy Policy Act of 2005 does nothing to address the root causes of the 2003 blackout, and hence will do nothing to enhance reliability.

## **XI. Recommendations<sup>14</sup>**

The authors have been asked to provide recommendations, a difficult assignment. In the massive effort to “deregulate” and “restructure” the electric power industry, the Laws of Physics were ignored, replaced by a blind conviction that the Laws of Economics could provide all things – including a reliable system. Unfortunately, this has been proven to be a tragic mistake. The problem with correction, however, is that a fundamentalist market philosophy has so permeated the entire industry, from the Federal Government and its regulatory officials to the industry’s own organizations, that to undo the damage will likely take an effort well beyond a few simple recommendations. The problem cannot easily be fixed since the problem is an innate attitude or belief system, not an error or two in procedures or protocols. An indication of this is the fact that, despite such evidence as the California Meltdown, unprecedented price spikes, the criminal actions of Enron and others, and the most devastating blackout in our history, policy makers still steadfastly deny that deregulation and restructuring had anything at all to do with any of it. Sociologists call this “cognitive dissonance.”

Recognizing this difficulty, there are a number of steps that could be taken to start the nation on its difficult corrective path:

- Before approving any new ISO/RTOs, ensure and demonstrate that the entity is fully functional.
- Investigate and recommend guidelines for the geo-electrical characteristics of control areas.
- Require NERC to roll back the reductions in reliability standards implemented since 1998.
- Prohibit NERC from implementing any further reductions in reliability standards.
- Permit any state or reliability entity to mandate more stringent reliability standards than NERC’s. In other words, make sure that NERC standards are a floor, but not a ceiling.
- Before implementing a new market design, ensure and demonstrate that the design’s
- To make markets work more efficiently and effectively, emphasize in policy standards the need to foster cooperation between organizations.
- Develop standards for technical qualifications required for key government and industry positions, including those responsible for establishing electric power policies, and for management, design and operation of the transmission grid.

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<sup>12</sup> DOE personnel have indicated in correspondence with the authors they had more important things to look into. Kevin Kolevar, March 8, 2005, attachments to letter to J.A. Casazza (see pages 12 and 13).

<sup>13</sup> The Congressional Research Service Report to Congress on Electric Utility Reform update of April 21, 2005 does not discuss such issues as industry behavior and its impact on reliability.

<sup>14</sup> These recommendations were prepared prior to recent Congressional action that made making reliability standards mandatory. They have since been reviewed and remain unchanged, since the problem is not whether the process is mandatory, but how strong the standards are, how our recommendations are implemented, and how competent those implementing them are. In any case, since the Energy Policy Act of 2005 does not address the underlying causes of the 2003 blackout, it will have no effect in improving the reliability of the bulk power system.

- Require that appointments to FERC and the new DOE Office of Electricity of Delivery and Energy Reliability, and to the NERC Board and senior management positions, have demonstrated expertise and experience in electric power and are vetted by the National Academy of Engineers, with input from the Institute of Electrical and Electronic Engineers (IEEE), Edison Electric Institute (EEI), the American Public Power Association (APPA) and National Rural Electric Cooperative Association (NRECA).
- Mandate that DOE, in consultation with FERC, NARUC, and NERC, undertake a biannual "National Power Survey" modeled after the 1964 survey. This survey should give emphasis to reliability risks, including such incidents as the loss of major gas pipelines, as well as economic constraints.<sup>15</sup>
- Investigate and develop new programs for encouraging and improving the transfer of technical experience and expertise in the electric power industry and universities; such efforts could be enhanced by utilizing experienced retired engineers from the electric power industry.
- Investigate the effects that extensive labor reductions have had on overall national reliability, and on the ability to cope with national disasters and acts of terrorism.
- Require that marketing areas and reliability council areas be consistent.
- Support the reporting and exchanging of information related to system reliability. (Concerns exist about the consistency of some information, and the availability of data to the entire electric power industry.) The Federal Government could play an important role in enhancing the definition, collection and sharing of information.
- When adjusting generation because of transmission economic constraints, insure that such adjustments minimize reliability risks.
- Investigate and monitor reductions of maintenance expenditures as indicated in reports to FERC as a part of FERC's reliability monitoring function.

Additional references can be obtained at the following web sites:

[www.PEST-03.org](http://www.PEST-03.org)  
[www.ameredinst.org](http://www.ameredinst.org)

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<sup>15</sup> "It's Time to Challenge Conventional Wisdom", Harrison Clark, Transmission and Distribution World, Oct 2004.