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**REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN
PARLIAMENT**

on the implementation of the European Energy Programme for Recovery

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1. The European Energy Programme for Recovery: from launch to implementation

Established by Regulation (EC) No 663/2009¹, the European Energy Programme for Recovery (EEPR) is one of the major initiatives taken by the EU to address the global economic and financial crisis which erupted in 2008. It co-finances a selected portfolio of energy projects with a view to sustaining capital expenditure in the European economy while helping to achieve key EU energy and climate policy objectives.

Since the first report on implementation of the EEPR was published in April 2010², considerable progress has been made. In all three sectors — energy infrastructure, offshore wind energy and carbon capture and storage — construction work has started and investment costs are being incurred. Three infrastructure projects have already been completed and are now operational; others are at the construction or development stage. The EEPR has proved a valuable tool at EU level that has accelerated implementation of major energy projects and played its role as a stimulus to economic recovery. Moreover, the scope of the EEPR has been expanded by allocating unspent funds to the energy efficiency and renewable energy sources sectors. This was achieved by means of an amendment to the EEPR Regulation³, which was adopted swiftly thanks to the good cooperation between the European institutions.

The EEPR is a key instrument for achieving the energy policy objectives set in Article 194 of the Treaty on the Functioning of the European Union and recently reaffirmed by the European Council of 4 February 2011. Its role as driver and facilitator for project implementation has been acknowledged on several occasions. In particular, the ‘energy infrastructure package’⁴ recognises the contribution made by the programme to mobilising infrastructure projects and mitigating disruptions of supply with negative effects on citizens and the European economy.

As indicated in the conclusions of the European Council of 4 February 2011, ‘*safe, secure, sustainable and affordable energy contributing to European competitiveness remains a priority for Europe. Action at the EU level can and must bring added value to that objective*’. The EEPR has made a significant contribution towards this objective. Future energy programmes may draw on the experience gained from the EEPR model.

In terms of budget implementation, thanks to the efforts of all involved, it was possible to make the legal commitments for all the EEPR projects within the deadline of 31 December 2010 set by the Regulation. This was an unusually short and challenging deadline, dictated by the ‘recovery’ nature of the programme. For the same reason, the programme targets only

¹ Regulation (EC) No 663/2009 establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy.

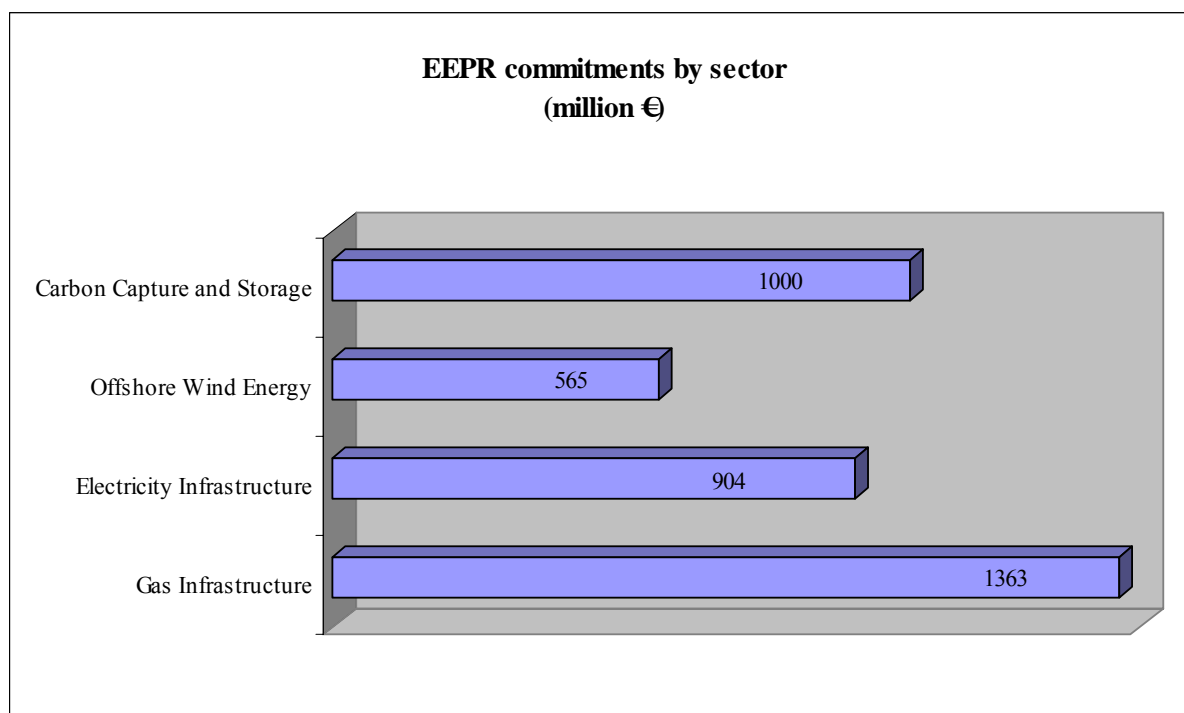
² COM(2010) 191 of 27.4.2010.

³ Regulation (EU) No 1233/2010 of the European Parliament and of the Council of 15 December 2010 amending Regulation (EC) No 663/2009 establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy.

⁴ COM(2010) 677 of 17.11.2010.

mature projects ready to start to incur capital expenditure, and therefore stimulate economic recovery, by the end of 2010.

By 31 December 2010, the individual legal commitments had been made for all 59 projects to which the EEPR had awarded a grant. More specifically, the Commission adopted 44 decisions awarding grants for gas and electricity infrastructure projects and signed six grant agreements with beneficiaries concerning carbon capture and storage (CCS) and nine concerning offshore wind energy (OWE). This adds up to a combined total of €3 833 million in terms of commitments, equivalent to 96.3% of the total EEPR budget. This is a very good result, considering the large size of the programme and the tight deadline.



Progress on implementation is also reflected in the level of payments, which is gaining momentum. By the end of 2010, €700 million had been paid to beneficiaries, in the form of €361 million to gas and electricity infrastructure projects, €146 million to OWE projects and €193 million to CCS projects. In the first few months of 2011, most of the projects are expected to submit cost statements, triggering substantial reimbursements of expenditure incurred in 2010. A detailed sector-by-sector overview of implementation of the programme is presented in the next few sections.

2. Gas and electricity infrastructure

Implementation of the electricity and gas infrastructure part of the programme in 2010 was very satisfactory.

In the course of the year, *three of the infrastructure projects were completed already*. The pipeline linking Hungary to Romania, inaugurated on 14 October, is the first high-pressure gas interconnection between the two countries. The first of the four reverse flow projects in Austria at the Baumgarten import facility, which will allow gas to be transported from Germany to countries adjacent to Austria, was inaugurated on 24 October. The Hungary-Croatia link, the first direct interconnection between Croatia and the European gas network with a capacity of 6 billion cubic metres a year (bcm/y), was inaugurated on 23 December.

Six more projects are near completion and will be finished in the course of 2011:

- the doubling of the capacity of the gas pipeline in Belgium connecting to Germany and to the United Kingdom by 10 bcm/y;
- the improvement of the interoperability between the Austrian and Hungarian electricity grids via the Wien-Győr interconnection with a state-of-the-art 400 kV optical connection;
- the completion of the site of the Czech gas storage hub, at the Czech-Polish border, which will increase storage capacity by 15%;
- the reverse flow project in Poland that will upgrade the cross-border connection point between Poland and Germany and the modernisation and upgrade of several sections of the Polish gas transmission system;
- the development of the Portugal-Spain cross-border electricity interconnections; and
- one of the two reverse flow projects in Slovakia, which will ensure bidirectional gas flow between Slovakia and the Czech Republic and also between Slovakia and Austria.

Out of the 44 projects, *construction work* is currently in progress on 17 gas and 5 electricity projects, for example:

- the Świnoujście LNG terminal in Poland;
- the Halle/Saale-Schweinfurt electricity interconnector in Germany;
- the action by Spain to support the gas interconnection project between Spain and France across the western Pyrenees;
- the reverse flow projects in Portugal and between Latvia and Lithuania are also both at the advanced construction stage.

During 2010, 35 projects proceeded to tendering for and ordering long-lead items (29 in the gas sector and 6 in the electricity sector), for instance:

- the Nordbalt 1 and 2 and Estlink electricity interconnection projects;
- the electricity interconnections linking Ireland to the United Kingdom, Sicily to the Italian mainland and Sicily to Malta and the development of the Maltese electricity network;
- the Romania-Bulgaria gas interconnection;
- the France-Spain electricity interconnection project;
- several reverse flow gas projects in Slovakia, the Czech Republic, Austria and Hungary and the similar reverse flow projects between Poland and Germany and between Poland and the Czech Republic.

A few projects are suffering some delays caused by lack of firm contracts with gas suppliers or complex and time-consuming permit procedures, namely:

- the three projects to contribute to the objectives of the southern gas corridor, i.e. ‘Nabucco’, ‘ITGI-Poseidon’ and its Greece-Bulgaria branch ‘IGB’;
- the Galsi project, which will supply Algerian gas to the Italian system via Sardinia and, possibly, to Corsica;
- the French-Belgian gas interconnection project on which progress has been made on the Belgian side (but which is still suspended on the French side);
- the work on the LNG terminal in Cyprus.



Upgrade of the gas transmission system in Slovenia between the Slovenian-Austrian border and Ljubljana

The programme provided a unique opportunity to boost strategic EU investment projects, particularly during a period when pure commercial considerations, combined with the economic and financial crisis, were limiting new investment.

The EEPR has given the gas infrastructure a truly European dimension, allowing quicker, more efficient implementation of the third internal market package and of the new Regulation on security of gas supply that entered into force on 2 December 2010. The programme has contributed to improving the way the internal gas market works by providing interconnections between western and eastern parts of the EU, in peripheral Member States and in Central and Eastern Europe, by progressively completing a bidirectional gas pipeline network and by bringing ‘energy islands’ closer. Once the projects have been completed, the impact of a gas crisis like the one in January 2009 should be much more limited. Furthermore, it has sent an unequivocal message to external suppliers such as Turkmenistan, Azerbaijan and Iraq for the Southern corridor and Algeria for the Mediterranean corridor on the interest of the European Union in diversification of energy supply routes. The electricity projects supported are lending strong impetus to completion of the internal market with the full participation of all parts of the European Union and bringing major improvements to the security of supply of the countries and regions concerned. The programme will clear bottlenecks and integrate ‘energy islands’ such as the Baltic States, the Iberian peninsula, Ireland, Sicily and Malta. Several new interconnections are also very important for integrating renewable energy sources into the electricity system.

In conclusion, the EEPR has speeded up implementation of projects by financing specific action, such as technical, engineering and environmental studies, procurement of long-lead items (pipes, cables, converter stations, transformers, etc.) and construction work. Thanks to the programme, project promoters were able to secure additional funding from financial institutions more easily: loan negotiations are ongoing, or have already been finalised, for 15 projects. Moreover, EEPR support has helped a great number of projects that were facing serious environmental permit problems to receive priority from the national administrations.

3. Offshore wind energy (OWE)

The projects supported by the EEPR address the key challenges and priorities identified in the Commission’s Communication on offshore wind energy⁵, in the Industrial Initiative on wind energy under the Strategic Energy Technology Plan and in the energy infrastructure package. The technologies demonstrated and deployed on a large-scale – innovative foundation structures, multi-MW offshore turbines, modular grid integration technology, etc. – are indispensable to achieve the ambitious EU goals for offshore wind penetration by 2020 and beyond.

Thanks to the EU support, installation of the first large (400 MW) offshore wind farms far (more than 100 km) from shore and in deep waters (more than 40 m) is secured. The EEPR grants for the offshore wind sector will directly increase carbon-free electricity production capacity by about 1500 MW. They will play a crucial role in EU Member States achieving the binding targets for renewable electricity in 2020. The grants are also fundamental for taking the first steps towards building a European offshore grid, thus increasing capacity for trading electricity in the internal market.

The ‘*turbines and offshore structures*’ part of the programme (projects in the German and Belgian North Sea) is the most advanced: design studies and soil investigations have been carried out, contracts have been concluded with main suppliers, notices to proceed have been given and installation logistics have been thoroughly prepared. Several projects are already in

⁵ COM(2008) 768.

the manufacturing and installation phase and the first electricity generated by offshore wind energy infrastructure co-financed by the EEPR was fed into the German grid in autumn 2010. The fast progress on these projects has led to substantial business and job creation in companies manufacturing offshore wind turbines and steel foundations, notably in the region of Bremerhaven and Cuxhaven in northern Germany.

Another project of major importance to the European industry is a test centre for offshore wind turbines and structures that will be located in Aberdeen. Significant progress has been made on issues such as consent and on putting in place the legal and commercial structure for managing the test facilities.



Multi-MW turbines and offshore foundation structures, co-financed by the EEPR, installed at the Bard I site in the German North Sea

Progress was also made with design, planning and contracting activities in the area of ‘*multi-connector wind-grid integration*’ (Kriegers Flak, Cobra Cable and a high-voltage direct current (HVDC) hub in Scotland). These projects often require coordination between authorities from several Member States and/or are subject to a strictly regulated co-financing system. For these projects, it was also important to ensure that innovative HVDC technologies would be used. In order to maximise synergies between these projects and their contribution to development of an offshore grid, the Commission will organise a workshop with the promoters in 2011.

In 2011, offshore work will continue or start on all the EEPR projects in the ‘*turbines and offshore structures*’ part of the programme. The wind-grid integration projects will define the optimum routes and technical specifications for the interconnection modules, continue the permit procedures and finalise contracts with the equipment suppliers.

It has to be stressed that timely achievement of all the intermediate objectives in the EEPR projects depends heavily on swift progress in permit procedures. Other conditions are also crucial, such as the assurance for offshore wind farms to obtain a grid connection and the possibility to make full use of the available time window (spring and summer) for offshore installation works. By the end of 2011, it is expected that about half of the EEPR – OWE budget of € 565 million will have been spent by the beneficiaries.

4. Carbon capture and storage (CCS)

The EEPR is a key instrument to achieve the EU objective to make the CCS technology commercially viable by 2020. It directly supports six out of the twelve CCS projects that, as the EU Council has called for, should be operational by 2015. The programme, in line with the European Industrial Initiative on CCS developed in the framework of the SET Plan, demonstrates all three different capture technologies (post combustion, pre combustion, oxyfuel combustion) as well as different storage concepts (depleted hydrocarbon fields and saline aquifers).

A first review, carried out by Commission staff together with representatives of the national authorities, concluded that all six CCS projects are progressing on schedule, including the front-end engineering and design (FEED) studies for the capture installations and exploration of CO₂ storage sites. All the projects are completing the application procedures for the necessary permits and authorisations for a CCS demonstration plant in their Member State. They have already received some of the permits necessary for construction and operation of the power plant and some for the capture installations. There has also been progress in the exploration of potential storage sites for the projects

However, some delays occurred, in part because of legal uncertainties concerning the details of CO₂ storage regulation resulting from the transposition of the CCS Directive⁶ into national legislation, which is ongoing. Member States have until 25th June 2011 to transpose the CCS Directive into national legislation. By December 2010, none of the Member States had transposed the Directive, and hence no permit applications for the permanent storage of CO₂ have been submitted to the Member States competent authorities yet.

As required by the EEPR Regulation, knowledge gained during all the projects is shared via the CCS project network (<http://www.ccsnetwork.eu>). The network was proposed by the Commission in 2008 to speed up development of CCS by coordinating the early-mover projects, helping them to learn from each other and increasing the visibility of the concept of CCS. In 2010, three knowledge-sharing events were organised by the project network. The first such event in 2011 was held in Brindisi in February, when representatives from the US also attended under the umbrella of the EU-US Energy Council. This can be seen as a first step towards global knowledge-sharing.

In Belchatow (Poland) progress has been made on both the storage and capture sides of the project. The final decision on selection of the storage site will be made by mid-2011. The detailed pipeline routing and permit work will be performed after the final site selection. On the capture side, FEED work for the carbon capture plant started in November 2009 and was almost completed by February 2011. The contract with the main equipment supplier is expected to be signed in the spring.

⁶ Directive 2009/31/EC of the European Parliament and of the Council on the geological storage of carbon dioxide, OJ L 140 of 5 June 2009.

In the Jaenschwalde (Germany) project, the tendering process for the nine main components started and qualified bids were received. The negotiations for the contract for the air separation unit, the biggest component of the EEPR project, were conducted in February 2011. The contract with one supplier is expected to be signed soon. On the transport and storage side, the main operating plan for Birkholz was authorised in January 2011.

In the Rotterdam (Netherlands) demonstration project (ROAD) the capture plant was put out to tender; six preliminary studies and two FEED studies were conducted for this process. In parallel, a technical plan for transport and storage was selected, routing studies on the pipeline were completed and a geological field study was conducted. The 'starting note' for the environmental impact assessment for the ROAD project was submitted in 2010, with permit applications to follow in March 2011.

In Italy, the pilot plant was commissioned and the experimental phase started in June 2010. For the Porto Tolle demonstration plant, four contractors have been selected to conduct the FEED studies for the carbon capture unit; the contracts were awarded in August 2010 and the studies will be completed in April 2011. The study to identify suitable CO₂ storage structures in the northern Adriatic Sea was performed on the basis of detailed datasets (2D and 3D seismic data) and borehole information. One saline aquifer located offshore in the northern Adriatic Sea has been selected and detailed reservoir studies are being carried out to build up a fuller picture of it.



CCS pilot installation in Jaenschwalde, Germany

The main technical achievements on CO₂ capture in Compostilla (Spain) were related to construction of the 30 MW oxyfuel technology development plant that will come into operation later this year. The major milestones reached in CO₂ storage were the structural analysis and strategic studies for site assessment and characterisation of reservoirs. A 3D seismic survey and acquisition of 3D magnetotelluric data have been undertaken to determine the characteristics of the underground CO₂ storage site.

In Hatfield (UK) the FEED study for the capture part of the project was completed; significant progress was also made on characterisation of the storage site. However, in December 2010 the mother company (Powerfuel plc) of the coordinator of the project (Powerfuel Power Ltd) went into administration. This affected the financing plan and stopped the work on the capture side. Consequently, the beneficiaries asked for suspension of the project until a new investor could be found. In March 2011 a preferred bidder has been identified. In principle, the project could resume once the process has been finalised, provided the new investor has the financial and technical capacity necessary.

5. Monitoring and risk management

Large-scale infrastructure projects like those funded by the EEPR involve considerable technological, financial and administrative risks. To manage the risks and closely monitor the progress made on the projects, the Commission has put in place a set of procedures.

The European Commission regularly monitors implementation of the projects from a very early stage, by making visits to the sites, accompanied by representatives of the national authorities. Furthermore, the Commission hosts regular review meetings individually with each project promoter. The beneficiaries also regularly submit technical reports to the Commission and the national authorities. Each EEPR project has to deliver, at least annually, an interim technical report with a cost statement (including an audit certificate). The Commission also draws on the support of independent experts contracted to perform review tasks (visits, meetings, reviews of interim reports, etc.).

An internal audit on the selection and contracting phase of the EEPR took place in the second half of 2010. The auditors were satisfied, but pointed to room for improvement in the visibility of Community financial support and in risk management. The departments concerned have addressed the issues raised and an action plan has been established to this end.

6. A new financial facility for energy efficiency and renewable energy sources

In a declaration annexed to the EEPR Regulation, the Commission gave a commitment that EEPR funds that could not be committed by 31 December 2010 would be reallocated to financing projects in the area of energy efficiency and renewable energy sources. In the end, it turned out that a total of about €146 million, i.e. 3.7% of the EEPR budget, could not be committed by the end of 2010. In order to fulfil its commitment, on 31 May 2010 the Commission had already proposed an amendment to the EEPR Regulation. Following this proposal, on 15 December 2010 Regulation (EU) No 1233/2010³ was adopted, which provides for the creation of a financial facility to support energy efficiency and renewable energy initiatives.

This initiative fits into the Europe 2020 strategy for sustainable growth and jobs as well as the recently adopted Energy Efficiency Plan 2011⁷ and complements other EU programmes and instruments such as the Structural and Cohesion Funds, the Intelligent Energy Europe Programme and the Framework Programme for research, technological development and demonstration. Promoting energy efficiency and renewable energy sources would contribute to green growth, building a competitive and sustainable economy and tackling climate change.

⁷ COM(2011) 109 of 8.3.2011

The new facility will take the form of an investment fund, in which the initial shareholders will be the EU and the EIB, backed up by technical assistance as well as awareness-raising measures for local, regional and national authorities to promote optimum use of Structural and Cohesion Funds for sustainable energy, in particular in the areas of energy efficiency and renewable energy improvements in housing and other types of buildings.. The EU will contribute €146 million to the facility and the EIB up to €75 million. Other financial institutions could join the fund later.

The beneficiaries of the facility will be local, regional and (where justified) national public authorities plus public or private entities acting on behalf of public authorities. The facility will provide loans, guarantees and equity along with technical assistance (following the European Local Energy Assistance (ELENA) model). The facility will invest in energy-saving, energy-efficiency and renewable-energy projects, particularly in urban settings, which will have a measurable and substantial impact on economic recovery within the European Union, on increasing energy security and on reducing greenhouse gas emissions. These could include: energy-saving/efficiency measures in public and private buildings; investment in efficient combined heat and power, including micro-cogeneration, and district heating/cooling networks; decentralised renewable energy sources, including micro-generation; clean urban transport; modernisation of infrastructure, such as street lighting and smart grids; and energy efficiency and renewable energy technologies with innovation and economic potential.

The Commission is currently negotiating an agreement to delegate to the EIB the tasks of setting up and managing this new facility. The Delegation Agreement has to be signed by 31 March 2011 at the latest. The facility is expected to come into operation in the second quarter of 2011.

7. Conclusions

Following the launch stage, which was thoroughly described in the first implementation report of April 2010, the EEPR has entered the implementation stage. As the previous paragraphs show, progress is being achieved in all three sectors supported by the programme. Most projects are in a construction or development phase and three have already been completed. The EEPR is speeding up implementation of projects by financing specific actions, such as technical, engineering and environmental studies, procurement of long-lead items and construction work. Also, as a result of the programme, project promoters were able to secure additional funding from financial institutions more easily.

As mentioned in the first implementation report, the complex and lengthy procedures for delivering construction permits could pose a risk for timely implementation of projects. However, even in this respect, the EEPR is proving beneficial, since it helped a great number of projects that were facing delays to receive priority from their national administrations.

At the time of adoption of the first report, the precise amount of possible uncommitted funds was not known. The Commission departments then assessed different options for the reallocation of unspent funds, in line with the EEPR Regulation. This led eventually to an amendment of the EEPR Regulation in December 2010 providing for the allocation of unused funds to a financial facility supporting sustainable energy projects.