Review of the
Balance of Competences

The Energy Review

Department
of Energy &
Climate Change

Call for Evidence on the Government's Review of the Balance of Competences between the United Kingdom and the European Union

Open date: **24 October 2013**
Closing date: **15 January 2014**

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INTRODUCTION

BALANCE OF COMPETENCE REVIEW: OVERALL CONTEXT

The Foreign Secretary launched the Balance of Competences Review in Parliament on 12 July 2012, taking forward a Coalition commitment to examine the balance of competences between the UK and the European Union (EU). The review will provide an analysis of what the UK's membership of the EU means for the UK national interest. It aims to deepen public and Parliamentary understanding of the nature of our EU membership and provide a constructive and serious contribution to the national and wider European debate about modernising, reforming and improving the EU in the face of collective challenges. It will not be tasked with producing specific recommendations or looking at alternative models for Britain's overall relationship with the EU.

The review is broken down into 32 specific areas of EU competence and a series of reports, spread over four semesters between autumn 2012 and autumn 2014, will be published following on from a Call for Evidence in each area. The review is led by Government but will also involve non-governmental experts, organisations, industry, civil society and other individuals who wish to feed in their views. Foreign governments, including our EU partners and the EU institutions, are also being invited to contribute. The process will be comprehensive, evidence-based and analytical. The progress of the review will be transparent, including in respect of the contributions submitted to it.

SCOPE OF ENERGY REVIEW

The Department of Energy and Climate Change (DECC) is leading the review on energy. Energy has an impact on almost all sectors of society in one way or another and is a key factor in the growth and social and economic health of this country. This Call for Evidence invites you, as a stakeholder, to contribute to the competence debate, based on your own experiences. We shall be considering, in particular, how the EU's competences (the power for the EU to act in particular areas conferred on it by the EU Treaties) impact energy activities and operations in the UK. For example, has the exercise of certain competences by the EU helped or hampered UK interests? Has the Commission developed internally coherent policies? To what extent have actions at EU level been successful and in what areas might UK energy interests be better served at a national level, EU or international level? What future challenges does the EU face and how best might these be addressed which will also benefit the UK?

The structure of this Call for Evidence is as follows:

Part One sets out the development of competences in relation to energy activities and the pathways that led to the development of EU energy (and related climate change) policies.

In **Part Two**, we invite you to respond to a number of questions - either via our online link or, if you prefer, by email. The questions are not exhaustive, but designed to help drill down into issues and possible tensions that have arisen through the exercise (or lack) of EU

competences and which impact positively or negatively on UK energy interests. We shall also be holding a number of stakeholder workshops to debate some of the issues that arise from the exercise of EU competences in the field of energy..

In **Part Three** we look at some energy activities by the EU in more detail and consider what future challenges may lie ahead under five thematic areas - broadly corresponding to current EU priorities.

- **Competitiveness and growth** - includes development of the internal gas and electricity market and state aid regulation of energy activities.
- **Security of energy supply and infrastructure** - includes import dependency, barriers to energy investment and exploitation of indigenous energy resources.
- **Sustainability (energy efficiency, renewable energy and carbon capture and storage)** – includes EU action to improve the way we use energy (energy efficiency), actions to increase and manage the share of renewable energy sources in the generation mix, and EU measures to regulate carbon capture and storage.
- **Deepening EU- External energy relations to achieve energy policy aims** – includes EU membership of international institutions, EU bilateral agreements with third countries.
- **Nuclear, protection from the harmful effects of ionising radiation and Euratom (a separate treaty for nuclear)** - includes the contribution of nuclear to a low carbon energy future and the activities of the Euratom Treaty.

A separate **legal annex** which further discusses the competences of the energy legislation and a **table of key EU legislation** can be found on the Balance of Competences Review website.

INTERDEPENDENCIES WITH OTHER REVIEWS

Where evidence has already been submitted in the context of other reviews and specifically relates to energy, it will be shared by the relevant Government Department so that it can form part of the evidence which will inform the drafting of the final energy report.

The Energy Review will not consider climate change and international negotiations on climate change, nor the reduction of EU Member State greenhouse gas emissions via 'burden-sharing' arrangements and the EU Emissions Trading Scheme (EU-ETS). These issues are being considered in the Environment and Climate Change Review (second semester). That Call for Evidence has now closed and the report will be published at the end of the year.

Legislation on safety and protection of workers which is relevant to the oil and gas and coal industries will be dealt with in the concurrent Social and Employment Review; while control

of major accident hazards (part of the 'Seveso' legislation) environment competence is addressed under semester 2 in the Environment and Climate Change Review.

State aid issues, which is also referenced in this Call for Evidence (since it affects a number of energy projects), will be examined in more detail in the Competition and Consumer Policy Review running concurrently with this review.

The Energy Review will also have a degree of overlap with the Cohesion Review (which is running concurrently with the Energy Review) and is dealing with competences under the Trans-European network provisions (TENS) in the treaties: TEN-T (transport), TEN-E (energy) and E-Comms (telecommunications). The linked Connecting Europe Facility Fund (CEF), applicable to all TENS, will also be considered in the Cohesion Review.

There is some overlap between this Review and the Single Market: Services Review (semester 3) in respect of provision of energy services.

As DECC is the lead department for the Euratom Treaty, this review also includes matters under the Euratom Treaty that otherwise fall outside the scope of energy. We will also consider competences in relation to the regulation of exposure to ionising radiation in other sectors, such as medicine, where radioactive substances are used.

Details of other reviews can be found on the Balance of Competences Review website.

WHAT IS COMPETENCE?

For the purposes of this review, we are using a broad definition of competence. Put simply, competence in this context is about everything deriving from EU law that affects what happens in the UK. That means examining all the areas where the Treaties give the EU competence to act, including the provisions in the Treaties giving the EU institutions the power to legislate, to adopt non-legislative acts, or to take any other sort of action. It also means examining areas where the Treaties apply directly to the Member States without needing any further action by the EU institutions.

The EU's competences are set out in the EU Treaties, which provide the basis for any actions the EU institutions take. The EU can only act within the limits of the competences conferred on it by the Treaties, and where the Treaties do not confer competences on the EU they remain with the Member States.

There are three different types of competence: **exclusive**, **shared** and **supporting**. Only the EU can act in areas where it has exclusive competence e.g. customs union; competition rules necessary for the functioning of the internal market (or single market); and common commercial policy. In areas of shared competence e.g. single market; energy; transport; trans-European networks; and environment, either the EU or the Member States may act, but the Member States may be prevented from acting in a particular area once the EU has done so. In areas of supporting competence e.g. culture; tourism; and civil protection, both the EU and the Member States may act, but action by the EU does not prevent the Member States from taking action of their own.

CALL FOR EVIDENCE – ENERGY – HOW TO RESPOND

We invite contributions and evidence from any institution, organisation, business, public, trade or private associations, civil society or individuals both from the UK and beyond who have relevant knowledge, expertise or experience. This is your opportunity to express your views and we value highly your input to the debate on the balance of competence. Please bear in mind that your evidence should be objective and wherever possible include evidence/ published sources of information you consider of relevance as regards the impact / effect of EU competence (or lack of EU measures / competence) within the area of energy.

We will expect to publish your response at the time of the final energy report together with the name of your organisation if applicable - unless you ask us not to do so. However, please note that, even if you ask us to keep your contribution confidential, we may have to release it in response to a request under the Freedom of Information Act, but we would not publish your own name unless you wish it to be included.

Please submit your analysis / evidence by 15 January 2014 via:

- **the online response form: https://econsultation.decc.gov.uk/decc-policy/balance-of-competence-energy-review**

or alternatively

- **email us at: balanceofcompetence@decc.gsi.gov.uk**

If submitting by email, please indicate clearly the theme or subject area(s) to which you are referring.

The same email address should be used for any related inquiries.

DEVOLUTION

This is a UK wide review and we are examining issues from the point of view of the interests of the UK. However, some of the subject areas covered by the Energy Review are devolved matters where the administrations in Scotland, Wales and Northern Ireland are responsible for the implementation of EU legislation. Input from the devolved administrations on their experiences in implementing EU legislation will therefore be particularly welcome to this debate.

STAKEHOLDER WORKSHOPS

We shall be holding a series of workshops to facilitate discussion of this Review , including, subject to sufficient demand, in Glasgow, Aberdeen, Belfast and Cardiff, and in Brussels.

We shall be holding:

- **two general workshops (covering all themes) in London on Monday 18 November (AM) and Monday 25 November (AM)**
- **an emerging themes workshop in London towards the end of the consultation period - Thursday 9 January (PM)**

and, in addition, four themed workshops in London:

- **Competitiveness and growth, security of supply and infrastructure, EU-external energy relations - includes internal energy market, import dependency, indigenous resources (gas, oil and coal), energy infrastructure development and the EU role in international organisations and bilateral agreements in the energy field - Thursday 14 November (PM)**
- **Sustainability - renewable energy and carbon capture and storage - Wednesday 20 November (PM)**
- **Sustainability - Energy efficiency - Friday 29 November (PM)**
- **Nuclear, Protection from the Harmful Effects of Ionising Radiation and the Euratom Treaty - Wednesday 11 December (PM)**

For workshops outside London, including in Brussels, we envisage covering all themes unless specific preferences are expressed:

- **Glasgow - Friday 6 December (PM)**
- **Aberdeen - Tuesday 7 January (PM)**
- **Belfast - Monday 13 January (PM)**
- **Cardiff - Thursday 12 December (PM)**
- **Brussels - Tuesday 3 December (PM)**

Please email us at the following address to register your interest in attending one or more of our workshops with your name, contact telephone number and organisation so that we can send out invitations to you with exact details of location and time:

balanceofcompetence@decc.gsi.gov.uk

PART ONE

We first consider the **development of competences (powers to act)** to regulate energy activities in successive EU treaties. Whilst energy was not carved out specifically in the early treaties (other than in the coal and steel and nuclear treaties in the aftermath of the second world war), energy activities were regulated using other treaty articles, for example those advancing competition, the single (internal) market in trade (the four freedoms of goods, capital, people and services), environmental protection, completion of trans-european networks - all of which had relevance to energy.

We then examine some of the events that have helped define the **pathways to, and development of, a European energy policy**.

DEVELOPMENT OF COMPETENCES

The Treaty of Rome in 1957, establishing the European Economic Community (EEC) together with its subsequent amending Treaties, had the aim of creating a single internal market within the European Community of Member States. Indeed an earlier Treaty of Paris (in 1951), which founded the European Coal and Steel Community (ECSC) for a period of fifty years, recognised the strength of working together; coal and steel were chosen at the time, in the immediate aftermath of the Second World War, because they were industries essential to the economic recovery of the founding Member States and it was thought that working together would reduce the threat of further conflict.

Nuclear is subject of its own treaty: the Treaty Establishing the European Atomic Energy Community ("the Euratom Treaty"). This was concluded in 1957 at the same time as the Treaty of Rome in response to concerns about energy security and safety of materials and recognising that significant nuclear incidents would, invariably, have cross-boundary affects. The overall mission of the Euratom Treaty is to encourage the development of a European nuclear industry through cooperation between Member States and the sharing of resources. The Euratom Treaty is ratified by all Member States who subsequently join the EU.

However, it was not until the Treaty of Lisbon in 2009 that the European Union (formerly European Community), in consolidating earlier amending treaties into two new treaties, adopted a specific article for energy. Nevertheless nuclear remains subject to the Euratom Treaty, though there are a number of environmental and health and safety EU laws in particular that are also applicable to that industry).

Energy - Article 194 of the Treaty on the Functioning of the European Union (TFEU) states:

"..In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to:

> *(a) ensure the functioning of the energy market;*
>
> *(b) ensure security of energy supply in the Union;*
>
> *(c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and*
>
> *(d) promote the interconnection of energy networks.*
>
> *……Such measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2)(c)……."*

TFEU still retains the general power, that existed before, to adopt legislation pursuant to the EU's objectives, but the presumption is that, if an energy measure or proposal for legislation fits Article 194, then that should be the preferred legal basis. Whilst the existence of a specific energy article has signalled the increasing importance of energy to the EU, it remains a matter of debate as to whether, in practice, this has meant a shift of competence from Member States to the EU and / or limited Member States' competences to any significant degree.

DEVELOPMENT OF A EUROPEAN ENERGY POLICY

Early development of internal gas and electricity markets

In the 1980s and 1990s, with the backcloth of relative abundance of, and access to, hydrocarbons and increasing energy demand, Member States' internal electricity and gas markets became increasingly interconnected, albeit piecemeal. No specific structure was in place to regulate these markets other than applicability of laws to set up the internal single market, such as competition and state aid rules. Some of the competences were exclusive, for example, the power of the Commission to rule on competition issues, but in other areas Member States regulated their own markets in respect of pricing and tariffs. Liberalisation of the gas and electricity internal markets was only partially achieved through what became known as the 'Second Package' of gas and electricity reforms.

Oil is not included in the EU internal energy market legislation since it has always been traded globally.

2005 informal European Council: first steps to a comprehensive EU energy policy?

It was not until the Hampton Court informal European Council (Heads of Government) under the UK Presidency in 2005 that the first significant attempts to forge a more comprehensive EU energy policy was made and in 2007 the European Commission published its Communication**:** 'An Energy Policy for Europe'**.** This reflected a number of concerns of Member States: increasing dependency on oil and gas imports from third countries (often from less stable areas of the world); an awareness that further steps in opening up the internal gas and electricity markets were still needed and had not been 'fixed' by the 'Second Package' in internal energy market reforms; and a heightened recognition of the challenges

and issues of climate change in a world where energy consumption and carbon emissions and other green-house gases are closely linked.

The Communication considered a number of options to address these issues. Chief amongst them were measures to achieve more energy efficient use of fuels (which would reduce energy consumption and hold down costs); increase the share of renewable sources of energy in Member States' energy mixes to reduce harmful emissions; enhance energy security by diversifying routes and sources of supplies; and improve competitiveness by removing barriers to cross-border trade and improve consumer access to alternative suppliers.

The European Council in 2007 endorsed the need for radical reform and in 2008 agreed legislation for the EU '20-20-20' targets we have today:

- a 20% reduction in EU greenhouse gas emissions in each Member State by 2020 compared with 1990 levels;
- 20% of all energy consumed in the EU to be from renewable sources by 2020 with a separate target set for each Member State; and
- a 20% improvement in energy efficiency (non binding) in each Member State by 2020 compared with 'business as usual' (set against a 2007 baseline) projections.

European Union action on energy as a response to the economic and financial crisis in Europe

Responding to the economic crisis in the EU, the European Council, in December 2008, endorsed the Commission's European Economic Recovery Plan for an immediate injection of €200 billion to aid the recovery process. Energy infrastructure and production facilities were included amongst the priority areas for support given many energy projects had been heavily delayed or cancelled as a result of the economic downturn. Regulation (EC) 663/2009 subsequently established the European Energy Programme for Recovery (EEPR) with a financial envelope of € 3.98 billion (€2.37 billion allocated for gas and electricity projects, €.57 billion for offshore wind and €1.05 billion for carbon capture and storage technologies).

In terms of financial provisions, it was the first time that such a large sum had been made available under the EU budget specifically with energy projects in mind. The identification of the type of energy products needing support reflected priorities in the Second Strategic Energy Review and in the Strategic Energy Technology Plan: completion of the EU-wide energy networks as well as development of strategic low carbon technologies.

Security of supply concerns

In January 2009 security of supply concerns were brought to a head when Russian gas supplies via Ukraine ceased completely for a period of two weeks as a result of a contract dispute between Russia and Ukraine. Many Member States were forced to declare a state of emergency and / or take emergency measures, including a number of the wider community of Balkan States. Whilst gas (and oil) disruptions of Russian supplies to the European Union was not a new phenomenon, the sheer scale of the 2009 disruption was the most severe to date.

The March 2009 European Council pressed for urgent EU action to improve the security of energy supplies in the EU. The EEPR was used not only to improve electricity networks and interconnectors, but also to facilitate some new gas pipeline connections between Member States including infrastructure to enable reverse flow in the event of further emergencies. In the following year, in 2010, the Gas Security of Supply Regulation was adopted (replacing an earlier light touch Directive). This sets vigorous new supply and infrastructure standards and the requirement that emergency and preventive plans are reviewed regularly, shared with the Commission and other Member States and published.

Further steps to energy market reform

2009 also saw the adoption of the 'Third Package' – the most comprehensive (gas and electricity) internal energy market package to date. It seeks to further improve the functioning of the market through a range of measures including requirements for:

- unbundling (the separation of ownership of transmission systems from ownership of electricity generation, gas production and supply to break up vertically integrated companies and to open up competition in the market);
- ensuring independence of national regulatory authorities from national Governments;
- improving levels of customer protection; and
- establishing a European Agency for the Cooperation of Energy Regulators (ACER) to assist national regulators in enforcing internal energy market rules.

The Third Package also states the goal to achieve a fully functioning market by 2014 (the date for full implementation of the package) and to end, by 2015, the 'energy island' status of those few Member States who are still unconnected with the rest of the EU for their energy supplies. For example, the Baltic States, even today, have minimal interconnection with the rest of the EU for electricity and no interconnection for gas. The Iberian peninsula also has minimal gas and electricity interconnection with other Member States.

A new EU Energy Strategy

In a further development of EU policy in 2010, the Commission published its proposal 'Energy 2020: A strategy for competitive, sustainable and secure energy'. This built on progress made by Member States towards achieving the '20-20-20' targets and identified where action still needed to be taken at both Member State and European level. The strategy focused on five priorities:

- achieving an energy efficient Europe;
- building a truly pan-European integrated energy market;
- empowering consumers and achieving the highest level of safety and security;
- extending Europe's leadership in energy technology and innovation; and
- strengthening the external dimension of the EU energy market.

Energy as a Driver for Economic Growth

As the EU slowly emerges from recession, action in the energy field is increasingly seen as a key part of the solution to achieve economic growth, whilst at the same time responding to climate change challenges to deliver a competitive low-carbon economy. The affordability of EU energy and impact on its competitiveness is an increasing theme.

Many barriers to investment still remain, particularly in respect of cross-border energy projects. Different regulatory regimes, difficulties in agreeing cost allocations and long lead times in securing planning consents have meant, in practice, that many energy projects have either been put on hold or cancelled, whatever their perceived economic or socio-economic benefit.

The recently adopted trans-European energy infrastructure regulation (TEN-E) - replacing earlier regulatory guidelines - goes some way to address these barriers and so too will agreement on a number of gas and electricity technical codes that are being developed under the 'Third Package' market reforms to facilitate increased cross-border gas and electricity flows. The Commission has also recently published a Communication on a 'Long term infrastructure vision for Europe and beyond' which seeks to stimulate debate on the infrastructure challenges remaining and the potential for improved interconnection with neighbouring countries.

Meanwhile action is being taken by the European Union: to deepen its ties with third countries and to develop shared security of supply goals in terms of both supplier certainty and consumer certainty since the EU, working together with Member States, has the potential to be a powerful global player and a major influencer of energy (and climate change) policies. In this regard the EU is doing more work to achieve greater coherence of its climate and energy policies and to consider longer-term policies and options for the period post 2020. The Commission is expected to publish its proposals early in 2014 for a climate and energy framework through to 2030.

PART TWO
ENERGY REVIEW - CONSULTATION QUESTIONS

The questions below are designed to help focus on some key issues around the balance of EU competences and policies as they relate to energy and explored in part three of the Call for Evidence.

We would particularly welcome any evidence and specific examples you might have in support of your responses. The questions are intended to stimulate discussion. Whilst we would particularly welcome responses to the questions themselves we recognise that these are not exhaustive and you should feel free to comment on any related energy issues which they raise.

PLEASE RESPOND ELECTRONICALLY VIA THE FOLLOWING LINK:
https://econsultation.decc.gov.uk/decc-policy/balance-of-competence-energy-review

OR VIA EMAIL (if submitting by email please indicate clearly the theme or subject area(s) to which you are referring):

balanceofcompetence@decc.gsi.gov.uk

GENERAL

1. To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?
2. Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?
3. In what areas might the UK's interests be served better if action were to be taken at:
    a. EU level instead of national, regional or international level?
    b. national, regional or international level instead of EU level?
4. How could the EU's current competence for energy be used more effectively? For example, could more be done during the development stage of proposals and the preparation of impact assessments? Are there alternatives to legislation and how feasible / practical is it to have continuous review mechanisms to ensure existing legislation remains fit for purpose in the light of changing circumstances?

THEMATIC AREAS

5. What have been the benefits or disadvantages for the UK / your sector of the development of the **internal energy market?** Is further or deeper integration of EU energy markets desirable?

6. To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase **security of supply and facilitate infrastructure development**?

7. What effect have EU measures had on the **development and exploitation of the UK's indigenous energy sources**? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

8. How have measures and policies at an EU level helped or hindered the development and deployment of **sustainability measures - energy efficiency, renewable and low carbon energy?** What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

9. To what extent might it be beneficial or disadvantageous for the EU to take on more initiatives and to exercise greater **external competence in the field of energy**, for example in negotiating international agreements and representing an EU view (speaking with one voice) in international meetings rather than Member States representing themselves?

10. To what extent does EU action under the **Euratom Treaty** (for example, in relation to nuclear safety) contribute to / disadvantage the development of nuclear power in the UK and EU? To what extent do **Euratom measures in respect of non-nuclear activities** help or hinder occupational protection, protection of the general public, or the use of medical exposures and procedures?

FUTURE CHALLENGES AND OPPORTUNITIES

11. What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

12. What would be the costs and benefits of facing these at an international, EU, or national level?

PART THREE – EU ACTION ON ENERGY: IS IT A EUROPEAN ISSUE?

This part considers, in more detail, the extent to which the EU has exercised its competences in energy under five thematic headings. It includes potential challenges and issues in the future. The themes reflect current EU energy (and climate change) priorities:

- **Competitiveness and growth - development of the internal gas and electricity market** – includes 'Third package' legislation and technical industry codes to facilitate energy flows cross-border; state aid regulation of energy activities where support for investment is needed; and regulation of wholesale energy markets ('REMIT') to prevent market abuse.
- **Security of energy supply, import dependency, exploitation of indigenous energy resources and infrastructure development** – includes gas and electricity security of supply legislation; oil stocking obligations; the role of the Trans-European energy infrastructure regulation (TEN-E) in removing planning barriers; regulation of exploration, exploitation and production of oil and gas including unconventional sources.
- **Sustainability: energy efficiency, renewable energy and carbon capture and storage** – includes EU action to improve the way we use energy (energy efficiency); actions to increase and manage the share of renewable energy sources in the generation mix; and EU measures to regulate carbon capture and storage.
- **Deepening EU- External energy relations** – includes issues around the respective roles of Member States and the EU in international negotiations and organisations to achieve EU energy policy aims; EU-third country agreements; and Member State energy responsibilities to comply with EU laws in concluding intergovernmental agreements with third countries.
- **Nuclear, protection from the harmful effects of ionising radiation and the Euratom Treaty (a separate treaty)** – includes issues around the contribution of nuclear to a low carbon energy future and the activities of the Euratom Treaty.

COMPETITIVENESS AND GROWTH – DEVELOPMENT OF THE INTERNAL GAS AND ELECTRICITY MARKET

EMERGENCE OF THE ENERGY INTERNAL MARKET: WHAT NEEDS STILL TO BE DONE?

Many years of liberalisation (opening up markets) have produced a deeply integrated single market, of which the internal energy market forms part. Energy market opening and integration, increased cross-border trade and stronger competition (all the subject of a series of legislative energy measures since the 1990s), together with enforcement of competition and state aid rules, have helped keep energy prices in check; however not all Member States have fully liberalised their markets. This has led to uncompetitive price differentials, particularly in those markets where market opening is held back by end price regulation. There is also the continuing challenge to ensure that market signals are sufficient to bring forward the necessary investment to meet the demands of a low carbon future.

The UK, always a strong proponent of strong, fully functioning markets, has provided an excellent market model for the EU reforms. More gas is traded on the UK national balancing hub than ever before and despite rising energy prices, UK retail and wholesale prices are amongst the lowest in Europe. However, whilst domestic energy prices compare well with those in other EU Member States, over the last ten years, UK price rises have still been significant, largely driven by internationally traded fossil fuel prices.

According to European Commission data, prices of primary fuels, globally traded, have increased annually by 14% for crude oil, nearly 10% for gas and 8%% for coal between 2002 and 2012, whereas wholesale electricity prices in the EU have risen by 3.4%.

However, EU electricity prices are high in comparison to the USA and China.

REMIT

As regards regulation of wholesale energy markets, the Wholesale Energy Market Integrity and Transparency Regulation (known as 'REMIT') was adopted in 2011. This is the first time that wholesale energy markets have specifically been regulated by the EU, prohibiting abusive practices. REMIT creates a regime which is consistent with the regime for financial market abuse and subject to an exemption concerning financial instruments, the Regulation applies to all trading in wholesale energy products.

STATE AID

State aid competences are being separately examined in the 'Competition and Consumer Policy' Review which runs concurrently with this Energy Review.

However we touch on state aid issues here since the programme of reform, on which the European Commission is currently working, will have major importance to the energy sector. It is expected that the revised draft Energy and Environmental Aid Guidelines, due to be published by the Commission in Autumn 2013, will for the first time, provide detailed

guidance on non-environmental energy issues. This is a reflection of the fact that the number of state aid cases is increasing given current (and future) security of energy supply and environmental policy challenges.

The energy sector has been a frequent source of cases under the EU state aid rules in the past, for example in relation to aid granted to energy undertakings upon or following de-nationalisation and / or associated with the unbundling of vertically integrated companies. Other energy related cases have concerned the extent to which various measures by Member States to support or encourage renewable energy sources have given rise to state aid[1] issues – reflecting EU and Member State measures to reduce their carbon footprint. For example, the UK small-scale Feed-in Tariff, the Renewable Obligation and Renewable Heat Incentive schemes have all required state aid approval.

The major challenge today is to build sufficient low carbon (generation) infrastructure, including more interconnection, to meet climate goals, whilst ensuring there is appropriate base load generation of more traditional energy sources to manage the variability of renewable forms of generation and to keep the lights on at a price consumers can afford. To achieve that investors need certainty of EU and Member States' policies and measures into the future.

Currently the UK, alongside other Member States, is working up options to help stimulate / facilitate that investment through limited market intervention (the Electricity Market Reform). This in turn will strengthen the security of energy supply of the EU. State aid rules, potentially, can have an impact on the way those measures are delivered. As a consequence, we can expect the number of energy related cases to continue to rise as the number of new energy policy measures increase. Effective EU state aid rules will therefore be essential.

SECURITY OF ENERGY SUPPLY, IMPORT DEPENDENCY INDIGENOUS RESOURCES AND INFRASTRUCTURE

SECURITY OF SUPPLY - IMPORT DEPENDENCY ISSUES

Over the past two decades European import dependence has increased significantly with new oil and gas discoveries failing to keep pace with declining resources, particularly in the latter years. This import dependency is set to grow to more than 80% in the case of oil and gas by 2035, according to Commission figures. Though oil and gas are traded globally, few Member States have access to such diverse import

UK energy security is closely connected with what happens in other EU Member States; interdependence is growing as EU energy markets become more integrated and the UK becomes more dependent on imported energy. Net imports met 44% of UK gas demand in 2011.

[1] For example, C-379/98 Preussen Elektra Case [2001] ECR I-2099

facilities as the UK. We reap the benefits, including at times of market stress, of our rich portfolio of energy supplies. We are fortunate that we still have significant oil and gas reserves. We also have access to the spot market (our UK hub is the busiest in the EU) and therefore gas to gas competition, which tends to exert downward pressure on prices. Many Member States are still locked into higher priced long term gas contracts that are oil linked.

In addition, a number of Member States remain dependent on a single supplier and a single supply route to meet 80-100% of their gas consumption. This exposes them to the market power of a sole supplier, whose business model may differ from those within the EU and can lead to very high prices. To some extent this also applies to access to oil for some central and eastern Member States.

GB has a diverse range of gas sources to supply the National Transmission System – a number of North Sea production fields, Norwegian, European and Liquefied Natural Gas (LNG) supply, and gas from storage facilities

Access to secure energy supplies at affordable prices is therefore a major and ongoing issue for the EU. As indicated earlier, the EU's vulnerability to gas supply disruption came to a head in January 2009, when approximately 30% of gas imports into the EU were halted for two weeks during the coldest snap of the winter. At that time Russia supplied around 40% of gas imports to the EU with the majority of that gas transiting Ukraine (though this is significantly less today). Fortunately the UK, with its diverse import portfolio and indigenous resources, was affected only to the extent that the UK / Netherlands interconnector (BBL) reversed its flow for exports to the mainland in response to price signals. Nevertheless supplies were sufficient to meet domestic demand throughout the period of disruption.

Responding to European Council demands in February 2009 for urgent action to reduce the EU's vulnerability to supply disruptions, the Gas Security of Supply Directive (replacing an earlier Directive), was adopted in 2010. The Regulation provides for a clear definition and attribution of responsibilities among natural gas undertakings, Member States and Regulators, sets new supply and infrastructure standards (including a requirement for reverse flow capability on all interconnectors) and requires emergency plans, risk assessment and preventive plans to be shared with other Member States. The Regulation is founded on the market principles of the Third Package and requires, for instance, that Member States keep open access to storage even in the early stages of an emergency – aimed at preventing Member States from 'hoarding' their gas. Progress by Member States in implementing the various measures is being tightly monitored by the Commission and workshops to share best practices have been arranged.

SECURITY OF ELECTRICITY SUPPLY

In contrast to gas and oil security of supply legislation, the Electricity Security of Supply Directive in respect of electricity security of supply obligations has not been amended. It requires Member States to ensure an adequate level of generation capacity, adequate balance between supply and demand and 'an appropriate level of interconnection' between Member States. It is light touch and leaves Member States a large degree of flexibility for the way in which they implement the measures foreseen in the Directive.

OIL STOCKING

Significant global oil supply disruptions over the years exposed vulnerabilities in Member States' supply portfolios - and therefore has also been a trigger for action at EU level. As far back as 1968, Member States were obligated to hold stocks of oil in order to be able to respond to significant global supply disruptions. The original Directive has been amended a number of times, culminating in the most recent Directive 2009/119/EC. Though there are similar (though not identical) obligations under the International Energy Agency (IEA) rules, not all Member States are members. In practice stock release measures, when needed, are co-ordinated after discussions between the IEA, its Member Countries, Member States and the Commission (also an observer of the IEA).

Directive 2009/119/EC requires that stocks are held at the higher of 61 days of daily inland consumption or 90 days of daily imports. This ensures that all EU Member States, including net exporters, hold stocks. The UK is currently on the 61 days model, but as North Sea production declines, it will in time, need to increase its stock holding. The 2009 Directive also requires that one-third of the obligation be held as finished products at all times (UK consumption is mostly petrol, diesel and aviation fuel). This is to enhance the immediate response capability in the event of a stock release.

INDIGENOUS RESOURCES

Historically, under the treaties, Member States have retained the right to determine the conditions for exploiting their energy resources (upstream activities), their choice between different energy sources and the general structure of their energy supply. As a consequence, few EU legislative measures apply specifically to the oil and petroleum sector.

Initially the main focus of EU legislation was to ensure non-discriminatory access to exploration, exploitation and production of hydrocarbons in Member States' territories, save under certain conditions of public security interest. The Hydrocarbons Licensing Directive imposed general requirements on Member States for issuing licenses and authorisations.

However, in the wake of major events such as the Piper Alpha offshore platform disaster in the North Sea in 1988, Member States through successive European Councils, have endorsed the need for more harmonised standards in upstream oil and gas activities, including those related to health and safety. For example, in the latter context, there is complementary legislation that deals with the protection of workers in the mineral-extracting industries and from major hazard risks. That legislation falls under the scope of the Social

and Employment Review (running concurrently with this review) and the Environmental and Climate Change Review, but we mention here to illustrate how EU actions and regulatory measures have been strengthened over the years in different sectors, reacting to major events.

Following the Gulf of Mexico incident in the United States in 2010, the Commission put forward a number of proposals aimed at preventing major accidents at offshore oil and gas installations, including pollution incidents. The Offshore Oil and Gas Safety Directive is intended to raise the standards of safety and environmental protection in relation to offshore oil and gas activities – establishing minimum conditions for the safe exploration and exploitation of offshore hydrocarbon resources and enhancing the response mechanisms in the event of a major accident. One element of the Directive is the introduction of a licensing scheme designed to ensure that licensees are sufficiently financially viable to deal with prevention and remediation of damage from oil spills, etc from off shore installations. In this respect, the Offshore Oil and Gas Safety Directive complements the Environmental Liability Directive, and extends its coverage to offshore waters (and hence to the offshore oil and gas industry).

UNCONVENTIONAL RESOURCES

A range of EU legislation also applies to the exploration and exploitation of shale gas and other unconventional sources - mainly through environmental protection, and health and safety laws. However those laws were not drafted with exploitation of unconventional sources of energy in mind and there is a lively continuing debate here in the UK and elsewhere in Europe as to whether, or how, it should be regulated and the extent to which it is already covered by existing legislation. The European Commission's Work Plan for 2013 commits them to consider an "Environmental, Climate and Energy Assessment Framework to Enable Safe and Secure Unconventional Hydrocarbon Extraction", subject to the results of an impact assessment . That is expected by the end of the year.

COAL

Coal is similarly subject to environmental, and health and safety rules as well as single market rules, such as the EU competition rules. Additionally specific state aid rules apply to the coal sector to facilitate the closure of uncompetitive coal mines.

According to European Commission data (based on Member States' returns), almost a fifth of the EU's total coal capacity is due to be retired between now and 2020. 11% of the UK national power generation capacity will go off the grid. In the EU, Switzerland and Norway, known retirements of power plants are 70% greater than those in the previous five years. Due to a combination of low energy demand post recession, lack of investor certainty in the future and increasing electricity production from renewable energy sources, roughly 40GW of gas power plant projects and 25GW of coal power plant projects have been postponed or cancelled in the last three years. Investment in renewable energy sources dropped in the first quarter of 2013 by 25% in Europe with an almost complete standstill in some Member States such as Spain, Italy and France.

INFRASTRUCTURE DEVELOPMENT – THE SCALE OF THE CHALLENGE

Major investment in energy infrastructure is required over the next few years if the EU is to achieve all of its energy and climate goals. A transition to a secure, competitive and low carbon energy future requires sustained increased investment in power equipment, grids, transport technologies, infrastructure and efficient buildings. According to Commission data, the increased investment is estimated to be equivalent to 1.5% of GDP on an annual basis over the period until 2050.

> In 2010, the European Commission estimated that over the ten years from 2010 to 2020, energy investments of the order of €1 trillion would be needed (with over €200 billion of that needed for gas and electricity networks and well over €500 billion for power generation).

Major challenges lie ahead.

The EU will need to take further steps to:

- diversify existing import sources;
- replace aging equipment (including adherence to environmental emissions requirements);
- cater for challenging and changing energy requirements as we move increasingly to a low carbon energy future; and
- adapt markets, networks and infrastructure to accommodate variable renewable sources such as wind and solar, which need to be backed up on the system.

However investments are failing to materialise. As Member States emerge from the recession and consider market interventions to help facilitate low carbon energy infrastructure investment (as in the UK with its Electricity Market Reform programme alongside a number of other Member States), there are uncertainties as to what will, and will not, be allowed under state aid rules. There are uncertainties as how other Member State and EU policies will impact / benefit industry and consumers. There are long planning delays and cancellations of key energy projects. Investors lack certainty as to the future shape, and extent of possible changes to Member States' fuel mixes between now and 2020.

External factors also play a major role. Coal, gas and oil are today all traded globally and the knock-on effects of the gas glut in the US, with the advent of its vast shale exploitation and production programme and the consequent abundance of US cheap coal exports to the EU, adds to the uncertainty as to how those markets will impact on supply and demand balances in the EU and Member States' import / export portfolios. There are also mixed signals on carbon pricing.

ADDRESSING BARRIERS TO INFRASTRUCTURE DEVELOPMENT

Long delays in planning and permitting consent procedures are not a new issue, particularly for transmission lines and pipelines that cross the borders of Member States. Differences in regulatory regimes and agreeing cost allocations (where more than one Member State can be said to benefit) add significant barriers to delivering investment.

According to the European Network of Transmission Operators for electricity (ENTSO-E), one in three planned investments in network infrastructure are experiencing delays in implementation.

A recent Booz and Co. report for the Commission estimated that the benefits of integration of electricity markets due to market coupling will be in the order of €2.5 - €4 billion per annum under current plans.

Some Member States, including the UK, have already taken steps to address planning barriers within their borders by streamlining consenting procedures for certain types of national "strategic" infrastructure. In the UK, for instance under the Planning Act 2008, there is a fast-track, transparent process for nationally significant infrastructure, including for electricity networks.

The new TEN-E Regulation, adopted in 2012, aims to address a number of the cross-border barriers for project investment. In particular it sets a framework for streamlining permitting and planning consent procedures (maximum four years 3 months), as well as establishing a framework mechanism for agreeing costs cross-border for projects that impact two or more Member States (or a Member State and EEA member such as Norway). Regulators provide regulatory oversight of this process.

TEN-E establishes nine strategic corridors (regions) to facilitate development of electricity and gas interconnections, storage, LNG terminals and some limited oil pipeline projects in central eastern EU, and three priority areas for Union wide electricity highways, smart grids and carbon dioxide transportation networks. It sets out a mechanism to establish, on a two yearly basis, EU wide lists of Projects of Common Interest ('PCIs') that will benefit from the measures in the Regulation. The Commission has also published non-binding guidelines on "Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs)" under Article 7(4) of the TEN-E Regulation (EU/347/2013). These set out guidance on how environmental impact assessments should be conducted for PCIs to ensure that processes are coherent across Member States.

Linked to the new TEN-E legislation, is a common infrastructure funding instrument, the Connecting Europe Facility (CEF), for all TENS (the energy, transport and telecommunications sectors). The final budget figures for the CEF still need to be determined, but they are likely to correspond to those agreed by the February 2013 European Council, namely €5.126 million in respect of energy sector investments. Detailed criteria on eligibility for accessing financial instruments and grants are set out in the TEN-E regulation.

Examination of the treaty based competences for TENS, including the CEF facility, will be covered in the Cohesion Review (concurrent with this Review).

SUSTAINABILITY – ENERGY EFFICIENCY, RENEWABLES AND CARBON CAPTURE AND STORAGE

ENERGY EFFICIENCY

Improving energy efficiency contributes to all three pillars of EU energy policy: sustainability, competitiveness and security of supply and helps to keep consumer costs down. It has the potential to boost employment and economic growth both in the short and long-term. It can lower domestic energy bills through energy savings, which in turn helps address fuel poverty and leads to higher disposable incomes that can be spent elsewhere in the economy. The health benefits from properly installed energy efficiency measures can be significant. Businesses can benefit by seeing a reduction in their running costs and increase productivity and competitiveness. Reducing energy demand through energy efficiency measures enhances our energy security by reducing our need for additional, and often costly, energy imports. Improvements in energy efficiency across all sectors is, more often than not, the most cost-effective means of delivering against the EU's greenhouse gas emission targets over the coming decades.

The European Union's initial actions on energy efficiency were focused on setting minimum energy performance standards (in 1992) and a requirement for Member States to promote energy efficiency to help limit Carbon Dioxide Emissions (1993).

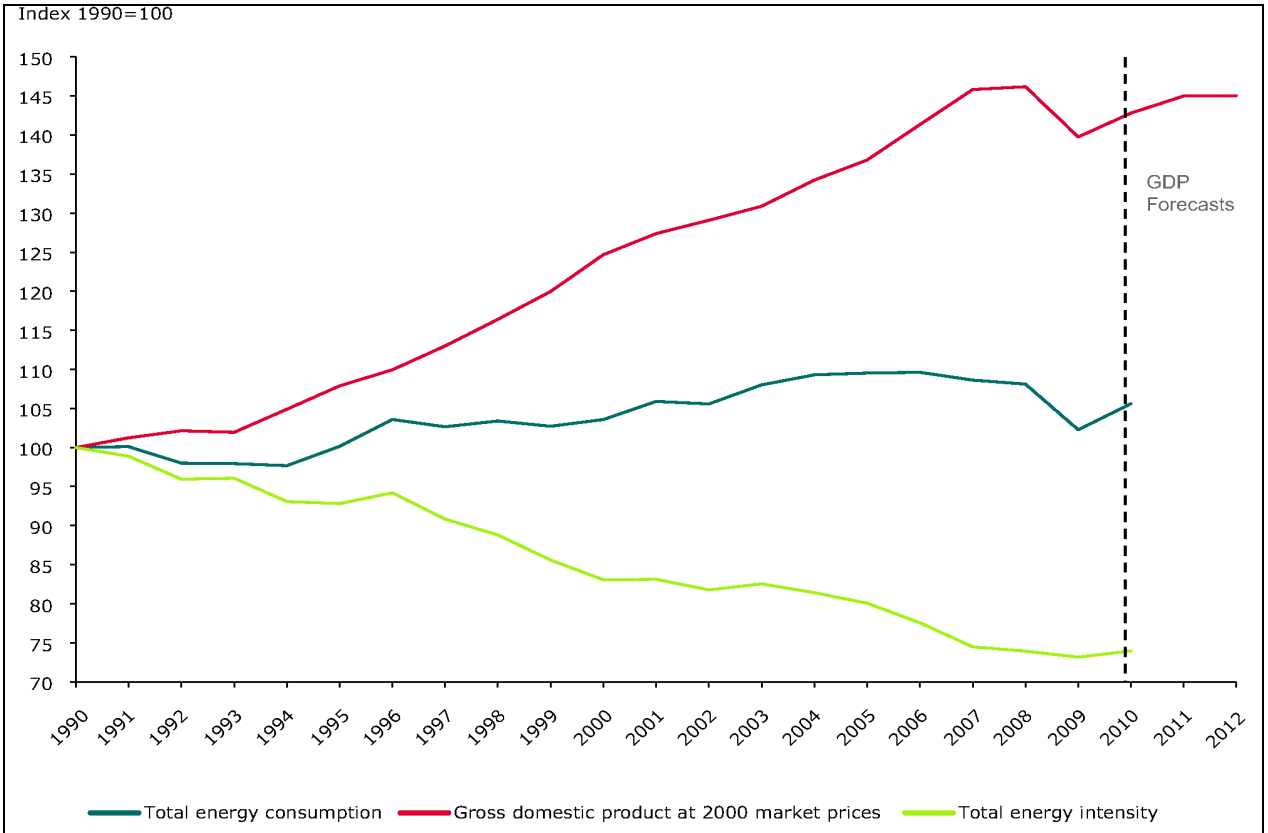
However the first attempt to develop a comprehensive framework of energy efficiency legislation was made in 2002 with the Energy Efficiency Action Plan. This recognised the key role that energy efficiency would have to play in meeting the targets the EU had taken on under the Kyoto Protocol, whilst also enhancing security of supply and competitiveness. That Action Plan adopted a target to deliver a 1% per year improvement in energy intensity to 2010 above over and above business as usual. It also led to the adoption of a comprehensive suite of legislation: the Energy Performance of Buildings Directive in 2002, the Cogeneration Directive in 2004, the Eco-Design of Energy Using Products Directive in 2005 and the Energy End-Use Efficiency and Energy Services Directive in 2006.

A further Action Plan, for 2007-2012, was adopted in 2006 with a target of achieving an overall 20% reduction in primary energy consumption by 2020 (as part of the 20-20-20 package) against business-as-usual projections. The Action Plan also introduced a range of new or amended legislation to help deliver the target: the Eco-Design Directive, the Energy Performance of Buildings Directive, the Labelling Directive and a Regulation on the labelling of tyres.

By 2011, the Commission had developed a third Energy Efficiency Plan. This reflected their assessment that the EU was not on track to meet its 2020 target. The Energy Efficiency Directive adopted in 2012 is intended to be the main driver to put the EU back on track. It contains a number of measures including energy saving targets, requirements for renovation of public buildings, energy audits for large companies, promotion of combined heat and power, public procurement of efficient appliances, services and buildings, accurate metering and billing, and promotion of energy services. Member States will also be required to submit regular Energy Efficiency Action Plans to the Commission.

The Energy Intensity of the EU Economy

Total primary energy intensity – the amount of energy used to create a unit of GDP - in the EU-27 decreased by 1.5% per year from 1990 to 2010. In 2010, the total primary energy intensity in the EU-27 was 26% below the 1990 level



Source: European Environment Agency

Smart Metering In 2008 domestic framework legislation was put in place to roll out smart metering in England, Wales and Scotland. This predated European Commission proposals to require a roll out of smart meters as part of the 'Third Package' reforms. Directives 2009/72/EC and 2009/73/EC create a requirement to roll out smart meters to domestic electricity and gas consumers (and specifically to 80% of electricity consumers by 2020), subject to an economic assessment of the costs and benefits to the market and consumers in the Member State concerned. The 2012 'Energy Efficiency Directive' added further obligations with regard to accurate metering and providing metering data to consumers. Compliance with the smart meter obligations involves little that is additional to the UK's own plans to roll-out smart meters.

RENEWABLE ENERGY

In the UK, electricity generation from renewables increased over a five year period, from 5% in 2007 to 11% in 2012, and renewable energy accounted for about 4% of the UK's total energy consumption, compared with the 15% target it has been set for 2020 under the Renewables Directive. Securing the necessary growth in renewable energy to meet the 15% target has also had cross-cutting implications for local environments and land use, particularly in more rural areas, with rising numbers of proposals and developments for wind turbines and more recently for large scale solar arrays.

EU measures in relation to renewable sources of energy are also part of a wider set of legislative measures aimed at addressing the relationship between energy use and generation and climate change, and the European Council's endorsement in 2007 of the '20-20-20' targets. The Council has subsequently also given a long term commitment to decarbonising the EU economy with a target of an 80-95% cut in emissions by 2050.

The Commission's latest renewable energy progress report shows that there has been strong growth in the renewable sector with renewables now accounting for 12.7% of total EU supply.

The Commission is currently developing proposals for a framework of climate and energy policies for the period between 2020 and 2030. This is in part due to the long investment cycles associated with energy infrastructure development and the consequent need to provide a degree of policy certainty and reduced regulatory risk to secure such investment that has been mentioned earlier. In March this year, the Commission published a Green Paper on a 2030 framework for climate and energy policies, inviting responses to a series of questions about the future of EU climate and energy policies, including the priorities for an EU-wide framework and the possibility of supporting targets for 2030. It is expected that the Commission will publish concrete proposals in the form of a White Paper on the 2030 framework by the end of 2013.

The UK Government published its response to the Commission's Green Paper in July 2013. It called for the EU to adopt an ambitious emissions reduction target for 2030, delivered in a flexible, cost-effective and technology neutral way. It stated that an emissions target should be supported by a robust, reformed EU ETS underpinned by a global climate agreement in 2015. The Government's response also made clear that imposing a renewable energy, or binding energy efficiency target for 2030 would risk pre-judging the cost effective pathway to meeting 2030 greenhouse targets.

CARBON CAPTURE AND STORAGE

Directive 2009/31/EC , the Carbon Capture and Storage (CCS) Directive establishes a legal framework for the environmentally safe geological storage of carbon dioxide (CO_2) in the territory of Member States, their exclusive economic zones, and on their continental shelves. It also, in combination with the ETS Directive, creates contingent liabilities (in the highly unlikely event of leakage) for storage operator. However it could be argued that this can

generate a potential barrier to investment in CCS in Europe unless the arrangements are reviewed (including the balance between risk and reward for storage operators).

Currently there are few Member States who are pursuing active programmes for CCS development. European cooperation will be necessary to take full advantage of opportunities for the commercialisation of important new technologies such as CCS that are required for climate mitigation. Much can be achieved through shared infrastructure, R&D and knowledge sharing and European funding programmes to support commercial scale CCS projects.

DEEPENING EU – EXTERNAL ENERGY RELATIONS

OVERVIEW OF EXTERNAL ENERGY COMPETENCES

Article 47 TFEU provides express recognition that the EU has legal personality to enter into treaties and agreements with international organisations and third states.[2] This is a priority area where there is increasing activity by the EU.

The first significant Communication by the EU on external energy relations was in 2006: 'External energy relations – from principles to action'. The Commission proposed a number of actions to support the EU's objectives for energy policy. This was then followed in 2010 by the Commission's Communication: 'New Energy Strategy Towards 2020' which confirmed that strengthening the external dimension remained a priority.

However it was not until 2011 that the Commission set out its vision for a comprehensive strategy for the EU's external role: 'The EU Energy Policy: Engaging with Partners beyond our borders'. This was in the wake of a number of events that had highlighted the EU's vulnerability to supply disruptions: third country supplier oil and gas disruptions in 2005/6, 2007, 2008 and 2009; the Gulf of Mexico incident; and the Fukushima nuclear incident in Japan.

That same year the Commission proposed a Decision 'on setting up an information exchange mechanism with regard to Intergovernmental Agreements (IGAs) between Member States and third countries in the field of energy'. This was concluded in 2012. The overarching aim of the Decision is to create transparency of bilateral energy agreements between Member States and third countries which are likely to have an impact on the operation or the functioning of the internal energy market or on the security of supply in the EU. It also provides for a Member State to seek Commission help in negotiating new agreements with third country suppliers when it might otherwise be under pressure to agree

[2] See Foreign Policy Review in semester 1 of the Balance of Competences Review

conditions that run counter to EU legislation. A number of Member States have experienced, and continue to experience, such pressures which also leave them increasingly vulnerable to interruptions in energy supplies if they do not agree to the conditions suggested .

EU ROLE - INTERNATIONAL ENERGY TREATIES

The role of the EU in energy agreements varies considerably depending on the terms of agreement.

For example, the EU, Member States and Euratom are all parties in their own right to the 1994 Energy Charter Treaty (54 signatories). The treaty entered into force in April 1998 and mainly concerns trade in energy products, transit of electricity and gas supplies and protection of investments in the energy sector of the Treaty's parties.

In 2006, the EU (on behalf of Member States) and the states of South-East Europe (Albania, Bosnia-Herzegovina, Macedonia, Montenegro, Serbia, Kosovo and now also Ukraine and Moldova), concluded the Energy Community Treaty. At the time Croatia, Romania and Bulgaria were also contracting parties, but are now EU Member States.

The main aim of the Energy Community Treaty is to extend EU energy and environmental rules into the energy markets of South-East Europe, create a stable investment climate and help to provide security of supply both in the region and the EU. South-East Europe is also strategically important to the EU for its potential to offer increased diversity of gas supply routes for gas to the EU from different sources over the longer term.

The EU is a party in its own right to the Energy Community Treaty with EU Member States agreeing their position with the Commission in advance of Energy Community meetings. When an applicant country applies for membership of the Treaty, EU Member States also agree the mandate for the EU to negotiate the terms of that accession.

Though the Energy Community Treaty contains mutual assistance provisions in the event of disruption of energy supply, measures proposed by the Energy Community can be blocked by the EU.

EU ROLE - INTERNATIONAL ENERGY ORGANISATIONS

The EU's role in international organisations also varies depending on the rules of the institution. In the International Energy Agency (IEA), for example, the EU has observer status and no voting rights, though it is entitled to speak. Not all EU Member States are IEA members, but those that are members, including the UK, have voting rights.

The EU also has a presence in both IRENA (International Renewable Energy Agency) and IPEEC (International Partnership for Energy Efficiency Co-operation) – the EU is a member of both organisations in its own right.

NUCLEAR, PROTECTION FROM THE HARMFUL EFFECTS OF IONISING RADIATION AND EURATOM TREATY

Nuclear energy, which is a low carbon technology, can be one way of helping to ensure security of supply and to reduce greenhouse gas emissions to slow down climate change. Under the Treaties, including Euratom, Member States remain competent to decide on their own energy mix and while some Member States such as the UK have chosen to retain nuclear in their energy mix, others have chosen to rely on other sources of energy as a significant source of power – or indeed have chosen to withdraw from nuclear entirely. In the latter case, such decisions have also had implications for other Member States and the functioning of the electricity market more generally in the EU - displacing traditional demand and supply patterns in a way that had not been foreseen a few years earlier and putting certain stresses on the networks at peak times as a consequence.

Nuclear energy (and radiological protection more generally) is the subject of its own treaty: the Treaty Establishing the European Atomic Energy Community - the Euratom Treaty - concluded in 1957. The principal aim behind the Euratom Treaty was, from the outset, to encourage the development of a European nuclear industry through cooperation between Member States and sharing of resources. The Euratom Treaty gives the Euratom Community competence to act in a number of areas including nuclear research and development, nuclear safety, investment in the nuclear sector, the supply and safeguarding of nuclear materials and the establishment of a nuclear common market, as well as radiological protection more generally. It also envisages that the Euratom Community (which has its own legal personality), will play an active role internationally to support the peaceful and safe uses of nuclear energy. Co-operation at international and European level is particularly relevant to the nuclear industry given the potential cross-border impacts of radioactivity.

A case-study

Stress tests

Following the nuclear incident at Fukushima, in order to ensure the continuous improvement of nuclear safety and that relevant lessons were learned, Euratom, the Commission, Member States, national regulators and plant operators all co-operated to develop and carry out "stress tests" at nuclear plants across Europe. This exercise took account of the distribution of competences among the participants in respect of nuclear safety and Euratom responsibilities. In particular, whilst organisation of the stress tests took place in a co-ordinated and uniform way taking advantage of European structures such as the European Nuclear Safety Regulators Group (which also advises the European Commission), participation in the stress testing exercise by the Member States, national regulators and plant operators was voluntary.

Focus on nuclear safety and radiological protection under the Euratom Treaty

The Euratom Community has been, and continues to be, very active in the field of nuclear safety and radiological protection, both within and outside Europe. Numerous legislative measures have been adopted, including measures laying down basic safety standards, frameworks for the safety of nuclear installations and the responsible and safe management of radioactive waste and spent fuel and measures regulating shipments of radioactive

substances, procedures following a radiological emergency and protection in particular cases such as in occupational exposures, public exposures, or medical treatment. These measures often reflect standards or practice developed at international level.

Currently a new draft 'Basic Safety Standards Directive' is being considered by the European Parliament and Member States, and the Commission has also proposed amendments to the Directive establishing the framework for the safety of nuclear installations.

The Euratom Community also has functions in relation to the prevention of unplanned releases of radioactive materials and the prevention of contamination. For instance, Member States are required to monitor levels of radioactivity in the air, water and soil to ensure levels are within permitted levels and to communicate information on those checks to the Commission, which has a right of access to Member States' monitoring facilities. In addition Member States are required to submit general data to the Commission, in advance of, plans for disposing of radioactive waste so that the Commission can give an opinion on the likely impact on other Member States. Some EU environment and energy legislation is also relevant to nuclear energy and radiological protection.

Focus on external relations under the Euratom Treaty

The Euratom Community is party to a range of international treaties, in particular the Convention on Nuclear Safety, the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management, the Convention on the Physical Protection of Nuclear Material, the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency. In addition, it has entered numerous co-operation agreements with countries outside Europe including Canada, Australia, USA, Japan, South Africa and Ukraine.

If a Member State wishes to enter into an external agreement which covers matters that fall within the scope of the Euratom Treaty, the Member State is required to notify the relevant provisions of the agreement to the Commission and the Commission can veto the conclusion of the proposed agreement if it "contains clauses which impede the application of the Euratom Treaty".

Although not a voting member, the Euratom Community also actively co-operates with the International Atomic Energy Authority (IAEA). It has recently entered into a Memorandum of Understanding with the IAEA setting out a framework for such cooperation.

The role and competence of the Euratom Community, as well as the relationship between Euratom and the EU, are discussed in more detail in a separate legal annex.

None of the provisions of the Euratom Treaty apply to the use of nuclear energy for military purposes.

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