2011

Annual Activity Report

Directorate-General for Energy

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PART 1. MAIN POLICY ACHIEVEMENTS

2011 has been a year of significant achievements contributing to the three general objectives of DG ENER, i.e. competitiveness, sustainability, and secure energy supply. The European Council on 4 February endorsed the Energy 2020 Strategy and acknowledged its contribution to sustainable growth. The Commission launched a new Plan and made legislative proposals to speed up energy efficiency improvements. A new framework for energy infrastructure was put forward. Concrete steps towards an increased coordination of Europe's external energy policy were made. The Energy Roadmap 2050 set out an in-depth assessment of how to transform European energy systems over the next four decades, as part of the EU's commitment to reduce greenhouse gas emissions by at least 80%. Following the Fukushima events and the mandate given by the European Council of 25 March 2011, the Commission, in cooperation with the European Nuclear Regulators' Group (ENSREG), established a system of coherent risk and safety analysis (stress-tests) for all operating European nuclear power plants. Measures to ensure the safe offshore exploitation of fossil fuels were also proposed.

More details on main policy achievements are presented in the following sections, structured according to the four ABB (Activity Based Budgeting) activities of DG ENER.

1.1 Conventional and renewable energy

On 15 December 2011, the Commission adopted the Communication **"Energy Roadmap 2050"**, which analysed different possible scenarios to achieve the decarbonisation of the energy sector by 2050. The main conclusion of this exercise is that decarbonisation is technically and economically feasible, but that all routes towards decarbonisation imply major changes: significant energy consumption reductions will be needed over time to cope with additional energy needs; electricity is likely to play a much greater role than now as well as the share of renewable energy. This in turn will highlight the importance of new and adequate infrastructure and the need to design markets which are able to offer cost-effective and flexible solutions. The Energy Roadmap 2050 identifies the policy areas in which actions have to be developed and the principles and objectives of these actions. It launches an interactive process between Member States and the EU to shape a common view on how to achieve an energy system transformation.

Taking action in the field of energy efficiency has been one of the main priorities in 2011, with a view to **realising the reduction of the EU's energy production** in line with the EU 2020 target. Even though there has been considerable progress, the EU is not on track to achieve its objective to reduce in 20% its **energy consumption** by 2020. As underlined at the European Council on Energy on 4 February 2011, the Commission adopted a new Energy Efficiency Plan last March. This was followed in June by a proposal for an Energy Efficiency Directive, which encompasses provisions for energy saving in all the energy chain, from generation to consumption, and reinforces and replaces existing

Directives on end Use energy and energy services[1], and on co-generation[2]. This work was supported by the results of two mid-term evaluations that assessed lessons learned from the 2006 Energy Efficiency Action Plan, including regarding the measurement methodology under the existing Energy Services Directive and good practices on financing Energy Efficiency in Member States.

Regarding existing legislation, supported by advice from the Commission, the Member States have progressed with implementing the Directive on the Energy Performance of Buildings[3], energy Labelling[4] and Eco-design[5]. As regards **energy using products**, tasks focused on implementing the 19 existing Eco-design, Energy Labelling and Tyre labelling implementing measures. DG ENER continued with the development and implementation of 35 preparatory studies and standardisation procedures. Communication activities continued to be of relevance, and action was launched to investigate in a consistent manner how Member States ensure market surveillance.

Much progress was achieved towards the objective of full **implementation of the internal energy market** by 2014, a deadline set by the European Council in its conclusions of 4 February 2011. Despite the efforts of the Commission, the degree of implementation and enforcement of legislation remains unsatisfactory. By the end of 2011, the Commission closed 22 infringement cases related either to the Directives or Gas and Electricity Regulations of the second internal energy package. Five complementary reasoned opinions were issued on regulated prices and two cases were referred to the Court of Justice. In addition, concerning the transposition of the third internal energy package, the Commission issued 19 letters of formal notice for non-communication regarding the transposition of the new Gas Directive[6] and 19 letters of formal notice for non-transposition of the new Electricity Directive[7]**.** Significant progress was also achieved in putting in place the governance structures and staff of the **Agency for the Cooperation of Energy Regulators (ACER)** which officially opened its headquarters in Ljubljana in March 2011. The Agency has taken over the functions of the European Regulators' Group for Electricity and Gas (ERGEG) as the coordinating body for the national energy regulators in the European Union. The Agency started its activities immediately and has already adopted several Framework Guidelines for the development of Network Codes by the ENTSO's as well as a number of opinions.

Work also continued on the follow-up to the Communication on **Regional Initiatives**[8]

[1] *Directive 2006/32/EC*

[2] *Directive 2008/4/EC*

[3] *Directive 2010/31/EU*

[4] *Directive 2010/30/EU*

[5] *Directive 2009/125/EC*

[6] *Directive 2009/73/EC repealing Directive 2003/55/EC*

[7] *Directive 2009/72/EC repealing Directive 2003/54/EC*

[8] *COM(2010) 721*

adopted in December 2010 which had been seeking stakeholders' views on possible options for strengthening the effectiveness of regional initiatives. Following the European Council's conclusions of February 2011 and the outcome of the Commission's public consultation on the governance of the Regional Initiatives, DG ENER requested each Regional Initiative to elaborate, in close cooperation with ACER, a "European Energy Work Plan 2011-2014" by June 2011. The aim is to agree on the necessary steps in view of reaching the integration of the gas and electricity markets by 2014.

The Directorate General continued preparatory work on guidelines and harmonised **network management rules** across the EU in cooperation with the European Regulators' Group for Electricity and Gas (ERGEG) and continued to do so following its abrogation with ACER, and the European Networks of Transmission System Operators (ENTSO). Intense discussions took place with stakeholders in several meetings of the Madrid and Florence fora, demonstrating their maturity. However, the main policy outputs foreseen for 2011 had to be postponed to 2012 because of the importance of the consultation process. This was the case of the Gas Target Model, where public consultation started in September 2011 and formal adoption is planned for the first quarter of 2012. The proposal to amend the annex to the Gas Regulation on congestion management was prepared in 2011 but will be formally adopted by the Commission during the second semester of 2012. The work on the guidelines on market coupling progressed well in 2011.

New developments in the generation field following the Fukushima crisis have resulted in the creation of the **Electricity Coordination Group** which met twice in 2011. This Group should provide a significant platform for exchanging information on the national energy policy changes affecting the internal electricity market.

As foreseen in the main policy outputs, Regulation (EU) No 1227/2011 on **wholesale energy market integrity and transparency** was adopted on 25 October 2011 by the co-legislators, showing the importance they attach to this new instrument, which should create more confidence in the energy markets. The Regulation entrusts new responsibilities to ACER, including market monitoring at EU level, which will require strengthening of its resources.

As regards **smart grids**, which should enhance greatly the functioning of the internal market in the future and the improvement of energy efficiency, the Commission adopted a Communication[9] on 12 April 2011 in which it outlined a number of actions needed for the timely and effective roll-out of smart grids. The Commission continued to work with stakeholders on smart grids, namely through a broad-based Smart Grids Task Force consisting of over 30 stakeholder organisations. Instead of a specific legislative proposal (foreseen in Annual Management Plan 2011), the issues and recommendations for the deployment of Smart Grids were finally included in EU policies and initiatives such as the Energy Infrastructure Package, the Plan on Energy Efficiency and the Proposal for an Energy Efficiency Directive. As smart meters represent the key enablers of smart grids, the Commission pursued the standardisation exercise for smart meters in 2011, which should deliver a first set of standards by the end of 2012, as requested by the European Council on 4 February 2011.

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[9] *COM(2011) 202*

The **Citizen's Energy Forum** met for the fourth time in London in October 2011 to discuss key consumer-regulatory issues related to the EU's internal energy market. Given the importance that local communities and governments play in many aspects of the internal market, DG ENER continued to involve municipal administrations in its initiatives through the **Covenant of Mayors**. By the end of the year, the membership of the Covenant more than doubled to over 3000 cities and communities. An external evaluation to assess the impact of the initiative is ongoing and the results will be available by February 2013.

In order to **increase the share of renewable energy** in accordance with the EU 2020 objectives DG ENER work in 2011 continued to focus on implementation and transposition of the Directive on the promotion of the use of energy from renewable sources[10](RED). The RED sets legally-binding national targets for the share of renewable energy to be achieved in each Member State and provides a comprehensive set of framework conditions and detailed criteria on biofuels sustainability, with which Member States must comply.

Each Member State also had to submit a **National Renewable Energy Action Plan (NREAP)**. During the course of 2011 the Commission entered into constructive dialogues with the Member States to ensure that their NREAPs complied with all the RED's requirements. With a few exceptions this process was completed by the end of 2011. The Concerted Action Project, aiming to assist Member States in correctly and effectively implementing the RED, also continued in 2011.

On 31 January 2011, the Commission adopted a **Communication entitled "Renewable Energy: Progressing towards the 2020 target"**. It shows that the 2020 renewable energy policy goals are likely to be met and exceeded, if Member States fully implement their national renewable energy action plans and if financing instruments are improved. It also stresses the need for further cooperation between Member States and a better integration of renewable energy into the internal European energy market.

In accordance with Article 18(3) of the RED, the Commission adopted a decision on certain types of information about **biofuels and bioliquids** to be submitted by economic operators to Member States on 12 January 2011. The Decision details the information which has to be submitted by economic operators for each consignment of biofuel or bioliquid to demonstrate compliance with certain aspects of the sustainability criteria. The Commission also started the process of validation of a number of biofuels and bioliquids certification systems.

The **role of fossil fuels** in the EU's future energy mix was one of the key topics of discussion during working group meetings of the Commission's Fossil Fuels Energy Forum in the course of 2011

As a consequence of the Deepwater Horizon oil rig accident **guaranteeing high safety standards** for people and environment in the exploration of hydrocarbon energy sources became a new priority for the Directorate-General. Following the Commission's

[10] Directive 2009/28/EC

Communication on **offshore oil and gas activities** adopted in October 2010[11], DG ENER conducted a thorough impact assessment in the first half of 2011 on the basis of which it drafted a legislative proposal for a regulation on the safety of offshore oil and gas activities. On 27 October 2011 the Commission adopted the proposal for the Regulation[12]. Furthermore, in late 2011, DG ENER prepared a Commission Decision on the establishment of an expert group of representatives from Member States' offshore regulatory bodies for exchange of information, identification of best practices and their sharing.

In the context of activities focused on the promotion of **indigenous fossil fuels**, the Commission started more detailed analyses of the potential economic impact of unconventional gas, including shale gas, in Europe.

The **promotion of renewables and energy efficiency through the Intelligent Energy-Europe (IEE) Programme** continued. The programme focuses on the removal of non-technical barriers to the uptake of energy efficiency and renewable energy. The support of small- and medium-sized enterprises plays an important role in this respect. The implementation of the IEE Programme, including regular assessment via annual externalised evaluations, is delegated to the Executive Agency for Competitiveness and Innovation. It implements the activities in close cooperation with its parent DGs, including DG Energy.

The interim and final evaluations of the specific programmes related to the IEE II were finalised in late 2011. The programmes were found to be relevant and useful as they reply to the evolving needs, problems and barriers related to sustainable energy. The combination of actions which cover a wide spectrum of priorities and the involvement of different types of actors which can clearly influence the uptake of sustainable energy solutions were found to contribute to the effectiveness of the programme.

A new **European Energy Efficiency Facility** (EEE-F) was created to provide tailored financial products for sustainable energy investment projects. The European Local Energy Assistance (**ELENA)** continued to successfully provide technical assistance to local and regional authorities to put together "bankable" projects in the field of energy efficiency and renewable.

With the aim of **contributing to European economic recovery through investing in the energy sector**, significant funds were allocated to different projects via the **European Energy Programme for Recovery** (EEPR). The implementation of all 43 gas and electricity infrastructure projects with an EU contribution of €2.27 billion accelerated in 2011. Twelve electricity and gas infrastructure projects were completed by the end of 2011 (two electricity interconnectors, three gas interconnectors and seven reverse flow/storage projects). Construction and/or tendering/placing orders for major items of capital expenditures have already begun for most projects. Some completed projects, particularly in the gas sector, have already **significantly improved the security of gas supply** in a number of Central and Eastern European Member States.

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[11] *COM(2010) 560*

[12] *COM(2011) 688*

All six carbon capture and storage demonstration projects had started by the first half of 2010 with a €1 billion EU contribution. CCS projects are being implemented, except for Jaenschwalde, the German project, which requested termination in December 2011. The main reason for cancellation was the absence of a legal framework in Germany that would allow CO_2 to be stored. The Commission accepted the request for termination in early 2012.

The entire €565 million EU contribution to the nine offshore wind projects was committed in 2010. By the end of 2011, €187.6 million had been paid to the beneficiaries. One EEPR action, at Thornton Bank in the Belgian North Sea, was finalised in September 2011.

Further progress was made to address the risk arising from potential under-spending in the EEPR projects with close monitoring having been put in place. The monitoring has been carried out via periodical reporting on progress of projects, by periodical risk assessments that are regularly carried out by project officers (including through regular meetings with coordinators of projects) and by project missions in order to ensure reasonable control on the spot.

In order to **ensure provisions for solidarity and coordination in the case of gas supply disruptions**, DG ENER continued to coordinate the crisis response mechanism put in place. In 2011 DG ENER began providing technical assistance for the implementation of the Regulation on Gas Security of Supply[13] and particularly for the preparation of the risk assessment by the Member States. This led most Member States to complete their risk assessment in early December 2011, as required by the Regulation.

As far as the **security of oil supply** is concerned, the overall EU oil stock levels remained over 120 days which is significantly above the 90 days minimum required by legislation. The stockholding system was put to the test by the IEA Collective Action addressing the Libya supply disruption. Communication between the Commission, Member States and the IEA was very good during an action in which eight Member States released stocks. DG ENER has also continued preparing the implementation of the new oil stocks Directive[14] (transposition by Member States is foreseen by the end of 2012); in particular, a streamlined reporting system has been developed together with Eurostat in 2011.

Key achievements undertaken to **foster security of supply through an active external policy** include the following:

- In September, the Commission adopted a **Communication on "Security of energy supply and international cooperation - The EU Energy Policy: Engaging with Partners beyond Our Borders"**, which, for the first time, sets a comprehensive, inclusive and ambitious strategy for the EU relations with third countries in the energy field. The document outlines over 40 follow up actions. Alongside the Communication, the Commission adopted a legislative proposal for

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[13] *Regulation 2010/994/EU repealing Council Directive 2004/67/EC*

[14] *Directive 2009/119/EC*

a Decision setting up an information exchange mechanism for intergovernmental agreements between Member States and third countries in the field of energy.

- **Relations with Russia** continued to be developed through various initiatives: the signature of an enhanced Early Warning Mechanism, the creation of a Gas Advisory Council, the preparation of a joint EU-Russia 2050 roadmap for energy cooperation, and the signature of a statement on information exchange. The 12th Progress Report of the EU-Russia Energy Dialogue was signed at the Permanent Partnership Council of 1 December. The Commission presented to the Russian side its proposal for the energy provisions under the New Agreement between the EU and Russia. Furthermore, the Commission requested a mandate to Council for negotiating an agreement with Russia and Belarus on the electricity system operation of the Baltic States. Following the successful resolution of the Yamal case, high-level official discussions on the implementation of the EU internal market rules and its impact on Russian companies and existing intergovernmental agreements between Member States and the Russian Federation continued.

- Good progress was made on the finalisation of the early warning mechanism and the energy provisions of the Association Agreement with **Ukraine**, which include a Deep and Comprehensive Free Trade Area, following the accession of Ukraine to the Energy Community Treaty. Under the Neighbourhood Investment Facility, the Commission funded the technical studies for the modernisation of the Ukrainian Gas Transit System required by the IFI's as part of their due diligence and has prepared an offer for further technical assistance for the restructuring of NJSC Naftogaz, which Ukraine is now considering. The Commission continues to follow developments in the gas relations between Ukraine and Russia very closely. An Early Warning Mechanism with **Belarus** has been finalised and its signature is expected in early 2012.

- Ukraine formally acceded to the **Energy Community Treaty** on 1st February 2011 and Armenia joined as an observer. In March 2011, the Commission adopted a Report on the Energy Community, which highlighted the main shortcomings and identified three main priorities in the short term: firstly, improving the implementation of the adopted rules; secondly, further alignment with the newest EU rules on the internal energy market, on renewables and energy efficiency, and thirdly, improving the investment climate. Following the Commission's proposal, the Energy Community adopted the 3rd internal market Package (which included, for the first time, adaptations to the institutions and countries concerned) and clear steps were made to attract investment through the setting up of a Regional Energy Strategy Task Force and through coordinated action for bringing gas to the region.

- In the **Caspian and Central Asia region**, the Commission continued to stimulate the development of the **Southern Gas Corridor** where significant progress has been made towards a decision on allocation of Azeri gas from Shah Deniz 2. President Barroso and Commissioner Oettinger visited Azerbaijan and Turkmenistan in January 2011. In Baku, President Barroso and President Aliyev signed a joint statement committed to the creation of a substantial dedicated pipeline that would allow Azerbaijani gas to be transported all the way to the EU without relying on gas swaps. In Ashgabat, the Turkmen President stressed his ambition to export gas to the EU and suggested a framework agreement to help in

the development of a Trans-Caspian pipeline. In September 2011 the Commission received negotiating directives to prepare the agreement from the Council and started the negotiations.

The preparatory work for all the pipeline options within the Southern Corridor continued in 2011. As regards Nabucco, all States involved signed Project Support Agreements in June 2011 in Kayseri, Turkey. The three pipeline project companies submitted their offers in October 2011 to the Shah Deniz 2 consortium in Azerbaijan, which is expected to indicate in early 2012 its preferred option for transporting Azeri gas to the EU.

- Energy cooperation with the **Southern Mediterranean region** was intensified notably through increased support to market reforms and regional integration and the establishment of the Mediterranean Solar Plan together with the Union for the Mediterranean (UfM) Secretariat. In particular, the Commission facilitated joint pilot projects based on the EU renewable directive. At the bilateral level, specific priority was given to reinforce our partnership with Algeria.

- Numerous other activities with external partners continued throughout the year, both at bilateral and multilateral level: cooperation with the **USA** under the auspices of the EU-US Energy Council; enhancement of the energy dialogue with **China, India and Japan**; and implementation of existing Memoranda of Understanding on energy. New activities were carried out with **OPEC** and countries of the **Gulf Cooperation Council**.

- The negotiations for the accession of **Croatia** to the EU were finalised and the Accession Treaty was signed in December 2011. The negotiations for the accession of Iceland were launched during the year.

1.2 Energy Infrastructure

As part of its efforts to achieve the objective of **improving security of energy supply through infrastructure** the Commission adopted the proposal for a **Regulation on Guidelines for trans-European Energy**[15] on 17th November 2011. The Regulation is based on the Commission's 2010 Communication on the Energy Infrastructure needs for 2020 and beyond[16] and the subsequent European and TTE Council conclusions. A new EU energy infrastructure policy was called for to coordinate and optimise network development on a continental scale. It confirmed the necessity to overhaul the existing Trans-European Networks for Energy (TEN-E) policy and financing framework. This proposal was supported by the key findings of an ex-post evaluation of the TEN-Energy programme (finalised in 2009) and the assessment of selected projects completed of the cycle 2009-2013.

The Regulation repeals Decision No 1364/2006/EC and lays down rules for the timely development and interoperability of trans-European energy networks in order to achieve

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[15] *COM(2011) 665*

[16] *COM(2010) 677*

the energy policy objectives of the Treaty on the Functioning of the European Union.

Following the Commission Communication "A Budget for Europe 2020" on the next multi-annual financial framework (2014-2020)[17], the Commission adopted the proposal for a Regulation for the creation of a **Connecting Europe Facility**[18] on 19th October 2011. The Facility aims to promote the completion of priority energy, transport and digital infrastructures with a single fund of €40 billion, of which €9.1 billion are dedicated to energy[19].

The European Network of Transmission System Operators for Gas (ENTSO-G), with support from the European Commission, the European Regulators' Group for Electricity and Gas (ERGEG), and many key stakeholders, published its first Ten-Year Network Development Plan on gas infrastructure in March 2011. Work related to energy infrastructure also concentrated on the Baltic Energy Market and Interconnection Plan which is supported by major infrastructure projects funded under the EEPR and the TEN-E programme. As regards the North-South connections in Central and Eastern Europe, a High Level Group, chaired by the Commission, was established. The Group agreed on an action plan in the margins of the TTE Council in November 2011. This plan aims at promoting the implementation of energy infrastructure projects of mutual regional interest and improving security of supply and market development in the region.

The TEN-E work programme 2011 was successfully implemented: €24 150 000 of commitments were made to 21 electricity and gas projects during the year.

Council Regulation (EU, EURATOM) 617/2010 on **investment projects in energy infrastructure** within the European Union requires that Member States notify their investment projects in energy infrastructure to the Commission every two years. The first reporting year was 2011. At the end of 2011, all MS except Bulgaria, Estonia, Germany and Italy had notified their investment projects.

1.3 Nuclear Energy

Under the objective of **guaranteeing a high level of nuclear safety** and following the Fukushima events, DG ENER, together with the European Nuclear Safety Regulators' Group (ENSREG) and DG JRC, defined and managed the process of EU stress tests. Throughout the year, Commission services were involved in defining and executing the process together with all participating countries (15 Member States and 2 Neighbouring Countries). They evaluated the national interim reports received in September, prepared the Commission Interim Report to the European Council adopted on 24 November, and set up the peer review mechanism to analyse the final national reports received at the end of 2011.

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[17] *COM(2011) 500/I and COM(2011) 500/II (Policy Fiches)*

[18] *COM(2011) 665*

[19] *All amounts in 2011 prices*

The Nuclear Safety Directive[20] adopted in 2009 had to be implemented at national level by 22 July 2011. The Commission started infringement proceedings against the twelve Member States (Belgium, Denmark, Estonia, Greece, Italy, Cyprus, Latvia, Austria, Poland, Portugal, Slovakia, and United Kingdom) that have not complied with this deadline.

Preparation work for the revision of the Euratom nuclear safety legislation started in 2011 and an open public consultation was launched in December.

DG ENER continued to handle the EU database on civil nuclear materials. During 2011, about 1.9 million lines of accounting data generated by 1000 Material Balance Areas (MBAs) were dealt with and 1.59 million accountancy records were transmitted to the International Atomic Energy Agency (IAEA). The DG continued to function as a focal point in the implementation of the Additional Protocol (AP). 403 declarations were submitted to the IAEA relating to 170 sites and a large number of other entities. The coordination and reporting of the Complementary Access pursuant to the AP were part of this task.

The Council adopted a Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste[21]. While reaffirming the ultimate responsibility of Member States, the Directive creates a strong EU framework with important obligations imposed on Member States. Member States need to notify national programmes on how to dispose spent fuel and high radioactive waste.

The Seventh Situation Report on the management of spent fuel and radioactive waste in the EU[22] provided information on production, storage, disposal as well as national waste policies. The Situation Report on uranium mine and milling tailings[23] provided information on the nature and status of legacies, on ongoing activities, as well as existing specific EU legislation. It highlighted possible further Commission activities in this area.

In a Communication to the European Parliament and the Council[24], the Commission provided, for the first time, a comprehensive European picture on education and training in the nuclear sector, identified current challenges, and presented the spectrum of existing and planned EU, national or international initiatives which could address the challenges identified.

In the field of nuclear decommissioning, the Commission has adopted a proposal for a Council Regulation, establishing a new legal base for further financial assistance to the decommissioning works in Bulgaria, Lithuania and Slovakia for the next Mid-Term Financial Framework[25]. An ex-ante evaluation of the existing decommissioning assistance

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[20] *Council Directive 2009/71/Euratom*

[21] *Council Directive 2011/70/Euratom*

[22] *SEC(2011) 1007*

[23] *SEC(2011) 340*

[24] *COM(2011) 563*

[25] *COM(2011) 783*

programme completed during 2011 provided the basis for this proposed prolongation of support beyond 2014. In 2011, these 3 Member States received €258 million in order to advance with the decommissioning programmes at Kozloduy (units 1-4), Ignalina (units 1-2) and Bohunice (units 1-2). Member States have been consulted on their decommissioning funding practices as part of the preparation of the third decommissioning policy report.

The Commission has adopted a draft proposal for a Regulation which would facilitate the transport of radioactive materials[26]. The existing national reporting and authorisation procedures would be replaced by a unique registration valid across the whole EU while the safety levels reached would be maintained.

The ENSREG and the European Nuclear Energy Forum (ENEF) gave substantial technical support to improve safety, security and transparency at European level. Both organisations provided valuable input for the proposal on the management of spent fuel and radioactive waste.

During the sixth ENEF Plenary Meeting in Prague, more than 300 participants took stock of the reactions in Europe to the events in Fukushima. It called for a detailed incident analysis; the findings and lessons learned thereof should be fully implemented. ENEF welcomed Europe-wide comprehensive safety and risk assessments of nuclear power plants and highlighted the value added of national and European initiatives to continuously improve nuclear safety.

On 29 September 2011, the European Commission adopted the Proposal for a Council Directive laying down basic safety standards for protection against the dangers arising from exposure to ionizing radiation[27]. The Proposal has been presented under Article 31 of the Euratom Treaty for the opinion of the Economic and Social Committee.

On 27 June 2011, the European Commission adopted the Proposal for a Council Directive laying down the requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption[28]. On 27 October 2011, the draft Council Directive received a positive opinion of the Economic and Social Committee.

Also during 2011, the Commission undertook seven verifications of Member States' facilities for monitoring radioactivity in the environment under Article 35 of the Euratom Treaty.

Under the objective of **verifying the security of nuclear material**, the Commission's nuclear safeguards services found no case of nuclear material diversion in 2011. In the same period, no irregularities were reported for the EU by the IAEA. However, for three installations, nuclear operators have been made aware of the identified deficiencies.

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[26] COM(2011) 518

[27] *COM(2011) 593*

[28] *COM(2011) 385*

Corrective actions and deadlines have been agreed with the operators to remediate the situation.

The number of inspections carried out by the Commission's safeguards services decreased slightly from 1415 in 2010 to 1300 in 2011 and the total number of inspection person-days decreased from 4024 in 2010 to 3775 in 2011. This decrease is mainly due to a temporary reduction of spent nuclear fuel transfers within certain Member States.

Safeguards cooperation with the IAEA continued in a constructive and productive atmosphere. A significant number of papers defining common nuclear safeguards approaches at a range of installations types were agreed in 2011. A reflection group was created to explore the possibilities for deepened cooperation between the two organisations.

With the objective of **ensuring the security of nuclear fuel supply**, bilateral cooperation with other international partners has been improved through the preparation or negotiation of Euratom Agreements: the agreement with Canada is being renegotiated; a renewed agreement with Australia has been concluded and entered into force on 1 January 2012; the negotiations for a new agreement with South Africa were concluded in 2011 and the text will be submitted to the Council for approval during 2012.

The European Commission, on behalf of the Euratom Community, attended the 5th review meeting of Contracting Parties under the Convention on Nuclear Safety (Vienna, 4-14 April 2011) and presented the Euratom report.

On 13 October 2011, the Commission also submitted to the IAEA Secretariat the Euratom report on the implementation of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, in view of the 4th review meeting in May 2012.

1.4 RTD activities related to energy

With the objective to **develop and demonstrate cost-effective low-carbon technologies for low carbon energy production, energy efficiency and energy security**, the implementation of the **Strategic Energy Technology (SET) Plan** achieved important milestones in 2011:

- Further to the six European Industrial Initiatives (EIIs) launched by the Commission during 2010, another one on Smart Cities and Communities was launched in June 2011. The ambition of this initiative is to address in an integrated way energy production, consumption and flows (electricity, heating & cooling, energy efficiency) in the urban environment, together with ICT solutions and smart transport systems. This is the result of a close cooperation between different Commission services. In parallel, a Smart Cities Stakeholder Platform was launched in order to gather all relevant players in Europe.

- The Commission, in close coordination with Airbus, leading European airlines (Lufthansa, Air France/KLM, & British Airways) and key European biofuel producers (Choren Industries, Neste Oil, Biomass Technology Group and UOP), launched the European Advanced Biofuels Flight Path Initiative to speed up the commercialisation of aviation biofuels in Europe.

In addition, a portfolio of roughly €1.5 billion of the 7th Framework Programme for

Research (**FP7**) projects was implemented on the basis of the SET-Plan technology roadmaps, with fewer but more focussed and relevant topics with greater European added value, increasing the participation and commitment of industry in research and demonstration work. The share of funding for industrial participants reached almost 70% in 2011. This was possible while maintaining a high level of participation of small and medium sized enterprises at approximately 20%.

The research priorities under FP7 build on the first results from ongoing or recently completed FP6 projects. The main results were related to technological changes for cost reduction (with a learning curve estimated to 2.5% per year), efficiency gains and enhanced reliability in electricity generation, bio-energy, heating and cooling and energy efficiency for industry and buildings (notably CONCERTO communities and projects from the Energy Efficient Buildings Public Private Partnership). FP7 projects also include the development and deployment of technologies for environmentally safer and more sustainable use of coal and other fossil fuels, focusing mainly on the technologies for carbon capture and storage.

A detailed plan of a comprehensive online Energy Research Knowledge Centre (ERKC) was developed in 2011. The ERKC will gather, analyse and widely disseminate relevant information on energy research activities conducted on the EU level as well as on the Member States level and beyond. The European energy research programmes and projects will be presented in a clearly structured and user friendly manner. The ERKC will thus provide access to a common pool of energy research knowledge and information to various stakeholders, thus facilitating their communication and speeding up the pace of innovation.

PART 2. MANAGEMENT AND INTERNAL CONTROL SYSTEMS

2.1 Introduction to DG ENER

DG ENER has been responsible for developing and implementing a European-level energy policy since its creation in 2010. In October 2011, its organisation was modified slightly to undertake the priority actions necessary to implement the Commission's 2020 energy strategy agreed by the European Council on 4 February 2011. The mission statement of the DG was revised to reflect these changes and published on the DG's intranet.

DG ENER has 614 staff, including 7 in the Shared Internal Audit Capability (SIAC). Of these, 533 are on permanent posts and 81 are external. There are also 182 posts in the Shared Resources Directorate (SRD) of DG ENER and DG MOVE, which are technically assigned to DG MOVE, but which serve both DGs.

DG ENER uses the partially decentralised model for the operational activities and the centralised model for all administrative expenditure related to Brussels-based activities[29].

For the commitments and payments under its responsibility, DG ENER uses a system of sub-delegation where each deputy director-general and director is the authorising officer by sub-delegation for the commitments and payments under their responsibility. Commitments can only be authorised by a director or above, while heads of unit (or their deputies) can authorise payments and recovery orders.

In 2011 DG ENER executed €733.76 million in commitment credits and €844.25 million in payment credits, with execution rates being 96.5% and 87.4% respectively. If the EACI, where DG ENER is a parent DG, is taken into account the execution of commitment credits rises to €821 million and to €903 in payment credits[30], with the execution rates being 97% and 88% respectively. The payment credits jointly managed with EIB were €53 million. The table below shows the 2011 execution of the main ENER programmes by management mode.

[29] *According to the terminology used in the last revision of the guidelines on the Financial Circuits of June 2010*

[30] *The table below refers only to operational credits, excluding the budget transferred to the regulatory agencies.*

Table 1: Execution of main DG ENER programmes by management mode

Programmes concerned	Management mode	Organisation	2011 Commitments (million €)	2011 Payments (million €)
EEPR	Direct centralised	-	0	457.5
	Joint	EIB[31]	146.33	30
Energy support activities	Direct centralised	-	2.63	2.85
TEN-E	Direct centralised	-	24.15	18
Intelligent Energy	Direct centralised	-	4.28	6.78
	Indirect centralised	EACI[32]	87.22	58.67
	Joint	EIB	30.00	23.00
Nuclear Decommissioning	Joint	EBRD[33]	136.42	78.14
	Indirect centralised	CPMA[34]	121.58	23.83
Research FP6	Direct centralised	-	-	25.79
Research FP7	Direct centralised	-	174.36	116.93

[31] *European Investment Bank*

[32] *Intelligent Energy Programme (IEE);*

[33] *European Bank for Reconstruction and Development*

[34] *Central Project Management Agency in Lithuania*

2.1.1 The general control environment

The DG's general control environment consists of the following elements:

Management meetings

The Director-General, his Deputies Directors-Generals, the Directors, including the Director of Executive Agency for Competitiveness and Innovation (EACI) and the Euratom Supply Agency (ESA), and the Heads of Unit meet usually every week to analyse work programme implementation, discuss matters of importance and coordinate the actions of the DG.

In addition, the Directors-Generals of DG MOVE and DG ENER meet regularly with the Director of the Shared Resources Directorate (SRD) to ensure coordination.

Control Board

This Board has a more detailed focus on financial and control issues than the management meetings. It is chaired by the Director-General and includes his deputies, as well as the directors, including from the EACI, representatives of the financial resources unit and the SIAC. In 2011 the Board met twice to analyse risk management, internal control, budgetary and financial execution matters. Whenever relevant, the follow-up to ongoing or completed internal and external audits was also discussed.

Risk management

Risks for potential inclusion in the DG's Risk Register are first identified and discussed in a management meeting when preparing the Management Plan. Units concerned are then tasked with drawing up an action plan with mitigation measures for each risk. These are then approved by the Director-General.

The implementation of the action plans and the risks themselves are then monitored throughout the year and reviewed at meetings of the Control Board. If other significant or critical risks are identified during the year these are then added to the register, monitored and mitigation measures taken.

Programming Committee

The Director-General chairs the Programming Committee, which consists of the Resources Director, the Head of the Financial Resources Unit and the Assistants to the Director-General. It usually meets once a year to decide on the actions to be financed for the year N+1. Before validating the descriptions of the actions proposed by directorates, the Committee verifies their coherence with the DG's priorities, the annual work programme and the approved budgets. These actions give rise to the annual financing decision and to *ad hoc* financing decisions.

Cross-delegations

DG ENER has given cross-delegations to DGs DIGIT, ECFIN, ENTR, JRC, MOVE and RTD, as well as to the HR, OP and PMO. It has received a cross-delegation from DG RTD.

Advisory Committee on Procurement and Contracts (ACPC)

When launching a call for tenders, the technical services concerned verify the validity of

the offers, the compliance with the terms of reference, the eligibility of the actions and the partners, the efficiency and effectiveness of the methods proposed and the quality of the tenders received by DG ENER.

In addition, procurement procedures leading to contracts with a value above €60 000 are analysed by the joint DG ENER and DG MOVE ACPC before the contracts are signed by the competent Authorising Officer. Chaired by the Director of the SRD or, in his absence, by his advisor or the Head of the Financial Resources Unit, the ACPC is composed of members selected for their particular competence in the field of public procurement and it gives an opinion on the way in which the procurement was carried out and on the draft contract proposed for signature.

Internal control groups

Two networks contribute to internal control:

- the HR assistants network (weekly meetings);
- the Internal Control Correspondents Group. This group, composed predominantly of directors' assistants, meets quarterly.

Supervision of the Agencies

The operational units responsible for the policies entrusted to the EACI and ACER agencies follow their activities closely. DG ENER's officials participate in several working groups set up to discuss technical issues and regular meetings take place between them and the staff from the agencies. Senior Commission officials are members of the ACER administrative board and of the EACI's steering committee. For more information, see the dedicated section 2.1.3 below.

Exceptions

In accordance with Internal Control Standard 8, each deviation from an established process or procedure is documented, justified and approved at the appropriate management level. They are then registered in the Internal Control Registry, reported as part of the monthly financial reporting, and discussed, if necessary, in the "Control Board" so that appropriate measures are taken in order to avoid recurrence of these cases.

Impact Assessment and Evaluation

The DG conducts impact assessments on all new policy initiatives in accordance with the Commission rules. It also regularly evaluates both spending and non-spending programmes.

Operational control

Deliverables received are checked by the operational services in order to verify compliance with the contractual obligations. If necessary, on-the-spot missions by the agent in charge are organised in order to check the effective implementation of the programme and the correctness of the information received. For some programmes (e.g. the research framework programmes) external experts provide technical reviews which feed into the operational services' assessments.

In general Heads of Unit act as operational verifying agents, approving deliverables and

being responsible for the follow-up and supervision of the programmes and projects entrusted to their unit. The operational services provide the 'certified correct' declaration.

Financial control

The Financial Management Unit (for Brussels) and the Finance and Contracts, Document Management and Management Centre sector attached to the Deputy Director-General for Nuclear Energy (for Luxembourg) carry out the financial initiation and verification and provide the "passed for payment" declaration. Before it can be given, each financial deliverable (invoice or cost claim) is thoroughly checked to assess its compliance with the applicable rules. All the financial transactions are then sent for signature to the Authorising Officer concerned.

Ex-post controls

The main type of ex-post control in the DG is financial audit. These are carried out in line the work programme approved by the Director-General. In addition, desk controls, which aimed to detect errors made by FP6 beneficiaries in their cost claims during the implementation of the projects so that errors could be corrected before the Commission made the final payment, were phased out.

Financial Reporting

Budgetary and financial reporting provides regular and detailed financial indicators to management, such as on the consumption of commitment and payment credits and its comparison with the Budget Implementation Plan, the contracting of the global commitments, payment delays, the number and nature of exceptions, abnormal RAL[35], error rates, implementation of the audit plan, recoveries and the number of cases sent to OLAF.

Reporting by the Authorised officers by sub-delegation (AOSD)

Each year each Director prepares their annual report to the Director-General, in which they identify potential weaknesses in internal control and may propose areas for a 'reservation' or 'risk', as well as reporting on political achievements and progress on programmes and policies. These reports, approved by the responsible Deputy Director-General where appropriate, include input from the Heads of Unit, who are also AOSD for payments and recoveries.

2.1.2 Events of particular importance

There were no events of particular importance.

2.1.3 Agencies and Joint Undertaking

In 2011, DG ENER was involved in the work of three agencies and one joint undertaking.

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[35] *Reste à liquider is DG Budget's estimate of the value of the outstanding commitments which have not been de-committed, but almost certainly should have been.*

The Agency for the Cooperation of Energy Regulators (ACER)

DG ENER is the "parent DG" for the Agency for the Cooperation of Energy Regulators (ACER), which is a regulatory agency set up in 2010[36] to assist national energy regulatory authorities to perform their duties at EU level and to coordinate their actions whenever necessary. In 2011, DG ENER granted the Agency a €5 million subsidy. In February 2011, ACER moved from Brussels to its Ljubljana headquarters and in March 2011 DG ENER granted it financial autonomy. In October 2011[37] the European Parliament and the Council gave ACER new tasks related to monitoring the wholesale energy markets.

The Commission takes part in the governance of ACER by participating as a member of the administrative board. The Agency board includes five representatives nominated by the Council of Ministers, two by the European Parliament and two Commission representatives. The Director-General and the Director of the SRD ensure the consistency of DG ENER's policy on the board. The Commission does not have a majority on the board.

The operational unit responsible for electricity and gas markets monitors the agency's activities. This includes regular coordination meetings at management level, numerous contacts at working level and reporting. Coordination of the horizontal issues related to the agencies is dealt by the SRD for budget, finance and administrative issues and Directorate A for inter-institutional and governance issues. Whenever necessary, bilateral meetings between DG ENER and ACER are organised.

DG ENER monitors the agency' staffing levels and recruitment, budgetary execution and the follow-up of auditors' recommendations by using indicators, which are updated quarterly with information from the agency. In order to ensure better cash management, the agency submits a cash flow forecast to DG ENER each time they request a payment.

The Executive Agency for Competitiveness and Innovation (EACI)

DG ENER is a parent DG for the Executive Agency for Competitiveness & Innovation "EACI" which implements and manages the Intelligent Energy Europe (IEE), Marco Polo, Enterprise Europe Network (EEN), and Eco-innovation programmes on behalf of the European Commission. The EACI is monitored by four "parent" directorates-general, of which DG ENER is responsible for the Intelligent Energy Europe programme. In 2011 DG ENER contributed €6.6 million to the Agency's running costs.

DG ENER has a supervisory role over the EACI[38]. This includes the definition of priorities

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[36] *Regulation (EC) 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators, OJ L 211, 14.8.2009, p. 1*

[37] *Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (REMIT) OJ L 326 of 8.12.2011, p. 1*

[38] *in accordance with the rules established by the Council Regulation (EC) No 58/2003 laying down the statute for Executive Agencies to be entrusted with certain tasks in the management of Community programmes and the Commission Regulation (EC) No 1653/2004 of 21 September 2004 on a Standard Financial Regulation for the Executive Agencies pursuant to Council*

and result-oriented goals in the annual work programmes approved by the Commission and an assessment of the activities carried out by the agency through the annual activity reports (AARs).

In accordance with Regulation (EC) No 58/2003, EACI has a Steering Committee, in which DG ENER was represented by the Director in charge of the Intelligent Energy Europe II programme. The Committee decides on the Agency's organisation and staff policy, as well as adopting the agency's annual work programme (comprising detailed objectives and performance indicators), its administrative budget, and any special rules needed to implement the right of access to documents. It also adopts[39] and applies measures to combat fraud and irregularities in the implementation of the agencies' activities. The Steering Committee is responsible for adopting and submitting the agency's Annual Activity Reports to the Commission, together with related financial and management data.

The operational unit concerned supervises and monitors the EACI's work through reports and meetings in line with the instruments of delegation that formalise the relationship between the parent DG and Agencies. This unit also provides support to the Steering Committee. The SRD coordinates horizontal budget, finance and administrative issues and Directorate A the inter-institutional and governance issues.

The EACI is obliged by its Acts of Delegation to regularly report on the performance of its tasks. These reports are prepared quarterly.

With the aim of providing detailed guidance on how DG ENER and the other parent DGs should communicate with the EACI on a day-to-day basis, Memoranda of Understanding were concluded. In addition, there are established "Guidelines for effective exchange of information between the EACI and parent DGs" and "Guidelines for effective financial and budgetary relations between the EACI and the parent DGs". In 2010 a new set of guidelines was produced, "Guidelines for effective relations between DG ENER and EACI in the establishment and management of concerted actions".

The EACI also uses ePMS, an IT application owned by DG ENER and DG MOVE, to manage the IEE programme as well as the EEN, Marco Polo and Eco-Innovation programmes (under the responsibility of DGs ENTR, MOVE and ENV).

The Euratom Supply Agency

The Euratom Supply Agency was established in 1960 to ensure all users of nuclear energy in the EU receive a regular and equitable supply of ores and nuclear fuels. It is neither a "regulatory" nor an "executive" agency. It reports directly to the Commission (not to the DG), which can veto its Director-General's decisions. Its Director-General has to consult an advisory committee, composed of most Member States, on most decisions. The Commission is not represented in this Committee.

Regulation (EC) No 58/2003, as amended by Commission Regulation (EC) N°651/2008 of 9 July 2008

39 *Rules were adopted on 14 July 2005*

According to its statutes[40], the Director-General of the Agency forwards an estimate of its budget to the Commission, which includes it in its draft budget. In its vote on the 2008 draft budget, the European Parliament did not allocate any budget to the Agency, a situation that continued in subsequent years up to and including 2011. As a result DG ENER bore the Agency's expenses under its own budget. This situation was criticised by the European Court of Auditors in their 2009 and 2010[41] reports.

These concerns have been addressed with the Budgetary Authority agreeing to a contribution of €98 000 for the Agency in the Commission's 2012 budget.

The Fuel Cells and Hydrogen Joint Undertaking (FCH JU)

DG ENER contributes (2011: €24.5 million) to the financing of the Fuel Cells and Hydrogen Joint Undertaking (FCH JU), for which DG RTD is responsible. This Joint Undertaking aims at increasing investment in the fuel cells and hydrogen sector in Europe, in the Member States and in countries associated to FP7. As regards FCH JU, DG ENER was represented in the administrative board by the Director of Directorate C (Renewables, Research and Innovation, Energy Efficiency) until 21 November 2011, when she was replaced by the Director of Directorate A (Energy Policy).

The regulation establishing the FCH JU was amended on 14 November 2011 to require that both industrial and research participants contribute to the matching of the European Union's contribution. It will therefore improve the current funding levels, while respecting the basic principle of the existing regulation in terms of 50/50 matching funding, as well as the need for fair and balanced funding reductions between the different types of participants.

2.2 The functioning of the entire internal control system

In 2011 DG ENER continued improving its Internal Control framework by:

- implementing the actions necessary to reach the requirements of the internal control standards prioritised for 2011;
- monitoring the implementation of the critical and other significant risks identified in the 2011 risk management exercise. No cross-cutting risks were identified;
- identifying the critical and other significant risks for 2012 (again, no cross-cutting risks were identified), as well as the prioritised internal control standards for 2012;
- regularly discussing internal control issues in the "Control Board".

2.2.1 Compliance with the requirements of the control

[40] *OJ L 41, 15.2.2008, p.15*

[41] *See the Court's Declaration of Assurance 2009, OJ C 206, paragraph 9.34 and the Court's Report on the Annual Accounts of the Euratom Supply Agency for the financial year 2010, OJ C, 366 paragraph 2.*

standards

The annual review of compliance with each of the standards took into account:

- progress with implementing the standards prioritised in 2011 (see section 2.2.2 below);
- the results of a questionnaire (iCAT) completed by staff working on internal control, managers and staff;
- the results of IAC audits and limited reviews, as well as of IAC and Court of Auditors' work;
- progress with implementing actions stemming from audit recommendations;
- the opinion of the internal control coordinator and staff working on internal control.

It concluded that the DG complies with all the internal control standards except the four below:

- ICS 3: Staff Allocations and Mobility: To ensure that particular efforts are made to improve DG ENER's staff allocation and mobility through a job mapping exercise. This ICS was also prioritised in 2010 when the vast majority of the actions then planned were implemented. The only exception to the planned actions was the job-mapping exercise. As it was not, due to resource constraints, completed in 2011 it has been reprioritised in 2012.
- ICS 8: Processes and Procedures: To ensure that the existing processes and procedures include the necessary elements stemming from the new Commission Anti-Fraud Strategy.
- ICS 13: Accounting and Financial Reporting: To ensure that the inventories of Commission assets situated in nuclear facilities subject to safeguards are up to date and appropriately recorded in the DG's accounts.
- ICS 15: Assessment of Internal Control Systems: To ensure that the self-assessment of the internal control standards' effectiveness is constructive, and its results are meaningful and accepted.

2.2.2.1 Derogations granted to the mandatory staff mobility requirement for sensitive functions[42]

DG ENER has recently assessed how long sensitive functions have been carried out by the same jobholder. This concluded that certain functions had been occupied by staff for longer than 7 years. The DG is currently evaluating possible measures to mitigate the risks that this situation creates.

2.2.2 Effectiveness of implementation of the prioritised

[42] *This section is currently being reviewed. Final text will be available in March.*

control standards

The three standards prioritised in the 2011 MP are set out below together with the measures taken during the year to ensure their effective implementation.

- *ICS 5 Objectives and performance indicators* – was prioritised to increase the level of involvement/awareness of staff in the development phase of the MP. The action plan was implemented by the end of the year.

- *ICS 8 Processes and Procedures* - was prioritised because the modifications to the financial circuits made in 2008 and 2009 and the entry into force of the Lisbon Treaty required revision of the Manual of Financial and Contractual Procedures. This had also been prioritised in 2010. All eight chapters have now been revised, approved and published on the DG's intranet site.

- *ICS 12 Information and Communication* – was prioritised to develop and communicate to all staff the internal communication strategy; document an external communication strategy and follow-up of its impact/results; raise awareness on internal control weaknesses and the concept; and increase staff awareness of IT security policy. The actions on internal and external communication and increasing staff awareness on IT security policy have been implemented. All actions are permanent and will continue in 2012. The procedure on reporting exceptions has been revised in line with new procedures for exceptions and non-compliance events reporting from DG BUDG. In addition, training sessions on internal control were carried out for managers and non-managers in February 2012.

The only other ICS prioritised in 2010, where actions had not been completed by the end of 2010 was ICS 11 on Document Management. The action plan has now been completed with all the data required having been sent to DIGIT before the Hermes Preservation Module was launched.

In addition, the DG continues to work to improve the effectiveness of all the ICS.

2.2.3 Conclusion

The main elements of the functioning of DG ENER control systems in 2011 are illustrated in the previous sections.

In the light of the results of the assessment of the compliance and effectiveness of the internal control against the Internal Control Standards we can consider that the DG's control system works as intended and adequately mitigates the main risks to the achievement of the objectives of the Directorate-General.

The further improvements needed to ensure compliance with ICS 3 (Staff Allocation and Mobility), 8 (procedures and processes) 13 (accounting and financial reporting) and 15 (Assessment of internal control systems) do not have a significant effect on the overall effectiveness of the system. Nevertheless, the changes will be made in 2012.

Particular attention will continue to be paid to addressing overpayments in personnel and indirect costs in research payments. The measures taken are described in more detail in section 3.

2.3 Information to the Commissioner

The working arrangements between DG ENER and the Commissioner in charge of Energy have been defined and approved in writing. They were published on the internal intranet on March 26th 2010. DG ENER informs the Commissioner as soon as possible of any issue requiring their attention or action.

A report with information on financial management, agencies, human resources management and internal control is sent to the Cabinet every 6 months.

The main elements of this report and assurance declaration, including the envisaged reservation, have been brought to the attention of Commissioner Oettinger, responsible for Energy.

PART 3. BUILDING BLOCKS TOWARDS THE DECLARATION OF ASSURANCE (AND POSSIBLE RESERVATIONS TO IT)

3.1 Building blocks towards reasonable assurance

Reasonable assurance is based on the:

- assurance given by DG ENER's management, including the Director of the EACI;
- assurance given by the Authorising Officers by Delegation (AOD) implementing funds in cross-delegation;
- information gained in the context of the joint management with the EBRD and EIB, and centralised indirect management through the CPMA in Lithuania;
- results from Court of Auditors' audits and implementation of the measures to address weaknesses identified;
- results of the Commission's services' audits and implementation of the measures to address weaknesses identified;
- internal control coordinator's assurance;
- reporting on exceptions.

The materiality criteria used are:

- for non-research activities: the scope and nature of the weakness; the duration of the weakness; the existence of compensatory measures (i.e. mitigating controls); the existence of effective corrective actions to correct the weaknesses (e.g. financial corrections and action plans); an assessment of whether more than 2% of the payment budget is erroneous.
- for research activities: see annex 4.

The impact on the Commission's reputation was also considered.

3.1.1 Building block 1: Assessment by management

DG ENER's control strategy builds on the following key controls: risk management; monitoring project implementation closely; *ex ante* and *ex post* controls; and exception monitoring and reporting.

3.1.1.1 Risk management

DG ENER's 2011 management plan identified one critical risk on the overpayment of research grants made under the 6th and 7th Framework Programmes. Mitigating actions were the same as those taken under the follow-up of the 2010 AAR reservation on overpayment of research grants made under FP6 (see section 3.1.3.1).

No cross-cutting critical risks were identified in the 2011 or 2012 Management Plans.

3.1.1.2 Monitoring project implementation closely[43]

Different projects are monitored in different ways as set out for the DG's major programmes below and in the internal control templates annexed. Corrective action is taken if these show potential causes for concern. This could lead to a decision to conduct a financial audit of the projects concerned, or to the project being suspended or terminated.

Research Programmes

For the FP6 programme, 63 projects were ongoing at the end of the year and no new projects were signed in 2011. The average duration of each project closed in 2011 was 49 months. The following technical monitoring took place:

- of the 63 projects, 33 were the subject of a report linked to a payment during the year;
- 22 of the projects had been visited by external expert reviewers and these reviewers attended 51 review meetings in Brussels during the year;
- in addition, 28 projects were visited by technical officers and these officers attended 42 review meetings in Brussels during the year;
- 18 projects were not reviewed during 2011 because they had finished

For the FP7 programme, 74 projects were ongoing, of which 12 were signed in 2011. The following technical monitoring took place:

- of the 74 projects, 42 were the subject of a report linked to a payment during the year;
- 16 of the projects had been visited by external expert reviewers and these reviewers attended 33 review meetings in Brussels during the year;
- in addition, 36 projects were visited by technical officers and these officers attended 79 review meetings in Brussels during the year;
- only 12 projects were not reviewed during 2011; 8 were insufficiently advanced to be reviewed in 2011, 2 have finished and for one the reports were delayed.

As a result the level of technical monitoring for both programmes is high and reflects the degree of advancement of the project. Further information is given in the annexed internal control template. All this information shows that the necessary measures are in place to ensure that assurance can be given from a technical perspective for both FP6

[43] *The figures in this section are preliminary and will be updated during March as the final figures become available.*

and FP7.

Nuclear Decommissioning

Representatives of the DG participate in monitoring committees[44], and, in the case of the EBRD, the assembly of contributors. Further information is given in the annexed internal control template. All this information shows that the necessary measures are in place to ensure that assurance can be given from a technical perspective.

European Energy Programme for Recovery[45]

In 2011 DG ENER continued managing the European Energy Programme for Recovery. In 2011 58 projects were ongoing in the following three areas: Carbon Capture and Storage, Offshore Wind and Energy Interconnectors. The following technical monitoring took place:

- for carbon capture and storage, all six projects have been the subject of a technical report by the end of the year. 6 reports were linked to a payment. During the year the technical officers responsible visited 5 of the projects and attended 8 review meetings in Brussels. In early 2012, one of the six projects had to be terminated for absence of a legal framework in the Member State concerned;

- for offshore wind, one of the nine ongoing projects was finalised in 2011. All nine projects have been the subject of a technical report by the end of the year. The reports received were reviewed by the technical officer responsible and/or by external reviewers. 9 reports were linked to a payment. The technical officers attended 14 review meetings;

- for energy interconnectors, 6 of the ongoing 43 projects were finalised (final payment made) in 2011. The reports received were all reviewed by the technical officer responsible and 22 of them were linked to a payment. Technical officers visited 29 projects in 2011 and attended 64 review meetings in Brussels.

Further information is given in the annexed internal control template. All this information shows that the necessary measures are in place to ensure that, from a technical perspective, assurance can be given.

Intelligent Energy Europe Programme

Approximately 70% of the budget allocated to this programme is managed by the EACI, 24% by the EIB and the final 6% by DG ENER.

As mentioned in section 2.1.4 above, DG ENER supervises the EACI. The Director of the

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[44] *Like those set up to monitor the nuclear decommissioning projects implemented by the Central Project Management Agency (CPMA) in Lithuania.*

[45] *€146 million of the total budget allocated to this programme was used for the creation of a Financial facility to support energy efficiency and renewable energy initiatives. No projects were financed under this scheme in 2011.*

EACI has also given his reasonable assurance on the Agency's activities (see section 3.1.1.6 and Annex 7).

DG ENER gives a cross sub-delegation to DG ECFIN to implement the European Local ENergy Assistance (ELENA) facility[46] with the European Investment Bank. The Director-General of DG ECFIN has given reasonable assurance. The facility is managed under joint management between the Commission and the EIB and there is a Steering Committee in which both the EIB and the Commission are equally represented. There is also a technical committee, in which DG ENER is represented, which met twice in 2011.

DG ENER and DG ECFIN have to approve each of the projects for funding by the EIB. During the lifetime of each project the beneficiary has to submit three separate reports on implementation, on which DG ENER and DG ECFIN are consulted before the payment is approved by the EIB. In addition, the EIB provides the Commission with monthly financial reporting on the fund and submits an annual report to the Commission on the implementation of the facility.

At the end of 2011, 16 projects had been approved, 15 contracts signed and 7 reports had been submitted by the beneficiary.

The final 6% is managed by the DG and is largely spent on procurement.

TEN-E

DG ENER manages the Trans-European Networks for Energy budget, which amounts to around €20-€25 million each year. In 2011, 73 projects were ongoing representing €99.2 million. The average project duration is 3-4 years.

DG ENER conducts monitoring on the basis of two deliverables:

- annual reports on implementation progress. These reports consider progress, including risks and mitigating measures. The reports are reviewed by DG ENER's technical staff and, if necessary, amending decisions are prepared (e.g. if a deadline extension or changes to the budget breakdown are required);

- reports accompanying requests for payment. These have to include a technical summary of the project, as well as an explanation of the project's results. An audit certificate is required for the costs incurred and the Member State concerned also has to certify that expenditure is directly related to the implementation of the project for which payment is claimed. If the payment is a final payment then the Member State concerned also has to give its assessment of the project. The Commission only approves the payment if all these elements are available and satisfactory.

In 2011, 46 technical reports were received, of which 24 were linked to a payment. All reports were reviewed by the technical officers responsible.

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[46] *ELENA is a European Facility aiming, through technical assistance, at supporting regional or local authorities in mobilising their investment programmes in the fields of energy efficiency and renewable energy sources.*

As a result the Commission considers that it can give reasonable assurance on the TEN-E expenditure for 2011.

Indicators

Most indicators in the table below show good progress. This is particularly true for the reduced payment delays, the increased payments made by the contractual deadline and the reduced number of old contracts.

Payment times[47] in particular, have decreased from 26.7 days in 2010 to 23.6 days in 2011 and the percentage of payments made during the contractual deadline has increased from 91% in 2010 to 96% in 2011.

The FP6 error rate is discussed in more detail in section 3.1.1.5.

[47] *Unlike the figures in Table 6 of Annex 3, these figures include payments made by the PMO for administrative expenditure.*

Table 2: Indicators for Specific Objectives

Specific objectives: "Plan, perform, monitor and report on the spending of financial resources so that sound and regular management of them is assured throughout the DG's activities" and "Implement and maintain an effective and reliable internal control system so that reasonable assurance can be given that resources assigned to the activities are used according to the principles of sound financial management and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions."		
Indicator	Latest known result	Target
Commitments budget carried out compared to final annual budget (%)	31/12/2011: 97% 31/12/2010: 91% 31/12/2009: 99% 31/12/2008: 99 %	>98 %
Payments budget carried out compared to final annual budget (%)	31/12/2011: 88% 31/12/2010: 80% 31/12/2009: 91% 31/12/2008: 83%	>90 %
Average time taken to make payments (days)	31/12/2011: 23.6 31/12/2010: 26.7 31/12/2009/ 37.7 31/12/2008: 47.5	<30
Payments made by contractual deadline (%)	31/12/2011: 96% 31/12/2010: 91% 31/12/2009: 67 % 31/12/2008: 58 %	>80 %
Number of open contracts that are more than 5 years old	31/12/2011: 33 31/12/2010: 48 31/12/2009: 93 31/12/2008: 239	<80
Individualisation of global commitments carried forward (%)	31/12/2011: 98.2% 31/12/2010: 99.8% 31/12/2009: 98.2% 31/12/2008: 99 %	>99 %
FP6 budget free from material errors and thus contributing to implementing the FP6 Audit Strategy (%)	31/12/2011: 95.56% 31/10/2010: 95.58% 31/10/2009: 95.96%	31/12/2011: >98%

Of the 4 open OLAF cases at the beginning of 2011:

– 3 have been closed by OLAF. Two were declared as "non-case" and for the third the Legal Service proposed to waive the recovery order and all the judicial follow-up has been closed.

– 1 remains under investigation.

3.1.1.3 Ex-ante control

The main errors detected and corrected in interim and final payments were:

- *in contracts:* services were claimed that were not included in the purchase order; travelling expenses which exceed the limits set (daily allowance, business class instead of economy, etc), VAT, arithmetical errors; and

Table 3: Statistics for contracts

Invoices	
Number	998
Total amount (€)	30,542,100
Credit notes (number)	72
Credit notes (€)	1,194,920
Number corrected (%)	7.21
Amount corrected (%)	3.91

- *in grant agreements:* inconsistencies between the information supplied by grant beneficiaries (amount of costs, methods of calculation, periods, etc.) and that included in the audit certificate; incomplete (or missing) audit certificates; arithmetical errors; audit certificates not provided by a qualified auditor; costs incurred outside the eligibility period; costs not covered by the legal basis.

Table 4: Statistics for Grant Agreements

Cost claims	
Number	390
Total amount (€)	866,490,911
Corrections (number)	85
Non-eligible amounts (€)	61,016,040
Number corrected (%)	21.79
Amount corrected (%)	7

These figures show that the ex-ante financial control works adequately and that the errors detected were within an acceptable margin. This has prevented the payment of €62.2 million of ineligible expenditure corresponding to 6.9% of the total claimed by the contractors and beneficiaries.

3.1.1.4 Exception reporting

In 2011 all exceptions were documented in a register and periodic reporting to the Control Board took place. None of the exceptions was considered to have a negative impact on giving reasonable assurance.

3.1.1.5 Ex-post control

3.1.1.5.1 Desk control

In 2011 32 controls on FP6 projects were worked on, all of which were carryovers from previous years. As of 31 December 2011, 26 of these have been completed, 4 have been cancelled and 2 have been transferred into a full, financial audit. As mentioned in section 2.1.1, desk controls have now been phased out.

3.1.1.5.2 Audits

During 2011, 102 audits were finalised[48] of which 81 were on the research programmes (FP6[49]: 58, FP7 ENER: 23), one on the nuclear decommissioning funds (Bohunice Fund), 10 EEPR (including 4 conducted together with the Court of Auditors), 8 TEN-E and 2 audits on other budget lines. The resources devoted to the audits done by the DG and outsourced are shown in the table below.

Table 5: Resources devoted to audits in DG ENER and DG MOVE in 2011

	2010	2011
Internal resources ex-post audits (FTE)	15.8	17
Cost of outsourced auditing (€)	1,421,066	1,528,995

Research

For FP7 the figures presented are only for DG ENER's projects, whereas for FP6 they concern both DG ENER and DG MOVE as the audit strategy was drawn up in the time of DG TREN.

[48] *An audit is considered finalised when the final audit report is sent by the Financial Audit Unit (SRD.5) to the Financial Management Unit (SRD.3) for implementation.*

[49] *For FP6 this includes both energy and transport.*

FP6

Coverage

When the FP6 audit strategy was set up DG TREN's objective was to finalise the audit of 344 contractors between 2007 and 2010. These 344 were to be composed of the 125 TOP[50] contractors by value corresponding to 50% of the budget, 161 MUS[51] contractors and 58 contractors selected on the basis of their risk. The split of DG TREN did not change this objective or the strategy, which remained common to the two DGs.

As can be seen in the table below, 383 audits (540 participations) were finalised by DG ENER and DG MOVE. In addition a further 50 were considered unnecessary or were stopped.[52]

The number of risk audits (which include preventive audits[53]) was higher than planned and the number of TOP and MUS audits lower because, as mentioned above, some contractors had already been audited three times by other DGs. This was the case for 18 of DG TREN's TOP contractors and 24 of its MUS contractors. In addition, at the beginning of the audit strategy, many contractors had not submitted an expense claim to the Commission meaning that it would have been too early to conduct a meaningful audit. Additional risk audits were done partially to offset these factors.

The following table shows how the coverage has evolved. Note that the FP6 common audit strategy only had planned objectives until 2010.

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50 *TOP contractors are the beneficiaries having received the most important financial contribution. Initially, 40% of the budget was included under this category. In 2009, this category was extended to 50% of the budget.*

51 *MUS contractors are beneficiaries selected using the Monetary Unit Sampling. A statistical sample of 161 beneficiaries for each research Directorate General was selected to be audited.*

52 *42 audits were considered unnecessary as the beneficiaries had already been audited 3 times by the research DGs for at least 3 other projects, a further 5 were not necessary because the projects were terminated without any costs submitted, a further 4 contractors merged to form 2 (resulting in 2 rather than 4 audits) and one audit was stopped with full recovery of costs.*

53 *"Preventive" audits target types of expenditure where errors most often occur (mainly personnel costs). One of their objectives is to help final beneficiaries learn so that the residual error rate will decrease in the long term. Beneficiaries generally appreciate these audits as they can see which costs they have declared incorrectly and how they could declare them properly. As these audits are carried out while the project is running, errors can be corrected in subsequent cost claims thus avoiding the Commission recovering funds once the project has ended.*

Table 6: FP6 audits: quantity

FP6	Planned cumulative period[54]	Achieved cumulative period	Achieved in 2011
Number of closed audits	344	383[55]	58
Audits TOP contractors	125	105	7
Audits MUS contractors	161	127	30
Audits Risk-based contractors	58	151	21
Total amount audited (EC share in €)	n.a.	138,401,650.08	9,971,987.64

Results

The results of these audits give a residual error rate of 4.44% for the whole population[56], which represents the rate that will be undetected and uncorrected after all controls have been put in place. Even if the rate of 4.44% is still above the control objective of 2% the fact that this rate is below the 11.87% rate for FP5 may indicate that the FP6 audit strategy has produced results. Nevertheless, the structural nature of the contractors participating in and the type of projects run by DG ENER and DG MOVE are likely to be the main causes of the error rate remaining above 2%. On this topic a study concluded the following:

- participants are mainly from municipalities, ministries, national institutes owned by the government, police and research (but non-university) organisations, which are typically the organisations that have the highest error rates;
- they are generally smaller than the organisations audited by DG RTD and DG INFSO. Small organisations typically have a higher error rate than large organisations;
- they are more likely to use the full costs model for reimbursement, which is the one with the highest level of error;

[54] *The cumulative period for FP6 is 2007-2011; for FP7: 2010-2016*

[55] *540 participations*

[56] *The residual error rate is only based on the results of the MUS and TOP audits and does not take account of the results of risk-based audits.*

- the projects are more likely to be "integrated projects"[57], which have a high error rate.

The following table shows how error rates have evolved.

Table 7: FP6 audit results

FP6	Achieved cumulative period	Achieved in 2011
Costs accepted by Financial Officers (EC share, in €) (A)	138,401,650.08	9,971,987.64
Systematic errors (number of extrapolation cases, as % of total)	28.46%	50%
Overall errors (in €) in favour of the Commission (B) (costs accepted by auditors - costs accepted by FO, in €)	- 10,796,998.35	- 983,767.15
Error rate in favour of the Commission (B/A)	-7.80%	-9.87%
Overall errors in favour of the beneficiary (EC share, in €) (C)	3,975,419.27	594,041.51
Error rate in favour of the beneficiary (for info) (C/A)	2.87%	5.96%
Total amount of adjustments implemented (EC share, in €)	-9,101,981.87	-3,990,378.65
From audit implementation:	-7,887,402.93	-3,226,501.65
From audit extrapolation:	-1,214,578.94	-763,877
Residual error rate (%)	4,44%	-

Adjustments implemented

Of the 271 participations with an audit adjustment in favour of the EC, 216 adjustments (80%) for €7,887,402.93 have already been implemented and 55 were in the contradictory procedure with the beneficiary.

[57] *An Integrated Project is an instrument to support objective-driven research, where the primary deliverable is new knowledge.*

Table 8: FP6 – implementation progress of audit adjustments in favour of the EC

Audit closing year	Results from external audits		Adjustments in contradictory procedure with the beneficiary		Adjustments implemented	
	Number of participations	Funding adjustments set by AOSDs	Number	Value	Number	Value
2007	3	-44,306.94	0	0	3	-44,306.94
2008	38	-1,313,884.71	0	0	38	-1,313,884.71
2009	128	-5,059,709.92	11	-924,490.86	117	-4,135,219.06
2010	65	-3,164,807.99	20	-853,346.55	45	-2,311,461.44
2011	37	-868,871.24	24	-786,340.46	13	-82,530.78
Total	**271**	**-10,451,580.80**	**55**	**-2,564,177.87**	**216**	**-7,887,402.93**

Of the €7,887,402.93 already implemented 77.4% was recovered through offsetting the adjustment from subsequent payments and 22.6% through recovery orders.

Table 9: FP6 - audit adjustments by implementation mode

Audit closing year	Adjustments implemented by implementation mode (in value)		
	Offset from payments	Recoveries	Waived
2007	-8,389.38	-35,917.56	0
2008	-1,108,568.84	-205,315.87	0
2009	-3,081,433.87	-1,053,785.19	0
2010	-1,907,566.26	-403,895.18	0
2011	-941.73	-81,589.05	0
Total	**-6,106,900.08**	**-1,780,502.85**	**0**

In addition, further corrections were made to the same beneficiaries participating in other DG MOVE/ENER research projects. These corrections stem from audits made by DG MOVE/ENER or other DGs in the research family where systematic errors were found. 468 such participations were found and the beneficiaries were asked to rectify the errors in DG MOVE/ENER projects and submit revised cost statements. On the basis of this 216 participations were judged not to be concerned by the systematic errors identified by DG MOVE/ENER or any of the other DGs. Of the remaining 252 participations, 93 have been corrected so far by DG MOVE/ENER leading to €1.2 million being recovered. For 111 participations the beneficiary has been asked to revise their cost statements by the AOSD. The remaining 48 are being dealt with by other DGs.

Table 10: FP6 - audits extrapolation progress

Year	Number of participations with expected systematic errors	Number of participations without systematic errors	Implemented cases				Number of participations with extrapolations managed centrally[58]	Number of participations to be implemented[59]
			In favour of the Commission		In favour of beneficiary			
			Number	Value	Number	Value		
2007	6	0	5	-359,321.24	1	10,848.46	0	0
2008	157	77	32	-419,840.12	17	116,952.47	19	12
2009	197	101	22	-345,451.28	9	34,085.94	29	36
2010	71	36	6	-89,966.30	1	94.86	0	28
2011	37	2	0	0	0	0	0	35
Total	**468**	**216**	**65**	**-1,214,578.94**	**28**	**161,981.73**	**48**	**111**

Liquidated damages

Liquidated damages are a financial penalty that the beneficiary has to pay if they breach contractual obligations. This includes when they over claim contributions to funding in the research programmes. In these cases the beneficiary has to repay the overpaid amount plus the liquidated damages. The extent of the liquidated damages is proportionate to the overstated costs and the unjustified amount received by the beneficiary.

Since its creation, DG ENER has applied liquidated damages to beneficiaries who received unjustified EU contributions in the research programmes. By the end of 2011 there had

[58] *Cases managed centrally refer to those with beneficiaries confronted with a large number of cases.*

[59] *Cases to be implemented are those for which the Commission has written to the beneficiaries requesting them to submit revised costs statements to correct the systematic issues detected.*

been 36 cases and in 19 recovery orders have been issued totalling €134,892. In 2012 a further 12 recovery orders will be issued. For cost-effectiveness reasons, DG ENER does not apply liquidated damages when the amount to recover is less than €200. As a result no damages were sought in 5 cases.

Economy, Efficiency and Effectiveness of Additional controls

The residual error rate of 4.44% remains above the current materiality threshold of 2% and is 0.02% higher than in 2010. Given that the FP6 programme is nearing its end and that no new simplification initiatives for the programme are planned, it is unlikely that this rate will change considerably over the coming years.

In the context of sound financial management[60], and given that resources available for auditing are finite, DG ENER considers it more appropriate to devote them to implementing the FP7 audit strategy, as well as controlling other areas of the DG's direct expenditure. This is particularly the case given the small proportion of DG ENER's payments that are constituted by FP6 (see table 1), and the fact that this trend that will continue in the coming years.

The audits launched as a result of the assessment of cost-effectiveness described in the 2010 Annual Activity Report will be finalised in 2012.

Conclusion

The DG's FP6 control strategy has been implemented successfully (see coverage) and effectively (see results). Compared to FP5 it has been able to improve assurance by reducing the residual error rate to 4.44%. Nevertheless the DG has not been able to attain the 2% materiality control target. Consequently, the conditions for maintaining a reservation on FP6 are still met.

FP7

On 30 September 2009, the Research Family of DGs agreed on the FP7 audit strategy. Implementation started in 2010 and DG ENER had planned 283 audits (161 MUS, 73 TOP and 49 Risk).

In late 2011, the Research Family changed its sampling methodology to have a single representative sample for the whole of the Family, rather than one representative sample per DG. This means that the audits planned over the whole programme have been reduced to 165 (13 MUS, 73 TOP and 79 Risk). The additional risk audits are to ensure that the particular nature of DG ENER's beneficiaries (see section "*Results*" above) are covered, as these are less likely to be picked up by a common sample.

During 2011 23 audits (24 contracts) were finalised, of which 4 audits (4 contracts) can be considered part of a random representative sample.

The coverage is shown in the table below.

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60 *in accordance with the principles of economy, efficiency and effectiveness*

Table 11: FP7 - audits quantity

FP7	Planned cumulative period	Achieved cumulative period	Planned in 2011	Achieved in 2011
Number of closed audits	165	29	14	23
Audits TOP contractors	73	13	0	11
Audits MUS contractors	13	5	2	4
Audits Risk-based contractors	79	11	12	8
Total amount audited (EC share in €)	n.a.	6,020,424.30	n.a.	4,071,659.61

Results

The error rate for the 29 audits (30 contracts) was 12.93% and 29.12% for the 5 representative audits (5 contracts). The error rates are shown in the following tables.

Table 12: FP7 - audits results

Year	Number of audits closed	Number of participations audited	EC share of the costs accepted by the FO (€)	EC share of the accumulated adjustments in favour of the EC		
				Amount (€)	Annual error rate	Cumulative error rate
2010	6	6	1,948,764.70	-57,726.37	-2.96%	-2.96%
2011	23	24	4,071,659.61	-720,492.69	-17.70%	-12.93%
Total	**29**	**30**	**6,020,424.31**	**-778,219.06**		

Adjustments implemented

Of the 18 participations with an audit adjustment in favour of the EC, 5 adjustments (28%) for €24,914.24 have already been implemented and 13 were in the contradictory procedure with the beneficiary.

Table 13: FP7 – implementation progress of audit adjustments in favour of the EC

Audit closing year	Results from external audits		Adjustments in contradictory procedure with the beneficiary		Adjustments implemented	
	Number of participations	Funding adjustments set by AOSDs	Number	Value	Number	Value
2010	4	-13,805.44	2	-1,514.03	2	-12,291.41
2011	14	-722,730.68	11	-710,107.85	3	-12,622.83
Total	**18**	**-736,536.12**	**13**	**-711,621.88**	**5**	**-24,914.24**

Of the €24,914.24 already implemented 31% was recovered through offsetting the adjustment from subsequent payments and 69% through recovery orders.

Table 14: FP7 – audit adjustments by implementation mode

Audit closing year	Adjustments implemented by implementation mode (in value)		
	Offset from payments	Recoveries	Waived
2010	-1,919.50	-10,371.91	0
2011	-5,710.80	-6,912.03	0
Total	**-7,630.30**	**-17,283.94**	**0**

In addition, further corrections were made to the same beneficiaries participating in other DG ENER research projects. These corrections stem from audits made by DG ENER or other DGs in the research family where systematic errors were found. 18 such participations were found and the beneficiaries were asked to rectify the errors in DG ENER projects and submit revised cost statements. On the basis of this 4 participations were judged not to be concerned by the systematic errors identified by DG ENER or any of the other DGs. The remaining 14 participations have not been corrected so far.

Table 15: FP7 – audits extrapolation progress

Year	Number of participations with expected systematic errors	Number of participations without systematic errors	Implemented cases				Number of participations with extrapolations managed centrally[61]	Number of participations to be implemented[62]
			In favour of the Commission		In favour of beneficiary			
			Number	Value	Number	Value		
2010	4	3	0	0	0	0	0	1
2011	14	1	0	0	0	0	0	13
Total	**18**	**4**	**0**	**0**	**0**	**0**	**0**	**14**

Liquidated damages

Since its creation, DG ENER has applied liquidated damages to beneficiaries who received unjustified EU contributions in the research programmes. By the end of 2011 there had been 11 cases and 2 recovery orders have been issued totalling €2,983. In 2012 a further 4 recovery orders will be issued. For cost-effectiveness reasons, DG ENER does not apply liquidated damages when the amount to recover is less than €200. As a result no damages were sought in 5 cases.

Conclusion

The limited number of random FP7 audits conducted so far by DG ENER is insufficient to give a representative indication of the likely trend in its FP7 error rate. In addition, at this stage in the implementation of the FP7 audit strategy, it is also not possible to calculate a statistically representative residual error rate for the Research family as results from a Common Representative audit Sample (CRaS) will only be available from 2012.

Nevertheless the following factors would indicate that DG ENER's FP7 error rate is likely to be above 2%:

- the other DGs in the Research family that have already conducted a larger numbers of audits have reported detected error rates above 2% (DG RTD: 3.77% from 441 audits; DG INFSO: 5.5% from 103 audits).
- DG ENER's error rate is unlikely to be lower than those of the other members of the Research family. For FP6 this was not the case (see section 3.1.1.5.2);

[61] *Cases managed centrally refer to those with beneficiaries confronted with a large number of cases.*

[62] *Cases to be implemented are those for which the Commission has written to the beneficiaries requesting them to submit revised costs statements to correct the systematic issues detected.*

- at this stage of the FP7 audit strategy, the "cleaning effect" from implementing and extrapolating audit results is still limited, which implies that the residual error rate is not yet significantly lower than the detected error rate;
- although significant simplification measures relating to FP7 were adopted by the Commission on 24 January 2011[63], these are only expected to have a positive impact on the error rate for costs claimed and audited from 2011 onwards (and so would only affect the error rate from 2012-2013).

So, even if not fully representative, the audit results from the other research DGs conducting a larger numbers of projects and audits are the best information available for FP7 in 2011. DG ENER has no reason to consider that its own FP7 payments would be subject to a lower error rate. As a result it considers 4.5% (the RTD and INFSO average) as the being the best estimate of its likely error rate.

As a result a reservation is required for FP7.

EEPR

The audit plan for the EEPR programme is that all 65 beneficiaries will be audited during the life of the programme. Given the size of most payments, audits are normally launched after the first cost statement has been paid. In addition, because of the size of the payments, they are frequently analysed by the European Court of Auditors as part of their work on the annual "Declaration of Assurance". In order to ensure that beneficiaries do not have the perception of being audited twice, DG ENER auditors accompany the Court when they visit the beneficiary.

As can be seen from the table below, up to the end of 2011, 10 audits had been finalised, covering 11.86% of the total payments made for the programme. These 10 audits revealed an error rate of 0.24%. These figures include the audits conducted together with the Court of Auditors.

Table 16: EEPR audits

EEPR	TOTAL
Number of closed audits	10
Total amount audited (EC share in €)	139,494,493.86
Overall errors (in €) in favour of the Commission	-340,899.01
Error rate in favour of the Commission	-0.24%

Of the 7 participations with an audit adjustment, 3 adjustments (43%) for €110,276.10 have already been implemented and 4 were in the contradictory procedure.

Table 17: EEPR – audit adjustments implementation progress

[63] *Decision C (2011) 174*

Audit closing year	Results from external audits		Adjustments in contradictory procedure with the beneficiary		Adjustments implemented	
	Number of participations	Funding adjustments set by AOSDs	Number	Value	Number	Value
2011	7	-340,868.22	4	-230,592.12	3	-110,276.10
Total	**7**	**-340,868.22**	**4**	**-230,592.12**	**3**	**-110,276.10**

The adjustment of €110,276 already implemented was recovered through offsetting the adjustment from subsequent payments.

Given that the all beneficiaries will be covered by audits and that the error rate to date (before any corrections) is significantly less than 2%, reasonable assurance can be given.

Nuclear Decommissioning

The audit on the Bohunice Nuclear Decommissioning Fund has been finalised in 2011. The conclusion was that the financial errors found represent around 0.25% of the total budget of the fund. Assuming that there is a similar level of error in the other two decommissioning funds, reasonable assurance can be given. Audits for the other two funds: Kozloduy and Ignalina are in preparation.

We have reasonable assurance that the CPMA meets the requirements of the Financial Regulation, based on the audit finalised in 2010 by DG ENER, which was a follow-up financial audit of the CPMA at the Ignalina nuclear power plant. This confirmed the institutional assessment conducted in 2008, which found that the following key pillars are well established and operational to a satisfactory degree: procurement; internal control system; accounting, external audit, public access to information; and publication of beneficiaries.

TEN-E

In 2011, DG ENER implemented an audit plan for the programme which ensures that beneficiaries receiving more than €1 million will be audited, provided they have not already been audited due to their taking part in the TEN-E programme. This builds on the 2010 audit plan, which concentrated on those beneficiaries having received a payment of more than €1 million in 2009 or 2010.

8 audits were finalised in 2011, covering 44.49% of the payments made in 2009 and 2010. The detected error rate was 1.6%.

Table 18: TEN-E audits

TEN-E	TOTAL
Number of closed audits	8
Total amount audited (EC share in €)	15,573,830.56
Overall errors (in €) in favour of the Commission	-248,775.98
Error rate in favour of the Commission	-1.60%
Coverage from payments 2009-2010	44.90%

Of the 8 participations audited, 5 adjustments (62.5%) for €223,895 have already been implemented and 3 were in the contradictory procedure with the beneficiary.

Table 19: TEN-E – audit adjustments implementation progress

Audit closing year	Results from external audits		Adjustments in contradictory procedure with the beneficiary		Adjustments implemented	
	Number of participations	Funding adjustments set by AOSDs	Number	Value	Number	Value
2011	8	-247,639	3	-23,744	5	-223,895
Total	**8**	**-247,639**	**3**	**-23,744**	**5**	**-223,895**

Of the €223,895 already implemented 0.14% was recovered through offsetting the adjustment from subsequent payments and 99.86% through recovery orders.

Table 20: TEN-E – audit adjustments by implementation mode

Audit closing year	Adjustments implemented by implementation mode (in value)		
	Offset from payments	Recoveries	Waived
2011	-304	-223,591	0
Total	**-304**	**-223,591**	**0**

Conclusion

From the results of the audits finalised in 2011, the detected error rate is well below 2% and can be expected to be reduced after the necessary corrections are applied. Given the high-level of coverage reasonable assurance can be given despite the fact that the sampling is not representative.

Other programmes

On grants and other budget lines one audit was finalised in 2011.

3.1.1.6 Fraud Prevention and Detection

Following adoption of the Commission's Anti-Fraud Strategy in 2011, DG ENER is in the process of ensuring that it implements the ensuing actions by the required deadlines. These actions will strengthen the existing processes and procedures within the DG, something that will also be done through the prioritisation of Internal Control Standard 8 in 2012 (see section 2.2.1).

3.1.1.7 Assessment made by the Directors of the Executive Agencies in their AAR

The Director of EACI gave his reasonable assurance that the resources assigned to the activities described in his report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions (see annex 7).

3.1.2 Building block 2: Results from audits during the reporting year

3.1.2.1 Internal Audit service (IAS)

DG ENER was only concerned by one IAS audit on "Compliance with payment deadlines", where 5 very important (VI) recommendations were issued. All of these have been implemented.

3.1.2.2 Shared Internal Audit Capability (SIAC)

The Shared Internal Audit Capability carried out, in accordance with its work plan, 5 audits during the period under review, of which 3 are related to DG ENER:

- financial management for the site of Luxemburg;
- implementation of the Trans-European Network Energy programme;
- supervisory and monitoring processes of the Executive Agency for Competitiveness and Innovation.

The first and second resulted in satisfactory opinions. The third contained a very important recommendation and therefore resulted in a qualified opinion.

The SIAC also carried out 2 limited reviews: a review of accounting processes in relation the cut-off of exercises 2010-2011 and a review of the management of the infringement proceedings.

In its Annual audit opinion for 2011, the SIAC concluded that, based on the audit work carried out and on other elements available, the internal control systems in place in DG

Energy provided **reasonable assurance**[64] regarding the achievement of business objectives set up for the processes audited with the exception of the specific qualification resulting from the above audit on the supervisory and monitoring processes of the Executive Agency for Competitiveness and Innovation mentioned above.

3.1.2.3 European Court of Auditors (ECA)

Statement of assurance (DAS) 2010

In the DG ENER payments it sampled, the Court identified three errors; two of which were accepted by the Commission. In both cases, the beneficiary was responsible for the error and the Commission has now taken the necessary corrective action.

The Court did not sample any of DG ENER's payments for research; however, their conclusion for the policy group Research and other Internal Policies, that the interim and final payments for the research programmes were subject to material error, applies by analogy to such payments made by DG ENER.

In this area, the Court recommended that the Commission should[65]:

- draw on the lessons learnt from the good practice of DG INFSO's risk-based *ex-post* auditing method to further enhance the Commission's *ex-ante* controls with the aim of identifying payments with a relatively high-risk profile, and
- with the aim to further increase the reliability of the audit certificates, intensify its actions to raise the independent auditors' awareness of the eligibility of expenditure rules, notably by actively informing the auditors about instances of failure to identify ineligible costs,

The Commission's response in the Court's report was:

"The Commission agrees with the recommendations, and is working on a number of possible improvements to its processes, both for FP7 and for the future Common Strategic Framework for EU Research and Innovation funding".

Special Reports

In 2011, DG ENER was not the lead DG for any of the reports published by the Court.

[64] *Even an effective internal control system, no matter how well designed and operated, has inherent limitations – including the possibility of circumvention or overriding of controls – and therefore can only provide reasonable assurance to Management and not absolute assurance.*

[65] *OJ C 326, vol. 54, 10.11.2011, paragraph 6.51.*

3.1.3 Building block 3: Follow-up of previous years' reservations and action plans for audits from previous years

3.1.3.1 Follow-up of 2010 reservation

In the AAR 2010 DG ENER made a reservation on the "rate of residual errors with regard to the accuracy of cost claims in Sixth Framework Programme (FP6) contracts". The corrective actions, which were designed to go beyond those recommended by the Court of Auditors in their annual reports and address the reservation were directed towards:

- Audits of additional beneficiaries where it is cost-effective to do so. During the year audits of 23 additional beneficiaries were launched;
- Risk-based audits where necessary. 6 risk-based audits were launched;
- Carrying out follow-up audits to check implementation of audit recommendations. 16 follow-up audits to check extrapolation were launched;
- Completion of on-going desk controls. All on-going desk controls were finalised;
- Extrapolation of audit results in line with the overall strategy designed for the research programme. The implementation of the mechanism is effective. Of the 468 cases identified (for both ENER and MOVE) as potentially requiring extrapolation, errors have been corrected in 93, 216 cases have been found not to contain errors, 111 cases are still to be examined and 48 will be dealt with by other DGs.

In 2011 the rate increased slightly to 4.44% compared to 4.42% in 2010. This figure is for DG ENER and for DG MOVE, as the audit strategy for FP6 is common to both DGs.

3.1.3.2 Internal Audit Service (IAS)

No critical or very important audit recommendations from audits conducted before 2011 were open at the beginning of the year.

3.1.3.3 Shared Internal Audit Capability (SIAC)

Follow-up activities covered 3 audits and 8 recommendations, of which 1 was rated very important. The overall indicator for the follow-up in 2011 shows an 87.5% level of implementation for recommendations. One very important recommendation has yet to be implemented, although progress has been made.

Table 21: internal audit indicators

Indicator	Latest known result	Target
% of "critical", "very important" and "important" accepted audit recommendations implemented within deadlines / number of accepted recommendations	31/12/2011: 87.5% 31/12/2010: 86.5% 31/12/2009: 91% 31/12/2008: 87.8% 31/12/2007: 92.5%	>70 %
% of recommendations accepted by auditees / number of recommendations issued	31/12/2011: 100% 31/12/2010: 100% 31/12/2009: 100% 31/12/2008: 100% 31/12/2007: 100%	>80 %
Work programme implemented as percentage of annual planned Work Programme (SIAC)	31/12/2011: 100% 31/12/2010:100% 31/12/2009: 95% 31/12/2008: 95 % 31/12/2007: 100 %	>90 %

3.1.3.4 Follow-up of Action plans in reply to the audit work of Court of Auditors

DG ENER continues to address the recommendations made by the Court of Auditors in its Annual Reports concerning the Research Framework Programmes. This is done through the audit strategy common to the research DGs and the actions taken to address the reservation. The implementation of the ex-post control strategy continues as set out section 3.1.3.1.

3.1.4 Building block 4: Assurance received from other Authorising Officers in cases of crossed sub-delegation

Assurance has been received from all the DGs and services mentioned in section 2.1.1.

3.1.5 Completeness and reliability of the information reported in the building blocks

The information in sections 3.1.1 to 3.1.4 comes from monitoring by management and auditors. It results from a systematic analysis of the available evidence. This approach results in an adequate coverage of the budget delegated to the Director General of DG ENER and provides sufficient guarantees of the completeness and reliability of the information reported.

The following table summarises the information given in section 3.1 for the main spending programmes managed by the DG. It can be seen that reasonable assurance can be given for all of them. A reservation is required for overpayments in grants under the FP6 and FP7 programmes.

Table 22: Summary of assurance for main spending areas

Programme	Reasonable assurance?	Reservation?	Reason
FP6	Yes	Yes	See below
FP7	Yes	Yes	See below
EEPR	Yes	No	Comprehensive technical and financial monitoring. No evidence of significant problems.
Intelligent Energy Europe	Yes	No	Adequate monitoring in place. Assurance received from the EACI and DG ECFIN.
Nuclear Decommissioning	Yes	No	Adequate monitoring in place. Financial errors below materiality threshold
TEN-E	Yes	No	Comprehensive technical and financial monitoring. No evidence of significant problems

3.2 Reservations

On the basis of the information and the materiality criteria provided above, two reservations are needed concerning the accuracy of the cost claims submitted in the framework of the FP6 (6th Research Framework Programme) and of the FP7 (7th Research Framework Programme).

More information on the reservations is given below.

Table 23: reservation on FP6 overpayments

DG	ENER
Title of the reservation, including its scope	Reservation concerning the rate of residual errors with regard to the accuracy of cost claims in Sixth Framework Programme (FP6) contracts.
Domain	Internal policy / Direct centralised management of grants under FP6
ABB activity and amount	RTD activities related to energy
Reason for the reservation	The residual error rate observed by ex-post controls is higher than the control objective (2%).
Materiality criterion/criteria	The materiality criterion is the cumulative residual error rate found by audits and the correction of errors in the population covered following the audit results. The

DG	ENER
	materiality thresholds are set at 2% and 5% in line with the approach used by the European Court of Auditors.
Quantification of the impact	Residual error rate is 4.44% for audits regarding FP6 projects. This rate does not take into account corrections in favour of beneficiaries.
Impact on the assurance	Potential impact on the legality and regularity of the FP6 payments concerned. Total FP6 payments in 2011 were €25.79 million, which represents 3.1% of the payments made by DG ENER. The residual error rate of 4.44% corresponds to an amount of €1.15 million potentially at risk, representing 0.81%[66] of the payments made on the relevant parts of ABB line and 0.14%[67] of the payments made by DG ENER in 2011. Consequently for the whole budget managed by DG ENER, relative assurance can be provided.
Responsibility for the weakness and its correction	The legislative authorities are responsible for the overly complex funding rules in the basic acts; the beneficiaries and the certifying auditors, for the correctness of cost claims and audit certificates; and the Commission services, for the management and control systems in place.
Corrective action	• Risk-based audits where necessary • Extrapolation of audit results in line with the overall strategy designed for the research programmes.

[66] *1.15 million of 142.72 million*

[67] *1.15 million of 844.25 million*

Table 24: reservation on FP7 overpayments

DG	ENER
Title of the reservation, including its scope	Reservation concerning the rate of residual errors with regard to the accuracy of cost claims in Seventh Framework Programme (FP7) contracts.
Domain	Internal policy / Direct centralised management of grants under FP7
ABB activity and amount	RTD activities related to energy
Reason for the reservation	The error rate detected by ex-post controls is higher than the control objective (2%).
Materiality criterion/criteria	The materiality criterion is the cumulative residual error rate found by audits and the correction of errors in the population covered following the audit results. The materiality thresholds are set at 2% and 5% in line with the approach used by the European Court of Auditors.
Quantification of the impact	The limited number of random FP7 audits conducted so far by DG ENER is insufficient to give a representative indication of the likely trend in its FP7 error rate. In addition, at this stage in the implementation of the FP7 audit strategy, it is also not possible to calculate a statistically representative residual error rate for the Research family as results from a Common Representative audit Sample (CRaS) will only be available from 2012. Nevertheless the following factors would indicate that DG ENER's FP7 error rate is likely to be above 2%: • the other DGs in the Research family that have already conducted a larger numbers of audits have reported detected error rates above 2% (DG RTD: 3.77% from 441 audits; DG INFSO: 5.5% from 103 audits). • DG ENER's error rate is unlikely to be lower than those of the other members of the Research family. For FP6 this was not the case; • at this stage of the FP7 audit strategy, the "cleaning effect" from implementing and extrapolating audit results is still limited, which implies that the residual error rate is not yet significantly lower than the detected error rate;

DG	ENER
	• although significant simplification measures relating to FP7 were adopted by the Commission on 24 January 2011[68], these are only expected to have a positive impact on the error rate for costs claimed and audited from 2011 onwards (and so would only affect the error rate from 2012-2013). So, even if not fully representative, the audit results from the other research DGs conducting a larger numbers of projects and audits are the best information available for FP7 in 2011. DG ENER has no reason to consider that its own FP7 payments would be subject to a lower error rate. As a result it considers 4.5% (the RTD and INFSO average) as the being the best estimate of its likely error rate.
Impact on the assurance	Potential impact on the legality and regularity of the FP7 payments concerned. Total FP7 payments in 2011 were €116,93 million, which represents 13.9% of the payments made by DG ENER. The error rate of 4.5% corresponds to an amount of €5.26 million potentially at risk, representing 3.7%[69] of the payments made on the relevant parts of ABB line and 0.62%[70] of the payments made by DG ENER in 2011. Consequently for the whole budget managed by DG ENER, relative assurance can be provided.
Responsibility for the weakness and its correction	The legislative authorities are responsible for the overly complex funding rules in the basic acts; the beneficiaries and the certifying auditors, for the correctness of cost claims and audit certificates; and the Commission services, for the management and control systems in place.
Corrective action	• Implementation of the agreed common control strategies for FP7; • Preventive audits of additional beneficiaries exhibiting the characteristics particular to DG MOVE and ENER; • Risk-based audits where necessary;

[68] *Decision C (2011) 174*

[69] *5.26 million of 142.72 million*

[70] *5.26 million of 844.25 million*

DG	ENER
	• Carrying out of follow-up audits to check implementation of audit recommendations; • Extrapolation of audit results in line with the overall strategy designed for the research programmes.

Overall conclusions on the combined impact of the reservations on the declaration as a whole

The potential amount at risk deriving from the residual error rate detected in the FP6 represents only 0.14% of the total amount paid by DG ENER in 2011. Similarly, assuming an error rate of 4.5% for FP7 would represent 0.62% of the total amount paid by DG ENER in 2011. Consequently, assurance can be provided for the whole of the budget managed by DG ENER.

In 2011, for the research programmes, control efforts will continue on FP7. For FP6, given the limited number of audit staff and the increasing relative importance of FP7, control efforts will be limited to risk-based audits if necessary, as well as the continued extrapolation of audit results.

PART 4. DECLARATION OF ASSURANCE

I, the undersigned, Philip LOWE

Director-General of DG ENER in 2011

In my capacity as authorising officer by delegation

Declare that the information contained in this report gives a true and fair view[71]*.*

State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the internal audit capability, the observations of the Internal Audit and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the institution.

However the following reservations should be noted:

1. *The residual error rate observed by ex-post controls on grants given under the Sixth Research Framework Programme is higher than the control objective (2%);*
2. *While we have no statistically representative error rate for grants given under the Seventh Research Framework Programme, it is already clear that the most likely rate will also be above 2%.*

Done in Brussels, 30 March 2012

(signed)

Philip LOWE

[71] *True and fair in this context means a reliable, complete and correct view on the state of affairs in the service*.

ANNEX TO PART 1: INFORMATION ON GENERAL OBJECTIVES AND IMPACT INDICATORS

POLICY AREA : Energy				
General objectives	***Impact indicators***			
	Indicator	*Target (long-term)*	*Milestones (if any)*	*Current situation*
1. To contribute to setting up an energy market providing citizens and business with affordable energy, competitive prices and technologically advanced energy services.	Degree of energy price convergence in the EU[72]	1:2		30/06/2011 (Prices of the first half of 2010 without taxes) Electricity households: 1:2.8 industry: 1: 2.9 Gas households: 1:3.9 industry: 1: 3.1 30/06/2010 (Prices of the first half of 2010 without taxes) Electricity: Household: 1:2.9 Industry 1:2.7 Gas: Household: 1:4.9 Industry: 1: 2.9 31/12/2009 (Prices of the second half of 2009 without taxes) Electricity: Household 1:2.9 Industry: 1:2.6 Gas Household 1:4.6 Industry 1:3.1 31/12/2008 Electricity – both categories: 1:3.4 Gas-household 1:3 industry 1:2.3 31/12/2007: 1:3 for households; 1:2.5 for non-households
2. To promote sustainable energy production, transport and	Energy efficiency and savings. Primary energy savings achieved in 2020 measured	20% by 2020		11.6% (2010) (provisional data) 13.4% (2009) 8.6% (2008)

[72] Measurement unit: price variation ratio between cheapest and most expensive Member State for both household and non-household consumers source: Eurostat and Energy Regulators.

POLICY AREA : Energy				
General objectives	***Impact indicators***			
	Indicator	*Target (long-term)*	*Milestones (if any)*	*Current situation*
	against the baseline (%)[73]			8.6% (2007) 7.3% (2006) 7.5% (2005)[74]
consumption in line with the EU 2020 targets and with a view to the 2050 decarbonisation objective.	Renewable energy share in final EU energy consumption (%)	20% by 2020	Member States' progress reports, due 12/2011 Commission's progress report due 12/2012 Trajectory with interim targets contained in Annex 1b of Dir. 2009/28/EC: 2011/2012: 10.8% 2013/2014: 12% 2015/2016: 13.7% 2017/2018: 16%	31/12/2009: 11.7% 31/12/2008: 10.3% 31/12/2007: 9.2% 31/12/2006: 8.74% 31/12/2005: 8.5%
	Share of renewable energy in EU energy consumption for transport[75]	10% by 2020	5.75% by 2010	31/12/2009: 4.2% 31/12/2008: 3.5% 31/12/2007: 2.6% 31/12/2005: 1%
3. To enhance the conditions for secure energy supply in a spirit of solidarity between Member States.	Number of major energy supply disruptions	0		2011: 0 gas disruptions or electricity blackouts 2010: 1 (Gas disruption originating in Belarus and affecting 2 Member States) 2009: 1 (Gas disruption originating in Russia and affecting 12 Member States)

73 Baseline is PRIMES 2007 in 2020, which includes policies to be implemented up to 2006 with an oil price of $61 per barrel and reference year 2005. Calculated as Gross Inland Consumption minus Final Non-Energy Use Consumption. Source: Eurostat, Commission studies.

74 [Explanation: When e.g. looking at EU-27 primary energy consumption in 2006, we would save 7% of the projected primary energy consumption for 2020, assuming constant consumption until 2020]

75 in %; Source: national reports under the renewable energy directive and Directive 2003/30 on the promotion of the use of biofuels or other renewable fuels for transport .

POLICY AREA : Energy				
General objectives	***Impact indicators***			
	Indicator	*Target (long-term)*	*Milestones (if any)*	*Current situation*
				2008:0 2007: 0 2006: 1 [Electricity originating in Germany and affecting 7 Member States]
	Number of extra-EU countries supplying at least 3% of the EU market for coal	Stabilisation		31/12/2010: 6 31/12/2009: 6 31/12/2008: 6 31/12/2007: 7 31/12/2006: 6
	Number of extra-EU countries supplying at least 3% of the EU market for gas	Stabilisation/Increase		31/12/2010: 6 31/12/2009: 5 31/12/2008: 5 31/12/2007: 5 31/12/2006: 4
	Number of extra-EU countries supplying at least 3% of the EU market for oil	Stabilisation/Increase		31/12/2010 :9 31/12/2009: 9 31/12/2008: 9 31/12/2007: 7 31/12/2006: 7
	Number of extra-EU countries supplying at least 3% of the EU market for uranium. (Source Euratom Supply Agency Annual Report)	Increase		31/12/2010: 6 31/12/2009: 7 31/12/2008: 7 31/12/2007: 6 (EU27) 31/12/2006: 5 (EU25) 31/12/2005: 8 (EU15)
	Percentage of indigenous primary energy production of gross inland consumption of all fuels	Increase		2009: 48.1% 2008 :46.8% 2007: 47.0% 2006: 47.6% 2005: 48.7%