



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 10.12.2003
SEC(2003) 1368

COMMISSION STAFF WORKING PAPER

Directive of the European Parliament and of the Council

**concerning measures to safeguard security of electricity supply and infrastructure
investment**

Extended Impact Assessment

{COM(2003) 740 final}

Table of contents

A.	What Issue is the Proposal expected to tackle?.....	3
B.	What Main Objective Is The Proposal Expected To Reach?.....	7
C.	Main policy options available	12
D.	What are the Impacts – Positive and Negative – expected from the Different Options identified?.....	14
E.	How to monitor and evaluate the results and impacts of the proposal after implementation?	24
F.	Stakeholder consultation	25
G.	Commission draft proposal and justification	27

A. WHAT ISSUE IS THE PROPOSAL EXPECTED TO TACKLE?

European Union policy to the electricity sector has three main strands. These relate to; i) sustainability, ii) security of supply, and iii) a competitive market. This proposal seeks to enhance the performance of the electricity sector in relation to all three of these objectives.

The first objective of sustainability, relates to the EU's environmental commitments to control the emission of greenhouse and other gases. Specifically, in the Kyoto Protocol, the EU committed itself to reducing its emissions of the six Kyoto gases by 8% below their 1990 level by 2008-2012. In order to comply with the Kyoto Protocol, more stringent measures and policies from Member States are of utmost importance. This includes initiatives to reduce emissions from the power sector, to constrain growth in demand through energy efficiency and to introduce common rules for the taxation of energy products.

Security of electricity supply is important since the use of electricity is central to the functioning and well being of society. Although no system can be 100% immune to interruptions, the disruption that is caused means that such events have to be kept to an absolute minimum. This implies that the balance between supply and demand must always be maintained and networks need to be appropriately configured so that electricity can be transported from the sites of production to consumers. Much of what is contained in this proposal is directed towards this objective through ensuring that adequate transmission infrastructure exists and to create a stable regulatory framework for balancing supply and demand. This is expected to be achieved, to a large extent, through the control of increases in energy consumption and moving towards less polluting generation technology, namely co-generation and renewables. Most of the increase in renewable electricity generation will come from wind and biomass.

Another key aspect is the centralisation versus decentralisation of the generation and the regional balance between generation and load. In the current power system, electricity generation takes place predominantly in large units (above 400MW) and the power is distributed through the transmission system and the distribution network to the consumers. In the future there will be increasingly more generation embedded in the distribution networks.

Finally, the introduction of competition and the internal market for electricity also brings new considerations. The market opening envisaged in the new electricity Directive (2003/54) seeks to create an environment for competition which will improve the efficiency of the sector, lead to a better and cheaper service for customers, with the knock on benefits to the wider European economy. The main avenue for these improvements to be achieved is for competition, both at the generation level and on retail supply margins to provide an incentive for companies active in the sector to reduce costs by, for example, rationalising production and customer service. A competitive market should also provide impetus to new innovation and a greater focus on customers.

Need for Community Action

It is vital to ensure that different Community policies, aimed at the three objectives set out above are compatible and that the configuration of the physical characteristics of the network, market structure and technology are in place to deliver these objectives. Of particular concern are the need for measures relating to infrastructure development and relating to security of supply.

Regarding the question of security of supply, the introduction of competition also implies a change in the way decisions are taken, particularly relating to the question of balancing supply and demand. Due to the special characteristics of electricity, in particular its status as a service of general economic interest, and the fact it cannot be stored, means that an appropriate regulatory framework must be provided for this interaction. This framework must be set out clearly and be stable over time, in order for the businesses concerned to take long lasting investment decisions.

Replacing a monopolistic structure with a competitive market means that this balance is maintained through numerous individual decisions about whether to invest in electricity generation and to consume electricity. Liberalisation should place more of an emphasis on demand management in this context. Instead of the historical attitude in a monopoly of “predict and provide”, the equilibrium position will instead be the result of decisions taken on both sides. Without demand management assuming a greater prominence there is a risk that liberalisation actually changes little concerning the functioning of the market. This would be at odds with both competition and the stated Community policy in relation to security of supply and the environment.

The issues relating to infrastructure are mainly relating to the competition agenda. It is increasingly clear that the level of interconnection available is insufficient to deliver real competition, given the market structure currently in place in the EU. Without more cross border investment, problems relating to market dominance will remain and with it the scope for intervention in the market which may undermine both the competition and the security of supply objectives.

There is also an interaction between infrastructure and the environment. Off-shore wind generation, especially, requires important investments in infrastructure, in the network, in the control systems and in the complementary generation units required for balancing the variable power output of the wind generators. The need for back-up supplies of energy in non-windy conditions would be enhanced through general network re-enforcement enabling, for example, better use of the hydro-electric resources of the Union. Similarly, for distributed generation technologies, such as small scale wind, co-generation and biomass, upgrading of lower voltage networks are needed. In addition, such technologies not only have advantages in terms of the environment, but also contribute to increased competition and to security of supply.

The proposal in question is therefore aimed at four main issues relating to the opening of the market. The first is the need for binding operational standards for the transmission systems, the second is to take into account environmental considerations in network investments, the third is to maintain incentives for transmission companies to invest in their networks, including the appropriate interconnections required to support the internal market. Finally the proposal addresses the need for Member States to have a stable regulatory framework for maintaining the supply-demand balance.

Current Trends in the EU Electricity Market

This section explains that there are currently a number of undesirable and unsustainable trends emerging in European electricity markets. These are putting in jeopardy the above objectives of the Commission. These relate to all three of the objectives discussed above.

In relation to sustainability, the main undesirable trends is the continuing growth in demand above the level for which the EU commitments on, for example, Kyoto, will be delivered and

the mediocre level of penetration of renewable and cogeneration production. Many of the trends are being tackled by other measures; for example the Renewables Directive, the Emission Trading Directive and the proposal for an Energy Services Directive that is currently being put forward. However one issue that is not being considered sufficiently is the infrastructure needs for delivering new generation of the desired type. This proposal therefore includes provisions to take into account environmental considerations in network investments.

Unsustainable increases in demand also affect the security of supply performance of the electricity industry. The recent incidents, within the EU have highlighted concerns about the stability of the current generation and network configuration. Although the main cause of the blackout seems to be non-compliance with the current operational standards used for the transmission network, this event also draws attention to other underlying trends in the electricity sector. These concerns centre on, firstly, the degree of co-operation between network operators to cope with such incidents; secondly whether the current network is adequate to the task of coping with a single electricity market; and thirdly whether a market framework will deliver the required balance between demand and supply without disruptive events.

On this last point, the heat wave in summer 2003 and the resulting price increases on the wholesale markets in Europe also drew attention to the question of the balance between supply and demand in the context of a competitive market and the effect of an unconstrained increase in demand coming, for instance, from the use of inefficient air-conditioning equipment. Although price volatility is characteristic of electricity markets and not a reason in itself to legislate or intervene in the market, the price increases inevitably draw attention to the concentrated nature of the industry and the lack of competition available between generators from different Member States. In addition, the calls for intervention in the market draw attention to the possibility of regulatory risk in the market and a clear need for clarity on this point to create a stable regulatory framework. Such a framework is required urgently since at some point in the future, perhaps in the next few years, market conditions are likely to change significantly with the current margins for reserve capacity being eroded and higher prices in wholesale electricity markets becoming more frequent.

Finally, relating to Competition and the Internal Market, the current trends are not at all encouraging. For transmission in particular, capacity between Member States needs to be expanded to allow cross border competition to become a reality, particularly in markets with a high degree of concentration. In addition, the introduction of regulated third party access implies a new role for regulatory agencies in influencing, directly or indirectly, the general investment priorities of the transmission and distribution system operators. Without these improvements, there are clear risks that, although the market is open, a market structure of segmented oligopolistic markets will emerge, where there is limited incentives for investment, where security of supply and potential manipulation of the market is an ongoing concern and for which there will inevitably be a motivation for governments and regulators to intervene. These trends will undermine or even negate the objective of the Community to have a competitive and integrated internal market.

These undesirable trends, relating in particular to the objective of a competitive market arising from an inadequate degree of investment is also underlined in the Commission's proposals for a review of the current guidelines for the support of trans-European networks. In particular, insufficient progress is currently being made on the necessary infrastructure projects is correlated to regulatory process and technical complexities in standardisation and interoperability.

Proper appraisal of major investments is a requirement of the Community reflected, for example, the Directive of Environmental Impact Assessment. Member States must therefore take such factors into account in their decision making.

As well as the requirements for Environmental Impact studies, potential projects may also have to deal with public consultation meetings in a number of local government regions, agree a package of compensation to landowners and “Right of Way” on an individual basis as well as discussing the project design at a number of levels. These complexities are often inter-related and a delay in one part of the process can have a knock-on effect in other areas.

It is also observed that there is a possible lack of incentives to investment in energy transmission infrastructure. One possible reason for the corresponding low expectation on return of investment is given by the regulatory obstacles as well as by the risk assessment for projects involving partners outside the EU.

Risks Inherent and Consequences of No Action and the Impact on EU Citizens

If no action is taken, the functioning of the European energy market could quickly deteriorate for all three of the policy objectives being discussed.

In relation to security of supply, the effects of a policy of neglect towards consumption growth, a continued unwillingness to construct new transmission and to co-ordinate system operation and the existence of a unclear regulatory framework relating to the supply-demand situation have already been seen in the example in California during 2000-01. In this case there were two main consequences for the population. The first was that the customers experienced a rapid and, more importantly, unexpected increase in electricity prices. In the absence of a clearly communicated policy on the question of the supply-demand balance, the political pressure for intervention in the market led to the reversal of the reforms. The second consequence was that, in order to balance supply and demand the system operator had to use “rolling blackouts” of different regions. This crude and indiscriminate form of balancing the system, which denies consumers their rights to choose to consume energy or not on the basis of the prevailing price, would be an unacceptable outcome. This event, in retrospect, has clearly set back progress towards an integrated market in the USA. The subsequent blackout in the North Eastern States served to underline the risks of a piecemeal approach to deregulation without binding rules on, for example, system operation and where investment in the transmission network is neglected.

Estimates for the damages that were caused by the energy crisis in California in 2000-2001 are as follows: rolling electric power blackouts that culminated in 20 hours of electricity outage had significant adverse implications for growth of the state economy and result in lost jobs. A study released May 9 (2001) by the California Alliance for Energy & Economic Stability reveals that electricity blackouts in summer 2001 would conservatively cost California businesses \$21.8 billion in lost productivity, reduce household income by another \$4.6 billion and take jobs away from 135,000 Californians. These experiences in the highly regulated US energy industry indicate that the regulatory approaches applied alone cannot adequately cope with growing demand or with the need to replace installations. These reports confirm the presumption that one non-delivered MWh is many times more “costly” (direct and non-direct losses on the side of customers) than timely investment in infrastructure.

Concerning the question of sustainability, the failure to take action will also have some impact. Where potential imbalances between supply and demand are forecast there may be, in the absence of a clearly defined policy based on demand management, be more hastily

conceived measures which risk giving an undue bias towards measures on the supply side: i.e. a return to some form of “predict and provide”.

In addition, if insufficient infrastructure exists then wind generation located at isolated points in the European network will either be constrained-off or will be subject to economic measures to alleviate congestion. Likewise, retail suppliers favouring renewable energy will be disadvantaged if network constraints reduce their access to cheap supplies of “back-up” power in cases where wind power is not available. Transmission investment will increase the number of available sources and make the economics of supplying renewable energy more viable and attractive to end-users.

Finally, if the internal market is undermined either through a lack of cross border competition, or through the political problems caused by security of supply concerns, the losers will be European consumers and business which, instead of seeing the benefits of competition in terms of lower prices and a higher level of service, will instead risk seeing the opposite.

B. WHAT MAIN OBJECTIVE IS THE PROPOSAL EXPECTED TO REACH?

The proposal is intended to address some key outstanding issues which, in particular relate to the need for additional transmission investment, to include environmental considerations in network investment decisions, and thirdly the need for a clearly policy statement to be made by Member States concerning the market for electricity generation and assuring a balance between supply and demand.

Concerning the part of the proposal dealing specifically with the supply demand -balance, the objective, as well as its direct effect on the issue of security of supply, is also to ensure that these questions are dealt with in the market place rather than by government intervention. In particular, although there is the possibility in the Electricity Directive for government intervention through a tendering procedure, such an approach will inevitably damage the objective of free competition. Specifically, the mere possibility of unpredictable government intervention in the market will have a negative impact on private investors in either generation or demand control technology. In addition a tendering approach, in practice, very often gives a bias to measures on the supply side at the expense of energy efficiency measures. This result could, therefore, also be against the Community’s sustainability objectives.

Regarding transmission the objective of the proposals, together with the associated proposal to revise the TEN-E guidelines, is to provide a further impetus to projects of priority European interest. These projects have been nominated at such precisely due to the contribution that they would be expected to make to security of supply, sustainability and competition. Some key examples from the proposed list of “projects of European Interest” are as follows:

Projects mainly related to security of supply:

AT	AT	Südburgenland-Kainachtal
AT	AT	Tauern-St.Peter
LT	PL	Alytus-Elk
AT	IT	Lienz-Cordignano
CH	IT	Robbia-S.Fiorano
IT	IT	Gorlago – San Fiorano
IT	IT	Matera – Santa Sofia
IT	IT	Venezia Nord-Cordignano
IT	SI	Phase shifter installation
IT	SI	Udine Ovest – Okroglo

Projects mainly relating to improving conditions for renewable energy

NL	UK	Undersea cable
DE	DK	Hamburg-Audorf-Flensburg-Kasso
DK	DK	Kasso-Revsing-Tjele
DK	DK	V.Hassing-Trige
DK	NO	Skagerak 4

Projects mainly related to improving cross border competition

AT	CZ	Dürnrohr-Slavetice
BE	BE	Upgrading Chooz - Jamiolle Monceau 225/150 kV
BE	FR	Aubange-Moulaine
BE	FR	Avelgem-Avelin
DE	PL	Neuenhagen-Vierraden-Krajnik
DE	PL	Third 400 kV AC connection PL – D
EE	FI	Harku-Espoo (ESTLINK)
ES	ES	Sentmenat-Bescanó
ES	FR	Bescanó-Baixas
ES	PT	Aldeadavila - Douro – Valdigem
ES	PT	Balboa-Sines
ES	PT	Cartelle-Lindoso II
IE	UK	Undersea cable
GR	TR	Philippi-Hamidabad

Overall Policy Objective

The proposal is therefore expected to have the following objectives on the electricity market.

- Firstly, the proposal will provide a stable framework where both electricity consumers and producers are faced with the correct price signals to inform their decisions to supply or demand electricity and where the policy of Member States in this regard is very clearly set out. The overall objective being that, through a combination of effective demand management and investment, supply and demand for electricity can be maintained in equilibrium at all times. This proposal will also contribute to the Community's sustainability goals, by requiring distribution and transmission companies to take into account environmental policy objectives in decision related to network investment. A move towards a stable wholesale market framework may allow better for demand management through price signals and therefore prevent conditions emerging where a tender process for new generation has to be launched
- Secondly, the proposals will oblige Member States to ensure that transmission system operators adhere to rules relating to the safe operation of the network and thereby reduce the frequency of interruption incidents, thus improving security of supply, a key objective of Community Energy Policy.
- Finally, in conjunction with the revision of the TEN-E guidelines, the proposal will provide an impetus to investment in the electricity transmission network, particularly on key parts of the network where additional cross border competition is necessary to develop the internal market. This will enhance all of the objectives of the Commission. A stronger network is more secure and can accommodate a greater amount of cross border transactions without running the risk of failure. Reinforcement of the networks thus enhances competition and security of supply. In addition, as discussed above, many of the interconnectors being considered will facilitate the use of renewable energy and improve the use made of the hydro-electricity resources of the Community.

Interaction with existing Community Policy

Environment

As already noted, the current proposal is not part of the main Community legislation in the environmental field and there already exists a series of Directives aimed at reducing demand, at the promotion of renewables and cogeneration, and to control the level of emissions. The current proposal will complement these measures to the extent that new infrastructure is needed to achieve these goals and that environmental considerations are explicitly taken into account in network investment decisions. In addition, relating to security of supply, the proposed Directive will avoid damaging the Community's objectives in this area since it specifically underlines the need for demand management to be a key part of any Member State's policy relating to the balancing of supply and demand.

Indeed the proposal in question forms part of a package with a Directive on Energy Services which envisages specific targets for demand management and places the emphasis of Community policy on these types of measures rather than simply accommodating unconstrained growth in consumption.

Competition and the Single market

The European Union is in the process of creating the largest competitive market for electricity and gas in the world. This integration of energy markets will both lead to greater efficiency and contribute to security of supply. A truly functioning, integrated market requires significant investment both in transmission and generation.

This Directive establishes measures aimed at ensuring the proper functioning of the EU internal market for electricity by safeguarding security of electricity supply and by ensuring an adequate level of interconnection between Member States. It establishes a framework within which Member States shall define general, transparent and non-discriminatory security of supply policies compatible with the requirements of a competitive single EU market for electricity as well as defining a common procedure for decisions to be taken on new interconnectors. It thereby clarifies the general roles and responsibilities of the different market actors and implements specific non-discriminatory procedures to safeguard security of electricity supply.

The objective of a competitive, integrated market for electricity is also taken into account since the proposals favour the use of market solutions, rather than central planning to the issue of security of supply. Clearly, of course, the proposal is closely integrated with the objectives of trans-European networks. A proposal to amend the TEN-E guidelines is being made in parallel.

Indeed one of the most important reasons why new interconnectors are needed is to allow for an increase in the scope for competition between the existing electricity companies in Europe. Without this happening, and in the absence of measures by Member States to reduce the dominant position of the largest companies, the possibility of choosing between different suppliers will remain an illusion for many customers.

Trans-European networks and other Community Financial Instruments

The Commission is proposing a change to the guidelines for trans-European networks for energy at the same time as this proposal. The revision of the TEN-E guidelines will update the list of eligible projects, as well as identifying a list of projects deemed to be “of priority European interest”. The proposal for the Directive complements this in two main ways. The first is via the consideration of the impact of regulated third party access on the decision making process.

Firstly, support from TENs, or any other Community instruments such as EIB loans and Structural Funds will only cover part of the cost of priority investments with the remainder coming from general transmission tariffs. These tariffs will now be regulated according to the new electricity Directive which requires regulatory authorities to approve the tariff setting methodology of the transmission system operators. In doing this, they need to take account of the cost of new infrastructure investments, including those interconnectors identified as priority projects. The proposed Directive sets out the procedure for this.

Secondly, given the importance of certain interconnectors for the internal market, the proposed Directive includes a requirement on Member States to provide a timetable for the most important projects to the Commission and explain any changes to that timetable. These provisions already form part of the TENs guidelines but are voluntary. Introducing an obligatory reporting framework serves to underline the critical nature of such projects.

C. MAIN POLICY OPTIONS AVAILABLE

Overall approaches to the problem

As with many issues the Commission is faced with a generic range of choices. The first approach is to do nothing and leave the issue to Member States to solve on an individual basis with only ad-hoc bilateral co-operation as considered necessary. Secondly the Commission can choose to play a co-ordinating role by encouraging the Member States to co-operate more generally in formulating their policies but without any obligations.

A more interventionist approach is one where the Commission seeks to place obligations on Member States to fulfil certain requirements in how they organise their policy on the issue concerned and how they interact with each other. The most extreme intervention is where the Commission would propose a Community level solution to the problem being considered.

For the current proposal relating to infrastructure, the approach taken is mainly in terms of co-ordination of practice in existing Member States with some obligation to provide a framework compatible with regulated third party access and some reporting obligations on projects of European Interest. The proposed approach is therefore relatively “light”. Concerning security of supply, the approach is more prescriptive in that it requires Member States to have a clearly defined policy for this subject. It does, however leave a considerable amount of choice available to Member States as to the approach to be taken.

Basic Approach Chosen

The basic approach taken in the Directive is as follows:

On transmission:

- to put a requirement on each TSO submit an (multi)annual investment strategy to its national regulator with the opportunity for the regulator, after consulting with the Commission and other EU regulatory authorities, to make additions of amendments to the programme included,
- to oblige the regulator to ensure that such investments are properly rewarded,
- to give regulators the power to ensure that the agreed infrastructure projects are completed,
- require Member States to have defined standard to be met relating to the security of supply provided by the transmission and distribution networks;

On balancing supply and demand:

- require Member States to have a published strategy for ensuring an appropriate balance between supply and demand including, where appropriate the setting of targets for reserve generation capacity;

On network investment:

- require Member States to ensure that demand side management, renewables, customer rights to choose supplier and universal service are taken into account in investment decisions of network operators.

Appraisal of different options

A number of different policy options were considered. On the question of transmission, for example, the following range of options were potentially available

A **“do nothing” approach** would leave decisions on infrastructure up to member States and more specifically transmission system operators. This was rejected because firstly, a number of TSOs are vertically integrated and secondly, in some Member States, regulatory practice is not conducive to new infrastructure investments and this creates problems when considering the issue at European level.

A further variation of the do-nothing approach would be for the Commission to stop in its efforts to accelerate cross border interconnection. Such an approach would rely on new investment in the generation market, to deliver the competition goals of the Community. A **“soft approach”**: would be to merely strengthen the existing co-operative approach through, for example, the Florence Forum and the existing co-operation between the Commission and national Regulators. This was also rejected since these discussions are a voluntary arrangement and experience has shown that it is difficult to get many difficult concrete issues resolved through such arrangements without binding rules. Since part of the objective is to remove regulatory risk, a voluntary approach might even be a disincentive to investment

By contrast a **“interventionist approach”**: where, for example, decisions to construct interconnection would be taken at Community level with the possibility of intervene in national planning processes was also seen as unsuitable for subsidiarity and other reasons.

In relation to the issue of balancing supply and demand there are also some key choices to be made.

A **“do nothing approach”** would mean that only obligations on Member States would be those contained in the new electricity Directive (2003/54). This already obliges Member States to monitor the supply demand balance and report to the Commission. and the existing policies to promote the penetration of renewables and cogeneration, as well as the possible Directive on energy services and energy efficiency. These policies will already make an important contribution to maintaining the supply demand balance.

. However, depending on the results of these, consultation with industry participants and consumers now lead us to believe that simply relying on these instruments may be inadequate in some cases. In particular, if additional investment is needed, the long term nature of the investments in this sector requires a very high degree of regulatory certainty for investors. Thus potential investors, whether in generation or demand management technology, need to be assured that their investment decisions are not later undermined by government intervention in the market. The proposal therefore obliges Member States to go one step further than the current legislation in this regard and actually issue a published policy . A passive approach is more likely to arrive at a scenario where the Member State has to issue a tender process for new investment.

More interventionist possibilities, such as the introduction of a common standard for reserve capacity or a common EU approach to the generation market were rejected due to subsidiarity reasons and the recognition that the reality of the electricity market still amounts to national or regional markets that are not very well interconnected. Likewise, other possibilities, such as the extension of obligations to tender for additional capacity were also rejected as not compatible with the objective of the internal market for electricity and gas.

Subsidiarity and Proportionality

In general it is considered that the proposal being made strikes the main balance in terms of what is considered a Commission or Community responsibility and what is left to Member States. Some European approach is required to these issues for a number of reasons. For transmission infrastructure, for example, a number of the most important interconnectors relate to cross border projects where it would appear that one of the obstacles is the lack of co-ordination between transmission system operators and regulators. Accordingly, the proposals develop a framework for such co-ordination without going to the extent of moving all such decision making to European level. The key arena remains the Member State(s) concerned with the relationship between the transmission system operator and its national regulator being the most important level of discussion.

The proposed measures are also proportional to the desired outcome. It is considered that the identified projects of European Interest can be realised with some fairly minor improvements to the current arrangements without creating new decision making structures.

On security of supply the proposal again defends the principle of subsidiarity. It remains the case that authorities in the Member States concerned will be answerable in the event of disruptions and that the key decision on the configuration of the energy market should be decided at national level. However there is clearly a Community element to these questions. With electricity traded across borders a key part of the competitive market for electricity, there is a need for a reasonably compatible framework to be adopted in order to reduce the possibility for, for example free-riding or for other distortions of the European electricity market. It is considered that the proposal achieves this balance.

The proposal is also proportional to the objective. Without the requirement to publish a clear policy document on the issue of balancing supply and demand for electricity there is a risk that the fall-back option set out in the Directive (i.e. tendering) may become more prevalent that is consistent with the overall principles of competition.

D. WHAT ARE THE IMPACTS – POSITIVE AND NEGATIVE – EXPECTED FROM THE DIFFERENT OPTIONS IDENTIFIED?

The likely positive and negative impacts of the selected options, particularly in terms of economic, social and environmental consequences are addressed. The issues of security of supply and construction of new infrastructure are of crucial importance

Expected Impact of the Proposed Policy

At a general level it important to evaluate the impact of the proposals on the overall vision of the electricity sector embodied by Community policy. Overall Community policy promotes a sector where the focus is on management of demand, where renewables and distributed co-generation additional capacity make an important contribution to generation and where competition in the market drives forward efficiencies and rationalisation. Within this framework, decisions in individual Member States will also be an important determinant factor in the precise development of the sector in future.

Another key motivation is the desire to increase the scope for cross border competition, both between incumbents and also facilitating new entrant electricity suppliers. The expected impact of this is evaluated quantitatively in the section below. However the proposal may also

have potential impacts on the other objectives of the European Union relating to sustainability.

Overall Energy Policy Impact

The configuration of the electricity network, in particular, is likely to have a knock on effect on the way in which electricity is produced. As already noted, there are two generic types of network configuration:

- i. a decentralised approach implying limited interconnection and small scale generation;
- ii. an integrated approach with an extensive network and generation centralised into large production units.

In reality the European system is something of a mixture of these two models. National networks are usually well reinforced and allow for electricity to be transported long distances. However connections between Member States are not as well developed and a number of important constraints exist.

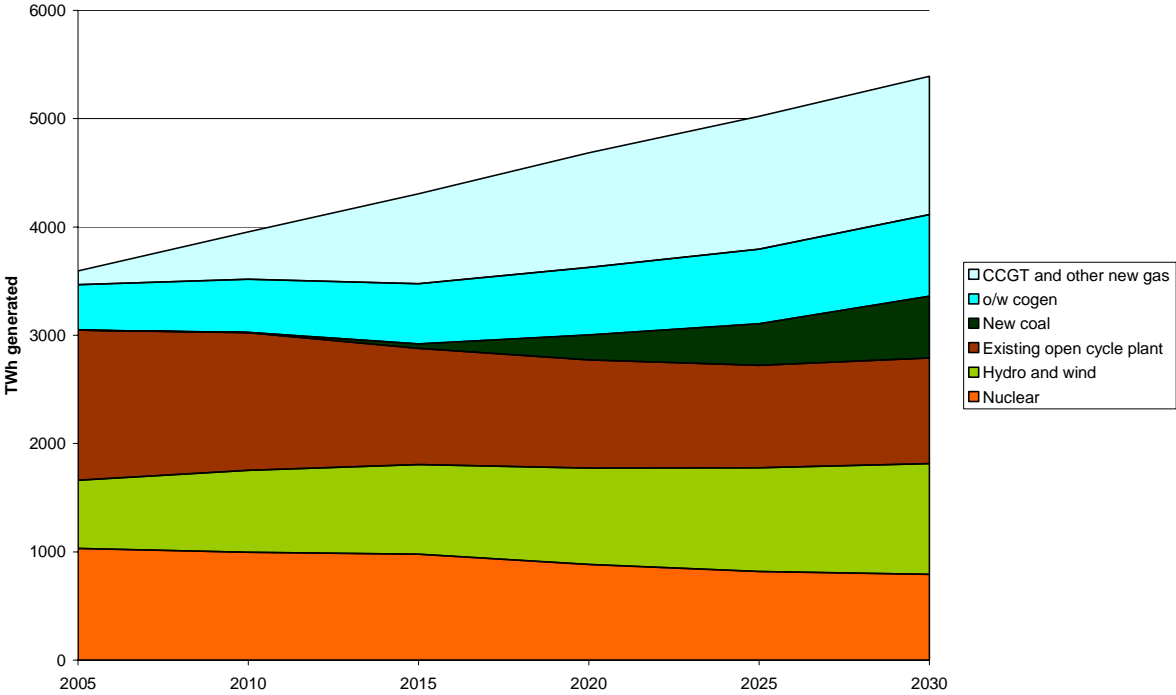
Increasing interconnection is, in fact, mainly intended to increase competition and this will not favour any particular technology. For example although production and export of nuclear generated electricity is prominent for base-load, flows at other times, when demand is higher will, in most cases be a combination of thermal resources and hydro-electricity which are more flexible. The key objective is to make the best use of the generation facilities that are available through competition rather than promote one or another type of generation. In reality, the main determinant of the generation mix in an individual Member State will largely be determined by the attitude of the governments concerned when they award authorisations to construct new plant.

In any case, the proposed projects will only have a limited impact on the overall scope for cross border trade. In total the increase in transmission capacity amounts to only 23000MW within the EU. This is only 3% of total EU25 generation capacity which is around 700.000MW. Thus the overall impact of the combined effect of the two proposals will be relatively small in this regard.

Some analysis of the future trends in generation may be useful in this context using the Commission's forecasts for 2030.¹ In these forecasts, the baseline consists of the expected outcome in the event of no additional action being taken in pursuit of the Kyoto objectives. Also the policies and measures, both at national or Community level (resulting from the European Climate Change Program) that have been taken or are still in the decision making process are not included in this baseline. This would lead to the results set out in Graph 1 below.

¹ European Energy and Transport: Trends to 2030.

Graph 1 Baseline projection

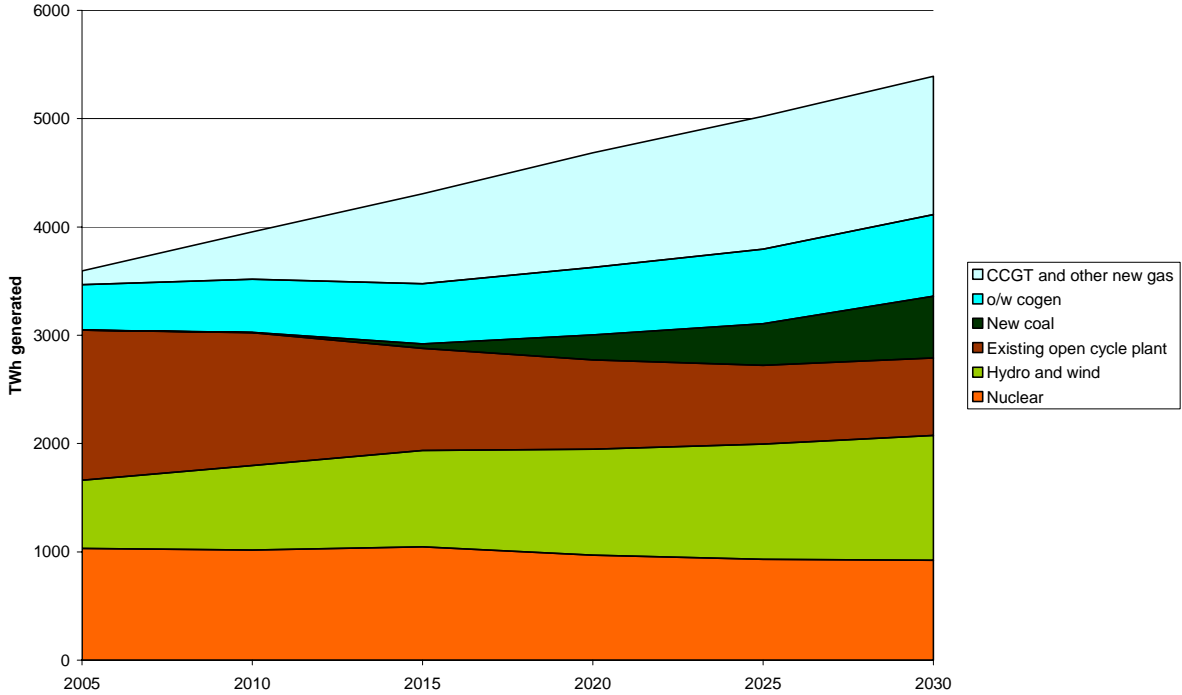


This shows that, with the closure of some existing open cycle plant, and the gradual reduction in output from nuclear plant, the projected increase in demand is met by new gas fired power plant, some of which will be cogeneration. Later, new coal fired plant based on clean coal technology is expected to make some contribution. Under such a scenario, there would be a clear need for additional generation investment other than renewables and cogeneration.

As already discussed above, the increase in transmission capacity envisaged over this period is relatively small. However it might be expected that increased transmission capacity will increase the likelihood that technologies with low marginal costs will be dispatched since there will be fewer network constraints. This would mainly benefit nuclear, hydro and wind energy at the expense of thermal electricity.

If it is supposed that an additional 20GW of interconnection is available by 2020 and 30GW by 2030 and that this will make additional dispatch of nuclear and hydro on a 50:50 basis. The revised fuel mix, which might imply additional investment in low marginal cost technologies, is shown in the following graph. The assumption made is that output from such plant will displace production from existing plant with higher marginal costs and result in the withdrawal of such capacity more quickly than otherwise.

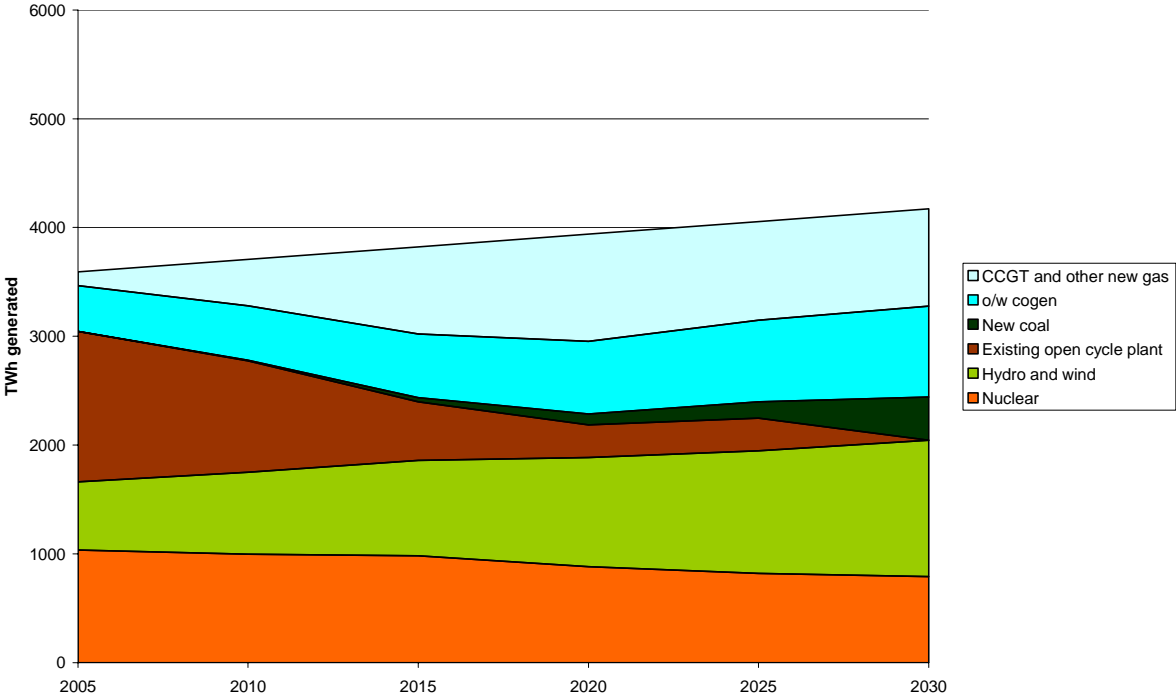
Graph 2 Baseline with additional transmission



Of course the “baseline” implies no action is taken relating to the Community’s target to reduce greenhouse emissions. The key element of the strategy in this regard is control of growth in demand, include the cost of CO2 in electricity generation through emission trading, and supporting policies for the penetration of renewable energies and of distributed cogeneration plant. It is instructive to try and examine to what extent generation investment requirements could be reduced in this context.

The baseline includes an increase in generated output of 1.6% per annum, it suggests 19% of production is from hydro and wind by 2030, and 14% of production from cogeneration. A possible alternative scenario to reflect elements of climate change mitigation measures might be based on annual growth in demand of 0.6%, hydro and wind penetration to 30% and cogeneration to 20%. This would result in the outcome in Graph 3 below.

Graph 3 Alternative Scenario



In this scenario, although there is some growth in demand, the most important feature, rather than the need for new investment, is to ensure that a smooth **renewal** of the existing generation park is undertaken. However this also requires Member States to have a clear policy on the generation market as proposed in the Directive.

In this scenario, the introduction of new transmission investment included in graph 2 above will displace new gas CCGT investment rather than meaning the faster withdrawal of existing plant. However, there will still remain the need to ensure the replacement of existing plant with new investments and therefore the same need for a stable investment framework exists.

Environmental Impact

A higher level of interconnection may also affect the structure of electricity generation in terms of the mix of primary energy. There are both advantages and disadvantages in this regard relating to the impact of the proposed measure. A lack of investment in transmission for example may instead provide an impetus to a greater amount of distributed generation, for example CHP plant which would be welcome. At the same time many of the proposed infrastructure projects, as discussed above, will promote the use of renewables and enable better use to be made of the Community’s hydro-electric resources. In particular, new investment is required for these technologies both due to the locational requirements and the fact that electricity produced by wind is intermittent and needs to be back-up by other generation. Hydro-electricity, due to its degree of flexibility is perfectly placed to do this. If the required transmission capacity exists, the combination of wind and hydro can make an important contribution to a more sustainable electricity sector.

For the purposes of this assessment it is assumed that the interconnection investments identified would enable an additional 5000MW of offshore wind generation in the next few years and this amount is available 50% of the time. In addition it is assumed that new

interconnection makes possible the use of hydro as back-up energy for half of the time that wind is not available. Hence the use of gas for the consumption concerned would be reduced by 75%. The annual reduction in emissions compared to gas fired generation can be calculated as follows:

Gas only: $\frac{5000\text{MW} \times 6000\text{hours/year}}{2} = 30\text{TWh}$ – equivalent to 6.0 million tonnes CO₂

Gas 25% of time: = 1.5 million tonnes CO₂.

Thus, an increase on infrastructure that enables greater use of renewables might reduce emissions by 4.5 million tonnes of CO₂ per year.

Building of interconnections clearly implies some effect on the aesthetic environment. Pylons are not seen as adding much to the landscape of the regions affected and there is often local resistance to construction of high voltage lines. The proposal, in conjunction with the TENs revision does, however, explore a number of avenue to reduce these problems. Undergrounding of infrastructure in certain sensitive regions is actively promoted. The sharing of energy and transport infrastructure corridors is also recommended. Many of the projects being put forward also relate to undersea cables.

Overall there is a need for a serious debate between all stakeholders leading to an accepted “optimum solution”. In some cases this acceptable solution will require higher costs, for example when alternate routes are chosen or underground cables are used in very sensitive parts of the route.

The impact of the proposals relating to security of supply is also important from an environmental point of view. A policy which favoured facilitating generation investment over demand management would clearly have a negative impact on the sustainability objectives of the Community. However, this initiative places demand management at the heart of the Community’s security of supply strategy. By requiring Member States to clearly set out their approach to the wholesale market for electricity, the likelihood of ad-hoc intervention in the market through, for example, tenders for new capacity, will be reduced and more emphasis should be placed on price signals leading to an appropriate reduction in demand when the supply-demand conditions are tight.

At the same time, however, a failure to address the question of the appropriate regulatory framework, which resulted in greater use of the tendering procedure, would also imply a bias toward the construction of new generation. By imposing on Member States a requirement to have a published policy which gives prominence to the use of demand management tools in achieving an ongoing supply-demand balance, the proposals will make a contribution to the sustainability objectives of the Community.

Supposing a clear policy on this subject ensured that consumption was 2% lower than otherwise after five years, this would amount to a reduction in demand of 60TWh per year.³ This would correspond to a reduction in CO₂ emissions of 12 million tonnes per year.

Thus the various policy options can be evaluated as follows:

² at 55.9kg CO₂/GJ

³ current consumption for the EU25 is around 3000TWh/year

- Relating to interconnection, the “**do nothing**” option resulting in slow progress in building priority interconnectors, would clearly reduce the scope for cross border transactions. This may favour certain environmentally friendly distributed generation technologies to an extent. However many of the connections being discussed in fact support the use of renewables and imply improved use of hydro-electricity. Hence on balance the do nothing option would probably mean negative consequences from the environmental point of view. Offshore wind farm would, for example, have a more limited impact on the internal market. Similar criticisms apply to a “**weaker version**” of the proposal to the extent that this meant slower progress with the projects under discussion.
- In relation to a more **interventionist approach**, it could be argued that this may, in fact be preferable from an environmental point of view, particularly for offshore investments, since taking decision on interconnection to EU level might give greater certainty to investors in renewables about the development of the network in the years to come and the impact this would have on whether the electricity being generated could be sold over a large area or not. However, the problem of reconciling EU level decision making and local legitimacy remains problematic.
- In relation to security of supply it is considered that a do nothing or **weak approach** would make it more likely that an aspect of central planning would return to the generation industry leading to a general bias in favour of investing in generation over the demand side. This would be detrimental to the environmental objectives of the Community.
- **an interventionist approach** at EU level would risk making inappropriate decisions based on an inadequate knowledge of local market conditions. These would not necessarily have an impact on the environment either way. However it is probably fair to say that the lower the level of knowledge about security of supply issues, the more likely it is that the “safe option” will be chosen, which in this case amounts to a bias in favour of construction of new generation capacity.

Economic Impact

Benefits of greater Security of Supply

The energy sector corresponds roughly to 3 to 4 % of the GDP. In terms of Gross Value added the energy branch accounts in year 2000 for EURO 265 billion, which corresponds to 3.3 % of the total, with around 1-2% relates to electricity. This fraction will remain the same for the next decade. This underlines the fact that even small fractions in energy efficiency corresponds actually to large sums.

These figures underline that both sectors play a crucial role the competitiveness of Europe in the global markets and are addressed both in the ‘Initiative for Growth’.

Concerning the electricity transmission network, the main positive impact is expected to be an acceleration of the construction of the key projects of European Interest. There should also be a higher level of co-ordination between Member States and, together with the revision of the TEN guidelines, greater consideration of the European dimension in this regard. A higher level of interconnection will boost cross border competition and increase consumer choice leading to a positive economic impact in the sector. Greater certainty about where and whether interconnections will be built will also provide greater certainty for investors in

generation and/or demand management tools. In addition, if the measures reduce the chance of interruptions occurring, this will be a significant positive impact on the European economy.

In the following analysis the assumption is made that there is a certain probability of an interruption in supply affecting 10% of the EU population (around 35 million) and businesses for a period of 24 hours. Using the above data recorded for the California experience, such an incident might be expected, as a conservative assessment, to have a negative impact of approximately €10 billion. A second assumption is that the policies proposed might reduce the likelihood of such an event from a “once in five years” event to a “once in ten years” event. This implies an annual saving of **€1 billion** or 0.01% of EU25 GDP in each year.

Benefits of greater competition

In the short term it is expected that investment in the key priority projects will increase transmission capacity by up to 12.800 MW. This additional capacity corresponds to 2.3 % of the total generation capacity in the UCTE system. The current level of cross border trade would increase from 8-9% of total capacity to 10-12%. These percentages confirm that the programme can influence the operation of the electricity internal market and the security of electricity supply in the coming 5 years. The effect of a higher level of transmission connection on competition will have two main beneficial effects. The first will be the immediate possibility to reduce prices in the high price regions of the European Community as far as electricity is concerned. The table below illustrates the scope for this.

Table 1 Recent Wholesale Electricity Price Data.

Month in 2003	OMEL, Spain,	EEX, Germany,	Nordpool, DK, FI, S, NO, c€/kWh
price €/MWh			
August	46	31	33
September	45	30	32
October	42	34	35

Generally speaking, electricity prices in “northern Europe”, including both France and the UK are currently in the range €30-35/MWh. price in Spain are more like €45/MWh with those in Italy the equivalent of €50-55/MWh. Increased interconnection will allow for the reduction of such price differences and the associated benefits to customers. Let us discuss for illustration the situation of Italy. The UCTE statistics indicate that the consumption in year 2002 was 310 TWh with 51 TWh imported (corresponding to 16 % of overall consumption). Let us assume for simplicity that the price of the imported electricity is one half of the domestic price. Thus importing 10 % (20 %) of the total consumption, the imports amount to 5% (10 %) of the total portfolio. In consequence, the total price will reduce by the factor 0.95 (0.9). In agreement with the above estimate that can amount for the case of Italy to EURO 700 Mio per year.

Similarly, as a longer term effect, the increase in cross border transmission of electricity will also allow for more competition in the end-user supply market. This will have the effect of driving down customer service costs and reducing the retail supply margin. Currently, this margin can be around 20% of a typical domestic customer’s bills of around €100/MWh.

Thus if, for example, where increased transmission interconnection improves the scope for competition such that prices are reduced by an additional €/MWh in the low cost countries and around €10/MWh in the higher cost countries. This might imply an average benefit of €/MWh or around 5% of total electricity bills. With the estimate that electricity supply is around 1% of the GDP of the European economy, this overall benefit would be 0.05% of GDP in every year or **€ billion per annum**. Such an effect on prices may not be recorded in every year (for example the difference between Italian wholesale prices and the rest of the EU may not last indefinitely).

Without increased interconnection, there are only two possibilities for exposing the incumbent companies in Member States to real competition. The first is to wait until such a position decays naturally. Specifically, as the company concern has to close obsolete generation plant, it may well be that this is replaced by plant owned by competitors. To the extent that new investment in, for example renewables and small scale co-generation is encouraged, this will tend towards a more diverse and fragmented ownership. The problem with this is the length of time such a process will take to have a significant effect. Although some generation plant will be closed in the period 2005-15, and this might be replaced by new entrants, this process will carry on well beyond the market opening deadline. Another consideration is that new incumbents will be in a strong position to maintain their position when they close plant since they will already have an existing site on which to construct replacement capacity.

The other route to strengthen competition, other than increase cross border investment, is for Member States to take action to directly reduce the dominant position of their incumbents. This is, however, an area where the Commission has limited competence, even under Community Competition Law. If decisions of this type are taken at Member State level, there is again the risk that they will not be rapid enough to give an impetus to the market, and that measures are taken in an asymmetric way. This is, in fact, already the case since some Member States have gone much further than others in redefining the market structure for electricity.

Economic Costs from the Proposals

The potential risks with consolidating the role of regulators in this field is that it means that decisions on interconnection investments are largely taken on an administrative basis. This runs the risk that there may be under or over investment in networks and the possibility of stranded investments. For example, building interconnections is not the only way to resolving congestion; the construction of new generating plants in areas of high demand constitutes often a cost-effective alternative. Balancing the corresponding construction of power generation and grid extension, an increased level of co-ordination is asked for. Arguments in favour of a market driven approach to infrastructure investment have been considered. However there is clear examples in the academic literature that market driven investment is also problematic.⁴

However the investments included in the projects of European interest are relatively small compared to the potential benefits outlined above. Even if all the proposed projects were constructed, including those expected in the medium term, this would amount to a **one-off cost of € billion** which corresponds to the annual savings calculated in the analysis above.

⁴ see for example “Merchant Transmission Investment” Joskow and Tirole, 10 February 2003

Possible negative effects from the measures relating to supply and demand may arise if the implementation of such measures in Member States implies a disproportionate level of obligations which distort the national or European market. This is a possibility that has been considered and the proposal includes the scope for the Commission to review the measures taken and issue recommendations.

Economic Impact of different policy options

Given the above assessment of the costs and benefits involved with increasing interconnection and in strengthening security of supply, the various options can be evaluated as follows:

- The “do nothing” option clearly would reduce the one-off investment costs but this would damage the functioning of the competitive market and mean that the ongoing benefits of competition would be forgone. The main effect of the proposal is to accelerate the effectiveness of introducing competition as discussed in the section above.
- Regarding security of supply, increasingly transmission capacity is clearly not the only way to achieve this goal. However to the extent that network security is also damaged by taking no action, this would also form a significant cost associated with not proceeding with this measure.
- A weaker version of the proposal requiring, for example, more voluntary co-ordination, would risk realising only part of the benefits. Since the above analysis suggests the benefits of the investments being covered outweigh the costs, this is also rejected. There is also the problem of asymmetric implementation of, for example, the requirement to publish a supply-demand policy which would risk problems of market distortion and free-riding.
- Finally a more interventionist approach could be considered. This would possibly ensure the maximum impact in terms of construction of infrastructure. However the risks with this approach is that the decisions potentially being taken at European level lack the required legitimacy at local level and such an approach is counter-productive. Similarly a more centralised approach to the questions of supply-demand balance would be less well tuned to local conditions in the generation market for which the Member States concerned and their national regulators will have more detailed knowledge. A centralised approach would risk an incorrect setting of the rules that would either imply costs relating to, for example, over-investment in generation or alternatively imply unacceptable risks of interruptions.

Social Impact

Relating to the social impact of infrastructure, energy infrastructures can have an economic impact at local or regional level in that they underpin the provision of energy services to the population, to business, SME's and bigger industries and support economic growth. The impact in the longer term should be seen along these lines and the effects are probably rather dispersed in their effect and will be difficult to assign to any particular group. Another consideration is the short to medium term job creation impact of construction projects, particularly in accession countries.

For the security of supply dimension, another important consideration is the extent to which consumers might be affected by changes in the regulatory framework. Member States must

take care to ensure that changes are gradual and explained clearly. For example, any move to widen the extent to which consumers are exposed to volatile spot market prices for electricity need to be clearly explained. The contract structure between and consumer and its supplier also needs to be overseen in some way to ensure that consumer rights are respected. To this extent, “**doing nothing**” might be the preferred option for consumers since they are familiar with the current framework and may not welcome being asked to think more about their consumption decisions. Consumers need to educate about their role in providing a more responsive pattern of demand. There is also a case for saying that, at household level, such a dramatic change is not to be recommended, particularly for vulnerable groups such as the elderly. The retention of a standard simplified contract structure for such consumers should perhaps be retained.

E. HOW TO MONITOR AND EVALUATE THE RESULTS AND IMPACTS OF THE PROPOSAL AFTER IMPLEMENTATION?

How will the policy be implemented?

On electricity transmission infrastructure it is expected that, following the entry into force of the Directive, Member States’ regulators would initially discuss the status of the relevant investment projects individually with the transmission system operators concerned. It is then expected that, on a regular basis, Regulators and the Commission would meet, in the context of the European Group of Electricity and Gas Regulators to discuss the coherence of the overall aggregate of investments being proposed and solve, for example any problems of co-ordination between Member States. For projects that are approved in this way regulators will ensure that the financing costs of the projects can be met through the general network tariffs charged by the transmission company to network users. Regulators will be required to ensure that TSOs can earn a reasonable return which covers the cost of capital. In this way, it is intended that the regulatory and financial obstacles to such investments can be removed.

Regarding the permitting process it is expected, in conjunction with the TEN-E guidelines, that Member States will endeavour to ensure that, for priority projects, the process is conducted in a way which provides for a rapid consideration of projects and for which decisions are co-ordinated at national level with respect of the European dimension.

Regarding the supply demand question it is expected that Member States governments’ and regulators will provide a clear statement of policy relating to these issues shortly after entry into force of the Directive that can be conveyed to participants in the market. This will be submitted to the Commission. Such policy statements should not be subject to frequent revision.

How will the policy be monitored?

Relating to infrastructure, the TEN guidelines envisage that, every two years, the Commission shall draw up a report on the implementation of the projects of common interest as listed in the TEN-E Guidelines, which it shall submit to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. In this report, attention shall also be given to the implementation and progress made in the carrying out of priority projects, as well as the modalities of their financing, especially as regards the contribution of Community funding, which concern cross-border connections

Regarding supply and demand, there is already an obligation in the existing electricity Directive on Member States and the Commission to co-operate in producing a regular report monitoring the position. This will be extended somewhat by the new proposal since the Commission will also be required to monitor the coherence of the different approaches in Member States and seek to minimise any distortions that arise.

What are the arrangements for any ex-post evaluation of the policy?

The evaluation of the TEN-E mechanism is foreseen through the TEN-E Financial Support Legislation. In this framework, it is foreseen to award a contract for a mid-term evaluation of the TEN-E Programme (2000-2006) to be undertaken by external independent experts. The main objective is to analyse the overall implementation, achievements and impact of the actions co-financed by the TEN-E financial line. This would also cover the impact of the Directive in this field and the new role given to regulatory bodies in the infrastructure process.

The Commission is also required, under the new electricity Directive to provide annual reports monitoring developments in the competitive market. Among other things, this will examine the extent to which the anticipated economic benefits of market opening and greater integration are realised and in particular the contribution of new infrastructure. An assessment of the degree of convergence of electricity prices is relevant in this regard.

F. STAKEHOLDER CONSULTATION

Consultations Launched

The Commission has consulted widely on the issues in the proposed Directive. These consultations and results are set out in the sections below.

November 2000 – June 2002

The Commission produced the Green Paper on Security of Energy Supply. As well as discussing the future dependence of the European Union on external energy sources, the paper also discussed the need for sufficient investment in transmission capacity, and generation capacity in the context of the events in California at the time. It is emphasized that stability and transparency of the legal framework including a well formulated comprehensive regulatory framework for new infrastructure rewarding is a necessary prerequisite for speeding up new infrastructure development to secure reliable operation of the grid. The Commission published in June 2002, a Communication summarising the outcome of this major consultation.

December 2001

The Commission published a Communication examining the general development of energy infrastructure. As a result of this Communication, Heads of State agreed at the Barcelona summit a target that interconnection for electricity should be developed so that 10% of generation capacity could be sourced from other Member States. The current proposal is partly the result of the limited progress that has been made towards this objective.

September 2002 – November 2003 Florence Forum: “Strategy Paper”

These meetings bring together the Commission, Member States, energy regulators as well as the electricity industry and main network user and consumer groups. At the 8th meeting of the

Forum 21-22 February 2002 it was agreed that the Commission would produce, in consultation with the participants a strategy paper highlighting the main issues to develop a competitive internal market over the next 5-10 years. The issues of network investment and security of supply were a key part in this consultation process. The document is now reaching its final drafting stages and the discussion has had an important impact on the proposal now being made by the Commission. The Commission has also, in collaboration with Eurelectric, organised a number of high level seminars on this subject.

Results of Consultation

The debate launched by the Green Paper underlined the general principles of the need for a strategy based on demand management and of the desirability of competitive markets and healthy competition, reinforcing the competitiveness of the European economy and requires a better use of existing cross-border capacities. A power blackout like the one in California was not considered possible in the internal market, provided that market opening is reinforced by rules governing investment, competition and access to resources and transport networks which protect against this type of breakdown. These are precisely the kind of rules that the proposed Directive seeks to encourage Member States to implement.

In response to a specific question on the internal market and security of supply, it was thought by many that overall the internal energy market, if it functions in an integrated and competitive way, should efficiently deliver secure supply, via a larger market with a variety of suppliers, more flexibility on the supply and demand sides, more effective price signals, competition-inspired efficiency gains. Some responses noted that security of electricity supply in particular is an ongoing concern. Comments on what still needs to be done include further development of cooperation among regulators, among TSOs, more adequate infrastructure across an enlarged Europe, and attention to investment trends and diversity of sources. Finally, some contributors believe that the market, driven by needs for short term profits, may not accommodate investments for shared or longer-term needs (eg. reserve and new capacities) and conclude that some re-regulation will be necessary. Some Member States regard themselves as responsible for safeguarding a minimum generation capacity.

On a specific question on the development and better operation of energy transport networks in the European Union many respondents looked to the implementation of current Commission proposals, further cooperation in the Florence and Madrid frameworks, encouraging investments across Europe. Some think that a more open attitude to mergers within the internal energy market would also help investments and security of supply. Concern that the market will not meet needs is evident among some contributors, arguing for re-regulation. Some argue for public ownership and/or responsibility for networks, especially the electricity grid, and an EU role, with proposals such as making the European Transmission System Operators an EU agency.

Others focus on the necessary network “overdesign”, valuable insurance against regional shortages. This relates to the question of reserve capacities and who should provide and pay for them. Many contributors focus on the further development of physical energy links. The need to promote the construction of interconnectors between some Member States where there is now congestion is widely acknowledged. Some comment on the need for improved networks within Member States and regions as well as between them.

There was widespread support for TENs: while some Member States say that only feasibility studies for TENs projects should be financed, other contributors argue that first priority should be given to expanding embedded generation as much as possible, with fewer long

distance interconnections and smaller transmission losses. The conditions for investments come up in many contributions. Within the EU, tariffs must be sufficient to accommodate new investments. Concern is expressed, primarily by the power industry, about the authorisation of new power plants and transmission lines. It is virtually impossible to have new overhead transmission lines accepted, they say, because of public concern about health risks from electromagnetic fields, ecological and visual impacts. The result is that private companies will shy away from such controversial investments, and security of supply will be threatened.

Many of these themes were repeated in the context of the Florence Forum discussion of the “medium term strategy paper”. The need for a stable regulatory framework was stressed, in particular, by the European electricity industry. The counter-productive nature of ad-hoc intervention in the market was highlighted as well as the need for investors in, for example, generation, to have certainty about likely investment in transmission. The role of a demand response was also stressed by a number of participants. The role of large users, in particular, in responding to prices signals was emphasised.

In relation to infrastructure a key conclusion of these consultations, which was repeated in the context of the TENs consultation was that that certain projects should be declared of “common European interest” . It is also recommended that that the Commission gives visible support throughout the entire authorisation process.

G. COMMISSION DRAFT PROPOSAL AND JUSTIFICATION

Final Policy Choice

The Community policies as formulated in the proposed Security of Electricity Supply Directive are closely interlinked, both establishing complementary measures aiming at the proper functioning of the EU internal energy market by maintaining the balance between demand and supply, integrating environmental considerations in network investment decisions and by ensuring the adequate level and standard of transmission. The nature of the proposal being made is intended to give greater transparency of Member States’ approaches without significant intervention at Community level. In this respect it respects the subsidiarity and proportionality issues at stake. It is important not to go too far in making such issues a Community competence given that these issues are often politically important at Member States level.

Need for Decision at this moment in time

There is a pressing need for these measures. The Community needs to ensure that the safeguards are there to ensure that the internal market delivers the expected benefits. The Commission therefore needs to respond to the potentially negative conclusions that could be drawn from the most recent interruptions. Data is already available (for example from UCTE) on the expected supply-demand balance position for the next few years. In some cases developments are worrying. Similarly information is already available on the need for new interconnections for competitive reasons (for example the Commission benchmarking reports).

Accompanying Measures

This proposal for a Directive on Infrastructure and Security of Supply is accompanied by the following measures:

- Directive on Energy Services which will promote demand management by requiring:
 - adoption of **national targets** of annual 1% cumulative savings to promote energy end-use efficiency and the availability of energy services from electricity retailers
 - require monitoring at Member State level
 - allow for support for energy saving devices with comparatively long payback requirements or high transaction costs;
 - require action by government authorities in its own operations including a target for energy efficiency,
 - encourage innovative tariff structures and greater information to customers.

This proposal re-enforces the importance of demand management and underlines the contribution to be made to maintaining security of supply. This accompanying measure reduces the risk of a bias in favour of investment in generation discussed in this impact assessment.

These proposals also form a package with the revision of the TEN-E Guidelines relating to infrastructure. This, among other things sets out the axes and specific projects deemed to be of European interest on which regulators and the Commission must co-operate in assessing the planned investments of TSOs. It also sets the support levels that are available.