

PROPOSED EUROPEAN DIRECTIVE ON SECURITY OF ELECTRICITY SUPPLY AND INFRASTRUCTURE INVESTMENT (2003/0301 (COD))

INITIAL REGULATORY IMPACT ASSESSMENT

Purpose and Intended Effect of Measure

Objective

1.1 The European Commission has proposed a Directive to safeguard the security of electricity supply and related infrastructure investment in the European Union (EU). The parties directly affected by this draft Directive are the EU's transmission system operators (TSOs) – i.e., National Grid Transco (NGT), Scottish Power, Scottish and Southern Energy and Northern Ireland Electricity in the United Kingdom (UK). All electricity consumers, both domestic and non-domestic, are potentially indirectly affected.

1.2 This initial RIA focuses on the proposed Directive's impact on the UK and so does not seek to analyse any implications for the EU as a whole.

Background

1.3 There were a number of significant electricity supply interruptions in developed countries around the world during late summer 2003. For instance, failures on certain high voltage transmission networks caused blackouts of varying durations in the north eastern United States and eastern Canada on 14 August, in a part of the UK's capital city on 28 August, in eastern Denmark and southern Sweden on 23 September and in most of Italy on 28 September. Concerns have grown in some quarters, consequently, that investment in electricity generation and transmission networks may not be sufficient to ensure (insofar as possible) the continuity of electricity supplies in the EU.

1.4 The European Commission published on 10 December 2003 a draft Directive concerning measures to promote security of electricity supply and infrastructure investment – see Appendix A for the complete text. Essentially, the proposed Directive would:

- require member states to have a clearly defined policy regarding the balancing of electricity supply and demand which allows for reserve capacity targets (or alternatives like demand-side measures) to be established;
- require member states to have explicit standards in force relating to the performance of the electricity transmission and distribution networks;
- require each TSO to submit a regular investment plan to its national regulator;
- require regulators to submit a summary of these investment programmes to the Commission for consultation with the European Regulators Group on Electricity and Gas;

- include a right for regulators to intervene to accelerate the completion of interconnector projects and, where necessary, to issue a tender for certain projects in the event that the TSO does not complete these projects sooner.

1.5 The goals of the proposed Directive, as stated in the Commission's extended impact assessment,¹ are (i) to oblige TSOs to adhere to rules governing the safe operation of their networks; (ii) to provide an impetus to investment in the transmission network; and (iii) to establish a stable regulatory framework in EU member states that gives electricity market participants appropriate incentives to enhance security of supply. At present, the only EU obligations in this latter area are set out in Article 7 of the revised Electricity Directive (2003/54/EC)² which states that member states shall adopt a tendering process to provide additional generating capacity or demand-side management or they shall use an alternative equivalent procedure if needed to maintain security of supply.

1.6 Further justification for the proposed Directive is provided in its recital by reference to the Trans-European Energy Networks (TEN-E) policy, which aims to create an interconnected and competitive electricity market across the EU. At the European Council meeting of March 2002 in Barcelona, the EU's heads of government endorsed a target for electricity interconnection between member states of at least 10% of installed generation capacity. (The target has no specific deadline). This implies that the UK should have no less than 7.7GW of interconnector capacity with other member states in the EU. The UK actually has around 2.6GW due to existing links with France and the Republic of Ireland, although there are currently proposals for a 1.3GW interconnector with the Netherlands and for an additional 1GW interconnector with the Irish Republic.

1.7 On 23 July 2004 the General Secretariat of the European Council suggested a revision³ to the proposed Directive for discussion at the first meeting of the Council's Energy Working Party in September 2004. In general terms, the revision seeks to clarify the Articles' interpretation and to make the proposed Directive more consistent with a market-based approach to the security of electricity supply.

1.8 With regard to the current legislative position domestically, Section 9 of the Electricity Act 1989, as amended, requires the TSOs in Great Britain to "develop and maintain an efficient, coordinated and economical system of electricity transmission". This requirement is reinforced in the TSOs' transmission licences, which Ofgem – as Britain's independent energy regulator – is responsible for enforcing. (Northern Ireland's TSO is subject to a similar duty). In addition, Section 3 of the Electricity Act 1989 gives the Government and Ofgem a statutory duty to ensure that "all reasonable demands for electricity are satisfied".⁴

¹ http://europa.eu.int/comm/energy/electricity/infrastructure/doc/2003/sec_2003_1368_en.pdf.

² http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_176/l_17620030715en00370055.pdf

³ <http://register.consilium.eu.int/pdf/en/04/st10/st10509.en04.pdf>

⁴ Section 172 of the Energy Act 2004 requires the Government and Ofgem annually to "publish a report dealing, as regards both the short-term and the long-term, with the availability of electricity and gas for meeting the reasonable demands of consumers in Great Britain".

Risk assessment

1.9 The fundamental rationale behind the proposed Directive, as stated in the European Commission's extended impact assessment, is that leaving decisions regarding generation and interconnector investment to individual member states could lead to a deterioration in the EU's security of electricity supply due to "a continued unwillingness [on the part of national TSOs] to construct new transmission, to coordinate system operation and the existence of an unclear regulatory framework relating to the supply-demand situation" (pg 6).

1.10 It is difficult to estimate the probability of a decline in the UK's future security of electricity supply in the absence of a dedicated EU-wide legislative framework such as that being proposed, but there is no real evidence that the British TSOs are unwilling to cooperate or that the UK's regulatory regime does not encourage an adequate level of security of supply. As stated in paragraph 1.8, ensuring the continuity of electricity supplies is an explicit regulatory objective domestically. Indeed, regardless of the history of other EU countries, British experience to date shows that the UK's security of supply has not deteriorated in the absence of an overarching EU framework of obligations on its TSOs in terms of either the adequacy of generation relative to peak demand or the performance of the high voltage network.

1.11 To elaborate, the electricity market in Great Britain was restructured in 1990 and progressively liberalised up to 1999, yet there have not been any supply interruptions due to inadequate generation relative to electricity demand since the 1990 reform took place. It is the case that there were widespread interruptions during 1973 in Britain, but this was the result of industrial action, so it is unlikely that the proposed Directive would have maintained electricity supplies in any event. In relation to the future, one should note that New Electricity Trading Arrangements (NETA), which were introduced in England and Wales during March 2001, reinforce security of supply by placing strong financial incentives on market participants to meet their customers' electricity demands. The planned British Electricity Trading and Transmission Arrangements (BETTA) will effectively extend NETA to Scotland during 2005. Hence there is little evidence that Britain's regulatory framework is unclear in this regard.

1.12 With respect to the electricity transmission network, investment levels by Britain's TSOs have increased considerably since 1990. For instance, transmission network investment by the National Grid Company (now a subsidiary of NGT) was around 40% higher in real terms in the thirteen years after 1990 compared to the preceding thirteen years. The available evidence regarding supply interruptions due to unexpected network outages – see Appendix B – does not point to a general decline in performance in England and Wales over the period. In relation to the forty-minute electricity supply interruption that part of south London experienced on 28 August 2003, it is notable that this was the result of the installation of an incorrect automatic protection relay circuit in a substation as opposed to a random network failure.⁵

⁵ National Grid's investigation report of the incident is available at <http://www.nationalgrid.com/uk/library/documents/pdfs/London28082003.pdf>. Ofgem concluded that National Grid had not breached its statutory obligations regarding system reliability. (http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/7601_14404_NGCStatement.pdf).

1.13 Although the European Commission has suggested in its impact assessment that the existence of vertically integrated TSOs is a potential hazard to security of supply, it is significant that the UK's largest TSO – i.e., National Grid Transco – is not vertically integrated. The TSOs in Scotland are vertically integrated at present, but their electricity transmission activities are separately regulated from the rest of the company and subject to independent performance incentive schemes. Furthermore, the Government is planning to introduce BETTA in April 2005, which are intended to increase competition in Scotland's electricity market.

1.14 With regard to the Commission's concern that "the level of interconnection available is insufficient to deliver real competition given the market structure currently in place in the EU" (pg 4 of its impact assessment), it is generally accepted that the British generation market is competitive, even though the UK has limited interconnection with its neighbours. For instance, there are over thirty generating companies of varying size in existence at present, none of which owns more than 20% of total installed capacity. It should also be pointed out that the UK's competition regime is now amongst the most stringent in the EU (e.g., price-fixing is a criminal offence and the Government of the day has little say in merger approvals), so a substantial worsening of competition in this market seems unlikely. In any event, the relationship between security of supply and competition is not straightforward – e.g., depending on the exact structure, uncompetitive electricity markets can also provide adequate security, albeit at the cost of inflated wholesale/retail electricity prices.

1.15 Consequently, there does not appear to be a significant risk that the UK's current regulatory regime will lead to a deterioration in the security of electricity supply. Experience suggests that the British regulatory regime already provides an adequate level of security. Indeed, domestic legislation already places a duty on the Government and independent energy regulator to ensure that "reasonable" electricity demand is met.

Options

2.1 There are essentially three different approaches that could be followed to safeguard the security of electricity supply and infrastructure investment in the UK.

Option A – the status quo

2.2 Doing nothing was rejected by the European Commission because, "firstly, a number of TSOs are vertically integrated and, secondly, in some member states regulatory practice is not conducive to new infrastructure investments" (pg 11 of its impact assessment), which also inhibits the development of a single EU market in electricity. As explained above, these risks are not evident in the UK, so it seems unlikely that failing to enact the proposed Directive would worsen future security of supply domestically. Moreover, a vertically integrated TSO does not in itself militate against the security of electricity supply, nor does the Commission's impact assessment offer any evidence to support this assertion.

2.3 Notwithstanding the series of international power failures during August and September 2003, there does not appear to be an overwhelming need to establish an EU-wide policy with respect to security of electricity supply beyond that specified in

the revised Electricity Directive. As the Commission's impact assessment makes clear, electricity is an essential input to virtually every modern economic activity, therefore ensuring continuity of supply is a very important goal. Indeed, it is the overriding importance of security of supply which means that each EU member state is individually strongly incentivised to take those actions it feels are best suited to avoid future supply interruptions. It is already in the interests of European countries to cooperate with each other in this area.

2.4 For example, Italy has developed a high level of electricity interconnection with its neighbours and is currently commissioning new generation projects in response to its widespread blackout in 2003; France has invested substantially in nuclear power so as to reduce its dependence on imported energy and is presently considering the construction of a new nuclear power station; and the Irish Republic is pursuing interconnection with Britain as well as a reform of its electricity trading arrangements that are designed to encourage adequate power supplies. Retail market liberalisation, furthermore, does not fundamentally alter the incentive to maintain security of supply as a matter of public policy, which Britain and Scandinavia have arguably demonstrated hitherto with their relatively long histories of market opening.

Option B – the proposed Directive as drafted

2.5 It is debatable whether the proposed security of supply Directive as currently drafted – see Appendix A – would significantly lower the probability of a future supply interruption in the UK for the reasons set out above. In short, the UK's current regulatory regime already provide an adequate level of security of supply by placing financial incentives on market participants, including the TSOs, to behave in a manner that promotes security.

2.6 The principal risk stemming from this option is that it would conflict with established regulatory practice in the UK because the proposed Directive implicitly assumes that TSOs are solely responsible for ensuring the continuity of electricity supplies. This is not the case in Britain with respect to the provision of generating capacity or demand-side services. In addition, there is no evidence British TSOs are “unwilling” to construct necessary new transmission capacity.

Option C – an amended version of the proposed Directive

2.7 It is questionable whether enacting a variant of the European Commission's proposed Directive, such as the suggested revision issued by the General Secretariat of the European Council in July 2004, would significantly improve the security of electricity supply in the UK on the grounds that the current mechanisms in place are already considered to be adequate. Other EU member states might benefit from this Option, however.

Costs and Benefits

Business sectors affected

3.1 The relevant business sector is electricity transmission. There are four companies licensed to undertake this activity in the UK. These are National Grid

Transco, Scottish Power, Scottish and Southern Energy and Northern Ireland Electricity.

Option A

3.2 The economic costs and benefits of option A are both zero given that no new costs are incurred by failing to enact the proposed Directive on security of supply and infrastructure investment, but neither are any new benefits derived. Hence, the overall net benefit is zero for the UK.

Option B

3.3 As explained above, it is unlikely that implementing the proposed Directive would lead to significantly enhanced security of supply in the UK, so the benefits of this Option are probably negligible, not least because some of the Directive's requirements are already in force domestically or they have been enacted in other Directives.

3.4 Article 3.1 of the proposed Directive, for example, requires EU member states to define and publish the responsibilities of all market participants, which is already the case in the UK – e.g., generation, transmission, distribution and supply licences are explicit in the duties that licensees have. In performing this particular task, Article 3.2 obliges member states to take account of, *inter alia*, “the importance of ensuring continuity of electricity supplies”, “the need to promote the use of electricity generated from renewable sources”, and, “the need for a cost-effective provision of electricity”. These factors are already important considerations in UK energy policy and its implementation – e.g., the British Government's 2003 Energy White Paper⁶ set out the four major goals of energy reliability, affordability, competitiveness and long-term carbon emission reductions.

3.5 Furthermore, Article 4.2 obliges EU member states to have in place explicit performance standards for their electricity transmission and distribution networks. The fourteen Distribution Network Operators (DNOs) in Great Britain already face financial incentives to meet specific targets in relation to the number and duration of customer interruptions.⁷ There are also proposals to introduce similar performance targets for Britain's transmission companies during their next price control review starting in 2007.

3.6 The costs of option B would probably be significant. In general, the proposed Directive takes a rather ‘top-down’ approach to the provision of the security of electricity supply, which would conflict with the UK's ‘bottom-up’ arrangements and therefore likely prove to be counterproductive. In particular.

- Article 7.1 states that TSOs must, “on a regular basis, submit a document setting out their investment intentions for the provision of adequate levels of cross-border interconnection capacity to the regulatory authority”. The definition of “adequate” is unclear. If, for the sake of argument, the definition

⁶ <http://www.dti.gov.uk/energy/whitepaper/index.shtml>

⁷ http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/7685_149_04_quality_of_service_report.pdf

referred to the EU's 10% goal as announced in March 2002, then the UK's transmission companies would be required to construct at least an extra 5GW of interconnector capacity over an unspecified period of time. As an island state off the north west coast of continental Europe, such projects would collectively cost in the order of billions of pounds. To date, interconnector projects involving the UK have only been undertaken following favourable conclusions reached in detailed feasibility studies and cost-benefit analyses rather than the need to meet an arbitrary numerical target. As noted above, despite relatively limited interconnection, Britain's generation market is generally regarded as competitive at present and it has not experienced a trend decline in the security of electricity supply since 1990.

- Articles 7.4 and 7.6 require the relevant regulator in each EU member state to approve their TSOs' investment plans for new interconnectors, after consultation with the European Regulators Group on Electricity and Gas, and then to compel the TSOs to undertake the specified projects – e.g., by imposing financial penalties if there are delays. This top-down approach to new interconnector build appears to preclude merchant investment and severely conflicts with UK market practice in this area whereby any company in the private sector (not necessarily one of the national TSOs) may build a new interconnector after obtaining the necessary legal consents, but the regulator has no right to vet the developer's plans or to enforce construction.

3.7 It is extremely difficult to quantify the likely costs of this Option at present given the uncertainty surrounding the precise obligations on national TSOs to maintain security of supply in the context of a competitive electricity market, although the costs could potentially be large if, *in extremis*, this involves enforcing construction of interconnectors that would not otherwise be built by the private sector. As a purely illustrative example of the order of magnitude of the related costs, it has been forecast that the proposed 1GW sub-sea interconnectors between the UK and Republic of Ireland will cost in the region of €400m (£270m) and take many years to build. Whilst there may be security of supply benefits from greater electricity interconnection between countries, this is not always the most cost-effective means of minimising the risk of supply interruptions for island nations like Britain.

3.8 The overall net benefit of Option B is very likely to be negative for the UK.

Option C

3.9 The benefits of implementing an amended version of the proposed Directive, such as that suggested by the General Secretariat of the Council in July 2004, are unlikely to be significant given that there is little risk of a deterioration in the UK's security of supply in the light of its hitherto successful market-based arrangements and regulatory regime in this area.

3.10 The potentially large costs identified in option B could be avoided, however, by making suitable amendments, especially to Article 7. In the Council's suggested revision to the proposed Directive, for instance, the reference to an "adequate level of cross-border interconnection" in Article 7.1 and the compulsion in Article 7.6 for TSOs to invest in specific projects have both been deleted.

3.11 The net benefit of Option C should be approximately zero in the UK, although this Option could create a net benefit for other EU member states.

Equity and Fairness

4.1 Option B would tend to have an adverse impact on “fuel poverty”⁸ on the grounds that the additional net costs implied by this option would result in higher electricity prices than would otherwise be the case, although the magnitude of such an increase is very uncertain at this stage. The welfare implications for the poorest members of society are greater in this scenario because they spend a larger share of their incomes on electricity than other social groups.

4.2 Neither of the other Options has a particular impact on equity considerations.

Small Firms’ Impact Test

5.1 The proposed Directive would not impact directly on small businesses in the UK. Although Option B would tend to result in higher end-user electricity prices than would otherwise be the case, these price rises would affect all consumers and would probably not disproportionately impact on British small firms. The magnitude of this hypothetical price increase is very uncertain at this stage.

5.2 Neither of the other Options has an impact on UK business.

Competition Assessment

6.1 Neither Option A nor C would affect competition in any UK business sector.

6.2 Only option B may have an adverse impact on competition because it would tend to interfere with the functioning of the domestic electricity market by giving the regulator and national TSOs additional (and rather ill-defined) responsibilities. Implementing the proposed Directive as originally drafted could therefore raise barriers to entry in this industry.

Enforcement and Sanctions

7.1 It is likely that Ofgem, as Britain’s independent energy regulator, would be empowered to undertake any of the necessary enforcement actions required by the proposed Directive. Ofgem already has the power to impose substantial penalties on Britain’s TSOs for any breaches of their statutory obligations regarding transmission network reliability.

Consultation

8.1 The DTI and Ofgem both maintain an ongoing dialogue with electricity industry stakeholders on issues related to security of supply.

⁸ A household is defined to be fuel poor in the UK if it must spend at least 10% of its income to be adequately heated.

Monitoring and Review

9.1 Article 10 of the proposed Directive requires the European Commission to monitor its application and to submit a progress report to the European Parliament and Council by the end of 2007.

Summary and Recommendation

10.1 Following a number of high profile electricity supply interruption during late summer 2003, the European Commission published a proposed Directive on the security of electricity supply on 10 December 2003. As originally drafted, the Directive would require national TSOs in the EU to take a rather interventionist approach to security of supply, especially in the field of electricity interconnector construction. This would tend to conflict with established regulatory practice in the UK where security of supply is achieved by placing financial incentives on electricity market participants, including the TSOs, to behave in a manner that promotes security.

10.2 It is very unlikely that the proposed Directive, or any alternative, would significantly reduce the probability of electricity supply interruptions in the UK because the current domestic regulatory regime is already provides an adequate level of security. For instance, the reliability of the electricity transmission network has not deteriorated since 1990 in the absence of an EU-wide framework of obligations. Moreover, domestic legislation explicitly states that the Government and Ofgem must ensure that “all reasonable demands for electricity are satisfied”; and the licences of the electricity transmission companies require licensees to “develop and maintain an efficient, coordinated and economical system of electricity transmission”.

10.3 Either the status quo or the implementation of a suitably amended European Directive are recommended because they would result in a higher overall net benefit to the UK economy than the implementation of the proposed Directive as originally drafted. However, an amended Directive on security of electricity supply may result in a positive net benefit for other EU member states.

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Appendix A – Proposed Directive on Security of Electricity Supply and Infrastructure Investment

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 95 thereof,

Having regard to the proposal from the Commission⁹,

Having regard to the opinion of the European Economic and Social Committee¹⁰,

Having regard to the opinion of the Committee of the Regions¹¹,

Acting in accordance with the procedure laid down in Article 251 of the Treaty¹²

Whereas:

- (1) Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC¹³ has made a very important contribution towards the creation of internal market for electricity. The guarantee of a high level of security of supply is a key objective for the successful operation of the internal market and that Directive gives the Member States the possibility of imposing public service obligations on electricity undertakings, inter alia, in relation to security of supply. These public service obligations should be defined as precisely and strictly as possible, and should not result in the creation of generation capacity that go beyond what is necessary to prevent undue interruption of distribution of electricity to final customers
- (2) A competitive single EU electricity market necessitates transparent and non-discriminatory security of supply policies compatible with the requirements of such a market. The absence of such policies in individual Member States, or significant differences between the policies of the Member States would lead to distortions of competition. Definition of clear roles and responsibilities of all market actors is therefore crucial in safeguarding the well-functioning of the internal market and security of electricity supply while at the same time avoiding creating obstacles to new entry, distortions of the internal market for electricity or significant difficulties for companies with small market shares.
- (3) Cooperation between national transmission system operators in issues relating to network security including definition of transfer capacity, information provision and network modelling is vital to the development of a well functioning internal market. A lack of co-ordination regarding network security is detrimental to the development of equal conditions for competition.
- (4) Transmission and distribution operators should be required to deliver a high level of service to final customers in terms of the frequency and duration of interruptions to customers.
- (5) Without prejudice to Articles 86, 87 and 88 of the EC Treaty, it is important that Member States lay down an unambiguous framework which will facilitate security of supply and is conducive to investments in generation capacity and

⁹ OJ C [...], [...], p. [...].

¹⁰ OJ C [...], [...], p. [...].

¹¹ OJ C [...], [...], p. [...].

¹² OJ C [...], [...], p. [...].

¹³ OJ L 176, 15.7.2003, p. 37.

demand management techniques. It is also important that appropriate measures are taken to ensure a regulatory and fiscal framework to encourage investment in new transmission interconnection, especially between Member States. These incentives should develop harmoniously throughout the Community if distortions to competition are to be avoided.

- (6) The European Council at Barcelona agreed on a target for the level of interconnection between Member States corresponding to 10% of installed generation capacity in each Member State in order to improve security of supply and facilitate competition. Low levels of interconnection have the effect of fragmenting the market and are an obstacle to the development of competition. The existence of adequate physical interconnection capacity is crucial but it is not a sufficient condition for competition to be fully effective. It also required that the transmission system operator is prevented from withholding capacity to create artificial scarcity. In that respect greater transparency of the capacity calculation and allocation procedure in the transmission system should be ensured.
- (7) Transmission system operators need an appropriate regulatory framework for investment. Such a framework should create regulatory certainty and incorporate a reasonable rate of return on those investments, at least covering their cost of capital. It should also contribute both to security of supply and the effectiveness of competition in the internal market.
- (8) Member States should lay down rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and ensure that they are implemented. Those penalties must be effective, proportionate and dissuasive.
- (9) In accordance with the principles of subsidiarity and proportionality as set out in Article 5 of the Treaty, the objectives of the proposed action, namely the creation of a fully operational internal electricity market, based on fair competition and secure electricity supplies, cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale and effects of the action, be better achieved by the Community. This Directive confines itself to the minimum required in order to achieve those objectives and does not go beyond what is necessary for that purpose.

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Subject Matter and Scope

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 policies on security of electricity supply compatible with the requirements of a competitive single market for electricity.

Article 2

Definitions

For the purposes of this Directive, the following definitions shall apply:

“*generation*” means the production of electricity;

“*transmission*” means the transport of electricity on the extra high-voltage and high-voltage interconnected system with a view to its delivery to final customers or to distributors, but not including supply;

“*transmission system operator*” means a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity;

“*distribution*” means the transport of electricity on high-voltage, medium-voltage and low-voltage distribution systems with a view to its delivery to customers, but not including supply;

“*distribution system operator*” means a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and, where applicable, its interconnections with other systems and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity;

“*interconnectors*” means equipment used to link electricity systems;

“*projects relating to cross border electricity transmission*” covers both interconnectors and internal connections which increase the scope for cross border transactions;

“*interconnected system*” means a number of transmission and distribution systems linked together by means of one or more interconnectors;

“*supply*” means the sale, including resale, of electricity to customers;

“*renewable energy sources*” means renewable non-fossil energy sources (wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases);

“*distributed generation*” means generation plants connected to the distribution system;

“*regulatory authority*” means the regulatory authorities in Member States, as designated in accordance with Article 23 of Directive 2003/54/EC;

“*new market entrant*” means a company generating or supplying electricity in a Member State which has started its operations in that Member State since the entry into force of Directive 96/92/EC;

“*company with a small market share*” means either a generator with less than 5% of the generation capacity in the relevant market, or a supplier with a share of less than 5% in its relevant market.

Article 3

General Provisions

1. In establishing their general policies with respect to ensuring high levels of security of electricity supply, Member States shall define and publish the roles and responsibilities of different categories of market actors, respectively:
 - a) transmission system operators;
 - b) suppliers;in achieving these policies and specify, where appropriate, the minimum standards that must be complied with by the actors on the electricity market in question.
2. In developing those measures, Member States shall take the utmost account of:

- a) the internal market and the possibilities for cross-border co-operation in relation to security of electricity supply;
 - b) the need for reductions in the trend rate of growth of electricity demand in order to meet the Community's environmental commitments;
 - c) the importance of ensuring continuity of electricity supplies;
 - d) the need to ensure adequate levels of reserve generation capacity or equivalent measures on the demand side;
 - e) the need to promote the use of electricity generated from renewable sources in line with Directive 2001/77/EC;
 - f) the need for a degree of diversity in electricity generation in order to ensure a reasonable balance between different primary fuels;
 - g) the need to encourage energy efficiency and the adoption of new technologies, in particular demand management technologies, renewable energy technologies and distributed generation;
 - h) the need for continued operation of the network in the event of system failure at an individual point or points in the network and the cost related to mitigate such supply disruption;
 - i) the need for ongoing renewal of the transmission and distribution networks to maintain the performance of the network;
 - j) the need for a cost effective provision of electricity.
3. Member States shall ensure that any measures adopted in accordance with paragraph 1 do not place an unreasonable burden on new market entrants and companies with small market shares. Member States shall also evaluate the impact of the measures on the cost of electricity for final consumers.

Article 4

Network Security

1. Member States, in consultation with their neighbouring countries, shall ensure that minimum operational standards on network security are observed by the transmission system operators.
2. The regulatory authorities in Member States shall set performance standards for transmission and distribution system operators in terms of occurrence of interruptions of final customers as a result of transmission network incidents. Those standards shall be published by the regulatory authorities.

Article 5

Maintaining Balance between Demand and Supply

1. Without prejudice to Articles 87 and 88 of the Treaty, Member States shall take appropriate measures, in the light of Articles 4 and 7 of Directive 2003/54/EC, and including the encouragement of the efficient use of energy as well as the encouragement of new generation companies to enter the market, to ensure that there is a balance between the demand for electricity and the availability of generation capacity.
In particular, Member States shall require transmission system operators to ensure an appropriate level of reserve capacity or by adopting equivalent measures, for instance relating to the real-time control of peak demands.
In addition to the measures provided for in the second sub-paragraph, and without prejudice to Articles 87 and 88 of the Treaty, Member States may take additional measures to achieve these objectives, including but not limited to:

- a) promotion of demand management
 - b) interruptible customers
 - c) obligations on suppliers and/or generators
 - d) establishment of a wholesale market framework with a sufficient number of competitors that provides suitable price signals for investment and consumption.
2. Member States shall publish the measures taken pursuant to this Article ensuring the widest possible dissemination among actual and potential investors in generation and electricity consumers.

Article 6

Network Investment

1. Member States shall ensure that, for both the transmission and distribution network, investment decisions are taken such that increased demand side management measures are prioritised in so far as they may supplant the need for network or generation investment.
2. Member States shall ensure that investment decisions take into account of the need for:
 - a) increased possibilities for connecting renewable electricity, in view of meeting the indicative targets as set out in the Directive 2001/77 on the promotion of electricity from renewable energy sources and in the Directive 200x/xx on cogeneration;
 - b) increased opportunities for customers to exercise their rights to choose supplier as set out in Directive 2003/54.
 - c) the need to ensure a high quality service at a reasonable price, in line with Directive 2003/54/EC, Article 3(3), in particular for customers in remote and isolated regions.

Article 7

Interconnector Construction

1. Transmission system operators shall, on a regular basis, submit a document setting out their investment intentions for the provision of adequate level of cross-border interconnection capacity to the regulatory authority.
2. The document referred to in paragraph 1 may cover one or more calendar years and shall, take account of
 - a) existing and planned generation, transmission, distribution and supply,
 - b) expected patterns of consumption allowing for demand management measures,
 - c) the need to promote distributed generation
 - d) the need to promote renewable generation
 - e) regional, national and European sustainable development objectives, including those projects forming part of the Axes of Priority European Interest provided for in Decision XXX of the European Parliament and of the Council [laying down guidelines for trans-European networks...] ¹⁴.
3. The regulatory authority shall consult on the proposed investment documents with the Commission. The Commission will consult on the aggregate effect of the proposed investment strategies with the European Regulators Group

on Electricity and Gas established by the Commission Decision 2003/796/EC.

4. The regulatory authority shall endorse the transmission system operator's plan or an alternative plan after having made, in consultation with the transmission system operator, suitable amendments as a result of the process in paragraph 3 and the priorities as defined in paragraph 2 and Article 6.
5. The regulatory authority shall take account of the investment strategy endorsed under paragraph 4 when approving, pursuant to Article 23(2) of Directive 2003/54/EC, the methodology for network access tariffs.
Without prejudice to Articles 87 and 88 of the Treaty, it shall in particular provide positive incentives for investment by allowing a rate of return on investment that compare to the average cost of capital for investment with similar risk.
6. In case of delay or default caused by the transmission system operator in implementing the projects identified under paragraph 4, the regulatory authority shall have the necessary means at its disposal to ensure that progress on the approved strategy is satisfactory, in particular by:
 - a) imposing financial penalties on transmission system operators whose projects fall behind schedule;
 - b) issuing of an instruction to the TSO to undertake work by a certain date;
 - c) arranging for work to be undertaken by a contractor through a tender process.

Article 8

Penalties

1. The Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive.
2. The Member States shall notify those provisions to the Commission by the 1 December 2005 at the latest and shall notify it without delay of any subsequent amendment affecting them.

Article 9

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive before 1 January 2006. They shall forthwith inform the Commission thereof.
2. When Member States adopt those measures; they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. The method of making such references shall be laid down by Member States.

Article 10

Reporting

The Commission shall monitor and review the application of this Directive and submit a progress report to the European Parliament and the Council no later than 31 December 2007.

Article 11
Entry into Force

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 12

This Directive is addressed to the Member States.

Done at Brussels, [...]

For the European Parliament
The President
[...]

For the Council
The President
[...]

Appendix B – Transmission Network Historic Performance Indicators

