

International Legal Basis for Electricity Sector Co-operation in the CIS and CEE Countries*

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Introduction

Mr. Chairman, distinguished delegates, I am very grateful for an opportunity to speak at this important forum. I have been asked to talk about international framework for co-operation in the European electricity sector, with a focus on the CIS and CEE countries. I will start this presentation with a review of the current political and economic environment and comments on the scope for such a co-operation.

I will then discuss the existing multilateral legal frameworks concerning the electricity sector and suggest potential steps to develop it further. This will demonstrate that there is scope for increased East-West co-operation in the electricity sector and that such a co-operation should be based largely on the existing legal frameworks and unilateral actions by CIS countries to liberalise power markets and bring their rules of operation closer to the market economy standards of Western Europe.

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1. Energy Charter Process

But first I would like to briefly introduce the Energy Charter process and explain its role in energy market liberalisation and co-operation. The process started in December 1991 with the signing of the European Energy Charter and the beginning of negotiations on the Energy Charter Treaty (ECT). The Treaty came into force in April 1998 and has now been signed or acceded to by 51 countries from Europe and CIS, as well as Turkey, Australia, Japan and Mongolia.

The Treaty establishes a legal framework for international energy co-operation, including trade, transit and investment. The key objectives are to: facilitate East-West energy co-operation through the climate of legal stability and predictability for market access for goods and investment; improve security of energy supply; and maximize energy efficiency.

Key provisions of the Treaty provide for MFN and national treatment in trade and incorporate in general the rules of the World Trade Organisation. In the area of investment, the Treaty provides for national treatment for investments and investors and gives the investors access to international legal adjudication of disputes with host governments.

Since its inception, the Charter has been advocating the opening up of domestic energy markets to competition as well as the progressive liberalisation of trade. As part of this effort, our organisation is now finalising the negotiations on the Transit Protocol, a legally binding document aimed at strengthening the existing transit-related obligations under the Treaty. Once finalised, the Protocol will offer another legal tool to facilitate energy transit and protect investors' interests and will, therefore, help to improve the prospects for attracting investment into energy projects.

We have recently developed several studies on the trade, investment and environmental issues facing the Eurasian power sector. One of such studies reviews the existing trade flows of electricity between ECT countries and identifies the bottlenecks and barriers to trade. Other analyses addressed the issues of electricity pricing, market concentration and state trading in the power sector.

Most recently, we have also engaged in discussion on a proposal by the CIS Electric Power Council to improve cooperation between the power sectors of the ECT countries. I will revert to this topic in a moment.

2. Current Political and Economic Environment

For many years, electricity was considered a public service that had to be provided universally to all citizens. The power industry as a whole was considered a natural monopoly and domestic self-sufficiency in electricity was one of the main energy policy objectives. As a result, the domestic power industries were heavily protected and the cross-border trade in electricity practically did not exist. This approach has recently started to give way to new policies promoting competition and market liberalisation. These policies are based on the premise that the industry as a whole is not a natural monopoly and that competition leads to improved economic efficiency. This premise has initially been embraced by the UK and other Western European countries and more recently by some economies in transition.

There is growing awareness of the substantial benefits of more liberal trade regimes and of greater integration of the networks which facilitates electricity trade. This is resulting in a trend towards restoring previously existing, or creating new, synchronous operations. The examples include the interconnection of CENTREL with the UCTE system in October 1995, the current efforts of Southern Europe to join the UCTE or the plans to create an integrated power network called the Baltic Ring.

There has also been a movement towards re-integration of the UPS/IPS networks which in 1998-1999 got divided into a number of separately operating parts. In June 2000, the parallel operation of the UES of Russia and the northern part of Kazakhstan was restored. In September 2000, the energy systems of five Central Asian states were re-connected with the UES system. In August 2001, the energy systems of Ukraine and Moldova started parallel operation with the CIS power system. Consequently, the energy systems of 12 CIS states are now re-integrated.

The most recent development is the preparation for parallel operation of the energy systems of the CIS and the Baltic states with the power association of the Western, Central and Southeast Europe (TESIS). This strategic aim of the CIS Electric Power Council may be achieved through the operation of 11 existing 220-270 kV high-voltage transmission lines between the CIS and Eastern European states.

The CIS countries have now indicated their desire to link and synchronise their transmission grids with the UCTE network. In this context, a protocol of co-operation was signed last March between the Electric Power Council of CIS and Eurelectric. The protocol aims at examining the possibilities

of strengthening long-term cooperation in the power sector and identifying necessary measures to develop interconnections. Two joint working groups – one on markets and the other on environment – have undertaken this task.

This initiative has become the subject of high-level consultations within the framework of the EU-Russian dialogue on energy co-operation. For CIS countries, the immediate objective is to create a unified CIS electricity market in order to improve the efficiency and reliability of their power systems. This would contribute to creating the technical and economic bases for eventual unification of that system with that of UCTE.

Last May, the CIS Electric Power Council put forward a proposal to the Energy Charter process for a protocol on electricity. Discussion on the proposal indicated that there was significant interest in improving cooperation in the electricity sector and accelerating its liberalisation, and suggested that there was some scope for developing additional multilateral rules aimed at enhanced cooperation in that sector. There was no consensus on commencing any negotiations. But it was agreed that deliberations on the proposal would continue in order to establish the objectives of this new electricity instrument and its value added relative to the existing legal framework.

At the technical level, the main added value of developing new rules of cooperation lies in harmonising different technical standards between the power networks of UCTE and CIS¹. Such a harmonisation could eventually pave the way for physical synchronisation of the two systems that is advocated by many CIS countries. The synchronisation could yield substantial benefits in terms of improved security of supply, greater economic efficiency, lower required reserve margins and reduced peak loads in the integrated systems.

At the broader economic level, the main added value of new rules of cooperation could be to harmonise the degree of power market liberalisation and to create a level playing field for market participants across the ECT countries.

3. Need and Scope for Future Co-operation

There is a wide disparity across the countries in terms of the power market structures and rules of

market operation. This tends to hamper trade, investment and economic efficiency, and results in the power markets being fragmented,

with limited cross-border trade and investment and sub-optimal operation of markets compared to the planning in the wider context of integrated systems.

Electricity Trade

I would like to elaborate first on the trade issue. Despite recent liberalisation efforts, the ECT markets remain fragmented and trade among them remains very modest. In 2000, inter-regional trade of 80.8 TWh represented only 2% of total electricity generation in Eurasian ECT area. The small trade flows were from the East to the West through a chain of countries. The only direct trade between the CIS countries and Western Europe was small exports from Russia to Finland. Even within the more liberalised and integrated EU markets, cross-border trade currently represents only 8% of total EU power consumption.

These low levels of trade can be explained partially by such technical and economic considerations as: non-storability of electricity, lack of synchronicity between some networks (notably between UCTE and CIS systems) or high costs of transmission over long distances. But the main cause is a wide range of legal and regulatory barriers that exist in virtually all ECT countries. The most prominent among such barriers are: monopolies and exclusive rights, lack of open access to grids, high and multiple transmission charges, limited consumer choice of suppliers, and explicit import restrictions. Moreover, market power is highly concentrated in the hands of few large utilities; the top ten companies account for nearly half of the Eurasian ECT generating capacity. This has adverse effects on the terms of access to networks, trade and the level of market competition.

Our analysis suggests that there is some potential in the medium term for increased electricity trade between Eurasian ECT regions. The existing interconnection capacity is considerably under-utilised and there is spare generating capacity that could facilitate increased trade. Moreover, wide price differentials among regions provide an incentive to trade. Various regulatory obstacles limiting this scope could be eliminated with sufficient political will.

Investment Climate

The meaningful liberalisation of electricity trade and the integration of ECT markets are unconvivable in the absence of necessary physical infrastructure and open, non-discriminatory, access to this infrastructure. These require a liberal investment regime for the construction and operation of networks and a pro-competitive regulation

¹ The network frequency on the UCTE network is set at a frequency of 50 Hz, with deviations of ± 50 Millihertz (mHz) considered compatible with normal operating conditions. The CIS operators have made significant progress towards achieving the same standard on a sustained basis.

that secures third-party access to these networks on non-discriminatory and transparent terms for both domestic and foreign suppliers.

At present, both the investment climate and the terms of access to networks leave a lot to be desired, especially in the CIS countries. Rapid reforms are needed in this area given that there will be a very substantial need for investment in the ageing power sectors of the CIS countries over the coming decades. For instance, the Russian government estimates that reconstruction and upgrading of existing facilities and construction of new power stations and transmission lines will require about \$217 billion of investment by 2020.

The bulk of this investment requirement will have to be financed by private investors. For equity investors the most important business risk is related primarily to electricity prices and access to the customers. These risks can be significantly reduced through cost-reflective prices, liberalised internal markets and greater integration of regional markets. In addition to these sector-specific factors, there are, of course, more general conditions affecting the overall investment climate such as: political and macroeconomic stability and predictability of fiscal and regulatory regimes. In many CIS countries, these conditions continue to fall short of the investors' expectations.

Market Liberalisation

Another important structural flaw that I have mentioned is the uneven pace of market reforms which results in differing market structures and rules of operation. Many countries have recognised the beneficial effects of market liberalisation on trade, investment and general economic efficiency, and have begun necessary reforms concentrated on ensuring customer choice of suppliers, vertical unbundling, third-party access to grids, and independent regulation. However, the degrees and the forms of liberalisation vary substantially across the ECT area, with the EU countries being in the forefront, the accession countries being already legally committed to the EU "*acquis communautaire*" and most CIS countries lagging behind.

These differing degrees of openness are reflected, for instance, in highly disparate conditions for access to networks. While in ECT countries that still operate a national monopoly no third-party access (TPA) is granted, countries with advanced sector liberalisation have adopted regulations that allow third-party access for both domestic and foreign players. However, some of these countries reserved the possibility for refusing network access on the grounds of lack of equal market openness.

At least some of the above problems could be solved more effectively through closer international co-operation across the electricity markets. There is not only the need, but also significant scope, for increased co-operation in the Eurasian electricity sectors, particularly in the CIS and CEE countries. The question arises whether the existing legal framework is adequate to support such a co-operation, or whether additional legal instruments are necessary.

4. Existing Legal Frameworks

Before trying to address this rather complex question, let us first take the stock of existing international legal framework. This framework comprises a vast and complex myriad of regional and multi-lateral instruments covering two main areas: **(a)** market reforms aimed at competition, trade and investment, and **(b)** environmental protection issues. In this brief overview, I will focus on multi-lateral rules and will not discuss the rules developed within the CIS countries which this audience is undoubtedly very familiar with.

Market Rules

In the area of market rules, the Energy Charter process has already developed, or is in the process developing, several international legal instruments binding for its members. The most important among them is the Energy Charter Treaty that came into effect in 1998. Among the CIS and CEE countries, Russia and Belarus are the only Signatories that have not yet ratified the ECT².

The ECT rules, including WTO rules made applicable in the ECT context, cover trade in electricity, though not perfectly and not in all respects. All GATT provisions are fully applicable to electricity trade, as they do for all other goods. This is important to bear in mind, because energy regulators and electricity operators tend to disregard the important constraints and rights that stem from the membership in WTO or ECT. The most important GATT provisions that constraint governmental measures relating to trade in electricity are the following.

The Most Favoured Nation Treatment (MFN) requires that no measure on imports or exports of electricity may discriminate between foreign exporters or importers. This obligation concern tariffs, as well as any other border measure. This means that in respect of any policy affecting trade, no discrimination can be made between electricity imports on the basis of their origin or between electricity exports on the basis of their destination.

And most importantly, such equal treatment

² The other three Signatories that have not yet ratified the Treaty are Australia, Norway and Iceland.

has to be granted “immediately and unconditionally”. However, only electricity from WTO Members or ECT Contracting Parties can claim this “MFN treatment”: non-WTO or non-ECT countries may be discriminated against.

The National Treatment (NT) obligation requires that imported electricity may not be treated in a less favourable manner than the best of internal regulations concerning domestically produced electricity. In other words, the obligation to provide “national treatment” to imported electricity means that they cannot be discriminated as against domestic electricity. The NT obligations concern such issues as taxation of electricity and any other internal regulation, including “all laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use” of electricity.

The third key principle is the prohibition of quantitative regulation of imports and exports. Article XI of the GATT outlaws all prohibitions or restrictions on exports or imports of electricity made effective through quotas, import or export licenses or other measures.

The fourth key provision of GATT relates to the operation of state-owned enterprises and enterprises that have been granted exclusive or special privileges. The importance of these provisions is obvious given that in many countries electricity supply is a matter for monopolies. Article XVII of GATT requires that these enterprises follow the non-discrimination rules of the GATT that apply to governments. In other words, while private electricity companies are free to discriminate between their buyers and sellers, state-owned electricity utilities and other enterprises with exclusive rights cannot. They have to apply both the MFN and NT principles when making their purchase or selling decisions, which requires that they act solely in accordance with commercial considerations, and afford the enterprises of other ECT Contracting Parties adequate opportunity, in accordance with customary business practice, to compete for participation in such purchases or sales.

The main underlying principles of the ECT are: market openness, transparency and non-discrimination with regard to cooperation on four key issues: energy trade and transit, investments, and energy efficiency. The transit provisions (especially Article 7) build upon the principles of freedom of transit and non-discrimination as embodied in Article V of the GATT. They confirm the principle of freedom of transit and non-discrimination with regard to access to energy transit facilities. The important new element contained in the Treaty is its explicit coverage of grid-bound energy trans-

port (including electricity) and the enforceability of its provisions through an additional conciliation mechanism in case of transit disputes. Consequently, Member countries now have, through the ECT, access to a set of multilaterally accepted rules that can be used to protect their interests.

Contracting Parties commit themselves to taking all necessary measures to facilitate transit of energy. They also undertake to promote the modernisation, development and operation of inter-regional transport facilities, as well as the development of internal and cross-border interconnection facilities. In addition, they agree to co-operate in order to mitigate the effects of interruptions in energy supply.

Under the Treaty, measures to facilitate transit are to be taken without distinction as to origin, destination or ownership of energy, or discrimination as to pricing, and without imposing any unreasonable delays, restrictions or charges. This means that countries may not refuse transit, or refuse to agree to the construction of a new network capacity, solely on the basis of the origin, destination or ownership of the energy. Transit countries must not interrupt or reduce existing transit flows, even if they have disputes with any other country concerning this transit. In such cases, they have the possibility to invoke a rapid conciliation procedure under Article 7(7) of ECT. Moreover, Contracting Parties must not frustrate the establishment of new capacity, if transit through existing capacity cannot be achieved on commercial terms.

The ECT also offers powerful means to promote and protect foreign investment in member countries. It protects foreign investors against such political risks as discrimination, expropriation and nationalisation, breach of individual investment contracts, damages due to war, and unjustified restrictions on the transfer of funds. Furthermore, Article 10 (7) of ECT obliges host countries to accord to investments of investors of other Contracting Parties the better of national treatment or most-favoured-nation treatment.

The Energy Charter has recently undertaken to further improve the framework of international rules on energy transit through the negotiations on the Protocol on Transit. Just like the Treaty, the Protocol will apply to all forms of energy, including electricity. The main objectives of the Protocol are to ensure that:

- ! energy flows in transit are not interrupted; and
- ! tariffs charged for energy in transit are reasonable and non-discriminatory.

Once adopted, the Protocol promises to clarify under international law such key issues as the definition of "available capacity for transit" in national energy networks, the criteria on which access to such available capacity is to be offered to interested third parties, and the criteria that network operators are to observe when setting transit tariffs. More specifically, access to available capacity must be negotiated in good faith and such negotiations must be based on transparent procedures and commercial terms, and not discriminate as to the origin, destination or ownership of energy. Moreover, transit tariffs must be cost-reflective, objective, reasonable, transparent and non-discriminatory on the basis of origin, destination or ownership of energy.

The Treaty and the forthcoming Protocol provide an extensive legal basis for further liberalisation and closer co-operation in the Eurasian power sector. In addition, the CIS countries could increase the basis for cooperation with CEE and other European countries by liberalising their domestic markets using the more advanced EU regulations as a model. This model is shaped mainly by the Electricity Directives of 1996 and 2003 and accompanying regulations. The EU directives are relevant from an international legal perspective not only because they are being adopted by the accession countries and followed by other non-EU countries, but also because the EU Member States have an obligation under the ECT to implement the directives in a non-discriminatory manner.

The 1996 directive required all member states to open up their electricity markets by a minimum of 30% by 1999. The EU electricity markets have opened up faster than required under that directive, reaching 100% in some countries and averaging 65% for the EU area. The other key obligations imposed by that directives are: transparent and non-discriminatory authorisation and tender procedures, establishment of independent systems operators and independent energy regulators, transparent and non-discriminatory public service obligations, and measures to prevent the abuse of dominant position.

The new EU Directive 2003/54/EC and Regulation 1228/2003 that were adopted in June 2003 aim at accelerating and deepening the process of electricity market liberalisation. The main provisions of the Directive include the requirements to establish: legal separation of the transmission systems within the vertically integrated entities; non-discriminatory third part access to transmission and distribution systems; complete market opening for all customers by 1 July 2007; and independent energy regulators.

The accompanying Regulation 1228/2003 aims at fair rules for cross-border exchanges of electricity. These include cost-reflective and transparent tariffs, and non-discriminatory and market-based solutions to network congestion. The Regulation allows the exemptions from the latter requirement for new interconnectors. It also prohibits specific network charges on individual transactions for transit of electricity and requires transmission systems operators to publish the estimates of available capacity.

The CEE and other EU accession countries are in the process of harmonising their legislation with the *acquis*. In addition, some transition economies have embarked on the process of market reforms including unbundling, privatisation and raising domestic prices to cover production costs. For instance, Russia adopted last February a package of laws aimed at restructuring the country's power sector and transforming it into a fully competitive market by 2005. The CIS countries could use the EU legislation as a model to develop their own regulations – either unilaterally or multilaterally – for the purpose of further liberalising their power markets.

Environmental Protection

Protection of the environment is becoming another important area of regulation and co-operation. This is partly due to the growing concerns in Western Europe that electricity imports from CEE and CIS countries may increase environmental damage and undermine the existing environmental standards. These concerns stem mainly from the perception that a large portion of these imports comes either from unsafe nuclear reactors or from highly polluting thermal power plants that are subject to lower environmental standards than those in the EU.

The above concerns have led to the initiatives to reduce both the risks of accidents in nuclear plants and the atmospheric pollution from thermal plants. The concrete actions aim at restricting, or even prohibiting, imports of electricity from those non-EU countries that may not conform to EU's environmental standards and promoting electricity from renewable energy sources. The main idea behind these measures is so-called "green reciprocity": environmental standards relating to power generation in the exporting country should be equivalent to the standards in the importing country. If those standards are not the same, imports may be curtailed.

Several countries, including Austria, Luxembourg, Italy, the Czech Republic and Hungary, have provisions in their electricity legislation prohibiting imports from countries where environmental stan-

dards are lower, and generation may endanger health of people, animals or plants.

Regulation of environmental and safety aspects of electricity production and trade varies from one country to the other, not only reflecting local environmental conditions and availability of primary energy sources, but also the degree of external liberalisation of electricity trade.

The most advanced regulations concerning the emissions by thermal power plants are those developed by the EU. The main basis is the Council Directive 88/609/EEC of November 1988³ that has subsequently been amended⁴, and more recently "recast in the interests of clarity"⁵ by Directive 2001/80/EC⁶. The latter directive entered into force in November 2001. It sets the limits on emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x) and dust from large combustion plants. The regulations apply to combustion plants with rated thermal capacity of more than 50 MW irrespective of the type of fuel used. For these pollutants, the directive establishes "emission limit values".

The SO₂ limits for existing and "old new" plants are limited to 400 mg SO₂/Nm³ for plants larger than 500 MW and progressively higher limits of up to 2000 mg SO₂/Nm³ for the smaller plants. For "new new plants" the standards are much stricter: 200 SO₂/Nm³ for plants with a capacity of over 100 MW, and 850 SO₂/Nm³ if the capacity is between 50 and 100 MW.

on Long-Range Transboundary Air Pollution (CLRTAP). The convention has a wider geographical scope than the EU legislation as it applies to 55 countries, including all EU and EU accession countries and most CIS countries. The convention is specifically aimed at transboundary impacts from air pollution, where the individual source is no longer identifiable (by contrast to the EU directives that specifically target the emissions at plant level). The convention contains mainly the soft obligations; contracting parties must "endeavour to limit and, as far as possible, gradually reduce and prevent air pollution including long-range transboundary air pollution" (Art. 2). It also creates a monitoring and evaluation programme.

The convention does not lay down specific limits, but rather creates a framework for international co-operation, exchange of information and research. Importantly, some additional protocols do contain more specific obligations. For example, the 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone" (the "Gothenburg Protocol") sets emission ceilings for 2010 for four pollutants: sulphur, NO_x, volatile organic compounds and ammonia. The Protocol sets decreasing binding ceilings for the regions and tight limit values for specific emission sources. It is therefore an international instrument that comes closest to the EU's Large Combustion Plants Directive⁷. The Protocol also contains national emission ceilings for pollutants (to be reached by 2010), and limit values for existing and new stationary emission sources.

The Protocol is slightly less stringent than the EU Directive⁸; it does not give details on how these limits were calculated, but for the EU15 these are similar to internal EU limits. If the same calculation principles were used for other UNECE members, these countries would come close to meeting the EU standards by complying with the Protocol. The Protocol's maximum limits allowed at plant level are also similar to those in the EU LCP Directive, but are somewhat less stringent for existing plants. Also, the time frame for compliance with the limits is different⁹.

This leads to a conclusion that internationally accepted standards do exist for some types of emissions from thermal plants. A number of states have declared themselves bound by certain emission limits (CLTRAP and Protocols and EU Directives). These standards seem to be satisfactory from a technical point of view: full compliance with the emission limits would drastically reduce total SO₂ and NO_x emissions. For the EU15 this would amount to a 70% reduction of SO₂ emissions by 2010, and a 9% re-

These directives have been quite effective in reducing the emissions levels in the EU countries. According to the European Environment Agency, SO₂ emissions from electricity generation in the EU fell by more than 60% between 1990 and 1998, largely due to the implementation of emission-specific abatement measures required by the above directives.

Outside the EU, the most relevant legal document establishing emissions standards is the 1979 UNECE Convention

³ Council Directive 88/609/EEC of 24 November 1988 on the limitation of emissions of certain pollutants into the air from large combustion plants.

⁴ Council Directive 90/656/EEC of 4 December 1990 and Council Directive 94/66/EC of 15 December 1994.

⁵ Taken from first consideration "whereas..." of Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001.

⁶ Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001.

⁷ The Protocol is not yet in force, but has already been signed by 31 UNECE members (including all EU and most EU accession countries, but few CIS countries); and ratified by 2. It needs 16 ratifications to enter into force.

⁸ The protocol allows for 4059 kilotonnes of SO₂ from the EU15 in 2010, the Directive for 3850; for NO_x the ceilings are 6671 and 6519 kilotonnes respectively; See Annex II to the Protocol.

⁹ New stationary sources must meet the standards one year after the entry into force of the protocol for the party where the source is built. For existing stationary sources, the deadline differs according to whether the party is a transition country or not. For non-transition countries, the standard must be met one year after the entry into force of the Protocol, or 31 December 2007, whichever is later. For transition countries, the deadline is eight years after the entry into force.

duction of NO_x. Compliance with these limits by the accession countries would reduce the emissions of SO₂ and NO_x by 85% and 8% respectively. Similar effects could likely be expected in the CIS countries.

In this context, it is also necessary to mention the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA). This Protocol was signed in 1994 and later on ratified by most Signatories. Among the six countries that have not yet ratified this instrument are Russia, Belarus and Georgia. The objective of PEEREA is to promote internationally acknowledged standards for sustainable development, such as “the polluter pays” principle and the practice of transparent environmental impact assessments.

I will now turn to the issue of nuclear safety. There are currently four binding international conventions related to nuclear safety: the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the Convention on Nuclear Safety and the latest Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

The most relevant in this context is the Convention on Nuclear Safety which entered into force in 1996. Its aim is to legally commit participating states operating nuclear power plants to maintain a high level of safety by setting international benchmarks. The convention is an incentive instrument and is not designed to ensure the fulfillment of obligations through control and sanctions. One of the key obligations of the Contracting Parties concerning existing nuclear installations is “to ensure that all reasonably practicable improvements are made as a matter of urgency to upgrade the safety of the nuclear installations. If such upgrading cannot be achieved, plans should be implemented to shut down the nuclear installation as soon as possible” (Art. 6).

Another important IAEA agreement is the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. This is also an “incentive” instrument that does not itself contain specific standards, but refers to existing international standards. The convention requires that states provide for effective protection of individuals, society and environment, and stipulates that the national legislation must have “*due regard to internationally endorsed criteria and standards*” (Art. 4(iv)). For existing facilities, Contracting Parties must review the safety and make “all reasonably practicable improvements” to upgrade their safety where necessary (Art. 5 and 12).

The IAEA standards seem to be of a regulatory nature, and are binding only upon the IAEA itself and its operations, and not on its members or third countries. The member states may adopt them at their own discretion for use in national regulations in respect of their own activities. There is no enforcement mechanism, but there is a certain peer pressure on countries to use the IAEA safety services, particularly in connection with the Convention on Nuclear Safety.

Moving now to the EU regulations, EURATOM can adopt binding acts that have to be transposed by the EU countries into national legislation. Under the provisions of the EURATOM Treaty, the European Commission acquired the status of a supra-national regulatory authority in three areas: radiological protection, supply of nuclear fissile materials and nuclear safeguards. However, the Euratom Treaty makes little or no specific mention of such aspects as operational safety of nuclear plants and radioactive waste storage or disposal facilities (i.e. criteria or norms to be respected during design or operation of these facilities). As a result, regulatory activities in these areas have developed under the responsibility of national authorities.

In November 2002, the European Commission released for discussion a draft “nuclear package” that contains *inter alia* a draft Directive setting out basic obligations and principles on the safety of nuclear installations and a draft Directive on the management of spent nuclear fuel and radioactive waste. The first document does not seek to set out EU nuclear safety standards, but rather to set out the basic obligations and principles “on the basis of which common safety standards will be adopted in due course”¹⁰. The main mechanism is the supervision of nuclear installations by independent safety authorities. There is also a requirement that funds set aside for decommissioning be placed in separate accounts. The other draft directive is more demanding as it proposes concrete timetables for the disposal of radioactive waste¹¹.

For EU accession countries, the Western European Nuclear Regulators’ Association (WENRA) assesses nuclear safety and makes recommendations on safety upgrades. Also of some relevance is the Working Party on Nuclear Safety (WPNS) that was established by the Council of the European Union in the context of EU enlargement. The mandate of this body is to evaluate nuclear safety in those accession countries that operate nuclear plants.

It can be concluded that the existing binding international conventions on nuclear safety refer to international standards in the

¹⁰ *Power in Europe*, issue 388 of 18 November 2002, page 7. (Platts)

¹¹ Authorisations for the development of, disposal sites should be granted no later than 2008 and authorisations for the operation of sites should be completed by 2013 for low-level radioactive waste and by 2018 for high-level radioactive waste.

field, but do not establish such standards themselves. Even though binding standards do not exist, internationally accepted and applied standards have been adopted by the IAEA and other organisations, providing a *de facto* standard for what is considered to be safe operation of nuclear plants and disposal of waste.

5. Possible Future Actions

The process of power market liberalisation should be accelerated and widened to cover the CIS countries. It should aim particularly at reducing the barriers to trade and investment and at introducing competition in generation and distribution. For instance, trade in electricity could be liberalised to a large degree simply through full compliance with the existing treaty obligations under the WTO and the ECT, and through unilateral efforts by countries to further liberalise their domestic power industries. These include unbundling of the incumbent national utilities so that the grid owner is independent from the companies engaged in generation and sales, and ensuring independent regulation of conditions for the use of grids.

The solutions to improving the current transit regimes also lie primarily in more complete implementation of existing and emerging international regulations. I have already mentioned the EU Electricity Directive which requires member states to implement non-discriminatory and transparent third-party access to networks. The currently negotiated Transit Protocol, if adopted in its present form, would require all ECT Contracting Parties to ensure that tariffs are cost-based, objective, reasonable, transparent and non-discriminatory.

It would also be desirable to harmonise the degree of power market liberalisation and to create a level playing field for market participants across the ECT area. This would greatly contribute to the long-term goal of creating a fully open and integrated Eurasian electricity market which, in turn, would yield benefits in terms of improved economic efficiency, security of supply and environmental protection. A lot still remains to be done in this area, despite some encouraging progress in recent years. In this context, the Energy Charter has an important contribution to make through its mandate to establish and implement common rules for international energy relations.

In some areas, such as nuclear safety, internationally accepted standards are not fully developed, or are not legally binding, or have limited geographical

application. A sensible strategy in such areas would be to develop and enforce through

multilateral agreements the standards that are independent from the trade rules. Adopting minimum environmental standards and liberalising the electricity sector for foreign traders and investors would be a win-win solution for the Eurasian community.

The European Commission (EC) advocates another approach, namely creating a new legal framework through bilateral agreements with accession countries and other transition economies. These countries would be obliged to: (a) meet the requirements of the EU electricity directive concerning market opening, third party access and unbundling; (b) grant access to their power sector for EU companies; (c) apply comparable environmental standards as those of EU and (d) exclude exports from unsafe nuclear plants¹².

In conclusion, the existing legal framework already provides an extensive basis for closer East-West co-operation in the electricity and energy sectors. In some cases, this framework either needs to be extended geographically to cover the CIS countries or simply implemented more fully in these countries. In my opinion, a future action plan could include *inter alia*:

- ! ratification of ECT by Russia and Belarus and its full implementation by all countries;
- ! successful adoption of the Transit Protocol and its subsequent ratification and implementation;
- ! further CIS market liberalisation – unilateral or regional – using EU *acquis* as a model;
- ! adoption by CIS and CEE countries of pollution limits similar to those set by the EU directives;
- ! ratification and implementation of the Gothenburg Protocol by most CIS and CEE countries; and
- ! adherence to IAEA standards and guidelines on nuclear safety and possibly development of additional international agreements.

The CIS and CEE countries have the potential to be major suppliers in the future open and integrated Eurasian electricity market. But to achieve that role they must first raise too many challenges facing their power sectors, including in particular the need to: create greater competition among suppliers; reform the pricing system for electricity; modernise the ageing power plants; and improve their environmental image. Sustained government efforts will be required during the transition period to monitor reliability, regulate network access and expansion, and ensure security of supply. The first steps in this direction are now being made, but the road ahead may yet prove to be long and difficult.

¹² European Commission, *Completing the internal energy market*, Communication from the Commission to the Council and the European Parliament, COM(2003) 125 final.