Herbert Smith

European Energy Review **2010**

Special edition on the EU Third Energy and Climate Change Packages

Herbert Smith in association with
Gleiss Lutz and Stibbe

Introduction

I am delighted to introduce the 2010 edition of European Energy Review which will again give an in-depth survey of current issues in the energy sector in 30 European jurisdictions.

2009 has been a busy year for the European energy sector:

- In April, the EU's Climate Change Package with its array of climate action and renewable energy measures designed to move the EU into a global leadership position in relation to emissions reduction measures entered into force.
- In September, the much awaited and at times controversial Third Energy Package entered into force, containing a wide range of measures intended to improve the working of the internal electricity and gas market in the now expanded European Union.

Therefore, this special edition of European Energy Review 2010 focuses entirely on the Third Energy Package and the Climate Change Package and the impact these two legislative packages will have in jurisdictions across Europe.

In addition to our Alliance partners Gleiss Lutz and Stibbe, who have contributed articles on Germany, the Netherlands and Belgium, respectively, this year we have contributions from Schönherr (Austria, Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia); Kromann Reumert (Denmark); Raidla Lejins & Norcous (Estonia, Latvia and Lithuania); Roschier (Finland); Zepos and Yannopoulos (Greece); Arthur Cox (Ireland); Legance (Italy); Arendt & Medernach (Luxembourg); Zammit Pace Law (Malta); Arntzen de Besche (Norway); Esquivel (Portugal); Advokatfirman Vinge (Sweden); and Homburger (Switzerland).

The Climate Change Package is the EU's first attempt to create a comprehensive European legal regime covering the carbon and renewable energy sectors, helping to inform investment decisions in these sectors by securing a future for carbon trading and laying the foundations for future investment in renewable technologies, biofuels and the development of carbon capture and storage. Many authors from Central and Eastern Europe point in their articles to the particular difficulties and efforts that the Climate Change Package seems to cause in their jurisdiction, largely due to structural issues linked to the coal dependency of some countries, the current low utilisation of renewable energy sources and the investment requirements triggered by the provisions of the Climate Change Package.

Whilst the Third Energy Package and in particular its unbundling regime was a cause of concern in some jurisdictions, the introduction of de-facto four unbundling options has enabled a somewhat softer application of the unbundling regime originally envisaged by the Commission. As such, the TEP did not bring the clear sea-change for the current unbundling situation that the Commission had originally set out to achieve. However, the TEP does bring considerable clarification on a number of existing rules, particularly in the area of third party access exemptions and, with the creation of the Agency for Co-operation of European Energy Regulators, could be said to herald the beginnings of a European energy regulator. Given that the full effect of the transposition of the TEP into national law will only become apparent in 2013, it is perhaps too early to venture an opinion on the effectiveness of the TEP whose success or otherwise will necessarily lie in its practical application across all Member States.

Silke Goldberg
Senior associate, Herbert Smith LLP
January 2010

Implementing the Third Energy Package and the Climate Change Package in Estonia

By Jaanus Iklaa, attorney at law, Raidla Lejins & Norcous, Tallinn

Introduction

Impact of the Two Packages

The introduction of the Climate Change Package and the TEP will have a significant impact on the Estonian electricity generators and industrial consumers. In relation to the assessment of the impact of the Climate Change Package and the TEP, it is important to take into account four specific characteristics of the Estonian electricity and gas markets.

Firstly, both the Estonian electricity and gas markets are isolated from the markets of all other EU Member States except Latvia, Lithuania and Finland. There are significant electrical interconnections with Latvia, totalling in excess of MW700, and a MW350 underwater electrical interconnection with Finland ("Estlink"). Estonia has gas interconnections only with Russia and Latvia. Secondly, an interconnection between the Estonian electricity system and a third country – Russia – exceeds MW 1,100 and thus enables to cover almost all of the internal consumption requirements. Thirdly, more than 90% of electricity generated in Estonia is produced from native fossil fuel – oil shale – which creates substantial carbon dioxide emissions. Finally, Estonia is the only EU country that has been granted a temporary derogation from the full market liberalisation requirement to provide for renovation of two oil shale-fired energy blocks. This derogation will lapse on 31 December 2012, which means that the Estonian electricity market will be fully open from 2013.

Based on the above, it can be said that the biggest impact for Estonia in association with the implementation of the Climate Change Package and the TEP is related to the New EU ETS Directive and, in particular, to the new system of allocation of allowances. It is expected that in 2013 the price of EUAs will be in the range of 25-50 per ton. To a material extent, the price of the electricity generated from oil shale will depend on the purchase price of EUAs. In Estonia, the implementation of the New EU ETS Directive will coincide with the full liberalisation of the electricity market. As a result, it is expected that the current price of electricity generated from oil shale will increase two or three-fold, leading to decreased competition in the generation of electricity from oil shale and making the necessary renovation of the existing oil shale generation units economically unviable. Although the Estonian Government accepts that the generation of electricity from oil shale cannot be maintained at the current level (approximately MW2,000), it nevertheless considers that the generation will be maintained at a level sufficient to ensure the security of supply.

Estonia's concern about the energy security as a result of the implementation of the Climate Change Package stems from one of the characteristics of the Estonian electricity market mentioned above. Interconnections with Russia would enable Estonia to import almost its entire requirement of electricity from Russia. Unlike the situation in other EU Member States, this would result in Estonian generators competing with generators from outside the EU. Although there are also substantial interconnections between Russia on the one hand and Latvia and Lithuania on the other, the situation in those countries is different. Latvia does not have sufficient generation capacity itself and is interested in importing electricity from Russia whilst Lithuania has not yet taken long-term decisions about electricity supply. In itself, the competition among electricity generators, including from Russia, would benefit the creation of a well functioning electricity market in Estonia. However, the regulatory framework and requirements in Russia, both in terms of market and environmental regulation, are very different from those in force in the EU. Because the EU ETS does not apply to Russian generators, it will result in the costs of electricity generated from coal in Russia being 2-3 times cheaper than the costs in the EU. Therefore, significant imports of electricity

generated under the requirements different from those in the EU would distort competition in the EU electricity market. These imports from Russia would also constitute a carbon leakage in the electricity market, which is absent in other Member States due to a lack of connections with third countries. Further, the decisions made by Russian electricity suppliers are not always driven by commercial considerations and can be politically manipulated. Consequently, substantial electricity import from Russia would constitute an energy security risk for Estonia.

Based on the above considerations, the Estonian Government has decided that additional oil shale fired energy blocks must be renovated in order to ensure the security of supply, meet higher environmental standards and improve energy efficiency. As generation of electricity from oil shale would become uncompetitive from 2013 onwards, mainly as a result of the implementation of the auction principle established in the New EU ETS Directive, the renovation of additional oil shale fired energy blocks would require the New EU ETS Directive to allow for appropriate support mechanisms.

During the discussion on the Climate Change Package, Estonia proposed several solutions to the abovementioned concerns related to Russian electricity imports. However, restrictions on electricity trading are prohibited under the WTO rules. Although the European Commission has yet to identify electricity industry as a sector exposed to a significant risk of carbon leakage, the European Commission has decided to look into the issue of Russian electricity imports in connection with the elaboration of measures for avoiding carbon leakage. When implementing further measures, the European Commission will take into account the impact of carbon leakage on the energy security in the countries, which have interconnections with non-EU Member States and whose interconnections with other EU Member States are insufficient. Estonia hopes that it would then be possible to create joint measures for the regulation of import of electricity from non-EU Member States at the EU level, for example by extending the application of the EU ETS to such electricity imports.

Estonia will also be able to take advantage of a provision in the New EU ETS Directive allowing for derogations from the prohibition of allocations of allowances to electricity free of charge which requires that 30% of the allowances available for electricity generators must be still auctioned in 2013, rising progressively to 100% by 2020. In order to use this derogation, Estonia will have to invest an amount equal to the market value of the free allocation in energy infrastructure, clean technologies and energy diversification. This condition would not be a problem for Estonia as the Estonian Government's approach, from the beginning, has been that any state income received from the sale of the EU ETS allowances would be used for restructuring of the energy sector and, in particular, energy diversification.

Estonia will also benefit from the provision allowing a redistribution of 2% of auctioned allowances to the Member States, which, in 2005, had achieved greenhouse gas emissions reductions of at least 20% compared to 1990 levels.

The Climate Change Package gives a clear and undisputable advantage to carbon dioxide free electricity production and creates additional revenues to the state from the sale of allowances. Therefore, it is believed that the implementation of the Climate Change Package in Estonia will also result in a diversification of the types of generation units, further development of renewable energy projects and a continuing development of the Estonian nuclear power plant project.

Impact of the Third Energy Package

The practical impact of the TEP on Estonia is not comparable with the impact of the Climate Change Package, mainly due to two characteristics of the Estonian electricity and natural gas markets. Firstly, there have been no serious problems with the behaviour of the TSO, even though the TSO is a part of a vertically integrated undertaking. Secondly, the Estonian electricity and, in particular, natural gas markets are very small and isolated. Therefore, it is expected that the implementation of the TEP will not have a major practical impact on the Estonian electricity and natural gas markets.

However, there are two major issues, which would have a significant impact on the Estonian electricity and natural gas markets. These are the Baltic Interconnection and the creation of the common regional electricity and natural gas markets in the Baltic States with a possible inclusion of the Nordic States.

The European Commission has initiated the Baltic Interconnection Plan, which enables to accelerate the development of interconnections between isolated energy systems of the Baltic States and the networks of other EU Member States. The Baltic Interconnection Plan also makes some provisions for funding of such interconnections. Only after the implementation of this plan will it be possible to speak of the functioning electricity and natural gas markets in Estonia because until such implementation there will be no real competition in these markets. The Finnish, Estonian, Latvian and Lithuanian TSOs have scheduled the start of the construction of the interconnector "Estlink 2" between Estonia and Finland for 2010. There are also plans for the construction of the Baltic-Sweden link, Baltic-Poland link and the synchronisation of the Baltic electricity system with the Central-European electricity system, UCTE. The latter would result not in a total disconnection from the Russian system but rather in the erection of a converter station to all or a part of the present interconnections.

It is important to create a common energy market for the Baltic and Nordic States. In order to establish a common market, it is not only necessary to develop the new interconnections, but also to establish controls to ensure efficient operation of the Baltic common market. At present, the Baltic electricity and natural gas markets do not function properly due to different regulations and the derogations granted to Latvia from the New Gas Directive and to Estonia from the New Electricity Directive. The primary aim of these derogations is to create a preferential regime for the local energy companies.

Transposition and implementation of the Climate Change Package and the Third Energy Package

The legislative amendments necessary for the implementation of the TEP will be prepared and submitted during 2010. Both the National Action Plan under the Renewable Energy Directive and certain amendments to the Estonian Electricity Market Act requiring the unbundling of the ownership of Elering OÜ, the Estonian TSO, are currently being prepared. The TEP is expected to be transposed into national legislation in 2012. However, the unbundling of the ownership of Elering OÜ is expected to be finalised in the first few months of 2010.

It is more difficult to predict the timing for the transposition and implementation of the Climate Change Package. According to the Development Plan for the Estonian Energy Industry until 2020, the relevant amendments arising from the Climate Change Package shall be prepared and submitted to the legislative bodies for adoption during 2011.

Public debate about the Climate Change Package and the TEP

Despite a historic lack of public interest in complicated economic and technical issues, there has been significant public debate about the Climate Change Package and the TEP. The main focus of the debate has been on the energy security issues and, in particular, the issue of unfair competition from the electricity generated in Russia, as well as the preservation of some degree of the oil shale-based electricity generation. Further, issues relating to renewable energy and nuclear energy were also subject to public debate. For example, the Prime Minister, the Minister of Economics and Communications and the Minister of Environment have emphasised on several occasions, and in different media channels, that Estonia intends to protect its energy security by ensuring that the Climate Change Package allows some free allowances to be allocated to electricity generators and that the electricity imported from third countries is treated in the same way as the electricity generated in the EU.

During the final phase of the discussions over the Climate Change Package and the TEP, the main message was that although some provisions of the Climate Change Package are too general, the position of Estonia is nevertheless protected and both the Climate Change Package and the TEP are thus compatible with Estonian interests.

Third Energy Package

At present, the Estonian TSO, Elering OÜ, is owned by Eesti Energia AS, a vertically integrated electricity undertaking. However, the amendments to the Electricity Market Act which will prohibit a vertically integrated undertaking from owning a TSO are currently going trough the legislative process and will probably be adopted by the end of 2009. The proposed ownership unbundling would see the Estonian Republic buy 100% of the shares in Elering OÜ from Eesti Energia AS in January 2010. Pursuant to the unbundling, the Republic of Estonia would be the owner of 100% of the shares in both Eesti Energia AS and Elering OÜ. The shareholdings would be managed by two different ministries, most likely the Ministry of Finance and the Ministry of Economics and Communication. Although the ownership unbundling of the Estonian electricity TSO will be completed in the near future it can be said that to a certain extent this stems from the new unbundling regime introduced by the New Electricity Directive.

The ownership unbundling of the Estonian TSO is unlikely to have a significant impact on the Estonian electricity market due to the high degree of independence the Estonian TSO already has under the current unbundling regime. Several local and international audits have verified that there has been no discrimination or abuse of rights by the Estonian TSO and there have been a minimal number of complaints to the regulator about the TSO. After the planned ownership unbundling is completed the independence of the TSO will increase even further and the theoretical possibility of the vertically integrated electricity undertaking influencing the decisions of the TSO is anticipated to disappear. The biggest practical impact of the ownership unbundling should be the fact that from 2010 onwards the TSO will be fully independent from any supplier and generator in making the decisions about investments into the transmission system.

The situation in relation to the TSO in the Estonian natural gas market is more complicated due to an even higher degree of concentration as compared to the electricity market. AS Eesti Gaas is effectively the single supplier of natural gas in Estonia. A 37 % stake in AS Eesti Gaas is owned by Gazprom and a 33% stake is owned by E.oN/ Ruhrgas. The similar market structure is also in place in Latvia and Lithuania. From the technical point of view, the entire supply of natural gas in the Baltic States depends upon Latvian gas storage facilities. In order to establish an effective market in natural gas in Estonia, it is necessary to enable new suppliers to enter the market, which can be achieved through the construction of new LNG terminals. Where the TSO is controlled by the main supplier, as is the case in all of the Baltic States at the moment, there is almost no incentive for the TSO to invest in the new LNG terminal and infrastructure. The unbundling of ownership of the TSO in the Estonian natural gas market is complicated by the fact that the only supplier of natural gas to the Estonian market and the owner of the Estonian TSO, AS Eesti Gaas, is a private company. Estonia is yet to take a decision on how to implement the unbundling regime introduced by the New Gas Directive.

However, it can be argued that the implementation of the TEP and the further ownership unbundling of the TSO will not have a significant impact on the Estonian natural gas market. Although, in theory, the Estonian natural gas market is fully open, some preconditions must be met before the natural gas market becomes operational in practice. The first condition is the lapse of the transitional period granted to Latvia in respect of the implementation of the Second Gas Directive and the New Gas Directive, as well as the creation of joint regulations, procedures and a joint natural gas market in all of the Baltic States. The second condition is the unification of gas tariffs by Russia both for internal customers and export. This should increase the likelihood of several suppliers entering the natural gas market.

The Estonian NRA has a good legislative basis and has greater powers than the NRAs of most of the other EU

Member States. In addition, the functions of the NRA and the Ministry of Energy and Communication have been clearly separated by legislation. Therefore, the main problems facing the Estonian NRA are the lack of resources, some problems with independence and the fact that the NRA's focus is only on the internal market.

Two years ago, the Estonian NRA merged with the Competition Authority, which increased the NRA's human resources and know-how. The independence of the NRA from ministerial control is likely to improve and the independent management of the NRA is likely to be secured even further with the implementation of the TEP. However, the implementation of the TEP is unlikely to increase the financial resources of the NRA.

The biggest change in the activities of the Estonian NRA in connection with the implementation of the TEP will stem from the international co-operation of regulators and introduction of the European dimension for the NRA. Therefore, the establishment of ACER and the setting of objectives with a clear European dimension in the TEP will result in engaging the Estonian NRA in the respective EU and regional co-operation and lead to the establishment of a regional market. This co-operation and the EU dimension is especially important in the Baltic States, which technically have a common regional market with very good interconnection capacity but which still lack co-operation on all levels.

Climate Change Package

The current support regime for renewable energy was established in the Estonian Electricity Market Act but does not take into account the substantial increase in the market price of electricity. The support mechanism established under the Estonian Electricity Market Act is a fixed price for each kWh generated from renewable energy sources. However, such a system may become inadequate and too favourable towards the generators if the market price of electricity sold by these generators would substantially increase as, if a fixed price support is added to the increased market price the income of the generators might become excessive. Further, from a legal perspective, it would be difficult to reduce the level of support on which both generators and developers have already relied.

Another question relates to the use of the funds that the state will receive from the sale of allowances under the New EU ETS Directive.

Further, it has been argued that the Climate Change Package does not encourage investments into carbon dioxide free generation for two reasons. Firstly, the calculation period under the Climate Change Package is far shorter than a meaningful investment period. Secondly, the market price for allowances would discourage investments in large projects because the allowances market would react against any large-scale project and new technology by adjusting the market price of allowances just below the level at which the relevant project would be feasible.

In Estonia, there have been no significant problems with grid access for neither small renewable generators nor for any other generator. The legislative framework for grid access is quite detailed and is applied by network operators without discrimination. Therefore, the only issue that small renewable generators may have in relation to grid access is the connection cost. At the moment, there are no plans to provide a support mechanism for small renewable generators in relation to their connection fees.

At presents, there are no CCS projects in Estonia and according to the Ministry of Environment such projects are unlikely in the foreseeable future because Estonia does not have suitable geological conditions for CCS projects.

Conclusion

The introduction of the Climate Change Package and the TEP will have a significant impact on the Estonian electricity generators and industrial consumers. This impact is related to the issues of energy security that arise in connection with substantial increases in the prices of oil shale based electricity and potential imports of energy from Russia. However, the Estonian Government believes that the measures provided for in, or to be elaborated under, the New EU ETS Directive will enable Estonia to address these concerns and ensure energy security.

The practical impact of the TEP on Estonia is not comparable with the impact of the Climate Change Package, mainly because there have been no serious problems with the behaviour of the TSO and the Estonian electricity sector and, in particular, natural gas markets are very small and isolated.

Energy law in Europe

By Silke Goldberg, a senior associate in Herbert Smith's London office

The Third Energy Package of the European Union

The Policy Context: From Sector Inquiry to Third Energy Package

In 2005, the European Commission undertook an inquiry into competition in gas and electricity markets (the "Sector Inquiry") leased on Article 17 of Regulation 1/2003[1] on the implementation of the EC Treaty rules on competition, aimed at assessing the prevailing competitive conditions and establishing the causes of the perceived market malfunctioning.

The Sector Inquiry examined eight key areas of the European energy market:

1) market concentration/market power;
2) vertical foreclosure (most prominently inadequate unbundling of network and supply);
3) lack of market integration (including lack of regulatory oversight for cross-border issues);
4) lack of transparency;
5) price formation;
6) downstream markets;
7) balancing markets; and
8) liquefied natural gas (LNG).

The final report of the Sector Inquiry (the "Final Report")[2] showed, for instance, the level to which the unbundling requirements of the Second Gas and Electricity Directives, respectively, had been implemented across the EU had negative repercussions on the functioning of the market as a whole and on incentives to invest in networks.

As a consequence of the somewhat patchy implementation of the applicable unbundling provisions, the Final Report found new market entrants often lacked effective access to networks (in the case of gas transmission networks) and storage and liquefied natural gas terminals despite the existing unbundling provisions.

The Final Report pointed out further derivative reasons as to why these effects were particularly felt:

- The operators of the relevant network infrastructure were often suspected of favouring their own affiliates and thereby discriminating against other market participants.
- The continued vertical integration of energy undertakings led to a situation, according to the Final Report, in which operational and investment decisions are not taken in the interest of network/infrastructure operations, but on the basis of the supply interests of the relevant integrated company. Grid connections for power plants competing with those of the network owning energy company were also found to be affected as well as investments in interconnection infrastructure.
- The integration and concentration of generation/imports and supply interests within the same group of undertakings reduces the incentives for incumbents to trade on wholesale markets and leads to sub-optimal levels of liquidity in these markets[3].
- In relation to trades on the wholesale market, the Final Report argues that "the prevalence of long-term supply contracts between gas producers and incumbent importers makes it very difficult for new entrants to access gas on the upstream markets" and that electricity generation assets are held by "few incumbent suppliers or are indirectly controlled by them on the basis of long-term power purchase agreements […] giving the incumbents control over the essential inputs into the wholesale markets[4]". The resulting low levels of market liquidity constitute, according to the Final Report, an entry barrier to both gas and electricity markets[5].

By way of a legislative follow-up to the results of the Sector Inquiry, the European Commission published, on 19 September 2007, a proposal for a Third Energy Package which, after intense negotiations amongst EU Member States and between the Council and the European Parliament was finally adopted on 13 July 2009 and entered into force on 4 September 2009 (the "TEP").

The TEP contains three Regulations and two Directives.

- Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (the "New Electricity Directive");
- Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/ECA Gas Directive amending and completing the existing Gas Directive 2003/55 (the "New Gas Directive");
- Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators (the "ACER Regulation");

- Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 (the "New Electricity Regulation"); and
- Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005A Gas Regulation amending and completing the existing Gas Regulation 1775/05 (the "New Gas Regulation").

This overview article briefly describes and analyses the most important provisions of the TEP, which, broadly, cover five main areas:

- unbundling;
- regulatory oversight and cooperation;
- network cooperation;
- transparency and record keeping; and
- access to storage and LNG facilities.

For an analysis as to how individual aspects of the TEP will impact the regulatory regime of a specific jurisdiction, please refer to the relevant national chapter in this edition of European Energy Review.

A new unbundling regime[6]

One of the most important features in the New Electricity and New Gas Directives is the "unbundling" regime, ie the separation of the operation of gas pipelines and electricity networks at transmission level from the business of producing or supplying either gas or electricity[7].

With the shift away from centrally owned transmission (transport) network in the wake of the liberalisation of the EU energy sector, investment adequacy became a concern[8], especially in relation to vertically integrated Transmission System Operators (TSOs) who might have short-term, compelling reasons not to invest in networks if such investments would come to benefit their competitors. The Commission has consistently argued that the unbundling of TSOs will augment the EU's supply security as it seems to lead to increased investments in the network facilities. Given that the aforementioned main investment disincentive has been removed, this, together with the unbundling regime, will contribute to furthering the supply continuity and reliability.

In its Impact Assessment[9], the Commission argues that within three or four years of TSOs undergoing ownership unbundling, investments in the networks in both the electricity and gas sectors had doubled. In some cases, for instance in the Spanish REE (year before unbundling: 2002, network investment: 203m; year after unbundling: 2003, network investment: 215m), the Czech CEPS (2002: CSK 506.6m; 2003: CSK 1388.3m), and the Dutch Gasunie (2004: 114m; 2005: 257m), this upwards trend was even stronger[10].

The Commission continues to argue that the same increase in network investment cannot be shown for vertically integrated TSOs. However, there seems to be a methodical inaccuracy in the data used by the Commission: the authors of the Impact Assessment concede that for vertically integrated TSOs "there is generally less data on network investment publicly available"[11]. The Impact Assessment nevertheless proceeds to draw the comparison on the basis of the data available for some of the German, French and Italian TSOs and to argue that, whilst there was an increase in network investment in recent years, this was less significant than in the case of those TSOs that had undergone ownership unbundling[12].

Whilst the Commission and European Parliament originally backed full ownership unbundling in both the gas and electricity sectors, political pressure from Member States opposing unbundling meant that a compromise had to be found. Under the agreement between the Council and the European Parliament, Member States have three options:

- full ownership unbundling;
- the independent system operator (ISO) model; or
- the independent transmission operator (ITO) model.

The ownership unbundling approach entails a full separation between the operation of gas and electricity transmission networks from supply and production/ generation activities. Under this regime, operators of gas and electricity grids can no longer be affiliated or be part of a group which is also active in supply, generation or production/generation. The operator of the network will be required to own and control the network.

Under the unbundling regime a person or company may, under certain circumstances, still be able to hold shares in both a network operator and a supply/production undertaking as long as these shares represent a non-controlling minority interest. A minority shareholder, who may not have voting or other blocking rights in the undertakings, nor be allowed to appoint members of the undertakings' boards. No person may be a member of the boards of both undertakings. This provision is of particular relevance to non-sector investors (eg, pension funds).

In the ISO approach, vertically integrated companies may retain the ownership of their network assets, but the network is managed by an ISO. The ISO has to be an undertaking or entity which is completely separate from the vertically integrated company and must perform all functions of a network operator. The ISO entity will need to comply with the same unbundling requirements as other network operators. As such, the ISO may not hold any interest in a supply/production undertaking.

In order to strengthen the ISO model, the TEP provides for a number of additional regulatory controls: the network owner which is still active in supply or production will have to legally and functionally unbundle that part of its company which owns the network, and will be required to finance the investment decisions made by the ISO. The identity of the ISO will be approved by the Commission (with the input of the new Agency for the Co-operation of Energy Regulators); and, once appointed, the ISO has to commit to complying with a ten year network investment plan agreed by the regulatory authority.

The third option, the ITO model, was introduced as a compromise model after eight Member States felt that both ownership unbundling and the ISO approach were unsuitable for their national regulatory regimes. It preserves integrated supply and transmission companies, but obliges such companies to comply with additional rules to ensure that the two activities are operated independently, such as:

- preventing the management of TSOs from having certain positions of responsibility, interest or business relationships, directly or indirectly, with the relevant vertically integrated undertaking. This should apply to the majority of management for three years prior to their appointment;
- placing a minimum period of six months prior to the appointment of a person to the rest of the management team of the TSO during which that person may not hold any management position or exercise any other relevant activity in the vertically integrated undertaking. The rules are intended to encourage the relevant national regulator to vet the executive management;
- examining network development and investment decisions taken by an ITO to ensure they are consistent with relevant Community-wide plans;
- working against discriminatory behaviour by the ITO (and on the influence exerted by the relevant vertically integrated undertaking), and restricting the ITO's access to the capital market, to be overseen by a supervisory body; and
- enforcing compliance with the ITO provisions. Penalties, depending on the breach, are defined in respect of the turnover of the ITO or of its relevant parent company. The ultimate penalty for a persistently non-compliant ITO model would be the mandatory introduction and designation of an ISO.

The Commission is to conduct a specific review of the ITO-related provisions, using effective and efficient unbundling as a benchmark, two years after implementation. Such a review would, in turn, lead, no later than three years after implementation, to proposals to ensure fully effective independence of the TSO where necessary.

The ITO model will only be applicable in Member States where TSOs belong to a vertically integrated undertaking. Member States that have already introduced the ISO model or mandatory ownership unbundling models will not be able to revert to a TSO model. Therefore, the ITO model constitutes the lowest threshold for network unbundling which will in future be legally possible across the EU.

The ITO model can perhaps best be characterised as the "status-quo-plus" model in that it will allow Member States such as France, Austria and Germany to maintain current arrangements where transmission system operators (TSOs) belong to a vertically integrated undertaking.

In addition, the New Gas and New Electricity Directives contain, in Article 9(9) in each case, a specific provision for the situation in Scotland, where the transmission networks are owned by the two Scottish transmission companies (Scottish Power and Scottish and Southern Energy) and operated by National Grid. The current model in Scotland is considered to fall short of the ISO model but held to be an effective model for the independence of the transmission system operator.

A softened third country clause

The original Commission proposal for the TEP contained a so –called "third country clause", thought to be aimed at Russian energy giant Gazprom, which would have required non-EU countries to comply with the EU regime if they wished to acquire a significant interest in, or control over an EU transmission network, and would have given the Commission a right to intervene in relation to such acquisitions. In the adopted version of the TEP, the third country clause has been slightly softened, although the principle of the application of the unbundling regime to non-EU companies and tight controls over third country investments in EU TSOs remains firmly established.

The TEP provides that national regulatory authorities ("NRAs") are to certify TSOs before they are allowed to take up their function as TSOs. Under the new third country clause, national regulators are required to refuse certification of a TSO if the relevant company does not comply with the unbundling requirements, and its market entry would jeopardise the Member State's or the EU's security of supply. In addition, national regulators must notify the European Commission if:

- a transmission system owner or operator that is controlled by a party from a non-EU country applies for certification; or
- if any circumstances arise which would result in a party from a non-EU country obtaining control of a transmission system owner or operator.

Transmission system operators (rather than the transmission system owners) must notify the relevant NRA if any circumstances arise that would result in an entity from a non-EU country acquiring control of the transmission system or its operator. The relevant NRA must also seek the view of the European Commission as to whether the foreign entity passes the unbundling and energy security tests and take "utmost account" of the Commission's view.

When making a decision in relation to energy security, both the NRA and the Commission must consider the particular facts, international law and any agreement between the EU or the Member State and the relevant non-EU country to address energy security. The implication is that the absence of such an agreement will make an approval much less likely.

However, given that the unbundling provisions have been softened to include the ITO model, it is thought that compliance with the unbundling provisions of the TEP will now be easier for non-EU companies as TSOs may, under the ITO model, remain part of a vertically integrated energy company.

Regulatory oversight

Whilst the Second Electricity and Gas Directives[13] required Member States to establish NRAs, these had different

levels of authority and independence in various Member States. Whereas some in some Member States, NRAs had become well-established bodies with substantial powers and resources, regulatory authorities in other Member States had only recently been established, with their powers weaker or dispersed over different governmental bodies and subject to ministerial or governmental control of varying degrees

Under the New Electricity and Gas Directives[14], the NRAs have to be legally distinct and functionally independent of any other public or private entity, and that its staff and any member of its decision-making body act independently of any market interest and neither seek nor take instruction from any government or other public or private entity. For that purpose, NRAs will have to have an independent legal personality, budgetary autonomy, appropriate human and financial resources and independent management.

In the New Electricity and Gas Directives, the NRAs have seen their market regulation powers strengthened, and have been assigned additional tasks, in particular in the following areas[15]:

- monitoring compliance of transmission and distribution system operators with third party access rules, unbundling obligations, balancing mechanisms, congestion and interconnection management;
- reviewing the investment plans of the transmission system operators, and providing in its annual report an assessment of how far the transmission system operators' investment plans are consistent with the Europe-wide 10-year network development plan;
- monitoring network security and reliability, and reviewing network security and reliability rules;
- monitoring transparency obligations;
- monitoring the level of market opening and competition, and promoting effective competition, in cooperation with competition authorities; and
- ensuring that consumer protection measures are effective.

For the first time in European energy legislation, the TEP is setting specific objectives with a clear European dimension for the NRAs. The New Gas and New Electricity Directives provide that NRAs' objective is to "promot[e], in close cooperation with the Agency, regulatory authorities of other Member States and the Commission, a competitive, secure and environmentally sustainable internal market in natural gas within the Community, and effective market opening for all customers and suppliers in the Community, and ensuring appropriate conditions for the effective and reliable operation of gas networks, taking into account long-term objectives[16]".

As the Sector Inquiry has shown, the European energy market has some way to go before it functions as an effective market which would be better capable of allocating scarce resources on time, and improve investment decision making on generation and infrastructure assets.

The effectiveness of the NRA's strengthened powers will, however, need to be demonstrated in practice and it will be sometime after the adoption and transposition of the TEP into national laws before an evaluation will be possible.

Agency for the Co-operation of Energy Regulators
In order to reinforce the position of regulators at European level and to institutionalize their co-operation, the ACER Regulation creates the Agency for Co-operation of Energy Regulators ("ACER").

ACER will be governed and its institutional setting will be based on the standard rules and practices for Community regulatory agencies. However, to ensure the necessary independence of regulators at the European level, ACER will be unique in that it will have a separate board of regulators. This board will be solely responsible for all regulatory matters and decisions. It will function alongside an Administrative Board which will be responsible for administrative and budgetary matters. The Director, appointed by the Administrative Board, after consulting the Regulatory Board, will be chosen from a shortlist adopted by the Commission. The Director will represent ACER and shall be responsible for the day-to-day management. In addition, the structure of ACER will include a Board of Appeal, which is competent to handle appeals against decisions adopted by ACER.[17]

The budget of ACER will come from the general budget of the European Communities, from fees paid to ACER in relation to third party access exemption decisions where the relevant infrastructure is in more than one member state and from voluntary contributions.[18]

ACER will generally be competent to:

- issue opinions addressed to Transmission System Operators;
- issue opinions addressed to regulatory authorities;
- issue opinions and recommendations addressed to the Commission;
- take individual decisions on technical issues.

As such, ACER may, upon a request from the Commission or on its own initiative, provide an opinion to the Commission on all issues related to the purpose for which it has been established.

Other tasks of ACER include the provision of an opinion to the Commission on:

- the draft statutes, list of board members and draft rules of procedure; and
- the technical or market codes, on the draft annual work programme and the draft 10-year investment plan of the European Networks of Transmission System Operators for Electricity and Gas, respectively (see below).

ACER may, in accordance with its own work programme or at the request of the Commission, adopt non-binding guidelines to assist regulatory authorities and market players in sharing good practice and promote cooperation between the national regulatory authorities and between regulatory authorities at regional level[19].

At the request of any regulatory authority or of the Commission, ACER will also issue opinions on whether a decision taken by a regulatory authority complies with any guidelines referred to in the New Gas and Electricity Directives and New Gas and Electricity Regulations. Likewise, a national regulatory authority may call on ACER to issue an opinion where the national regulator encounters difficulties with the application of the Guidelines referred to in the same Directives and/or Regulations[20].

ACER can be the competent authority to decide the regulatory regime for infrastructure connecting at least two Member States and grant exemptions from the third party access regime where the relevant infrastructure concerned is located in the territory of more than one Member State[21].

Compared to the version of the ACER Regulation originally proposed by the European Commission, the adopted version mandates ACER with a range of additional tasks, which have widened ACER's scope considerably. ACER's tasks now include:

- participation in the development of European network codes;
- monitoring the development of the energy markets, in particular in relation to retail gas and electricity prices;
- monitoring the implementation of the TSO's 10-year infrastructure investment plans; and
- establishing non-binding "framework guidelines" on conditions for access to the network for cross-border electricity and gas exchanges[22].

Whilst ACER's competencies are often expressed to be of an advisory nature, the ACER Regulation does grant it decision making powers in some areas, in particular in relation to cross-border projects and co-operation. It also seems to assume the role of "Regulator of last resort" in situations where, in Member State with an ISO-System, the national regulator has failed to appoint an ISO in the prescribed time.

On a number of topics, ACER may issue own-initiative opinions; on other issues, the Commission may request an opinion from ACER. This relatively vague framework seems designed to leave ACER some freedom to fully define and exercise its role. Depending on whether or not its Director steps up to this challenge, ACER may well prove to be the first step towards a European regulator.

Although the ACER Regulation has entered into force in September 2009, it is unlikely that ACER will be fully operational before the Directives of the TEP have been transposed into national law, as the Articles in the ACER Regulation relating to ACER's policy and legal task will only be applied once Member States have implemented the New Electricity and New Gas Directives in order to avoid any inconsistencies in the regulatory regime.

However, various organs of ACER could be set up quickly. This would include the Board of Regulators, the Administrative Board, the Director of ACER, and his/her staff as well as the Board of Appeals. It is likely that the establishment of ACER will be a priority area of work for NRAs during the next two years. ACER is likely to be initially located in Brussels and to be relocated at a later date. So far, Slovenia, Hungary and Romania have expressed their interest in hosting ACER.

Cooperation between Transmission System Operators

It has been argued that the electricity outages in Europe over the last few years have been due to technical failures in the networks rather than shortages in generation capacity or fuel[23]. The increasing energy demand and simultaneous import dependency of the EU will require improved transmission networks able to cope with the "energy traffic" created by the export and import electricity and gas in peak demand conditions.

Cooperation in grid operation is therefore indispensable, especially in the electricity sector, where co-operation between TSOs will make an important contribution to network reliability particularly in heavily interconnected areas. The greater transparency will allow investments to be made where they are most effective and improving network reliability through coordinated investments[24].

The New Electricity and Gas Regulations[25] formalise the cooperation between transmission network operators, which at present is channelled through platforms such as GTE and ETSO, through the establishment of a European Network for Transmission System Operators for the electricity and gas sector ("ENTSO-E" and "ENTSO-G", respectively). The ENTSOs will in turn be responsible for four core areas[26]:

The first concerns the development of coherent market and technical codes needed for the integration of the electricity and gas markets, which the ENTSOs are tasked to develop in co-operation with ACER and the Commission. The benefit of such coherent European codes generally to be found in the intended elimination of inconsistencies at national level regarding, eg, tariff structures, capacity allocation rules, balancing arrangements and trading timetables and security of supply measures. At present, such differences in market design lead to market segmentation, with some national markets remaining split into different local tariff or balancing areas. However, at the same time, the development of the European network codes will necessarily cause some friction to the existing, national approaches and is likely to be a long-term project the results of which will not be available for some time to come even after the transposition of the New Electricity and New Gas Directives into national law.

The second area of co-operation concerns the research and innovation activities of common interest. Under this heading, the ENTSOs are to identify, finance and manage research and innovation activities necessary in relation to the technical development and evolution of the European electricity and gas networks, in particular to promote security of supply and energy efficiency and to enable penetration of low carbon technologies.

The third area of co-operation relates to the coordination of grid operation, ie, to exchange network operational information and the coordinated publication of information

on network access, and the fourth main area of co-operation is the co-ordination of the planning of network investments and the monitoring the development of the transmission network capacities. The two ENTSOs must publish a European-wide and ten year forward-looking investment plan every two years.

The overall effect of the increased co-operation of TSOs in the framework of the strengthened ENTSOs will undoubtedly be a greater degree of market harmonisation which in turn might result in better network and operational reliability and as such in better supply security. Therefore, given the range of issues with which the new ETSOs will be charged, the question arises whether the ETSOs are only a stepping stone on this journey towards greater network harmonisation and interoperability, the next stop being a single European TSO under ACER as the single European regulatory authority.

Transparency and record keeping obligations
The New Electricity and New Gas Directives also set out a number of record keeping obligations on electricity generators, gas network operators, and supply undertakings who will be required to keep record of all data relating to operational decisions and trades.

The Commission hopes that such obligations will enable regulators to effectively assess allegations of market abuse and study past behaviour of market participants. In particular, the Commission believes that a review of the relevant records will enable regulators to investigate whether operational decisions were based on sound economic reasoning rather than attempts to manipulate the market. The Commission has stated that these record keeping obligations will, in case of some types of traders (eg, banks), not be in addition to relevant record keeping obligations of such traders under the Markets in Financial Instruments Directive.

It is therefore proposed that prior to adoption of guidelines defining record keeping requirements, the Agency for the Cooperation of Energy Regulators and the Committee of European Securities Regulators (CESR) will advise the Commission on the content of the relevant guidelines.

Access to storage and LNG facilities
The New Gas Regulation largely serves to make the currently voluntarily applicable Guidelines for Good Third Party Access Practice for Storage System Operators (GGPSSO) of the Madrid Forum binding on relevant market participants as the GGPSSO were generally found not to have been widely implemented.

In addition, the New Gas Directive establishes legal and functional unbundling rules in relation to storage system operators who are part of supply undertakings[27] and enhance the powers of NRAs to oversee access to storage[28].

Taken together, the New Gas Directive and the New Electricity Regulation are set to overhaul the current rules for exemptions from regulated third party access for major new infrastructure[29]. The European legislators believe that a streamlined procedure for applying for and granting exemptions, as well as a clarification of some of the conditions, would benefit the market generally. The Article 36 of the New Gas Directive is therefore considerably more detailed than the currently applicable Article 22 of the Second Gas Directive, thus providing a clear list of applicable conditions and detailed procedural provisions. This procedure however, has at the same time become more complex due to the added involvement of ACER in the decision making process where the infrastructure crosses the border of two or more Member States.

In addition, the Commission will be proposing guidelines to assist applicants and regulators in applying the conditions for an exemption. Under these guidelines, the minimum requirements for the allocation of capacity and congestion management provisions for the new infrastructure that have so far been applied on a case-by-case basis are likely to become general requirements applicable to all interested parties.

Other TEP elements
The New Gas Directive also promotes "regional solidarity" for energy supply security by requiring Member States to co-operate in the event of "severe disruptions" of gas supply. This could be particularly important in case of interrupted supply as seen this winter in Hungary and Slovakia as a result of the Russia–Ukraine gas dispute[30].

In addition, Member States are tasked with taking measures to address energy poverty such as National Energy Action Plans or benefits in social security systems to guarantee necessary energy supply to vulnerable customers[31].

Implementation - the way forward
Member States have until March 2011 to transpose the majority of the provision in the New Electricity and Gas Directives into national law, the exception being the "third country clause" which will need to be transposed by March 2013. The New Gas and Electricity Regulations and ACER Regulation have entered into force as of September 2009; however, in order to avoid a discrepancy between the exemption regime for new infrastructure in the gas sector, which is contained in the New Gas Directive and the corresponding regime in the electricity sector which is contained in the New Electricity Regulation, the latter will only be applied as of 3 March 2011. Likewise, Articles 5-11 of the ACER Regulation, which deal with detailed tasks of ACER, will only be applied from that date.

Conclusion: The Third Energy Package of the European Union

Whilst the introduction of de-facto four unbundling options, the TEP did not bring the clear sea-change for the current unbundling situation that the Commission had originally set out to achieve. However, the TEP does bring considerable clarification on a number of existing rules, particularly in the area of third party access exemptions.

The TEP also gives legal status to Commission guidelines and generally expands the Commission's competence to give guidelines powers in a number of legal policy areas, which is a change from the current practice by which the Commission de-facto already issues such guidelines, through the publication of non-binding staff working papers, eg, on the meaning of legal, managerial and accounting unbundling or the third party access exemption regime which were never formally legitimized but had come to be perceived as official guidelines on the relevant topics.

The harmonisation of the competencies of NRAs and the introduction of ACER has been interpreted as a necessary step towards a European regulator, although some commentators have expressed concerns, also against the background of the new European objectives for the NRAs, that the latter will be kept busy with a rich array of monitoring tasks whilst decision making power in questions of regulatory policy is being shifted to ACER and the ENTSOs.

Whilst some voices can already be heard to wish for a Fourth Energy Package, given that the full effect of the transposition of the TEP into national law will only become apparent in 2013 it is perhaps too early to venture an opinion of the effectiveness of the TEP whose success or otherwise will necessarily lie in its practical application across all Member States.

The EU Climate Change Package

In January 2008, the European Commission proposed a legislative package focussed on a range of measures designed to shape the European Union's climate change policies and actions (the "Climate Change Package") which was adopted at first reading in the co-decision procedure, having been discussed at the European Council of 12 December 2008. In accepting all of the amendments the European Parliament adopted on 17 December 2008, the Council definitively adopted the new acts on 6 April 2009, thereby passing the Climate Change Package into European law.

The Climate Change Package contains four Directives, one Regulation and one Decision:

- Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community (the "New EU ETS Directive");
- Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 (the "GHG Reduction Decision");
- Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directive 2001/77/EC and 2003/30/EC (the "Renewable Energy Directive");
- Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 200/60/EC, 2001/80/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 (the "CCS Directive");
- Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 98/70/EC as regards the specification of petrol, diesel, and gas oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC (the "Biofuel Directive"); and
- Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO2 emissions from light-duty vehicles (the "Emission Standard Regulation").

In this overview article, the key elements of the Climate Change Package are described and analysed. For a detailed analysis as to the impact the Climate Change Package will have in EU Member States, please refer to the relevant national chapters in this edition of European Energy Review.

New EU ETS Directive

The New EU ETS Directive amends the currently applicable version of the EU Emissions Trading Scheme and introduces a number of important changes to the EU ETS that will take effect from Phase III (2013-2020) of the scheme, and provide a clearer sense of the future of the scheme. The main changes include a declining emissions cap, increased auctioning of allowances and longer trading phases. The increase in auctioning will be introduced more slowly than was proposed by the European Commission when it announced the climate and energy package in January 2008.

In particular, the New EU ETS Directive expands the EU ETS to cover new activities and gases, including:

- carbon dioxide emissions from the petrochemicals, ammonia and aluminium sectors;
- nitrous oxide emissions from the production of nitric, adipic and glyocalic acid; and
- perfluorocarbon emissions from the aluminium sector.

Although much of the attention on Phase III has surrounded its expansion, the New EU ETS Directive confirms that the EU ETS will continue to be focused on large energy-intensive sectors.

One of the main features of the New EU ETS[32] Directive is the increased harmonisation and centralisation of the operation of the EU ETS . As such, the allocation of allowances will be made centrally rather than by Member States under National Allocation Plans. This change

from the current practice which EU ETS participants have claimed has lead to competitive distortions within sectors due to different allocation rules being adopted by Member States. Likewise, the administration of the New Entrant Reserve (equivalent to 5% of total annual allowances to be awarded) will be centralised; and records relating to allowances, and trading in allowances, will be held in a central register rather than in national registries. The proceeds from auctioning 300 million allowances reserved for new entrants to the EU ETS will be used to support renewable energy projects and up to 12 CCS demonstration projects[33].

Overall, the New EU ETS Directive decreases to the now EU-wide allowance cap. From 2013, the cap will decrease year on year by 1.74% of the Phase II cap from the total amount of 1.974 billion allowances in 2013 to 1.720 billion in 2020 (equivalent to an overall reduction of 21% in allowances available by 2020 compared to 2005). After 2020, the cap will continue to decrease by 1.74% per year, but this rate of reduction may be revised by 2025; and allowances issued from 2013 onwards can be banked for use in any subsequent phase of the scheme[34].

A major change will be a shift away from allocating allowances to operators free of charge, to a process involving the compulsory auctioning of allowances. Free allocations of allowances will be phased out progressively, with 20% of available allowances being auctioned in 2013, increasing to 70% in 2020, with a view to the full quota of allowances being auctioned in 2027[35].

For the electricity sector, stricter rules will apply in that no allowances will be allocated free of charge to electricity generators as of 2013 (except for district heating schemes, high-efficiency combined heat and power schemes, and where eligible Member States have opted to derogate from this rule). Member States are to conduct auctions, with 90% of the allowances to be auctioned being given to Member States in proportion to their verified emissions for 2005, and the remaining 10% of allowances being given to Member States with lower per capita income. A further provision has been added to allow a redistribution of 2% of auctioned allowances to take into account Member States which, in 2005, had achieved greenhouse gas emissions reductions of at least 20% compared to 1990 levels (the twelve "new" Member States and Greece and Portugal will benefit from this measure)[36].

The option available to Member States to exempt small installations has been extended to cover all small installations regardless of sector or the nature of the activity undertaken. The emissions threshold below which an installation is classified as "small" has been raised from 10,000 to 25,000 tonnes of carbon dioxide emitted per year. In addition, in the case of combustion installations, the capacity threshold has been raised from 25 MW to 35 MW. Member States have also been given the option of excluding hospitals from the exemptions[37].

Member States may compensate certain installations for EU ETS costs passed on to them through higher electricity prices if these costs might otherwise expose them to the risk of carbon leakage. The Commission will amend its guidelines on state aid for environmental protection to allow this compensation to be granted.

In order to assist Member States with less developed generating infrastructure and economies, certain Member States may opt to derogate from the rule preventing the allocation of allowances to electricity generators free of charge. This option will only be available where certain conditions relating to the interconnectivity of the electricity grid, the share of fossil fuels in electricity generation, and GDP per capita are fulfilled. Even if the option is exercised, 30% of the allowances available for electricity generators must be auctioned in 2013, rising progressively to 100% by 2020, and the Member State must invest in energy infrastructure, clean technologies and energy diversification an amount equal to the market value of the free allocation. In addition, free allocations can only be made for emissions from installations that are operational or under construction no later than the end of 2008.

The adopted version of the New EU ETS Directive contains detailed provisions as to the criteria that will be used to determine sectors exposed to a significant risk of "carbon leakage" (such as the relocation of manufacturing or other activities covered by the scheme outside the EU where similar emission reduction constraints have not been imposed). The Commission will identify those sectors that will face significantly increased production costs, ie, costs comprising (more than 5% of its gross value added) and international competition (more than 10% non-EU imports and exports). The publication of the Commission's list of affected sectors is due by 31 December 2009. By June 2010, the Commission will review carbon leakage generally in light of any international agreement that is reached which may substantially reduce the risk of carbon leakage. The Commission has stated that this could involve maintaining or adjusting the proportion of allowances received free of charge by sectors deemed to be at risk of carbon leakage[38].

With regard to credits generated by Clean Development Mechanism (CDM) and Joint Implementation (JI) projects, the New EU ETS Directive envisages two scenarios[39].

Generally, the New EU ETS Directive extends the ability to use credits generated by CDM and JI projects issued in respect of emission reductions occurring before 2013 or generated by projects established before 2013 into Phase III of the EU ETS.

Prior to or without a global successor agreement to the Kyoto Protocol, operators of relevant installations will be able to use credits allocated to them for the period 2008-2012 that they have not already used. This could represent up to more than one third of the emission reductions required between 2013 and 2020. However, in this scenario, only credits from project types which were accepted by all Member States during the 2008-12 period will be eligible for use to guarantee that JI/CDM credits are treated equally throughout the EU ETS. Provided that the new credits do not increase the overall number

of credits available, JI/CDM credits from new energy efficiency or renewable energy projects that promote sustainable development could be used in accordance with agreements concluded with third countries; and JI/CDM credits derived from new projects that started from 2013 onwards would be allowed from Least Developed Countries without the need to conclude an agreement with these countries (if CERs stem from project types accepted by all Member States during 2008-2012)[40].

If a global successor agreement to the Kyoto Protocol has been reached, the limit on the use of JI/CDM credits will be automatically increased by up to half of the additional reduction effort and operators of participating installations may, in addition to the credits provided for in the New EU ETS Directive, use CERs. ERUs or other approved credits from third countries which have ratified the international agreement on climate change succeeding the Kyoto Protocol[41].

In another change from current practice, the EU ETS will, from 2013, be extended to cover the capture, transport and storage of carbon dioxide. However, in order to support the development of CCS, operators will not need to surrender any allowances for carbon dioxide that is permanently stored in a licensed CCS facility (see section below on the CCS Directive).

Member States are obliged to transpose the New EU ETS Directive into national law by 31 December 2012. In order to avoid any legal uncertainty, the New EU ETS Directive specifies that the relevant directives amended by the New EU ETS will continue to apply until 31 December 2012.

The GHG Reduction Decision

The GHG Reduction Decision sets binding greenhouse gas emissions targets for individual EU Member States for sectors of the economy not covered by the EU ETS and provides an indication of the extent to which Member States will be required to address and reduce emissions from non-EU ETS sectors (such as surface transport, construction, and agriculture) over the next decade.

The targets for individual Member States amount to an average reduction of 10%[42]. This reduction, combined with the agreed 21% reduction for EU ETS sector emissions, is designed to ensure that the EU meets its current overall target of a 20% reduction in emissions by 2020.

Those Member States with lower per capita income and strong prospects for future economic growth (mostly the "new" Member States) may increase their greenhouse gas emissions by up to 20% by 2020 compared to 2005 levels, whereas Member States with higher income per capita must reduce their emissions by up to 20% by 2020. A reduction target of 16% has been set for the UK, and a reduction target of 14% has been set for Germany and France. The individual targets are the same as those proposed by the Commission when it announced the climate and energy package in January 2008, but they will be reviewed if an international agreement succeeding the Kyoto Protocol can be agreed[43].

In order to set a trajectory to meet the target of a 20% reduction in emissions by 2020, the GHG Reduction Decision also sets annual binding emissions limits for each Member State. Several flexibility measures are provided allowing Member States to bank and borrow up to 5% of limits between years; transfer "overachieved" emissions reductions between Member States; and use, without limit, credits generated by emissions reduction projects within the EU[44].

The GHG Reduction Decision allows Member States that are required to reduce their emissions, or are allowed to increase them by up to 5%, to use an additional amount of CERs equal to 1% of 2005 emissions. These CERs can come only from CDM projects in less developed countries and are only available to Member States that meet certain conditions (de facto, it is thought that the only Member States that could benefit from this measure are Austria, Finland, Denmark, Italy, Spain, Belgium, Luxembourg, Portugal, Ireland, Slovenia, Cyprus and Sweden)[45].

Member States already monitor and report greenhouse gas emissions annually. The GHG Reduction Decision now provides that, if a report indicates non-compliance with a limit for a given year (taking into account any use of the flexible measures or CDM/JI credits), the Member State will have to submit a corrective action plan to the Commission detailing the measures they intend to take to rectify the situation[46]. If a Member State fails to take corrective action, formal enforcement action can be taken[47].

The GHG Reduction Decision does not, however, include the enforcement mechanism requested by the European Parliament which would have required a Member State that fails to meet its target to pay an "excess emissions penalty" equivalent to the fines payable under the EU ETS - ie, €100 per tonne of carbon dioxide emitted.

The GHG Reduction Decision has already entered into force.

The Renewable Energy Directive

The Renewable Energy Directive promotes the use of renewable sources for electricity generation and sets a target for energy from renewables of 20% of total energy consumption across the EU by 2020, including a further target of 10% for energy from renewable sources for each Member State's transport energy consumption.

In order to achieve the overall targets, the Renewable Energy Directive sets a mandatory national target for each Member State stating the overall share of gross energy consumption that must come from renewables, taking the differing levels of progress achieved by Member States to date into account[48]. The mandatory national targets will provide certainty for investors and should encourage technological development. To ensure that the mandatory national targets are achieved, Member States are required to follow an indicative trajectory towards the achievement of their target and each will produce a National Action Plan. The plan will set national targets for the share of energy from renewable sources to be used to meet demands for transport, electricity, heating and cooling in 2020.

Member States are free to decide their preferred mix of renewable sources, but must present National Action Plans, based on an "indicative trajectory", to the Commission by 30 June 2010[49]. Progress reports must then be submitted every two years. The plans will need to be split so that three sectors are identified separately, namely: electricity, heating and cooling, and transport[50].

Member States can apply financial support schemes in relation to the mandatory targets, although it will not be mandatory to link these with schemes in other Member States. The Renewable Energy Directive also lays down rules relating to statistical transfers between Member States, joint projects between Member States and with non-EU countries, Guarantees of Origin, administrative procedures, information and training, and access to the electricity grid for energy from renewable sources[51].

The Renewable Energy Directive contains a series of interim targets for all Member States, in order to ensure steady progress towards the 2020 targets:

- 25% of the overall 2020 target to be achieved between 2011 and 2012;
- 35% of the overall 2020 target to be achieved between 2013 and 2014;
- 45% of the overall 2020 target to be achieved between 2015 and 2016; and
- 65% of the overall 2020 target to be achieved between 2017 and 2018.

There are no financial penalties for failing to achieve these interim targets. The Commission does however reserve the right to issue infringement proceedings if Member States do not take "appropriate measures" to try to meet their targets.

Two or more Member States can cooperate on joint projects relating to the production of energy from renewable sources. Member States can also join forces with one or more non-EU countries on renewable electricity generation projects. Member States will be permitted to link their national support schemes to those of other Member States, and will be allowed under certain circumstances to count the import of "physical" renewable energy from third-country sources towards their targets. It will not be possible to count "virtual" imports, based on investments in non-EU countries towards a Member State national target[52].

A system requiring open trading in renewable energy certificates between participants across Member States was rejected in favour of a system only permitting Member States themselves to transfer excess renewables credits. These "statistical transfers" can only take place if the Member State has reached its interim renewables targets[53].

The Renewable Energy Directive states that Guarantees of Origin in relation to renewable energy are only to be used to prove the quantity of energy from renewable sources in a supplier's energy mix to final consumers. Member States must ensure that a Guarantee of Origin is issued in response to a request from a generator of renewable electricity and that guarantees will be given in relation to each 1MWh generated[54].

In addition, the Renewable Energy Directive establishes binding criteria to ensure that biofuel and bioliquid production is environmentally sustainable. For the purposes of meeting national targets, energy from these sources must fulfil the requisite criteria. The criteria relate to biodiversity, the protection of rare, threatened or endangered species and ecosystems, and greenhouse gas emissions savings.

From 2017 onwards, the greenhouse gas emissions savings resulting from the use of biofuels produced in existing biofuel production plants must be at least 50% compared with the emissions from using fossil fuels. The greenhouse gas emissions from the use of biofuels produced in new installations must be at least 60% lower than those from fossil fuels. Unlike traditional, "first-generation" biofuels, it is thought that second-generation biofuels do not present the same risks to the security of food supplies as these biofuels are, for example, produced from wastes, residues, or biomass such as algae, wood residues, or paper waste. To promote those new, more sustainable alternatives, "second-generation" biofuels will receive double credits for the purposes of the overall 10% transport target[55].

In the past many smaller producers of renewable electricity have argued that a lack of transparency and restricted access to electricity grids has prevented them from competing in the market. The directive requires Member States to ensure that transmission and distribution system operators provide either priority access or guaranteed access to the grid for electricity produced from renewable energy sources. System operators will be required to provide any new generator wishing to be connected to their network with a timetable and a comprehensive estimate of costs associated with the connection. In addition, Member States are required to develop transmission and distribution grid infrastructure, intelligent networks, storage facilities and systems that can be operated safely while accommodating renewable generation[56].

In their National Action Plans Member States are required to assess whether there is a need to build new district infrastructure for heating and cooling using energy produced from renewable sources (including large biomass, solar and geothermal facilities) in order to achieve their mandatory 2020 national target. Local and regional administrative bodies should be advised to "ensure equipment and systems are installed for the use of heating, cooling and electricity from renewable sources, and for district heating and cooling when planning, designing, building and refurbishing industrial or residential areas". In particular, they should be encouraged to include heating and cooling systems when planning city infrastructures[57].

Member States must transpose the Renewable Energy Directive by 5 December 2010.

The CCS Directive

The climate change and renewable energy package includes a directive which provides a framework for carbon capture and storage in the EU (the CCS Directive) supporting CCS as an emissions reduction option.

The key provisions of the CCS Directive are:

- the creation of a permit based CCS storage regime to be administered by Member States and the amendment of existing EU legislation which prohibits or inhibits CCS[58];
- the establishment of a regime for operators holding permits to pass long-term liability for leakage from storage sites to the licensing Member State, provided certain handover criteria are met[59]; and
- requirements for all new combustion plants in the EU built without CCS to have space for CCS equipment and to have carried out studies into the availability of storage sites and the feasibility of "retro-fitting" capture equipment[60].

By joining up the funding mechanism under the New EU ETS Directive and the provisions of the CCS Directive, the Climate Change Package provides that CCS will be financially incentivised through the EU ETS from Phase III (2013 – 2020) and Member States can opt-in for the inclusion of CCS in Phase II (2008 – 2012) (see section on the New EU ETS Directive above). Specific funding for CCS is made available through its inclusion in the EU ETS and allocation of up to 300 million EU ETS allowances from the new entrant reserve to fund up to 12 CCS demonstration projects[61]. Support for such projects will be provided via Member States and the mechanics of how and when such support will be made available are currently unclear.

As a result of the CCS Directive, carbon dioxide stored in geological formations will not be classed as 'emitted' for the purposes of the EU ETS so that credit is given to power stations with CCS technology which will not be required to surrender allowances for carbon dioxide which is stored.

The CCS Directive envisages two types of permit. The first is an exploration permit to allow the specified exploration works to be carried out and entitling the permit holder to explore the area covered by the permit for suitable geological formations on an exclusive basis[62]. The second is a storage permit for the development and utilisation of geological formations within the permit area as storage sites for carbon dioxide, and allows the injection of carbon dioxide[63].

The criteria for the grant of a storage permit are rigorous and involve substantial site characterisation in order to assess its suitability for permanent storage. Applicants must also satisfy technical and financial requirements. As well as delineating the storage complex, storage permits will contain a number of important provisions including the requirements for operating the storage facility, the total quantity of carbon dioxide to be stored, the requirements with regard to the composition of the carbon dioxide stream and an approved monitoring plan[64].

Permits will be issued by the competent authority in each Member State. However, the Commission proposes to review and comment on each individual storage permit application before it is awarded and Member States will be obliged to take the Commission's comments into consideration[65].

The CCS Directive includes provisions relating to liability for damage resulting from the leakage of carbon dioxide from a storage site, both in terms of damage to the local environment and the climate. With regard to the local environment, the CCS Directive applies the Environmental Liability Directive (2004/35/EC) to the storage of carbon dioxide to ensure the prevention and remedy of any damage by an operator of a storage facility. Liability for climate damage resulting from leakage will be covered by the inclusion of CCS in the revised EU ETS Directive so that EU ETS allowances will need to be surrendered for leaked emissions.

The CCS Directive requires the storage operator to take corrective measures to remedy any leakage, and the storage operator remains responsible for the storage site for as long as it represents a risk (even after closure), until the site is handed over to the competent authority of the relevant Member State[66]. The relevant Member State is required to assume responsibility for storage sites in its territory from the point of handover[67]. Once a handover has occurred, subject to an important caveat, there should be no further liability for the operator.

The CCS Directive contains a provision stating that where there is fault on the part of the operator, including deficiencies in data, concealment of relevant information, negligence, wilful deceit or a failure to exercise due diligence, the competent authority may recover the costs incurred from the operator, even after the transfer of responsibility has taken place. This is a broad derogation from the principle of liability handover. How this is translated into national legislation will be of great interest to operators of storage facilities[68].

As part of the permitting regime, Member States may require operators to lodge financial security for their prospective liabilities before the injection of carbon dioxide into a storage facility commences. The scope of these liabilities and the form that the security will take is a matter for individual Member States to decide and will no doubt come under scrutiny when the CCS Directive is implemented at national level. In addition, Member States will be entitled to require a contribution from the operator to cover future liabilities as a condition of the handover of responsibility. Member States are permitted to set the level of this contribution subject to a minimum of not less than the cost of monitoring the site for 30 years post-closure[69].

Whilst stopping short of compulsory CCS for new power plants, there are requirements on the operators of all new combustion plants in the EU with a capacity in excess of 300MW which are built without CCS capabilities to have assessed whether suitable storage sites are available, whether transport facilities are technically and economically feasible and whether it is technically and economically feasible to retrofit the plant for carbon dioxide capture. The relevant competent

authority in the Member State should also ensure that the operator has secured suitable space on the site for the installation of equipment necessary to capture and compress carbon dioxide[70].

By amending directives relating to the waste and ground water to permit to permit the injection of carbon dioxide into storage sites, the Climate Change Package removes a significant part of the current prohibitions on CCS under EU legislation.

In addition to the financing support mechanisms in the CCS Directive, financial support for carbon capture and storage is also forthcoming under the European recovery plan. On 20 March 2009, EU leaders agreed proposals for 5 billion of investment in energy and broadband infrastructure projects as part of the EU recovery plan. The 5 billion comes entirely from unspent money in the EU budget and a total of 1,050 million has been proposed for investment in five CCS demonstration projects. Under the plan Germany, the UK, Poland, the Netherlands and Spain will all receive 180 million each, Italy will receive 100 million and France will receive 50 million. 13 projects are shortlisted as funding candidates, among them Hatfield, Kingsnorth, Longannet and Tilbury in the UK, Eemshaven and Rotterdam in the Netherlands and Hürth and Jänschwalde in Germany.

Member States have to transpose the CCS Directive into national law by 25 June 2011.

The Biofuel Directive

The measures introduced by the Biofuel Directive are expected to give a significant boost to the European biofuels market.

The Biofuel Directive amends two previous European directives relating to the quality of petrol and diesel (Directive 98/70/EC of the European Parliament and Council relating to the quality of petrol and diesel fuels as amended by Directive 2003/17/EC). Broadly, the changes aim to introduce a mechanism for the reporting of and reduction in the life cycle of greenhouse gas emissions from fuel; enable the more widespread use of ethanol in petrol; and tighten environmental quality standards for specified fuel parameters.

The Biofuel Directive obliges fossil fuel suppliers to reduce greenhouse gas emissions from their fuels throughout their lifecycle by 6%, a reduction from the Commission's initial proposal for a binding 10% reduction. However, the Commission will review the target in 2012 in the light of technological advances (such as the use of electricity in transport) reserving the option to increase the reduction target by afurther 2%[71]. Subject to that review, a further 2% reduction is expected to be achieved through the use of Certified Emissions Reductions obtained from projects related to flaring reductions which are not linked to EU oil consumption.

Perhaps the most significant change brought about by the Biofuel Directive is the increase in the permissible content of biological components of petrol to up to 10% by the phasing in of 10% Ethanol (E10) petrol. Petrol meeting current requirements (containing up to 5% by volume of ethanol) will continue to be marketed until 2013, with the possibility of an extension. This transitional period has been introduced to mitigate the potential damage that would be caused to vehicles which are not calibrated or covered by a warranty allowing the use of petrol with an ethanol content of over 5% by volume[72].

The Biofuel Directive also provides for changes to the current diesel specifications, allowing a content of fatty acid methyl ester (FAME) of up to 7% by volume, with no limit on other advanced biodiesel blends in the conventional diesel specification. Although allowances are made for Member States that want to make biodiesel blends with a FAME content of 10% by volume available, as a result of the new specification, diesel constituting up to 7% by volume of FAME (B7) is likely to be the grade of diesel predominately available on the European market[73].

European legislators intend the Biofuel Directive to incorporate sustainability criteria for biofuels used to meet greenhouse gas reduction requirements. Despite criteria being set out in the Renewable Energy Directive, these criteria had not been agreed by the time that the package was adopted. The European Commission has been tasked with developing a methodology to assess the environmental impact of biofuels across their lifecycle by December 2010[74].

Member States have until 31 December 2010 to transpose the Biofuel Directive into national law. Once implemented, it is likely to have a significant impact on fuel suppliers throughout the distribution chain as well as fuel producers, who more so than other affected parties, will have to adapt to meet the new quality criteria.

The Emission Standard Regulation

Despite improvements in fuel efficiency, CO_2 emissions from road transport across the EU increased by 26% between 1990 and 2004, and now account for almost a third of the EU's total emissions. When it became apparent that voluntary car industry reduction targets would not be met, the European Commission proposed new legislation to impose enhanced emissions performance requirements. The Emission Standard Regulation sets the first legally-binding standards for CO_2 emissions from passenger cars, requiring reductions from current levels to an EU average for new cars of 130g of CO_2 per kilometre travelled through the adoption of improvements in motor technology. A further 10g per kilometre reduction in emissions will be sought through additional measures, including the increased use of sustainable biofuels and more efficient vehicle features such as better air-conditioning systems or tyres.

The Emission Standard Regulation is much less demanding than the European Commission's original proposal, which had sought to impose significant financial penalties for missing targets that would have applied in full from 2012. The car industry argued strongly that lead-in times for new car development would have made complying with the proposed targets within this timeframe impossible.

The obligations will now be phased in between 2012 and 2015. From 2012, on average 65% of a manufacturer's newly registered cars will need to comply, with the manufacturer's target. This will grow to 75% in 2013, 80% in 2014 and 100% from 2015 onwards[75]. Additional credit will be given for very low emission vehicles, and in certain circumstances for biofuel-capable cars, until 2016. The target for each manufacturer will be set by reference to a limit value curve, with manufacturers of heavier cars being allowed higher emissions than those of smaller cars, but also being required to make steeper cuts from current fleet average emission levels[76].

Manufacturers (including companies within the same manufacturing group) may agree to pool together to meet the emissions targets. In that case, a nominated pool manager is responsible for paying any penalties, and evidence must be provided that it is sufficiently financially robust to do so. In order to discourage cartel behaviour amongst pool members that are not part of the same group of companies, pools must allow open, transparent and non-discriminatory participation on commercially reasonable terms, and the usual anti-competition rules apply. Pool members are not allowed to share information (eg, on pricing or research developments) other than that which directly relates to compliance with their targets. This does not preclude collaboration agreements which are unconnected with the pooling agreement and do not otherwise violate applicable laws or regulations[77].

Small scale manufacturers (registering fewer than 10,000 cars per year) and niche manufacturers (registering fewer than 300,000 cars per year) may benefit from lower targets. Small scale manufacturers may put forward a reduction target consistent with their reduction potential in light of economic, technological and market considerations, but such reduced targets are only available for a maximum of five years, whereas niche manufacturers, instead of having a target set by reference to the limit curve, are able to apply for a lower target of a reduction of 25% from 2007 emission performance levels. These lower targets must still be achieved by 2012 and the same financial penalties apply as for larger manufacturers[78].

Manufacturers may seek to gain credit of up to 7g of CO_2 per kilometre travelled for eco-innovations shown to improve CO_2 emissions performance, provided the improvements go beyond what is otherwise required by the regulation. However, over time, eco-innovations (and in particular reductions in car weight) will be subsumed into required standards and no extra credit will be given[79].

The penalty system has also been amended from the original proposal, so that manufacturers who miss the target by a small margin are penalised less severely. The fines will now be 5 per gram per new car registered for the first gram per kilometre over target, 15 for the second gram per kilometre over target, 25 for the third gram per kilometre and 95 for each gram above three grams until 2019. After 2019 the full penalty of 95 for each gram per kilometre above the target will apply[80].

From 2011 onwards manufacturers will be notified by the Commission of any shortfall in meeting their targets for the previous year. Inaccuracies can be challenged and the notice will be confirmed by 31 October of the relevant year. Details of each manufacturer's performance will be published[81].

A longer-term target of 95 grams of CO_2 per kilometre travelled by 2020 is also specified in the regulation. Mechanisms for meeting this goal and penalties for missing it will be set following a review of the regulation which will be completed by 2013. That review will encompass a review of all targets applying from 2012 and the smallscale manufacturer and niche market derogations. It will also include an overall assessment of the impact of the regulation on the car industry and dependent industries such as parts providers[82].

The Emission Standard Regulation has already entered into force and is directly applicable in all EU Member States, although its measures will be introduced gradually between 2010 and 2016.

The way ahead for Europe's climate change regime

Taken as a whole, the Climate Change Package is the EU's first attempt to create a comprehensive European legal regime covering the carbon and renewable energy sectors, helping to inform investment decisions in these sectors, by securing a future for carbon trading and laying the foundations for future investment in renewable technologies, biofuels and the development of carbon capture and storage.

At policy level, the Climate Change Package aims to achieve a reduction of at least 20% in the levels of greenhouse gas emissions by 2020 – rising to 30% if an international agreement is reached committing other developed countries to comparable emission reductions and economically more advanced developing countries to contributing adequately according to their responsibilities and respective capabilities; and a 20% share of EU energy consumption to be generated from renewable sources by 2020.

As the Climate Change Package will not be fully transposed into national law until 2012, it will be some time before its real impact can be assessed. In addition, the European Parliament and the Council have made it clear throughout the legislative process that the Climate Change Package is not the final word in the EU's climate change initiative, emphasising that the EU now has to set its sight beyond 2020 to make even greater cuts in greenhouse gas emissions to meet the target of halving global emissions by 2050. This is likely to include stricter future emissions limits affecting more sectors, but will also involve stimulating technological developments to ensure that industry players, particularly those in energy intensive industries, implement new technologies.

footnotes

1. Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty (OJ L 1 of 4.1.2003, p.1), as amended by Council Regulation (EC) No 411/2004 (OJ L 68 of 6.3.2004, p.1).
2. DG Competition Report on Energy Sector Inquiry, Brussels, 10 January 2007, SEC (2006)1724 (the "Final Report").
3. One might add that this does not only reduce the incentive for wholesale market trades for new entrants, but also for existing, integrated energy undertakings who will not see the need to engage in such trade outside its own group undertakings.
4. The position of the Commission on long-term contracts in the energy sector is somewhat ambiguous: The Gas Supply Directive (see below) provides an annex with a non-exhaustive list of "instruments to enhance the security of gas supply" and explicitly lists long-term contracts as such an instrument and Article 32(1) of Directive 2003/55/EC exempts long-term contracts for gas transmission concluded pursuant to Article 3(1) of Directive 91/296/EEC. Yet, the Final Report suggests that long-term contracts are problematic from a competition point of view as they necessarily commit pipeline capacity over a significant period of time. For the purposes of the TEP, the Commission has decided that further legislative measures concerning long-term contracts in gas do not appear to be proportionate.
5. Final Report, p.7.
6. The unbundling provisions are contained in Articles 9-11 and 13-14 New Electricity Directive and Articles 9-11 and 14 New Gas Directive.
7. Articles 9 in the New Electricity Directive and New Gas Directive, respectively.
8. T. Jamasb, M Politt, Energy Policy 36 (2008) 4584-4589, page 4585.
9. Commission Staff Working Document, Impact Assessment Summary Accompanying the legislative package on the internal market for electricity and gas, SEC(2007) 1180/2.
10. All figures in this paragraph are quoted as per Annex III of the Impact Assessment.
11. Impact Assessment, page 33.
12. Ibid.
13. Directives 2003/54/EC and 2003/55/EC, respectively.
14. Article 35 New Electricity Directive, Article 39 New Gas Directive.
15. Article 37 New Electricity Directive, Article 41 New Gas Directive.
16. Article 6 (a) New Electricity Directive, Article 40(a) New Gas Directive.
17. On the structure of ACER, see Article 3 of the ACER Regulation.
18. Article 21 ACER Regulation.
19. Articles 5 and 6 ACER Regulation.
20. Article 7 ACER Regulation.
21. Article 9(1) ACER Regulation.
22. Article 6(6)ff ACER Regulation.
23. See, for instance, Jamasb, Tooraj and Pollitt, Michael, ibid.
24. Impact Assessment page 54.
25. Articles 5 of the New Electricity and New Gas Regulations, respectively.
26. Articles 8 of the New Electricity and New Gas Regulations, respectively.
27. Article 15 New Gas Directive.
28. Articles 33 and 41 (m) New Gas Directive.
29. Article 36 New Gas Directive and Article 17 New Electricity Regulation.
30. Article 6 New Gas Directive.
31. Article 3(4) New Gas Directive, Article 3(7) New Electricity Directive.
32. Art 1 (12) of the New EU ETS Directive.
33. Art 1(12 (8)) of the New EU ETS Directive.
34. Art 1(9) of the New EU ETS Directive.
35. Art 1 (10) of the New EU ETS Directive.
36. Art 1 (11) of the New EU ETS Directive.

footnotes (continued)

37. Art 1 (28) of the New EU ETS Directive.
38. Article 1 (11) of the New EU ETS Directive.
39. Article 1 (13) of the New EU ETS Directive.
40. Ibid.
41. Ibid.
42. See Annex II of the GHG Reduction Decision.
43. Article 8 of the GHG Reduction Decision.
44. Article 3 (4) of the GHG Reduction Decision.
45. Article 5 of the GHG Reduction Decision.
46. Article 6 of the GHG Reduction Decision.
47. Article 7 of the GHG Reduction Decision.
48. See Annex I of the Renewable Energy Directive.
49. Article 4 of the Renewable Energy Directive.
50. Article 22 of the Renewable Energy Directive.
51. Article 6 of the Renewable Energy Directive.
52. Article 8 of the Renewable Energy Directive.
53. Article 6 of the Renewable Energy Directive.
54. Article 15 of the Renewable Energy Directive.
55. Article 17 of the Renewable Energy Directive. For provisions as to the enforcement of the sustainability criteria, see Article 18 of the Renewable Energy Directive.
56. Article 16 of the Renewable Energy Directive.
57. Ibid.
58. Articles 5-10 of the CCS Directive.
59. Articles 12-20 of the CCS Directive.
60. Article 33 of the CCS Directive, amending Directive 2001/80/EC.
61. Article 1(12) of the New EU ETS Directive.
62. Article 5 of the CCS Directive.
63. Article 6 of the CCS Directive.
64. Article 8 of the CCS Directive.
65. Article 8(2) of the CCS Directive.
66. Article 16 of the CCS Directive.
67. Article 17 of the CCS Directive.
68. Article 18(7) of the CCS Directive.
69. Article 19 of the CCS Directive.
70. Article 33 of the CCS Directive.
71. Article 1(5) of the Biofuel Directive.
72. Article 1(3) of the Biofuel Directive.
73. Article 1(4) of the Biofuel Directive.
74. Article 1(6) of the Biofuel Directive.
75. Article 4 of the Emission Standard Regulation.
76. Article 5 of the Emission Standard Regulation.
77. Article 17 of the Emission Standard Regulation.
78. Article 11 of the Emission Standard Regulation.
79. Article 12 of the Emission Standard Regulation.
80. Article 9 of the Emission Standard Regulation.
81. Article 10 of the Emission Standard Regulation.
82. Article 13(5) of the Emission Standard Regulation.

Herbert Smith

Herbert Smith in association with Gleiss Lutz and Stibbe

For further information on any matters in this publication, please contact:

Austria
Christian Schmelz
+43 1 5343 7127
c.schmelz@schoenherr.at

Bernd Rajal
+43 1 5343 7203
b.rajal@schoenherr.at

Belgium
Wouter Geldhof
+32 2 533 5259
wouter.geldhof@stibbe.com

Bulgaria
Stefana Tsekova
+359 2 933 1073
s.tsekova@schoenherr.bg

Elena Rangelova
+359 2 933 1004
e.rangelova@schoenherr.bg

Czech Republic
Martin Nedelka
+420 225 996 500
m.nedelka@schoenherr.cz

Kateřina Jandová
+420 225 996 500
k.jandova@schoenherr.cz

Denmark
Anders Stubbe Arndal
+45 38 77 43 05
asa@kromannreumert.com

Estonia
Jaanus Ikla
+372 640 7170
jaanus.ikla@rln.ee

Finland
Jyrki Prusila
+358 20 506 6234
jyrki.prusila@roschier.com

Leena Lindell
+358 20 506 6619
leena.lindell@roschier.com

France
Stéphane Brabant
+33 1 5357 7070
stephane.brabant@herbertsmith.com

Mehdi Haroun
+33 1 5357 7070
mehdi.haroun@herbertsmith.com

Germany
Petra Linsmeier
+49 89 21 667 220
petra.linsmeier@gleisslutz.com

Christian Hamann
+49 30 800 979 113
christian.hamann@gleisslutz.com

Andreas Neun
+49 30 800 979 217
andreas.neun@gleisslutz.com

Greece
Marina Kolia
+30 210 696 7000
m.kolia@zeya.com

Hungary
Kinga Hetényi
+36 1 345 8746
k.hetenyi@schoenherr.hu

András Lovas
+36 1 345 4552
a.lovas@schoenherr.hu

Ireland
Alex McLean
+353 1 618 0546
alex.mclean@arthurcox.com

Brendan Slattery
+353 1 618 0422
brendan.slattery@arthurcox.com

Italy
Monica Colombera
+39 02 89 63 071
mcolombera@legance.it

Federico Greco
+39 02 89 63 071
fgreco@legance.it

Latvia
Girts Lejins
+371 6724 0689
girts.lejins@rln.lv

Martins Aljens
+371 6724 0689
martins.aljens@rln.lv

Lithuania
Juozas Rimas
+ 370 5 250 0800
juozas.rimas@rln.lt

Ruslanas Černiauskas
+370 5 250 0800
ruslanas.cerniauskas@rln.lt

Luxembourg
Christian Point
+352 40 78 78 206
christian.point@arendt.com

Marianne Rau
+352 40 78 78 240
marianne.rau@arendt.com

Gilles Dauphin
+352 40 78 78 206
gilles.dauphin@arendt.com

Malta
Roderick Zammit Pace
+356 21 222 607
roderick.zammitpace@bar.com.mt

The Netherlands
Martin In de Braekt
+31 20 5460 242
martin.indebraekt@stibbe.com

Kirsten Berger
+31 20 5460 479
kirsten.berger@stibbe.com

Norway
Henrik Bjørnebye
+47 9 829 4553
henrik.bjornebye@adeb.no

Torkjel K. Grøndalen
+47 9 829 4599
torkjel.grondalen@adeb.no

Poland
Torsten Bogen
+48 22 222 4200
t.bogen@schoenherr.pl

Maciej Knowski
+48 22 222 4200
m.knowski@schoenherr.pl

Portugal
José Luís Esquível
+ 351 21 384 5310
geral@esquiveladvogados.com

Bernardo Cunha Ferreira
+ 351 21 384 5310
geral@esquiveladvogados.com

Romania
Markus Piuk
+40 21 319 67 90
m.piuk@schoenherr.at

Russia
Danila Logofet
+44 20 7374 8000
danila.logofet@herbertsmith.com

Evgeny Yuriev
+7 495 363 6500
evgeny.yuriev@herbertsmith.com

Slovakia
Martin Nedelka
+421 25262 2950
m.nedelka@schoenherr.sk

Slovenia
Tomaź Petrović
+38 6 1 2000 980
t.petrovic@schoenherr.si

Spain
Miguel Riaño
+34 91 423 4000
miguel.riano@herbertsmith.com

Marta Sanchez-Villalta
+34 91 423 4000
marta.sanchez-villalta@herbertsmith.com

Sweden
Fredrik Wilkens
+46 8 614 31 54
fredrik.wilkens@vinge.se

Christian Johansson
+46 8 614 31 05
christian.johansson@vinge.se

Switzerland
Mariella Orelli
+41 43 222 1000
mariella.orelli@homburger.ch

United Kingdom and European Union
Mark Newbery
+44 20 7374 8000
mark.newbery@herbertsmith.com

Silke Goldberg
+44 20 7374 8000
silke.goldberg@herbertsmith.com

Lynda Haigh
+44 20 7374 8000
lynda.haigh@herbertsmith.com

www.herbertsmith.com
www.gleisslutz.com
www.stibbe.com

ISBN 978-0-9555037-2-6

9 780955 503726 >

7847/210110