EUROPEAN PARLIAMENT

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT A
ECONOMIC AND SCIENTIFIC POLICY

Economic and Monetary Affairs

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EU Energy Governance for the future

Study

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POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY

EU Energy Governance for the Future

STUDY

Abstract

This study, provided by the Policy Department A at the request of the Industry, Research and Energy Committee (ITRE) aims to explain key features of energy governance in the European Union related to the ITRE Committee's mandate. This document assesses governance in terms of transparency and accountability, effectiveness and coherence.

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ABOUT THE EDITOR

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CONTENTS

LIST OF ABBREVIATIONS

ACER	Agency for the Cooperation of Energy Regulators
CEF	Connecting Europe Facility
CoR	Committee of the Regions
COP	Conference of the Parties under the UNFCCC
DG	Directorate General
EASME	Executive Agency for Small and Medium-Sized Enterprises
EC	European Commission
EED	Energy Efficiency Directive
EESC	European Economic and Social Committee
EIB	European Investment Bank
EIT	European Institute of Innovation and Technology
ENSREG	European Nuclear Safety Regulators Group
ENTSO	European Network of Transmission System Operators
EP	European Parliament
ERC	European Research Council
ERCEA	European Research Council Executive Agency
ERGEG	European Regulators Group for Electricity and Gas
EU	European Union
GHG	Greenhouse gas
INEA	Innovation and Networks Executive Agency
ITRE	Industry, research and energy
JRC	Joint Research Center
MEP	Member of the European Parliament

MMR	Monitoring Mechanism Regulation
MS	Member State
PCI	Projects of Common Interest
REA	Research Executive Agency
RES	Renewable Energy Sources
TSO	Transmission System Operator
UNFCCC	United Nations Framework Convention on Climate Change
VP	Vice-President

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1. INTRODUCTION

1.1. Background

EU energy governance concerns the way that European Institutions interact, both formally and informally, in order to set and realise energy policy objectives of the European Union.

In May 2014 a new European Parliament (EP) was elected. This means that a new ITRE Committee has recently started its work, with its new members having to find their way quickly into the complex world of European energy policy and governance. The new ITRE Committee therefore needs a quick starters' guide into the governance of EU energy policy. That holds even more as energy is one of the priority areas of the new European Commission (EC), with a Vice-President for Energy Union and a Commissioner for Energy and Climate Action are newly appointed. Because of this, many important policy issues around energy are likely to come on the agenda of the ITRE Committee.

Finding a way in the complex world of EU energy governance is even more important as there are significant changes upcoming or announced for the starting legislative period. Next to the changes in the Commission and a merger of DG Energy and DG Climate Action, at the beginning of 2014 the European Commission has outlined a proposal for a new governance framework for 2030 (EC COM(2014)15). This concerns in particular a plan to 'streamline and simplify the current separate processes for reporting on renewable energy, energy efficiency and greenhouse gas reduction for the period after 2020, and to have a consolidated governance process with Member States'. The Commission has explicitly invited the European Council and Parliament to react on this proposal, so a discussion of this specific proposal will be part of this briefing note.

1.2. Objectives

The main objective of this briefing note is to explain key features of the EU energy governance related to the ITRE Committee's mandate. This briefing note will also assess whether EU energy governance works well in terms of transparency and accountability, effectiveness and coherence. The specific objectives are to:

- Describe the formal roles and responsibilities of EU institutions in place;
- Examine the functioning of EU energy governance in practice;
- Analyse the overlaps, influence and effectiveness of EU energy governance; and
- Give recommendations regarding governance issues to take into account by the EP.

1.3. Reading Guide

The briefing note is organised as follows:

- Section 2 provides an overview of EU energy governance. It explains the main energy policy objectives and actors, as well as the accountability and transparency mechanisms in place and the proposed changes with the new commission.
- Section 3 focuses on energy governance in practice, listing the key energy policy issues and providing an overview of key policies and legislation concerning the key energy objectives: climate, security of supply, and competitiveness.
- Section 4 – Energy governance for the future, provides topics for discussion, conclusions and recommendations.

2. EU ENERGY GOVERNANCE

This section will focus on the key features of the present EU governance structure and the announced changes, answering the following questions:

- What are the main areas of energy policies?
- What are the overall energy governance structure and the formal responsibilities of energy governance actors in the EU?
- What are new features of EU governance with the start of the new EC?
- How are accountability, transparency and cooperation of EU energy organisations organised?

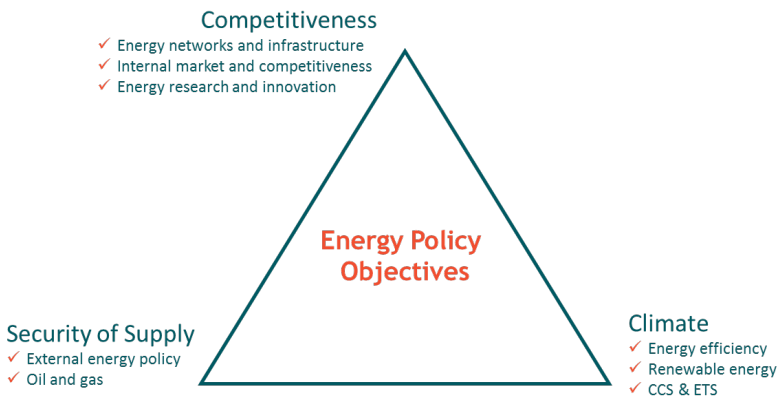
2.1. EU Energy Policy Objectives

EU energy governance concerns the organisational structures that are in place to set and realise EU energy policy objectives. Therefore an overview of EU energy governance should start with the overall objectives that these structures are meant to obtain.

The main EU energy policy objectives are since the 1990s often represented in the form of a triangle: competitiveness, security of supply and climate or sustainability (Figure 1). The competitiveness objective involves the need for a competitive, integrated and interconnected market for gas and electricity. The climate objective focuses on reducing greenhouse gas emissions by using less energy and more renewables. Finally, the security of supply objective aims to minimise the EU's vulnerability concerning uncertainties with respect to future supply, dealing with external energy policies, in particular oil and gas but, also with EU energy infrastructure and internal market policies.

The three pillars of EU energy policy are presented in Figure 1 along with some of the key energy topics. Most of the energy topics in practice can be grouped under several pillars, as they are contributing to several objectives simultaneously. For example, by increasing energy efficiency and renewable energy, the EU is not only contributing to the climate change goal but also moving forward towards improved security of supply. The same is true for infrastructure investment, which won't only contribute to competitiveness and internal market development, but will also lead to increased security of supply through the development of a reliable and coherent energy network in Europe. Nuclear energy can be grouped under several pillars as well, as it contributes to reduction of greenhouse gas emissions but also to security of supply. Traditionally, nuclear energy has had a separate status within EU energy policy, as it was originally regulated by the separate Euratom Treaty. Therefore nuclear will be discussed in this paper separately from the three pillars.

Figure 1 : The three pillars of EU energy policy



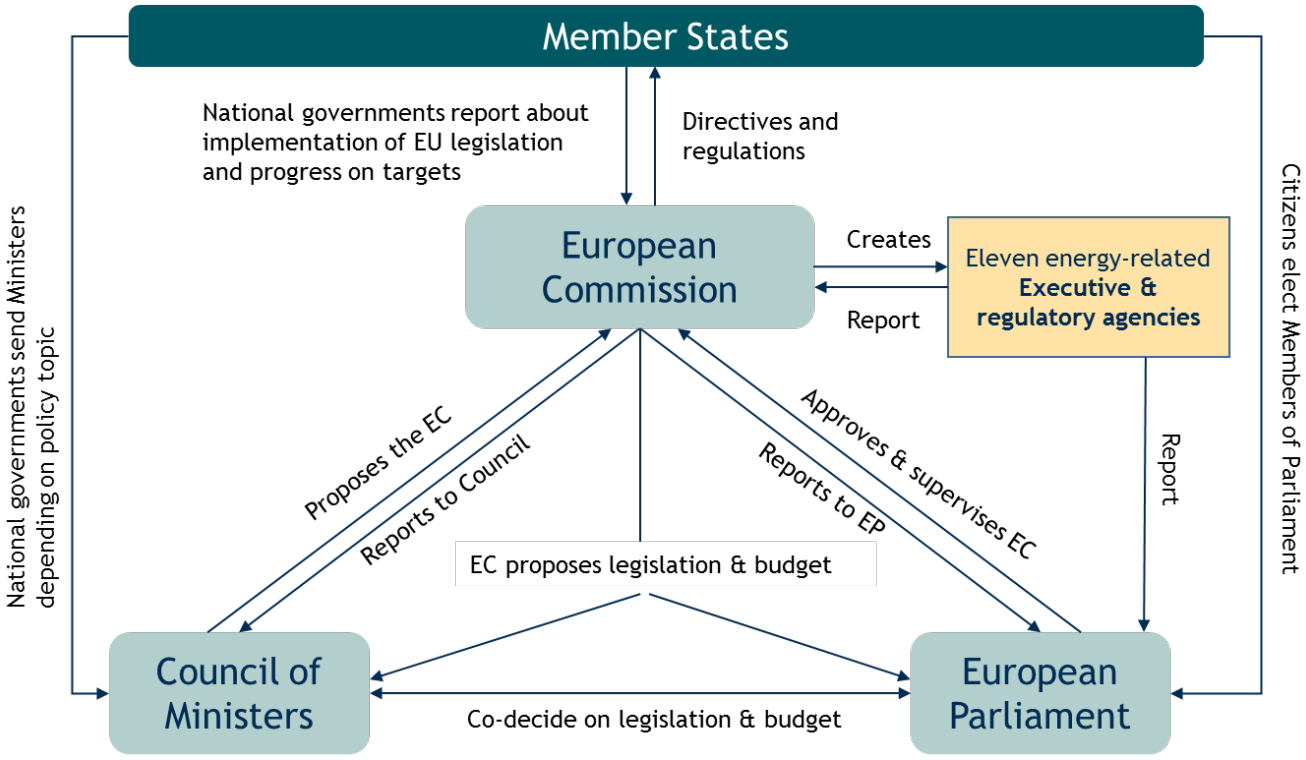
2.2. Main Actors and Responsibilities

In short, the organisational structure in place for realisation of EU energy policy objectives consists of an interplay of the main EU organisations Parliament, Commission and Council with the 28 individual Member States of the EU. Also, 11 executive and regulatory agencies contribute to the execution of EU energy policies (Figure 2). The legislative power for energy policies in the EU lies with the **European Parliament** (EP) and the **Council of Ministers,** which co-decide on legislation put forward by the executive power, the **European Commission** (EC). The Parliament also supervises the EC. The EC, as the executive power, can propose legislation and enforce it. The role of **Member States** (MS) in a European context is to co-decide on European legislation via the Council of Ministers. Member States furthermore transpose and apply legislation in the specific national contexts.

In practice, there is a large difference in actual roles of each of the main actors depending on the specific energy topic. On issues regarding external EU policy the High Representative for Foreign Affairs and Security Policy acts as the "foreign minister" of the EU and other Commissioners need to coordinate actions with the High Representative. This is particularly relevant when dealing with policies on security of energy supply.

The European Atomic Energy Community or Euratom is governed by the same institutions as the EU, however, the Euratom Treaty has remained a separate Treaty, almost unchanged since it was signed in 1957.

Figure 2: Overview of EU energy governance structure



2.2.1. The European Commission

The European Commission is the main executive body of the EU and the institution that can propose new legislation. The Commission is divided into several **Directorates-General** (DGs), according to the specific policy they deal with. Even though several DGs touch upon energy issues in a broad sense, the DGs particularly relevant for EU energy governance in

recent years were **DG Energy** (DG ENER) and **DG Climate Action** (DG CLIMA). Their main tasks are presented below:

DG Energy:

- Develops and implements international and domestic energy policies and strategies;
- Promotes the completion of the internal energy market;
- Supports the reinforcement of energy infrastructure;
- Ensures the safe and competitive exploitation of indigenous sources;
- Ensures meeting Energy Efficiency (EE) and Renewable Energy (RE) targets;
- Monitors implementation of EU energy law and proposes new legislation.

DG Climate Action:

- Develops and implements international and domestic climate action policies and strategies;
- Leads international negotiations on climate;
- Implements the EU Emissions Trading System (EU ETS);
- Monitors the implementation of MSs' emission reduction targets in the sectors outside the EU ETS;
- Promotes low carbon and adaptation technologies

Furthermore, DG Energy is structured in a thematic manner in five directorates[1]:

A. *Energy policy* – including international relations and economic analysis;
B. *Internal energy market* – covering regional initiatives; wholesale markets; electricity and gas; retail markets; coal and oil;
C. *Renewables, research and innovation, energy efficiency* – including CCS and clean coal;
D. *Nuclear safety and fuel cycle* (Luxembourg-based);
E. *Nuclear safeguards* (Luxembourg-based).

Other DGs that are relevant for energy governance in a broader sense are, for example, DG Research and Innovation, which focuses on research and innovation policies and DG Enterprise and Industry, which promotes economic growth and framework for EU enterprises, particularly with regard to energy efficiency. Further information on other DGs is presented in the annex 'Directorate Generals'.

The new structure of the European Commission

With the new Juncker Commission in 2014, the organisational structure of energy governance was changed. The main difference lies in the envisioned roles and fortified position of the Vice-Presidents (VPs). Unlike preceding EC teams, where the VPs were in charge of one particular portfolio, the seven VPs in the Juncker Commission will coordinate and steer the work of several Commissioners in light of several designated priority projects. Also, the former two DG's of Climate Action and Energy are merged under the new Commission.

The VPs whose portfolios are most relevant for energy policies are the VP for Energy Union, Maroš Šefčovič, and the VP for Jobs, Growth, Investment and Competitiveness, Jyrki Katainen, who will be responsible for investments in energy infrastructure.

[1] DG Energy Organisation Chart, November 2014
http://ec.europa.eu/dgs/energy/doc/dg_energy_organigram_en.pdf

The new Vice-president for Energy Union will steer and coordinate the Project Team formed for the priority area "A Resilient Energy Union with a Forward-Looking Climate Change Policy". The responsibilities of the designated VP for Energy Union encompasses various areas including the achievement of the 2020 and 2030 energy targets, completion of the internal energy market and coordination of actions to secure the energy supply[2]. The energy-relevant role of the Vice-President for Jobs, Growth, Investment and Competitiveness[3] lies with the "jobs, growth and investment package" which is the first priority of the new EC. This package is expected to offer policy options on how the common EU budget and mandate of the European Investment Bank (EIB) can be used to stimulate private investment in, among other sectors, energy networks infrastructure, transport infrastructure, renewable energy and energy efficiency. Furthermore, the VP for Jobs, Growth, Investment and Competitiveness will coordinate the medium term review of the 2020 Strategy. Also, the new VC Frans Timmermans might have an influence on the energy policy portfolio, as his deregulation task might lead him to change and reduce energy and climate related policies, such as energy labelling.

As the role of the VPs in the new EC is wider, so the responsibilities of some Commissioners have increased too. With relation to energy governance the most significant change is the portfolio of the Commissioner for Climate Action & Energy who is going to steer the work of the Climate Action and Energy DG, which will be merged (Table 1).

Table 1: Current and previous structure of the DGs relevant for energy governance

Relevant DGs	Coordination in Barroso Commission [2010-2014]	Coordination in Juncker Commission [2014-2019]	Coordination by VPs [2014-2019]*
DG Climate Action	Climate Action	Climate Action and Energy	VP Energy Union; VP Jobs, Growth, Investment & Competitiveness
DG Energy	Energy		

***)** All Commissioners will be coordinated by the High Representative for Foreign Affairs and Security Policy on external issues

2.2.2. The Council of Ministers[4]

The Council Ministers is where national ministers from each Member State meet. Depending on the policy in question, the MSs send their corresponding national minister to a Council meeting. The main responsibilities of the Council of the EU are:

- Passing EU laws – together with the Parliament it has the final say on laws proposed by the EC;
- Coordinating the broad economic policies of the MSs;
- Signing agreements between the EU and other countries;
- Approving the annual EU budget – the budget is decided jointly with the Parliament;

[2] EC (2014) Mission Letter to the Vice-President for Energy Union, 15 October 2014 recovered from http://ec.europa.eu/about/juncker-commission/docs/sefcovic_en.pdf

[3] EC (2014) Mission Letter to the Vice-President for Jobs, Growth, Investment and Competitiveness, 10 September 2014 recovered from http://ec.europa.eu/about/juncker-commission/docs/katainen_en.pdf

[4] EU (2014) How the EU works? Council of the EU recovered from http://europa.eu/about-eu/institutions-bodies/council-eu/index_en.htm

- Developing the EU's foreign and defence policies;
- Coordinating cooperation between courts and police forces of MSs.

In practice, the Council is the place where Member States can express their national views most directly on an EU level. For energy policies these national views are very important, as there are large differences in national energy policies and preferences.

2.2.3. The European Parliament[5]

Within the EU legislative framework, the European Parliament is a key stakeholder. Its main responsibilities are:

- Passing EU laws – together with the Council the Parliament decides on the content of EU laws proposed by the EC and officially adopts them;
- Democratic supervision - it scrutinises other EU institutions:
    - it approves the composition of the EC, its committees check the work of the EC by examining EC reports and questioning Commissioners, the Parliament is also the sole EU governance body that has the power to dismiss a Commission;
    - it also gives its opinion on the topics discussed at European Council summits;
- Adopting and supervising the EU's budget - together with the Council, the Parliament adopts the EU annual budget, and also monitors how the budget is spent by the Commission.

Even though the Council of Ministers and the Parliament cannot propose new legislation they can "invite" the Commission to do so. The EC is not obliged to submit proposals for legislation as advised by the EP and the Council but it has to provide official argumentation for its decision (Poptcheva, 2013).

The EP committee responsible for energy policy is the Parliamentary Committee for Industry, Research and Energy (ITRE). The ITRE committee holds frequent meetings where energy issues, among other topics, are discussed. Relevant stakeholders including the EC's DG ENER, ACER (Agency for the Cooperation of Energy Regulators) and the Energy Charter have taken part in the latest meetings (from July 2014 onwards).

2.2.4. Member States

The currently 28 EU Member States have also important responsibilities in EU energy policies. Member States can decide on a national level on their preferred energy mix. In practice, depending on geological and geographical circumstances as well as on national policy preferences, this has led to substantial differences. For instance, whereas France is traditionally for a predominant part of its electricity supply dependent on nuclear energy, in Germany recently – following the Fukuyama nuclear disaster - a national 'Atomausstieg' has been decided on. Similarly, whereas the Netherlands, with its large domestic gas reserves, has a relatively gas-intensive energy mix, Poland has built its electricity supply to a large extent on its domestic coal.

Substantial differences between Member States also exist regarding their energy infrastructures. Previously, the Eastern European Member States were connected between themselves but not with the Western European Member States. Also, in particular many

[5] EU (2014) How the EU works? European Parliament recovered from http://europa.eu/about-eu/institutions-bodies/european-parliament/index_en.htm

Eastern European Member States are largely dependent on Russia for their gas supplies and have their gas pipelines traditionally outlined to transport gas from Russia to their country. Only in recent years, due to intensive EU energy infrastructure policies, connections between all Member States in the field of gas as well as electricity have been substantially improved and dependencies have been somewhat reduced.

2.2.5. Executive and regulatory energy-related agencies

There are over 40 agencies in the EU that contribute to EU governance by various executive or regulatory tasks. Eleven of these can be seen to be specifically energy-related. These are presented in
Table 2. Further detail about these agencies is presented in the annex 'Executive and regulatory agencies'

Table 2: Overview of the energy-related executive and regulatory agencies

Institution	Function	Energy policy area
ACER Agency for the Cooperation of Energy Regulators	ACER's coordinates the work of national energy regulators, monitors and aids the development of the single EU energy market for electricity and natural gas and wholesale energy trading.	Energy networks and infrastructure; Internal market
EASME Executive Agency for Small and Medium-Sized Enterprises	EASME manages several EU programmes including: the Energy Efficiency part of the 'Secure, Clean and Efficient Energy'; the legacy of the Intelligent Energy – Europe programme and the Eco-innovation initiative.	Energy efficiency; Renewable energy; Climate change
EEA European Environmental Agency	The EEA provides independent information for the developing, adopting, implementation and evaluation of environmental policy (including the link with some energy policy areas).	Energy efficiency; Renewable energy; Climate change
EIT European Institute of Innovation and Technology	EIT aim is to integrate the three aspects of knowledge - education, research and business, and help bring innovative ideas to the market through Knowledge Innovation Communities (KICs) in areas such as Climate Change and Sustainable Energy.	Energy research and innovation; Energy efficiency; Renewable energy
ENSREG European Nuclear Safety Regulators Group	ENSREG aids the establishment of conditions for the improvement and understanding in the areas of nuclear safety and radioactive waste management.	Nuclear energy

Institution	Function	Energy policy area
ERC / ERCEA European Research Council & the ERC Executive Agency	ERC's aim is to encourage high quality research through competitive funding. It complements national research funding agencies and other EU funding activities. The ERCEA manages the ERC operations.	Energy research and innovation; Energy efficiency; Renewable energy; Climate change; Security of energy supply
Euratom Supply Agency	Euratom ensures a secure and equitable supply of nuclear material in the EU – for energy and medical purposes. Its responsibilities include: concluding supply contracts for nuclear material for energy and providing expertise on the nuclear market and market trends.	Nuclear energy
F4E Fusion for Energy	F4E is the EU's contribution to ITER6 and the research and development of fusion energy. It was created under the Euratom Treaty and works towards the construction of demonstration fusion reactors.	Nuclear energy
INEA Innovation and Networks Executive Agency	INEA manages several EU programmes including: the Connecting Europe Facility (CEF); the parts of Horizon 2020 on "Smart, green, and integrated transport" and "Secure, clean and efficient energy".	Energy efficiency; Renewable energy; Energy networks and infrastructure; Security of energy supply; Climate change
JRC Joint Research Centre	JRC is the EC's in-house science service which aims at aiding the DGs and providing independent, evidence-based scientific and technical support to the policy cycle.	Energy research and innovation; Energy efficiency; Renewable energy; Nuclear energy; Security of energy supply; Climate change
REA Research Executive Agency	REA is a funding body focused on maximising the efficiency and impact of EU research and innovation programmes. It manages the research proposals and funded projects.	Energy research and innovation; Energy efficiency; Renewable energy; Climate change; Security of energy supply

Source: Agency websites.

[6] The acronym ITER has a Latin origin and means "the way." The acronym also originally stood for International Thermonuclear Experimental Reactor but this name is no longer in use.

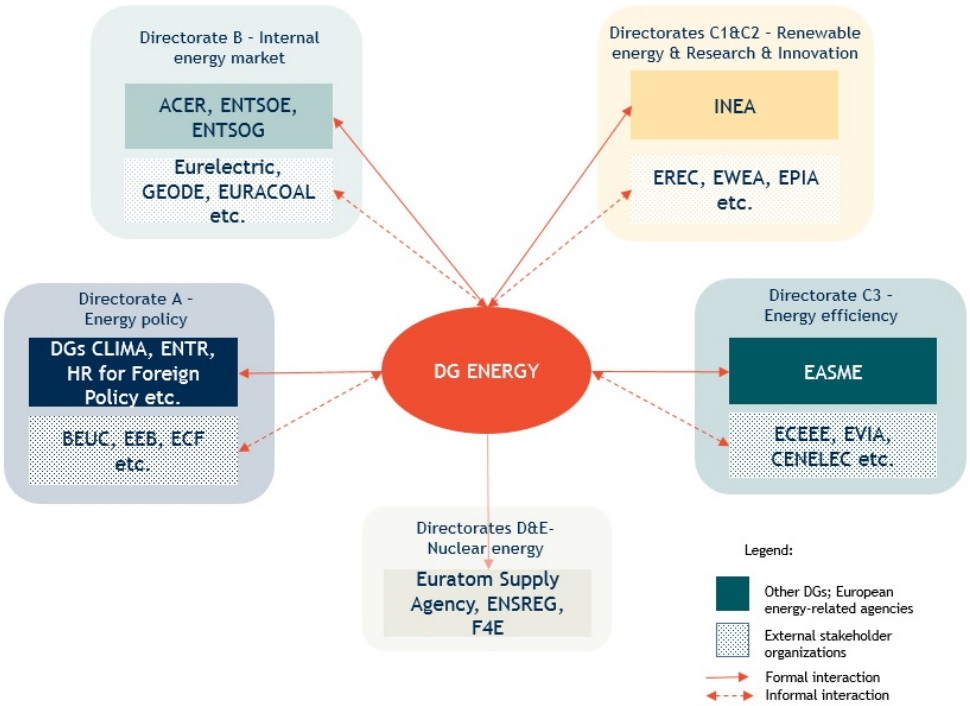
2.2.6. Other actors

In practice, EU energy governance involves a wide network of stakeholders. These can be for instance consumers, energy suppliers, industry associations and environmental NGOs. Some examples of relevant energy stakeholders on the EU-level are:

- **Renewable energy** – EREC (European Renewable Energy Council), EWEA (European Wind Energy Association), EPIA (European Photovoltaic Industry Association), etc.
- **Non-renewable energy** – EURACOAL (European Association for Coal and Lignite), EUROGAS (representing the gas industry – wholesale, retail & distribution), etc.
- **Energy efficiency** - ECEEE (European Council for an Energy Efficient Economy), EVIA (European Ventilation Industry Association), HVACR (European air-conditioning, heat pump and refrigeration industry), CENELEC (European Committee for Electrotechnical Standardization), BEUC (European Environmental Citizens Organisation for Standardisation), etc.
- **Energy supply, distribution & networks** – Eurelectric (representing the electricity industryin), GEODE (European association of the independent distribution companies of gas and electricity), T&D (European Association of the Electricity Transmission and Distribution Equipment and Services Industry), EASE (European Association for Storage of Energy) etc.
- **Citizens' organisations** – BEUC (European Consumer Organisation), EEB (European Environmental Bureau), Inforse (International Network for Sustainable Energy), ECF (European Climate Foundation), etc.
- **Research & Innovation** – EUREC (Association of European Renewable Energy Research Centres).

Figure 3 presents an example of how the actors involved in energy policy preparation interact, namely DG Energy and its directorates, energy agencies and other energy stakeholders.

Figure 3: Example of key energy governance actors' interaction



2.3. Accountability and Transparency

Accountability and transparency of policies are important features of EU energy policies. Two moments in the energy policy process are particularly important in this respect. Before deciding on legislation, stakeholder engagement ensures that all parties potentially interested to give an opinion have the opportunity to do so. After implementing legislation, formal reporting obligations guarantee that monitoring and evaluation of policies is possible. Furthermore, informal consultation between the actors at all stages is an important component of the policy process. These different processes are discussed here.

2.3.1. Formal Stakeholder Engagement

When developing new policies and legislation, stakeholders are often consulted. Stakeholder engagement can be done in a number of different ways. The most common one is public consultations, but e.g. workshops, bilateral meetings, and consultation on specific documents are also used. Typical stakeholders involved include industry, consumer organisations, environmental organisations, energy companies, TSOs, NRAs, etc. depending on the topic at hand.

When the EC starts working on a new policy initiative, piece of legislation or revises existing legislation, it usually launches a public consultation open to citizens, businesses and other organisations with an interest or expert opinion on the topic in question. During this consultation stakeholders can help shape/ influence the draft proposal before it goes for formal review and adoption by the Council and the EP. Box 1 provides a practical example of stakeholder engagement when developing ecodesign implementing measures.

Textbox 1: Stakeholder engagement for ecodesign

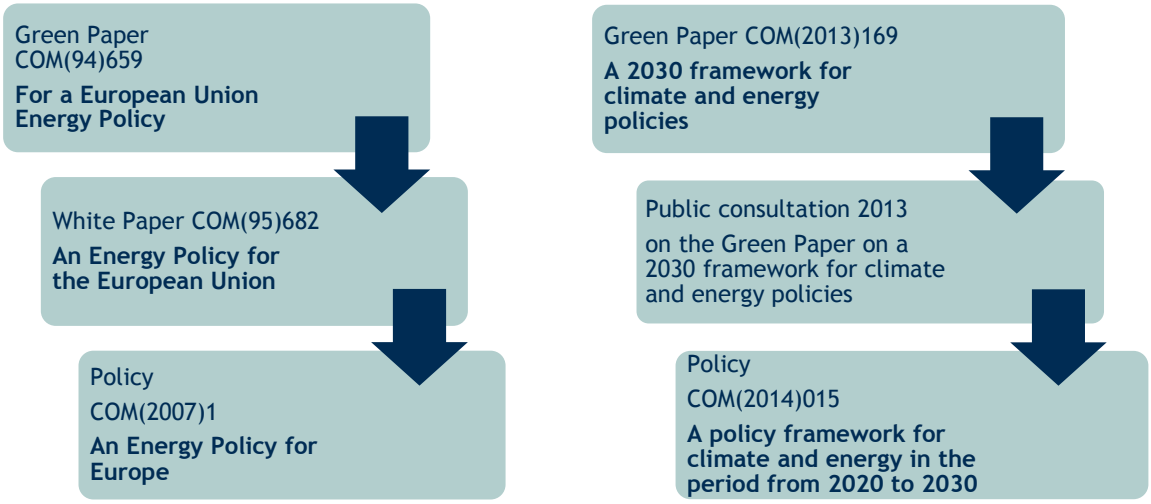
The Ecodesign legislative process includes, as a first step, a preparatory study that considers which ecodesign requirements should be set for a particular product. Based on the results of this study, the Commission prepares a working document. A **Consultation Forum**, consisting of representatives from Member States, industry and NGOs is established. The Forum meets on one or more occasions to debate the Commission proposals for a particular product group and to express their views on the working document and the possible implementing measures presented in it.

In parallel, an external Impact Assessment study is prepared. Afterwards, the final version of the proposed legislation is sent to the Regulatory Committee on the Ecodesign of Energy-related Products (EEP) that consists of officials from all Member States. The committee is allowed to make adjustments to the proposal and should reach a qualified majority to allow the Commission to present the proposal to the EP and the Council. After voting by the EEP, the EP and the Council have three months to apply scrutiny, in which they can review the final proposal and potentially still block its introduction. The World Trade Organization (WTO) is notified and the implementing measure is adopted and enters the Official Journal of the European Union

The policy-making in the EU often starts with "green papers" published by the EC. Even though green papers are not formally required, they are often the first step of the policy-making process as green papers stimulate discussion and stakeholder engagement on the topic they treat. Green papers are used to invite both formal institutions and citizens to participate in a consultation process and debate of the proposals in the green paper. Green papers give rise to legislative developments that are outlined in "white papers". White papers are the next step of the policy making process as they contain proposals for action in a specific area. When a white paper is well received by the Council it can lead to an action programme for the EU and legislation proposals. For example, both the COM(2007)1

An Energy Policy for Europe and the COM(2014)015 A Policy Framework for Climate and Energy in the Period from 2020 to 2030 started with Green Papers, as presented in the figure below.

Figure 4: Energy policy making examples



Stakeholder involvement is foreseen by the treaties of the EU and two stakeholder institutions have official advisory role in the policy making process, namely the European Economic and Social Committee (EESC) and the Committee of the Regions (CoR)[7]. The EC, EP and Council are required to consult the EESC and the CoR regarding legislation on a wide range of topics. Furthermore, the two committees can issue opinions on their own initiative too. For example, both committees have issued official opinions on the 2030 package (EESC, 2014 and CoR, 2014). The EESC represents different sectors of the "organised civil society" such as trade unions, employers, professional associations, etc. Within its structure, two sections are related to energy governance: the Section for Transport, Energy, Infrastructure and Information Society (TEN) and the Section for Agriculture, Rural Development and Environment (NAT). The CoR represents regional and local authorities as some EU legislation is implemented on regional and local level. Within the CoR's structure, the energy-relevant commission is the one for Environment, Climate Change and Energy (ENVE).

Additionally, a European Citizens' Initiative[8] allows EU citizens to invite the Commission to propose legislation on issues for which they believe a legal act of the Union is required. A citizens' initiative has to be supported by at least one million signatures from at least seven MSs for the EC to consider it. Since 2012, when the European Citizens' Initiative started, three energy-related initiatives have been launched.

2.3.2. Informal Policy-Making

Interest group interaction with EU institutions and national governments has historically played a crucial role in internal energy market policy development (Per Ove Eikeland, 2008). In addition to the formal accountability and transparency mechanisms, there are also a number of informal aspects towards energy governance. These include from informal meetings of energy ministers in the EU to lobbying in Brussels from a broad range of organisations. Both energy consumers and energy suppliers are main lobby segments in Brussels, including e.g. Eurelectric and EREC, as well as a number of energy-intensive

[7] European Union (2014) How the European Union Works, Luxembourg 2014; and the committees' webpages
[8] European Citizens' Initiative webpage: http://ec.europa.eu/citizens-initiative/public/welcome

industry associations, and BEUC representing consumer organisations (Per Ove Eikeland, 2008).

As this an important aspect of policy-making, President Juncker has made improving the transparency of informal policy-making one of the ten priorities for his term. The new EC under VP Timmermans' guidance is expected to propose an Inter-institutional Agreement to the EP and the Council for the creation of a mandatory lobby register in order to inform about the contact of the EC, EP and Council with stakeholders and lobbyists in the context of the legislative process[9].

2.3.3. Reporting

There is formal reporting set by regulation at different levels, namely: Member State, European Commission and agency level. The table below provides an overview of key targets and related reporting relevant for energy governance.

Table 3: Key quantitative targets set in EU energy policy

Topic	Target	MS Reporting	EC reporting to EP and Council
Climate change	20% reduction in EU greenhouse gas emissions from 1990 levels by 2020 and 40% by 2030. The ESD set national targets for MSs for 2020.	MMR reporting every two (and four) years from 2015 onwards[10] ETS annual report	MMR annual progress report ETS annual report 2016: Report on Effort Sharing Decision
Renewable energy	Raise the share of EU energy consumption produced from renewable resources to 20% by 2020 and 27% by 2030. The RES Directive set mandatory national targets for MSs for 2020.	NREAP Progress report every two years until 2021[11]	Progress report every two years
Energy efficiency	20% cut in Europe's annual primary energy consumption by 2020 and a 27% energy savings target for 2030. Both are non-binding targets.	NEEAP Annual progress report[12]	Annual assessment of progress reports 2015: Report Art. 6; 2016: Report Art. 7; 2018: Assess Art.

[9] EC (2014) 10 Priorities: A Union of Democratic Change. Recovered from http://ec.europa.eu/about/juncker-commission/priorities/10/index_en.htm

[10] The EU monitoring mechanism (revised in 2013, Regulation 525/2013) enhances the reporting rules on GHG emissions to meet requirements arising from current and future international climate agreements as well as the 2009 climate and energy package. Member States must report on their emissions annually under the EU monitoring mechanism. In addition, the Commission is required to submit an annual report to the European Parliament and to the Council, assessing the progress of the EU and its Member States towards meeting their commitments under the UNFCCC and the Kyoto Protocol.

[11] Article 22 of Directive 2009/28/EC requires Member States to submit a report to the European Commission (EC) on progress in the promotion and use of energy from renewable sources every two years until 2021.

[12] Article 24(1) of the EED (2012/27/EU) requires Member States to submit an annual report providing an overview of progress towards national energy efficiency targets and data that will help the Commission assess overall progress towards the EU's 2020 energy efficiency goals.

Topic	Target	MS Reporting	EC reporting to EP and Council
	The EED requires MSs to set a national EE target.		19(1) of EED
Internal market	Completion of the internal market by end 2014 10% interconnection by 2020 and 15% by 2030	Annual report from NRAs	Annual report (Third package)

ESD: Effort Sharing Decision No 406/2009/EC
MMR: Monitoring Mechanism Regulation (EU) No 525/2013
ETS: Emissions Trading System Directive 2003/87/EC
RES Directive: Renewable Energy Sources Directive 2009/28/EC
EED: Energy Efficiency Directive 2012/27/EU
NREAP: Renewable energy action plan; **NEEAP**: National energy efficiency action plan
Third package: Directive 2009/72/EC 13 and Directive 2009/73/EC

Currently there is separate reporting on various targets of the 2020 climate and energy package, through the Energy Efficiency Directive (EED)[13], the Renewable Energy Directive[14] and the Monitoring Mechanism Regulation (MMR, to monitor GHG emissions)[15].

The Commission's proposal (EC COM(2014)15) aims to "streamline and simplify the current separate processes for reporting on renewable energy, energy efficiency and greenhouse gas reduction for the period after 2020, and to have a consolidated governance process with Member States". This would imply merging the separate reporting and would have implications at MS level where, in many cases, different agencies deal with each of these reports.

[13] Article 24(1) of the EED (2012/27/EU) requires MSs to submit an annual report providing an overview of progress towards national EE targets and data that will help the Commission assess overall progress towards the EU's 2020 energy efficiency goals.

[14] Article 22 of Directive 2009/28/EC requires Member States to submit a report to the European Commission (EC) on progress in the promotion and use of energy from renewable sources every two years until 2021.

[15] The EU monitoring mechanism (revised in 2013, Regulation 525/2013) enhances the reporting rules on GHG emissions to meet requirements arising from current and future international climate agreements as well as the 2009 climate and energy package. Member States must report on their emissions annually under the EU monitoring mechanism. In addition, the Commission is required to submit an annual report to the European Parliament and to the Council, assessing the progress of the EU and its Member States towards meeting their commitments under the UNFCCC and the Kyoto Protocol.

3. EU ENERGY GOVERNANCE IN PRACTICE

This chapter will focus on answering the following questions:

- What are the main current and upcoming energy issues and how do they relate to energy governance?
- How do EU energy organisations coordinate their actions at EU level?
- How do EU energy organisations interact with national authorities?
- What is the level of influence of EU energy organisations?

In the previous chapter, the formal structures of EU energy governance were outlined. In this chapter, we will discuss how this energy governance has worked in practice over the last 20 years to realise the EU energy policy objectives competitiveness, climate and security of supply.

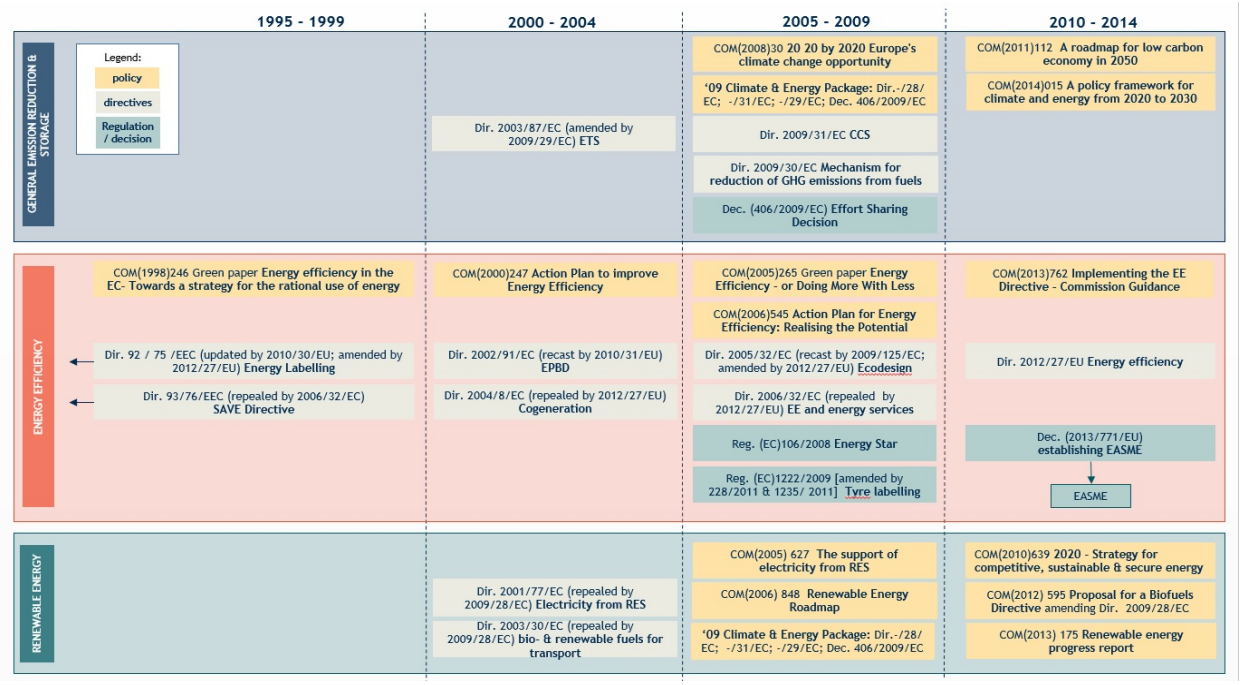
Important pieces of legislation for these three pillars include in the field of climate the 2020 targets set in 2008 and the recent 2030 energy and climate package, for security of supply the 2008 second strategic energy review and the 2014 EU energy security strategy as well as regarding the internal market the three market packages of 1998, 2003 and 2009 together with the 2014 progress paper. The following sections will discuss these three main pillars in more detail.

3.1. The Climate Pillar

3.1.1. Overview and main characteristics

Climate policy is one of the areas where the role of the European institutions has been prominent over the last decades and the policy-making has taken place on a supranational rather than on national level. Various EU policy papers have been published in order to outline a united strategy for meeting the climate targets of the EU. Moreover, extensive European legislation has been passed, especially in the past 14 years, in three areas: GHG emission reduction, energy efficiency and renewable energy (Figure 5).

Figure 5: Energy and climate policy



Having a close look at EU climate policies as they have been implemented over the years, several key features emerge:

a. Internal EU climate and energy policy has been quite successful, but needs to be scaled up further

Although EU energy and climate policy is often criticized for not being ambitious enough in light of what would be needed on a global level, also substantial successes have been obtained. The EU has passed legislation in all the three key areas of climate policy that are distinguished here. Some of the first pieces of legislation date back to the early 2000s, and some of the most important directives under the climate pillar were passed in 2009 as part of the **"Climate and Energy Package".** This policy package includes the CCS, ETS and RES directives and the **Effort Sharing Decision** with regard to GHG emissions and is key to the 2020 Energy Strategy.

Recently, an update of this policy has been proposed with targets up to 2030. This is the **2030 Climate and Energy Framework** (EC COM(2014)15), which was proposed by the EC earlier this year and agreed upon at the October 2014 summit of the European Council[16] (although with less ambitious targets than originally proposed[17]).

The main targets from these strategic documents are:

- **Climate change and decarbonisation:** The EU aims for a 20% reduction in EU greenhouse gas emissions from 1990 levels by 2020 and 40% by 2030.
- **Renewable energy**: The EU aims to raise the share of EU energy consumption produced from renewable resources to 20% by 2020 and 27% by 2030.
- **Energy efficiency**: The EU aims for a 20% cut in Europe's annual primary energy consumption by 2020 and a 27% energy savings target for 2030. Both are non-binding targets.

EEA (2014) reports that the EU is on track with achieving its 2020 goals (even though the progress at MS-level varies). The share of RES is growing as planned but further progress is conditional on investments and energy market transformation necessary to accommodate larger shares of RES. Energy consumption has also been decreasing over the last nine years, however, full implementation and enforcement of national policies is required for the EU to achieve its 2020 energy efficiency target. Meanwhile, the GHG emissions are already 19% below 1990 levels and further reduction may even surpass the 20% target. Even though this fall in emissions is partly due to the economic crisis and following industrial slowdown, part of the reduction can be attributed to relevant EU policies. For example, the fall in emissions in the period 2005-2011 can be attributed to the economic crisis and industrial slowdown (30%), the development of renewable energy (40-50%), the improvement of energy intensity (10-20%) and the switch from coal to gas energy and the carbon price (10-20%) (Capgemini, 2014). Even though some MSs have set

[16] EurActiv (2014) EU leaders adopt 'flexible' energy and climate targets for 2030, published 24 October 2014. Recovered from http://www.euractiv.com/sections/eu-priorities-2020/eu-leaders-adopt-flexible-energy-and-climate-targets-2030-309462

[17] The agreed targets include reduction of the greenhouse gas (GHG) emission of at least 40%, renewable energies target of at least 27% and a non-binding goal for energy efficiency of 27% by 2030. Furthermore, a special "flexibility clause" allows the European Council to review these targets following the UN climate summit in 2015, even though a possible revision can take place at any time. Other agreements reached at the European Council meeting in October 2014 are commitment to increase energy trading through electricity connectors by 10% to 2020 and subsequently to 15% as well as implementation of critical projects in the gas sector which are of common interest for the EU such as the North-South corridor, the Southern Gas Corridor, and the promotion of a new gas hub in Southern Europe.

themselves more ambitious goals[18] with regard to climate and energy, the policy in most of the MSs has largely been guided by the European strategy on climate and energy.

Furthermore, considerable progress has been achieved with regard to improved energy efficiency of products. Improving the efficiency of energy-related products has been a priority of the EU for two decades. It started with the energy labelling requirements for appliances in the early 1990s, then complemented by minimum energy performance standards through ecodesign. Ecodesign and updated energy labelling requirements legislation have been passed for a variety of products since 2009 and legislation for a new list of products is under way[19]. The ecodesign directive brings considerable energy savings and is expected to contribute 40% of the 2020 energy savings target. The products currently covered by ecodesign legislation can save 480TWh of electricity annually by 2020[20].

b. A prominent role for the ETS, which needs to be strengthened in the future

The **ETS** is one of the most important climate and energy policies that have been passed on EU-level. Despite criticism from various carbon-intensive sectors and exemptions for some of them the ETS has been in place since 2005 and covers the EU and three EEA-EFTA countries[21]. In 2013 the ETS entered its third phase covering the period 2013-2020. The transitional periods and exemptions granted to some industries expired and now the ETS covers 45% of the total GHG emissions in the EU originating from power and heat generation, energy-intensive industries[22] and commercial aviation.

Despite ETS' contribution to emission reduction in the EU as discussed in the previous section, the system does not function very well as the price of CO2 has fallen significantly[23] despite an originally increasing trend. Furthermore, the surplus of unallocated carbon allowances has grown. On the one hand this is due to the economic crisis which has had a negative effect on different European industries covered by the ETS and hence on the carbon market. On the other hand, the surplus of carbon allowances is due to the many exemptions given to various industries in the first two phases of the ETS. The main argument against the ETS and in favour of exemptions from it which have been put forward by the industry is that it reduces the competitiveness of European companies compared to their international counterparts. Therefore, the EC has put proposals for amendments to the ETS directive in order to address the surplus of emission allowances, improve the functioning of the system and to enhance the system's resilience to major shocks (COM(2014)20).

c. The frontrunner role of external EU climate and energy policy has not yet led to a breakthrough regarding an international climate agreement

Even though the EU has the ambition to be the global leader in climate policies, it has not yet succeeded to force an international agreement with its policy of leading by example. The last several Conferences of the Parties (COPs) under the United Nations Framework Convention on Climate Change (UNFCCC) have been marked by lack of consensus between

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[18] E.g. Denmark aims to have all of its energy supply met by RES by 2050 with an intermediate goal of 35% by 2020

[19] DG Enterprise and Industry Ecodesign webpage

[20] Cool Products (2014) The benefits of ecodesign – infographic recovered from http://www.coolproducts.eu/infographics

[21] Iceland, Liechtenstein and Norway

[22] The ETS covers the following sectors: oil refineries, iron and steel, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals; production of nitric, adipic, glyoxal and glyoxlic acids

[23] In April 2013 the CO2 was as low as 2.46 €/t of CO2 (Investing), while in 2008 the carbon price reached almost 30 €/t [COM(2012) 652 Report (…) The state of the European carbon market in 2012, p.5]

the parties and delay in putting forward a binding global agreement for emission reductions post Kyoto. For example, despite expectations for reaching an EU-led agreement at the 2009 COP in Copenhagen, the negotiations were instead marked by division, lack of binding commitments for reduction post-Kyoto and alliance between the USA and emerging economies (Chandani, 2010). Currently, all expectations are directed to the 2015 COP in Paris.

Even though the EU can be considered as "leading by doing" (Malla, 2011) thanks to its ETS and voluntary commitments to the Kyoto Protocol, it has not been successful in pushing major GHG emitters like the USA and China to commit too. Recently however, both USA and China have sent signals that they are willing to cut GHG emissions[24]. The USA targets a decrease of GHG emissions of 26-28% from 2005 levels by 2025 (the USA has already committed to reductions of 17% by 2020 and of 83% by 2050). Meanwhile, China has announced its intent to peak CO2 emissions by 2030 without a specification at what level the emissions will peak. China also plans to increase the share of non-fossil fuels in primary energy consumption to 15% by 2020 and to 20% by 2030[25]. Nevertheless, this "change of attitude" by two of the largest global emitters of GHGs has not been attributed to the EU's influence in climate policies. Nonetheless, at the G20 summit in November 2014 the EU and USA are credited with putting climate talks on the agenda despite the host's attempts to avoid discussing climate policies at the event[26].

3.1.2. Role of EU Institutions and Member States

The European institutions have played a key role in setting the strategy and passing legislation with regard to the climate pillar of energy policy in the EU. The policy role of the MSs can be considered minor compared to that of the European institutions as it has primarily been focused on implementing the EU climate and energy legislation and working towards the 2020 targets.

Among the MSs Germany is considered as one of the most influential members with regard to energy policy. For example, its influence can be noticed in the new EU rules on public support for energy which is similar to the new German law on RES (Capgemini, 2014).

As energy policy largely falls under the ordinary legislative procedure, the EP has an important role to play with regard to climate and energy policy. Moreover, the EP appears to support more ambitious polices than the Commission and the Council in this field. For instance, during the preparation of the 2030 package the EP has voiced its support for three more ambitious and binding targets[27] but the formulation approved by the European Council has milder objectives.

3.1.3. Future Policy Issues and Governance

A first main challenge for the future EU energy policies relating to climate will be to scale up its emission reduction initiatives in order to stay on track for the announced goal of 80-95% emission reduction in 2050. This holds even more, as Member States are fairly divided as to steps and pace needed towards this target. More and more detailed legislation does not seem the right way forward in this respect, as there is already a fairly detailed

[24] The Guardian (2014) US and China strike deal on carbon cuts in push for global climate change pact. Recovered from http://www.theguardian.com/environment/2014/nov/12/china-and-us-make-carbon-pledge

[25] Ibid. and World Resource Institute (2014) The China-U.S. Climate Agreement: By the Numbers, published 20 November 2014. Recovered from http://www.wri.org/blog/2014/11/numbers-china-us-climate-agreement

[26] Reuters (2014) U.S., EU override Australia to put climate change on G20 agenda. Recovered from http://www.reuters.com/article/2014/11/16/us-g20-summit-idUSKCN0IZ03C20141116

[27] European Parliament News (2014) MEPs want binding 2030 goals for CO2 emissions, renewables and energy efficiency - MEPs called for a 40% cut in CO2 emissions, a 30% target for renewable energy and a 40% target for energy efficiency by 2030, all binding targets

legislative and organisational structure in place regarding main sub-topics such as energy efficiency, renewable energy and overall decarbonisation as aimed for by the ETS. Neither would new legislative efforts fit with the current overall policy trend within Member States of increasing attention to the national level and overall scepticism against European policy making and new obligatory targets. Rather, streamlining of policies by integrated reporting could help to improve policy making here. Also, increased attention to interactions between climate and security of supply on one hand and climate and competitiveness on the other hand could help to find new legitimacy for scaling up emission reduction efforts. In this respect, questions like 'to what extent can energy efficiency and renewable energy development help to reduce dependencies on Russian gas?' or 'how can greening of EU energy-intensive industry counteract US shale gas developments?' could be addressed.

From a governance point of view, for the EP this could mean that current efforts of the Commission to integrate climate related energy reporting by MS could be supported, on the condition that this does not lead to loss of transparency of the reporting. In such new reporting formats, analysis of trade-offs and synergies between achievement of energy efficiency, renewable energy and overall emission reductions should be stimulated. Also, regarding the increasing importance of interactions between climate, security of supply and competitiveness policies, hearings by the EP could be organised with think-tanks and other organisations that can provide ideas on harmonisation of these policies.

A second main challenge for EU energy and climate policies will be to strengthen the ETS. The recent proposal for the introduction of a Market Stability Reserve (MSR) under the ETS is yet to be decided upon. This would however only be a second-best option next to significantly reducing the number of emission allowances over the long term. From a governance perspective, here as well simplification of the ETS system by reducing the exceptions in the system and harmonising the ETS with other emission trading systems worldwide could be an overall aim of the EP for the future. For this purpose, closer contacts of the EP with the national emission registration authorities (whether or not to be integrated with energy efficiency and renewable energy target reporting organisations) could be useful.

A third challenge for successful future EU energy and climate policies will be to improve its external performance. So far, EU climate policy has not visibly led to other countries following similar ambitious reduction pathways. With an increasing importance of China in global climate emissions, this country in particular should be addressed. EP governance efforts therefore could be directed at more regular climate exchanges with Chinese parties in order to explore further energy and climate cooperation possibilities. Also, EP could invite the EU high commissioner for external affairs to discuss how to play a more prominent role here.

3.2. The Security of Supply Pillar

3.2.1. Overview and main characteristics

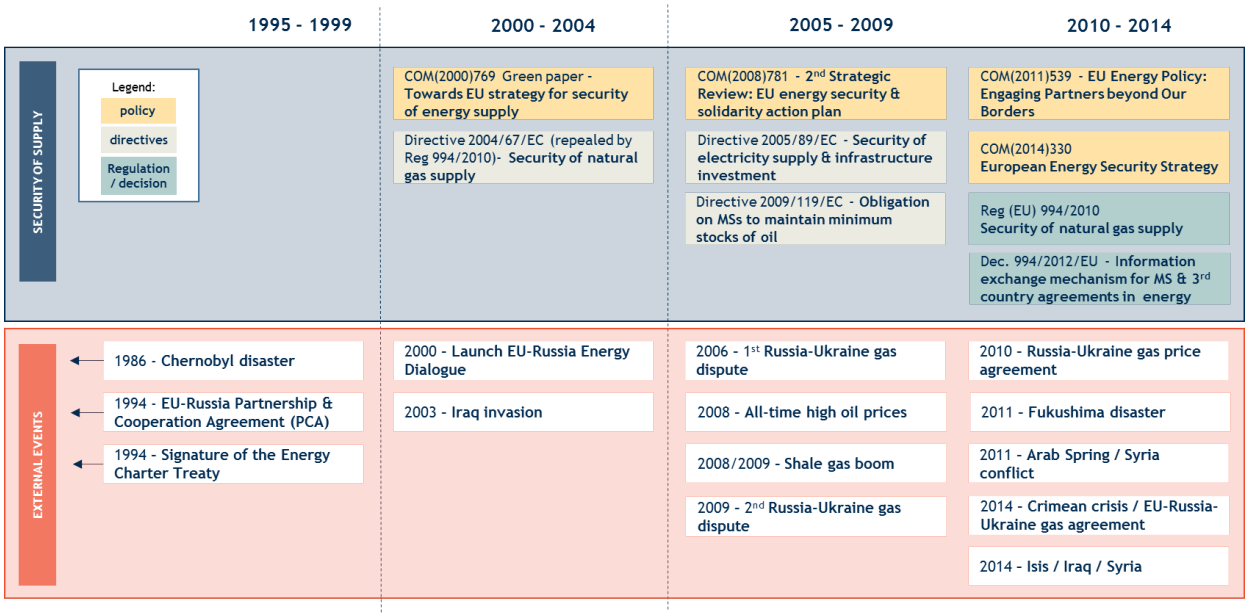
The EU has traditionally relied on imported fuels. The EU imports over 60 % of its gas and over 80 % of its oil. Because of this, security of supply has always been important.

Two of the three treaties establishing the European Communities are in essence about energy security: the European Coal and Steel Community (ECSC) Treaty and the Euratom Treaty. As such, security of supply has been part of EU energy policies right from the start in the 1950s. And this topic has remained important up to present, since EU dependency on external energy sources has only increased over the years.

Over the years it has shown to be difficult to develop common approaches regarding security of supply on an EU level, since such measures by Member States are seen to be

very much related to their national energy mixes and hence are regarded as a national competence. Nevertheless, in the last 20 years several policy approaches to address energy security of supply on an EU level were agreed on, which gradually developed from pure emergency response measures to more integral prevention strategies (Figure 6).

Figure 6: Energy and security of supply policy



Analysing these EU security of supply policies, several key features emerge:

a. Geopolitical dependencies as an underlying motivation

Energy security of supply policies are traditionally motivated by fears for political scarcity of resources, i.e. considerations that being too dependent on energy imports from certain countries could be abused by these countries to obtain political advantages – either in terms of favourable price conditions or as a means to exert pressure in times of a political or armed conflict. They have started after the 1973-74 oil crisis in an IEA/OECD context, when strategic oil reserves were set up as a key emergency response mechanism. Later on, the arrangements made in IEA context were also integrated into EU policies, for instance with the Directive 2009/119/EC that specifies Member State obligations to maintain emergency oil stocks.

b. Crisis-driven

Whereas the oil crisis in the 1970s can be seen as the start of energy security policies, other energy crises marked further steps in EU energy policies. The sharp rise in oil prices in 2000 was quoted prominently in the green paper 'Towards an EU strategy for security of energy supply' (COM(2000)769), and the 2006 Russia – Ukraine gas crisis was an important motivation for further policies such as the COM(2008)781 Second Strategic Energy Review.

c. Mainly oil and gas based

The energy mix of EU Member States consists of oil, gas, coal, nuclear and in the last decades also increasing amounts of renewables. However, security of supply policies are usually related to oil and gas. Regarding oil, the EU is presently dependent mainly on imports from Russia, Norway and a variety of Middle East countries. For gas, Russia, Norway and Algeria are the main exporters to the EU. Since relationships with these by far

dominant suppliers are from time to time problematic and insecure – excluding those with Norway –, EU security of supply policies have been focusing on oil and gas mainly[28].

Although the EU also imports large amounts of coal, these have never been a main topic in security of supply policies, as the number of suppliers and potential suppliers is far larger. The risk of political exploitation of coal export relationships by the exporting countries is therefore considered much smaller. On the contrary, diversification into coal away from gas is one of the strategies proposed in security of supply policies.

Nuclear energy is also relating to security of supply, but in a different way than oil and gas. It can be used to diversify away from gas in electricity supply and as such can be regarded as an instrument in security of supply policies, but the import of uranium as a raw material for nuclear energy is hardly an issue for security of supply - as only small quantities are required and supply can be obtained from various countries (e.g. Canada, Australia, Kazakhstan, Niger, South Africa and Russia).

d. External as well as internal EU policies

Table 4 gives a schematic outline of EU energy security policies. The table shows that current policies are directed at emergency response as well as prevention. In recent years, a whole range of external as well as internal measures has been enacted in various directives, such as 2004/67/EC on gas and 2005/89/EC on electricity supply and infrastructure investment. Measures vary from engaging in diplomatic relationships with oil and gas exporting countries, via infrastructure development to energy efficiency and diversification in order to reduce demand for imported oil and gas.

Table 4: Schematic outline of EU energy security policies

Type of measure		Measure
Emergency response		• Emergency stocks oil and gas
Prevention	External	• Diplomatic relationships with main oil and gas exporting countries and international organisations
	Internal	• Energy efficiency • Diversification into RES, coal and nuclear as an alternative for oil and gas • LNG imports supplementing pipeline gas imports • Improving gas interconnections and bi-directional gas flows between MS • Electricity interconnections and internal market improving gas dispatch in electricity supply between MS • Innovation into new energy technologies

3.2.2. Role of EU institutions and Member States

Key actors in EU energy security policies are in the first place individual Member States, which still play a dominant role due to their decisive power regarding national energy mixes, the Commission, that plays an increasingly important role in integrating national

[28] A particular situation exists for the Baltic States regarding electricity, being largely connected to, and dependent on, Russia to balance the networks.

policies and the External Action Service, which coordinates EU diplomatic relations with key energy exporters. Furthermore, the inclining importance of regional energy coordination mechanisms within the EU should also be noted as an important trend in security of supply governance.

Given the differences in energy mixes between Member States, security of supply policies are up to present still to a large extent an issue decided on a Member State level. However, as by decision 994/2012/EU, it is now assured that at least an exchange of information takes place regarding national decisions that affect EU energy security. The gradual movement from emergency mechanisms to preventive action over the last decades has also seen an increasing role of the European Commission, as particularly confirmed by several security of supply policies and directives launched in the last ten years. Further, the European External Action Service plays an important role in integrating energy considerations into EU foreign policy and making the Member States externally 'speak with one voice'.

An important trend in internal energy security of supply and market policies in recent years has been the increasing role of regional coordination mechanisms, such as the NordPool (Scandinavian countries), the Pentalateral forum (Benelux, Germany and France) and e.g. several regional 'working groups' determining preferential energy infrastructure projects under the PCI (e.g. Baltic Sea region, East and West corridors). Also, the 'Gas Coordination Group', involving Member States, regulators and other gas stakeholders, according to the new energy security strategy COM(2014)330 'has proven to be an effective EU-wide platform to exchange information between experts and coordinate action'. The strategy also mentions establishment of the sector-based 'PRISMA-platform' in 2013, where interconnection capacity for the gas networks of 28 TSOs is auctioned as an important accomplishment.

3.2.3. Future Policy issues and Governance

The 2014 Energy Security Strategy (COM(2014)330) has outlined the latest status-quo in EU energy security policies. Apart from specific emergency measures to be taken now also preventive measures are included in EU security of supply policies. Still, these policies can be seen as to have arrived at an important crossroads for the coming decades. Unless a rapid implementation of CCS will allow for a continued use of fossil fuels and realisation of low-carbon policies at the same time, oil and gas dependency is bound to decrease until 2050. This will have important consequences for the relationships with oil and gas exporting countries. These countries themselves are often to a high extent dependent on these exports for their national incomes.

From a governance perspective, relationships of the EU should equally assure present oil and gas flows, and prepare these countries for a future with lower income from their oil and gas exports. The High Commissioner is the main responsible for such energy external relations. Also, the Commissioner for economic and financial affairs plays an important role here. A joint EP hearing with both could contribute to further improve internal EU cooperation for EU external energy relations in the light of a future transition to a low-carbon economy that is not only beneficial to the EU but also to its fossil fuel exporting partners.

Also, for security of supply in a future low-carbon economy it should be carefully checked if a shift towards renewable energy is not introducing new dependencies on other countries – for instance related to high-volume biomass imports or to imports of rare raw materials for high-tech renewables applications. A hearing of the EP with the Raw Materials Initiative could be of help here.

Finally, for the European Parliament it is important to consider to what extent a closer relationship is needed with the emerging regional and sector-based coordination mechanisms, as these increasingly seem to represent an intermediate step towards further coordination of energy supply policies in the EU. A discussion with representatives from Nordpool, Pentalatal forum and other regional energy market coordination could give the EP a more informed view on the role that these organisations can play in internal security of supply and market policies.

3.3. The Competitiveness Pillar

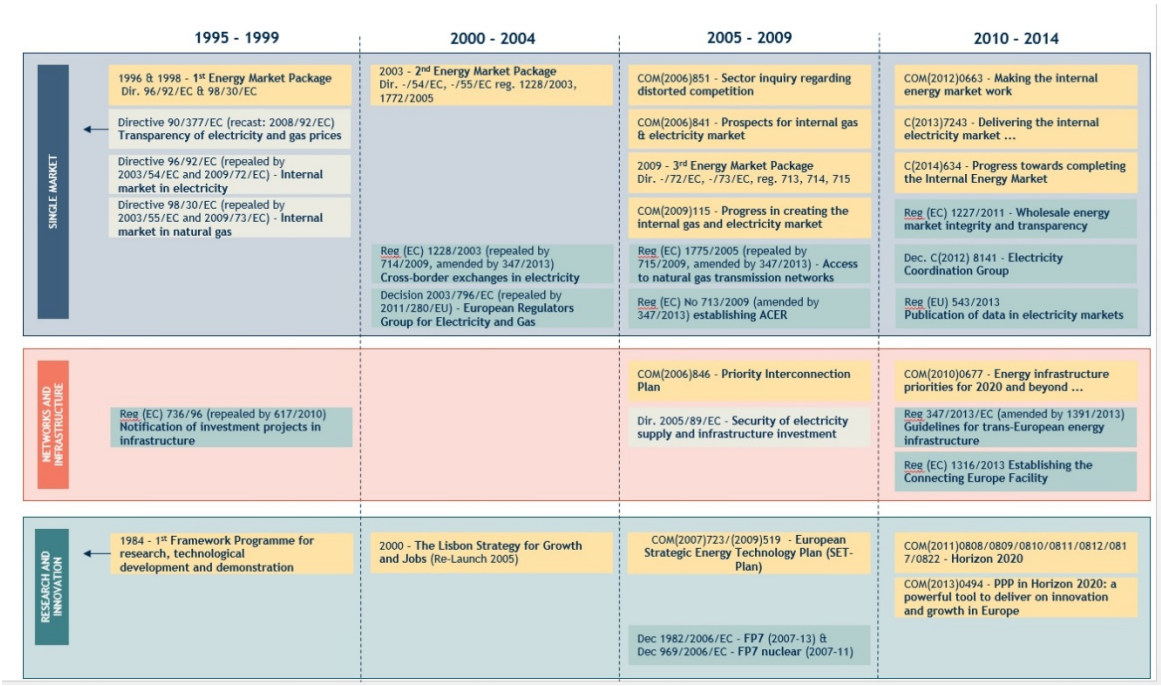
3.3.1. Overview and main characteristics

A third key objective of EU energy policies is to create a competitive and integrated internal energy market. After market liberalisation policies pursued since the 1990s, the key goal of competitiveness policy now is to complete the internal energy market by 2014. For this purpose, regulatory integration is needed next to infrastructure investments in order to have a reliable and integrated energy network in Europe. Financial aid for trans-European networks has been provided since the 1990s and recently the Connecting Europe Facility has been established for this purpose. Part of this facility is the designation of priority infrastructure projects, which will receive financial as well as regulatory aid on an EU level.

Energy and competitiveness policy has progressed in the last 20 years with a focus on the single energy market and investment on infrastructure, as well as with constant support for research and innovation (see Figure 7 and Box 2).

The energy market has been a policy topic since the 90's, which was expressed in particular by the three energy market packages (in 1996-1998, 2003 and 2009). In 2011 the EU Heads of State declared the need to complete the internal energy market by 2014.[29] Although many steps have been made in this direction, the objective of one single European coupled market will be delayed until after 2014 (Capgemini, 2014).

Figure 7: Energy and competitiveness policy



[29] Press release "It's time to complete the internal energy market" [IP/12/1214]

Textbox 2: Energy Research and Innovation

The security of supply, sustainability and competitiveness of Europe's energy depends to a large extent on the development and deployment of new energy technologies.

Horizon 2020 has been launched as a follow up to FP7. Horizon 2020 is the main instrument to support research and innovation. Under its challenge-based approach, Horizon 2020 has included the **Energy Challenge - Secure, Clean and Efficient Energy.** This challenge is designed to support the transition to a reliable, sustainable and competitive energy system. The first work programme will be split into the following focus areas: Energy efficiency, low carbon technologies, and smart cities & communities.

The **SET-Plan**, on the other hand, is a strategic plan to accelerate the development and deployment of cost-effective low carbon energy technologies. It proposes a new governance structure based on joint strategic planning which allows decision-makers in the Member States, industry, and the research and financial communities to jointly and strategically plan energy research and innovation efforts in alignment with EU energy policy goals.

Key features of EU competitiveness policies are:

a. Liberalisation policies have transformed EU energy markets over the last decades

It has been over 25 years since the EC targeted for the first time a well-functioning internal energy market in the Commission Working Document 'The Internal Energy Market' (COM (88)238). This paper focused on the free trading of energy products across the Community – where companies and technologies freely compete to provide the best energy services at the lowest price - in order to improve security of supply, reducing costs and improving competitiveness.

This has led to liberalising the energy sector by unbundling production and distribution arms of large integrated energy firms. The unbundling aims to break up the national or regional monopolies - usually dominated by vertically integrated companies - characteristic of the 'old' market structure – which could control electricity prices in the wholesale market and block new entrants to the market. Liberalisation policies have led to a completely different landscape of energy markets over the years. Monopoly energy suppliers have been transformed into energy companies generating, transporting and supplying energy. Also, many new parties have emerged. And a new phase in liberalisation policies is upcoming. With the large rise of RES in particular in the electricity sector in recent years, incumbent energy suppliers now increasingly will have to look for new business models to remain profitable. In this light, the current discussion about 'flexibility' in the EU power system, with a discussion on 'capacity mechanisms' is important (Box 3).

Textbox 3: Flexibility in the EU power system

Increasing shares of Variable Renewables in the EU power system now ask for an increasingly flexible power system to deal with the varying power supply. EU legislation addresses several factors that can increase the flexibility of a power system or improve the use of inherently existing flexibility.

Market design

The EU launched the Third Energy Package to create a single market for gas & electricity,

consisting of two Directives and three Regulations. This legislative package should ensure common rules for the internal market in electricity[30], and a network for cross-border exchanges in electricity[31].

Sufficient interconnection

The European Commission has voiced its strong support for Demand Response. The Energy Efficiency Directive (2012/27/EU)[32], Article 15.8 outlines clear and specific requirements for Member States. The article requires national regulators and TSOs to allow consumer access to markets through Demand Response programs, to enable the participation of service providers such as aggregators and to enable and encourage program development.

Sufficient back up capacity

Several Member States are considering or implementing capacity mechanisms, in addition to the energy only market, that should ensure sufficient back-up capacity. There are no such mechanisms in place on an EU level.

Power storage

There is currently no EU legislation directly addressing storage. Storage is regulated under Directive 2009/72/EC, which mainly addresses the definition of underlying principles for system operation, dispatching and balancing, and the provision of ancillary services[33]. There are, at national level, other laws under development which will regulate electricity storage application. The design of an EU wide legal framework to enable the short and medium term development and deployment of storage at all levels is currently under consideration[34].

b. Further Infrastructure Investments are needed

The EU's existing grid infrastructure needs to be further updated - it is partly outdated, still fragmented into national structures and threatens to be overloaded or become unbalanced due to a substantially higher degree of variability as a result of the rise of renewable electricity. Infrastructure investment is therefore needed to have a reliable and coherent energy network in Europe. This is why the EU has taken actions to develop an integrated European energy network, including the publication of a blueprint for an integrated European energy network (COM/2010/0677), the guidelines for trans-European energy infrastructure (Regulation (EU) 347/2013) and the selection of 248 projects of common interest of EU-wide relevance under the Connecting Europe Facility.[35]

The average interconnection level stands at about 8% and should be increased to 15% by 2030 as proposed in the European Energy Security Strategy (COM (2014)330). Significant

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30 Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC

31 Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003

32 Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC

33 Directive 2009/72/EC (Art. 15) calls for transparent and non-discriminatory nature of dispatching and balancing and CEER (2014) Memo on Development and Regulation of Electricity Storage Applications Ref: C14-EQS-54-04 21 July 2014

34 EC (2013) DG ENER Working Paper. "The future role and challenges of Energy Storage"

35 On October 2013, the EC published a list of 248 "projects of common interest" (PCI) under the new guidelines for trans-European energy infrastructure. A PCI has to have significant benefits for at least two Member States; contribute to market integration and further competition; enhance security of supply, and reduce CO2 emissions. On 29 October 2014, Member States voted in favour of allocating €647 million from the Connecting Europe Facility (CEF) to 34 actions that will help advance these PCIs. CEF has a €5.85 billion budget for supporting trans-European energy infrastructure until 2020.

progress has been made - 96 of around 100 European TSOs comply with the Third energy package's unbundling models; the Commission adopted the first list of projects of common interest (PCIs); €5.85 billion were assigned for energy infrastructure under the Connecting Europe Facility (CEF); key missing links have been completed or are under construction.

However, access to finance remains a problem for infrastructure development given that such capital intensive projects require 'stable and predictable regulatory conditions'.[36]

c. Harmonisation of MS Regulation is still ongoing

A harmonized internal energy market was planned for the end of 2014 to be achieved, but is still not completely realised. This therefore maintains a key aim of EU competitiveness policies (Box 4).

Textbox 4: How to progress towards completing the Internal Energy Market

The completion of the Internal Energy Market will not be achieved by the end of 2014 as planned, because – even though national market prices have somewhat converged – there are still widely differing national rules and arrangements. The 2014 Communication on Progress towards completing the Internal Energy Market (COM(2014)634) has outlined the status and key issues towards achieving an integrated internal energy market including the need for additional infrastructure investments and the need for harmonization of regulation at MS level.

Additional infrastructure still needs to be built in order to make the networks fit for the future, i.e. by reinforcing transmission pipelines and cables within and between market areas; creating links to avoid isolated areas; and building grids that allow for the integration of offshore and onshore renewables. The COM(2014)634 provides details as to where investments are needed.

Regarding further integration of regulation, it is mentioned in the communication that: 'As the European power market expands, challenges ahead include coordinating regional systems into one Europe-wide wholesale electricity market, the intra-day market, the integration of renewables, and the issue of switching from available transmission capacity (ATC) to flow-based (FB) in market coupling price calculations' (Capgemini, 2014).

In addition, adoption of further network codes and better implementation are needed. A key issue is the need for network tariffs to be transparent and build on clear common European rules. The relevant network codes are under development, but will need to be completed and adopted in the next two years. Once regulations are in place, focus should shift towards implementation.

A prerequisite for the integrated market to work is to ensure that all participants can access the infrastructure 'in a non-discriminatory way and at a fair price'. The European Networks of Transmission System Operators (ENTSOs) must propose legally binding network codes (under regulations 714/2009 and 715/2009) in line with ACER's framework guidelines to ensure maximum use of interconnections, optimize congestion management and minimize the risk of investment duplication. Pilot projects and early implementation at regional level have shown the way to coupling markets (e.g. PRISMA-platform and 'day-ahead coupling

[36] 'Ongoing work on common EU-wide rules for setting transmission tariffs in gas as well as the practice developed by NRAs and the Commission in setting tailor-made regulatory regimes for important new individual projects (such as TAP or Eleclink) are steps in the right direction which need to be built upon further.' Source: COM(2014)634

mechanism'). Attempts for harmonizing energy prices include internal as well as external prices (Box 5).

Textbox 5: The Energy Union and energy prices in the EU

One of the key projects for the Juncker Commission is the Energy Union. Commissioner Canete, who will be implementing the investment plan proposed by VP Sefcovic in early 2015, has commented on the Energy Union project:[37]

The EC has intention to push for further harmonisation of the electricity taxes paid in the different MS as this is essential for the achievement of the single energy market goal. The composition of the network tariffs needs to be more transparent and based on common rules. The large difference in power and gas costs across MS which is observed today is attributed partly to the different national tax laws. Even though synchronisation of national tax rules is considered as decreasing the national sovereignty, the Climate Action and Energy Commissioner believes that there are enough incentives for MS to make efforts in this respect as lower power prices can improve the EU's competitiveness vis-à-vis the US.

Another aspect of the Energy Union idea is to have energy companies negotiate gas prices with Russia jointly. There have been concerns that this may not comply with the competition law of the EU. However, the Climate Action & Energy and Competition Commissioners are expected to work together in order to put forward a system for the companies to cooperate and achieve common prices. Canete emphasized that the idea is not that the EC buys gas on behalf of MS, but it would rather serve to stimulate interest among private companies for working and negotiating together.

3.3.2. Role of EU Institutions and Member States

With the goal of a competitive and integrated energy market, the EU has taken an important role, providing an EU wide framework and supporting the cross-border infrastructure investments that will allow for a low-carbon future. There is an increasing role for EU institutions, with the establishment of ACER and augmented responsibilities for ENTSO-E and ENTSO-G. For example, the harmonised legal framework (binding EU Network Codes[38]), foreseen by the third energy package, is being developed in cooperation with the energy regulators (under the ACER umbrella) and network operators (under the ENTSO umbrellas). Further, ACER and the NRAs must oversee trading activities. ACER also provides reporting on congestion management and annual market monitoring reports. On the other hand, the ENTSOs' role will be to monitor implementation of the network codes, as designed by Third energy package (though so far they have been reluctant to take up this task).

It is also interesting to mention that regulatory oversight to ensure market integrity has been tightened with the 2011 Regulation on Energy Market Integrity and Transparency (Regulation (EU) No 1227/2011 REMIT). Furthermore, ENTSO-E will establish a central information transparency platform for the publication of data in electricity markets by early 2015 (as defined by Regulation (EU) 543/2013).

Where there is a lack of overall coordination, regional mechanisms still play a key and increasing role. The 2014 Communication on Progress towards completing the Internal

[37] Financial Times (2014) New EU energy chief shifts focus to building common power market, published 13 Nov 2014 recovered from http://www.ft.com/cms/s/0/d1444394-6a71-11e4-8fca-00144feabdc0.html#axzz3Lg7aMoYG

[38] The rules have been formalised in the first legally binding network codes for gas. The first set of codes for electricity, is expected later in 2014.

Energy Market (COM(2014)634) mentions, for example, the establishment of the 'PRISMA-platform' in 2013, where interconnection capacity for the gas networks of 28 TSOs is auctioned transparently; another key achievement is the establishment of the 'day-ahead market coupling' in February 2014, a mechanism that manages cross-border electricity flows across 14 Member States (+Norway), smoothing out price differences.

Existing grid infrastructure and regulatory frameworks were developed at the Member State level, focusing on the optimisation of national systems. F Member States also have a key role to play, implementing and abiding by existing EU legislation. Furthermore, national regulatory frameworks and grid infrastructure need to be updated with regional and EU-wide systems in mind. Harmonisation of MS regulation is key in order to have an integrated market. Member States also need to implement the TEN-E Regulation, in order to identify and complete the most important Projects of Common Interest.

3.3.3. Future policy Issues and Governance

Regarding competitiveness, close contacts of EP with regulation and network organisations will be crucial in oversight of harmonisation of national regulations. From a governance point of view, ACER already is formally obliged to report to the EP, but closer contacts of EP to the network organisations ENTSO-E (electricity) and ENTSO-G (gas) could also contribute for the EP to get an informed view over relevant electricity and gas developments, such as for instance the increased need for flexibility in electricity markets due to the rising share of variable renewables or developments regarding LNG in the gas sector.

Energy innovation is also crucial for future EU competitiveness, not only in the energy field itself, but also in sectors that are heavily dependent on energy as a main resource. A large array of EU organisations is active in this field next to national research organisations. These organisations, such as EIT, JRC, ERC, INEA and REA, have partly overlapping responsibilities. From a governance point of view, such a fragmentation of research might lead to suboptimal results and inefficiencies. EP therefore could stimulate further research into streamlining EU energy innovation.

3.4. Nuclear energy

Nuclear energy has been a policy topic for the EU since the 1957 Euratom treaty. It relates to all three pillars of EU energy policy, and further to EU military defence and nuclear proliferation[39]. At least since the 1970s, the topic has been highly controversial amongst MS, with some strong proponents and other MS opposed to the use of nuclear energy. Also, within MS nuclear policies are variable over time, and highly influenced by changes in public opinion due to nuclear accidents. The German 'Atomausstieg' after the Fukushima accident in Japan is the most recent prominent sign of such changing policies.

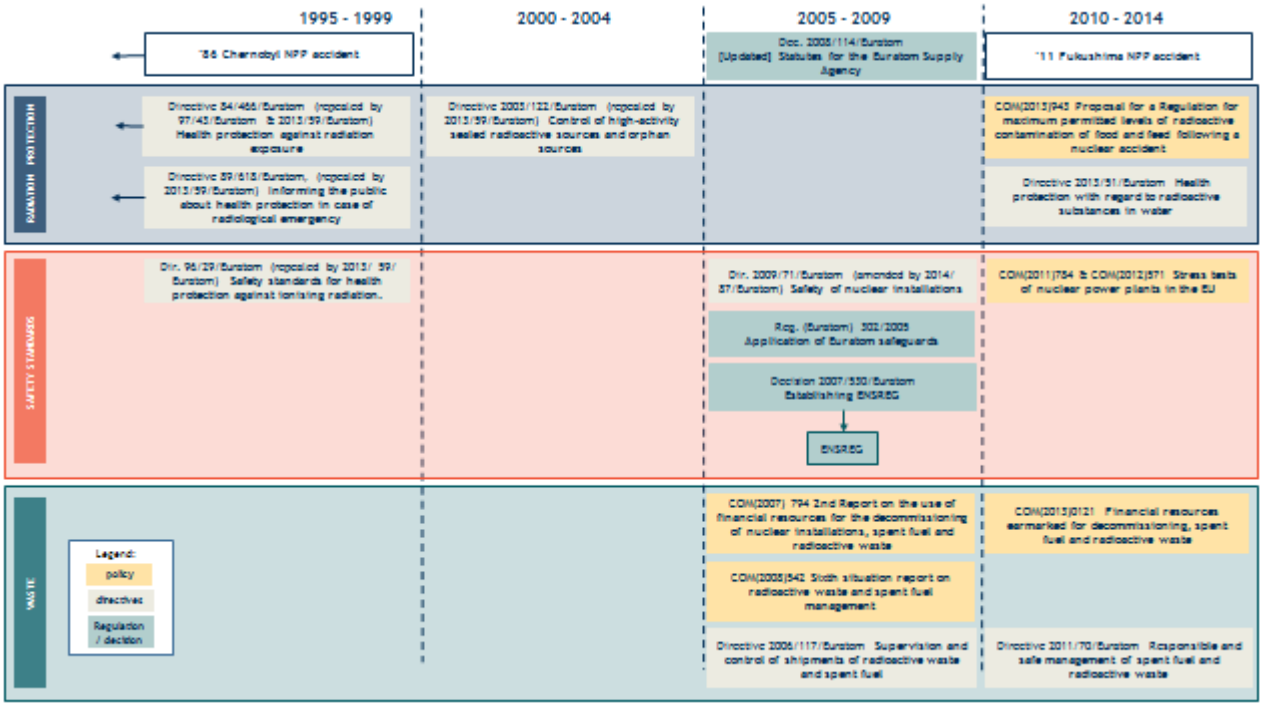
Whereas the decision whether or not to apply nuclear energy is very much an issue of individual MS, EU policies have concentrated on nuclear safety, radiation protection and waste disposal (Figure 8). At the European Commission, all nuclear matters are led by DG ENER, directorates D and E, based in Luxemburg. They do work closely together with the nuclear regulatory bodies at member state level and with Euratom, based in Vienna.

For the future, safety, radiation protection and waste disposal are expected to remain key issues of EU nuclear energy policies. An upcoming issue in nuclear energy is also the ageing

[39] Remark: Although technically the civil use of nuclear energy should be seen separate from military uses of nuclear weapons

workforce and limited influx of young staff into the sector. Whether or not this will also become to play on an EU level remains to be seen, however.

Figure 8 Nuclear energy policy



4. EU ENERGY GOVERNANCE FOR THE FUTURE

This final section will provide conclusions from the discussion on EU energy governance in the previous chapters and recommendations to the EP regarding future energy governance issues. More in particular, it will summarize

- Key characteristics of the EU energy governance structure so far
- Main features of the governance changes announced
- Recommendations to the EP to a changing EU energy governance for the future

4.1. Conclusions

This report has intended to give an introduction to EU energy governance and the role of the EP herein.

Over the years, an impressive framework of EU institutions involved in energy policy has been built that, in close coordination with Member States and a large variety of stakeholders, intents to realise the key EU energy policy objectives in the fields of climate, security of supply and competitiveness. So far, this has led in general to internal compliance with main targets set. However, comparing targets set with final objectives to be obtained e.g. in the area of climate change, also shows that the present efforts still need to be scaled up in order to obtain the final objectives.

Key characteristics of the energy governance structure set in place so far are:

- **An overall structure based on a limited number of key EU organisations, supported a large variety of regulatory and executive agencies and within a very diffuse network of stakeholder organisations**
  Key organisations for EU energy policies are, like with other policy topics, European Parliament, Commission, Council and the individual Member States. These are supported by eleven energy-related agencies dedicated to a variety of energy topics. The organisations operate within a very large and diffuse network of stakeholder organisations representing large and small consumers, producers, network organisations, and others.

- **Division of responsibilities and interactions between EU and Member States strongly vary per energy objective.**
  EU energy governance has developed organically over many decades. Three main pillars of EU energy policy have emerged and are now dominant: climate change, security of supply and competitiveness. Sub-topics within energy policy (e.g. renewables, markets, R, D&D) are generally arranged under one of these pillars, although they mostly relate to several pillars simultaneously. Nuclear energy can be seen as a sub-topic separate from the three pillars, as it relates to all three pillars and in addition to safety, military and proliferation issues. For each of the sub-topics, a different division of responsibilities between MS and main EU organisations can be observed.

- **A slow but steady trend towards European integration and larger responsibilities for EU institutions in all three objectives, while maintaining sovereignty of Member States over their respective energy mixes.**
  Whereas energy mixes to be applied are likely to remain the responsibility of individual MS in the near future, over all three pillars a trend towards steady integration and harmonisation can be seen. Integration is probably strongest within

the climate change pillar, in which traditionally a strong coordinating role for the EU exists. With the completion of the internal market, also harmonization in the competitiveness pillar will have made important steps. Harmonization of policies in the security of supply pillar, and in particular of external energy policies, seems to remain most controversial for the near future.

With the recently started legislature of the Juncker Commission, changes in governance structure have been implemented or announced. These concern in particular:

- **High priority for energy as a policy topic**
- **Joint responsibility for energy within the Commission between a Vice President and a Commissioner**
- **A merger of the DG's Climate Action and Energy**
- **Proposed streamlining of reporting obligations of Member States**

Whereas the importance of energy to the new Commission is underlined by assigning 'A resilient Energy Union with a forward-looking climate change policy' as one of the ten key policy priorities, a Vice-President for the Energy Union and the merger of DG Climate Action and Energy have to streamline energy governance on the highest EU governance level. Merging of various existing energy reporting obligations for MS furthermore has to contribute to reduced bureaucracy and improved quality of reporting.

4.2. Recommendations to the EP

Whereas the effects of the organisational changes remain to be seen, it is clear that ambitious policy targets and large changes in the EU energy sector foreseen in the coming years require a close scrutiny by the EP of developments and adequacy of the institutional framework set in place to deal with EU energy challenges for the future. Specific recommendations regarding energy governance that follow from the analysis made in this paper are:

Regarding *reporting*

- **Closely examine consequences for transparency and completeness of the proposed new integrated reporting format.**
  Whereas there are likely benefits of integrating the various existing reporting obligations of MS in the climate pillar of energy policy, it should be also analysed in more detail to what extent the new format still presents a transparent and complete picture of all necessary indicators for policy making on an EU level.

- **Stimulate reporting of interactions between the policy areas of emission reduction, renewables and energy efficiency.**
  One specific benefit of the proposed integrated reporting format could lie in the new possibilities for reporting on interactions between the policy areas of emission reduction, renewables and efficiency. It should be explored to what extent these possibilities are fully used.

- **Establish closer contacts with national reporting agencies to discuss consequences of streamlining of reporting and of future further-going policies.**
  Integrated reporting will also result in improved coordination and integration on a national level of reporting agencies. Closer contacts with this more limited number of coordinating agencies could help to optimise the use of indicators for policies on an EU level.

Regarding *contacts of the EP with relevant energy organisations and bodies*

- **Discuss consequences of external energy policies in particular regarding China (climate) and fossil energy exporting countries (economic relationships in a low-carbon energy economy) with High Commissioner and Commissioner for Economic and Financial Affairs.**
  The EU already maintains close energy relationships with many neighbouring and other countries. Given the particular importance of China for progress in the international climate negotiations and of the fossil energy exporting countries for an internationally supported energy transition, the existing relationships with these countries could still be strengthened. The possibilities for such increased diplomatic efforts could first be discussed by EP with the relevant EC officials.

- **Establish closer contacts with network organisations and regional supra-national energy market coordination mechanisms as emerging axes of key developments in future EU energy markets.**
  Regional cooperation within the EU and increasing cooperation between network organisations are two important focus points for further development of the EU internal market. Closer contacts of EP with these organisations and coordinating bodies could help the EP to better understand trends and specific regional sensitivities to future energy market developments.

- **Check consequences of emerging new energy technologies for security of supply by interaction with the Raw Materials Initiative.**
  New energy technologies in the field of renewables and energy efficiency increasingly make use of materials that could give rise to future security of supply risks. Such possible risks should be closely evaluated, preferably in cooperation with the Raw Materials Initiative.

Regarding *overall improvement of EU energy governance*

- **Examine if the current large variety of EU organisations responsible for energy research and innovation can be streamlined by improving integration and reducing overlaps.**
  Activities in the field of energy research and innovation at this moment seem scattered over a large variety of organisations and without a clear division of responsibilities between MS and EU level. An closer examination into overlaps and gaps could help to streamline overall EU energy research and innovation efforts.

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ANNEXES

Directorate Generals

DG	Name	Function	EP Policy Area	Interaction with MS	Accountable to EP
DG ENER	DG Energy	Responsible for the EU's energy policy with a focus on energy market with affordable energy; sustainable energy production, transport and consumption; secure energy supply.	Energy efficiency; Renewable energy; Energy networks and infrastructure; Security of energy supply; Internal market and competitiveness; Climate change	Policy officers from all MS represented in the EC and its DGs; EC and its respective DGs supervise the transposition and implementation of EU legislation in the MS	Yes – The EC is generally accountable and reports to the EP. Its Commissioners and budget have to be voted by the EP[40]
DG CLIMA	DG Climate Action	Responsible for the EU's climate policy including meeting the 2020 targets, the functioning of the EU Emissions Trading System and international climate negotiations.	Energy efficiency, Renewable energy, Climate change		
DG GROW	DG Internal Market, Industry, Entrepreneurship and SMEs	Responsible for promoting a growth-friendly framework for European enterprises and helping the EU reach its 2020 goals for a smart, sustainable and inclusive growth.	Energy efficiency; Renewable energy; Internal market and competitiveness; Climate change		
DG MARKT	DG Internal Market and Services	Responsible for the policy on the European Single Market and the removal of unjustified obstacles to trade, in particular in the field of services and financial markets.	Internal market and competitiveness		
DG MOVE	DG Mobility and Transport	Responsible for promoting efficient, safe, secure and environmentally friendly mobility and creating the conditions for a competitive industry generating growth and jobs.	Energy efficiency; Renewable energy; Energy networks and infrastructure; Internal market and competitiveness; Climate change		
DG CONNECT	DG Communications Networks,	Responsible for promoting the use of and public access to digital goods and services and for supporting research and innovation of information & communications technologies.	Internal market and competitiveness		

[40] European Union (2014) How the EU works? European Parliament http://europa.eu/about-eu/institutions-bodies/european-parliament/index_en.htm

DG	Name	Function	EP Policy Area	Interaction with MS	Accountable to EP
	Content & Technology				
DG ECFIN	DG Economic and Financial Affairs	Responsible for the economic policy of the EU but it also manages certain energy-related financing programmes: Energy Efficiency Finance Facility; Project Bond Initiative for energy infrastructure; Euratom loans for investments in nuclear installations.	Energy efficiency; Renewable energy; Nuclear energy; Energy networks and infrastructure; Security of energy supply; Internal market and competitiveness; Climate change		
DG RTD	DG Research and Innovation	Responsible for developing and implementing the European research and innovation policy with a view to achieving the goals of Europe 2020 and the Innovation Union.	Energy research and innovation; Climate change; Security of energy supply		

Source: DG websites.

Executive and Regulatory Agencies

Institution	Name	Function	EP Policy Area	Interaction with MS	Accountable to EP
ACER	Agency for the Cooperation of Energy Regulators	ACER's coordinates the work of national energy regulators, monitors and aids the development of the single EU energy market for electricity and natural gas and wholesale energy trading.	Energy networks and infrastructure; Security of energy supply; Internal market and competitiveness	ACER's Board of Regulators comprises senior representatives from the national regulatory authorities of the MS.	Yes - The EC evaluates the work of the agency and presents the results to the EP. Furthermore, the EP and other EU institutions appoint its Administrative Board[41].

[41] Regulation 713/2009 establishing an Agency for the Cooperation of Energy Regulators

Institution	Name	Function	EP Policy Area	Interaction with MS	Accountable to EP
EASME	Executive Agency for Small and	It manages several EU programmes including: the Energy Efficiency part of the 'Secure, Clean and Efficient Energy'; the legacy of the Intelligent Energy – Europe programme and the Eco-innovation initiative.	Energy efficiency; Renewable energy; Climate change	No direct interaction	No – it is supervised by, and reports to, the EC[42]
EEA	European Environmental Agency	The EEA provides independent information for the developing, adopting, implementation and evaluation of environmental policy (including the link with some energy policy areas). Every five years EEA produces a report on the state of, trends and prospects for the environment in the EU.	Energy efficiency; Renewable energy; Climate change	EEA's Management Board consists of one representative of each MS.	The Management Board submits annual reports on the EEA's activities to the European institutions incl. the EP. Furthermore, the EC forwards the annual report on the budgetary and financial management of the EEA to the EP and the Council. The EP appoints two members of the Management Board who are scientists in the field of environmental protection[43].
Euratom Supply Agency	Euratom Supply Agency	It ensures a secure and equitable supply of nuclear material in the EU – for energy and medical purposes. Its responsibilities include: concluding supply contracts for nuclear material for energy and providing expertise on the nuclear market and market trends.	Nuclear energy; Security of energy supply; Climate change; Internal market and competitiveness	The members of its Advisory Committee are appointed by MS.	Yes – yearly report and work programme submitted to the EU institutions incl. the EP[44]
ENSREG	European	It aids the establishment of conditions	Nuclear energy; Climate	It is composed of senior	Yes - 2-yearly reports to the EC, which transmits

[42] Decision (2013/771/EU) establishing the 'Executive Agency for Small and Medium-sized Enterprises'
[43] Regulation (EC) No 401/2009 (…) on the European Environment Agency and the European Environment Information and Observation Network
[44] Council Decision (2008/114/EC, Euratom) establishing Statutes for the Euratom Supply Agency Euratom

Institution	Name	Function	EP Policy Area	Interaction with MS	Accountable to EP
	Nuclear Safety Regulators Group	for the improvement and understanding in the areas of nuclear safety and radioactive waste management.	change; Security of energy supply	officials and civil servants from the corresponding national regulatory authorities of the MS and EC representatives.	these to the EP with comments (where applicable)[45]
EIT	European Institute of Innovation and Technology	Its aim is to integrate the three aspects of knowledge - education, research and business, and help bring innovative ideas to the market through Knowledge Innovation Communities (KICs) in areas such as Climate Change and Sustainable Energy.	Energy research and innovation; Energy efficiency; Renewable energy; Climate change; Security of energy supply	Partner organisations for the different KICs need to be based in MS.	Yes - its work programme is presented to EU institutions incl. the EP; 5-yearly evaluations by the EC, which in turn reports the results to the EP[46]
ERC & ERCEA	European Research Council & the ERC Executive Agency	ERC's aim is to encourage high quality research through competitive funding. It complements national research funding agencies and other EU funding activities. The ERCEA manages the ERC operations.	Energy research and innovation; Energy efficiency; Renewable energy; Climate change; Security of energy supply	No direct interaction	No - it is appointed by and reports to the EC[47]
F4E	Fusion for Energy	F4E is the EU's contribution to ITER and the research and development of fusion energy. It was created under the Euratom Treaty and works towards the construction of demonstration fusion reactors.	Nuclear energy	Each EU MS has a representative in the Governing Board of F4E.	The annual activity report is sent to the European institutions, incl. the EP[48].

[45] Decision (2007/530/Euratom) on establishing the European High Level Group on Nuclear Safety and Waste Management
[46] Regulation 294/2008 establishing the European Institute of Innovation and Technology
[47] Decision (2008/37/EC) setting up the 'European Research Council Executive Agency' for the management of the specific Community programme 'Ideas' in the field of frontier research in application of Council Regulation (EC) No 58/2003
[48] Decision (2007/198/Euratom) establishing the European Joint Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it

Institution	Name	Function	EP Policy Area	Interaction with MS	Accountable to EP
INEA	Innovation and Networks Executive Agency	It manages several EU programmes including: the Connecting Europe Facility (CEF); the parts of Horizon 2020 on "Smart, green, and integrated transport" and "Secure, clean and efficient energy".	Energy efficiency; Renewable energy; Energy networks and infrastructure; Security of energy supply; Climate change	No direct interaction	No – it is supervised by and reports to the EC[49]
JRC	Joint Research Centre	It is the EC's in-house science service which aims at aiding the DGs and providing independent, evidence-based scientific and technical support to the policy cycle.	Energy research and innovation; Energy efficiency; Renewable energy; Nuclear energy; Security of energy supply; Climate change	All MS are represented in the JRC with policy officers and researchers.	Yes – as part of the EC.
REA	Research Executive Agency	It is a funding body focused on maximising the efficiency and impact of EU research and innovation programmes. It manages the research proposals and funded projects.	Energy research and innovation; Energy efficiency; Renewable energy; Climate change; Security of energy supply	No direct interaction	No - it is supervised and controlled by the EC.

Source: Agency websites.

[49] Commission Implementing Decision (2013/801/EU) establishing the Innovation and Networks Executive Agency

Recent hearings of the ITRE Committee related to energy topics

Organisation	Topic	Meeting
Energy Charter	Planning for the International Energy Charter 2015	4 December 2014
ENVI[50]	Establishment and operation of a market stability reserve for the Union GHG ETS and amendment of Directive 2003/87/EC	4 December 2014 and 17 November 2014
EC, DG RTD	Structured Dialogue European Parliament - European Commission, Exchange of views with Commissioner for Research, Science and Innovation	4 December 2014
EC, DG Climate action and energy	Structured Dialogue European Parliament - European Commission, Exchange of views with Commissioner for Climate Action and Energy	3 December 2014
ITRE	European Energy Security Strategy	3 December 2014
EC, DG RTD	Horizon 2020 implementation: state of play	17 November 2014
TNO	Horizon 2020, Key enabling technologies, Booster for European Leadership in the Manufacturing Sector	6 November 2014
EC, DG RTD BBI[51]	Bio-based Industries joint undertaking: Example of Horizon 2020 implementation	6 November 2014
ACER	Market Monitoring Report and other ongoing activities	5 November 2014
(Public hearing)	EU Energy Security Strategy under the conditions of the Internal Energy Market	5 November 2014
ENVI	Limitation of emissions of certain pollutants into the air from medium combustion plants	25 September 2014
EC, DG ENER	Security of Supply and Energy Efficiency	24 September 2014
ENVI	2014 UN Climate Change Conference - COP 20 in Lima, Peru. Exchange of views – ITRE's contribution to the COP 20 resolution	2 September 2014
EC, DG ENER	Communication on the European Energy Security Strategy	22 July 2014

[50] EP Committee on Environment, Public Health and Food Safety
[51] Bio-Based Industries, Public-Private Partnership

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CAT: QA-04-15-070-EN-C (paper)
CAT: QA-04-15-070-EN-N (pdf)

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