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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: origin and characteristics

Context and motivation

The origin of the European Energy Programme for Recovery (EEPR) lies in the European Economic Recovery Plan, adopted by the Commission on 26 November 2008 as a response to the economic and financial crisis in Europe. The Plan called for coordinated national action, complemented by direct EU action, aimed at injecting purchasing power and boosting demand in the economy through an immediate budgetary impulse amounting to €200 billion. In this context, investing to modernise Europe's energy infrastructure and production facilities was singled out as one of the main priorities and the mobilisation of additional resources from the EU budget was proposed. The European Council endorsed the Plan in December 2008 and invited the Commission to present a list of concrete energy projects. Furthermore, the Second Strategic Energy Review adopted by the Commission in November 2008 and endorsed by the 2009 Spring European Council was a key political document, which set the priorities for the EU in the energy field for the coming years.

As the financial and economic crisis unfolded, public expenditure interventions were necessary to facilitate investments in energy networks and innovative renewable energy production and to speed up the development of carbon capture and storage technologies. As a result of the recession, planned projects were in danger of being delayed or withdrawn, which would have undermined the Union's security of energy supply and the quality of supply to end-users. The EU stepped in by proposing a series of well targeted and appropriate measures to help boost investments in the energy sector.

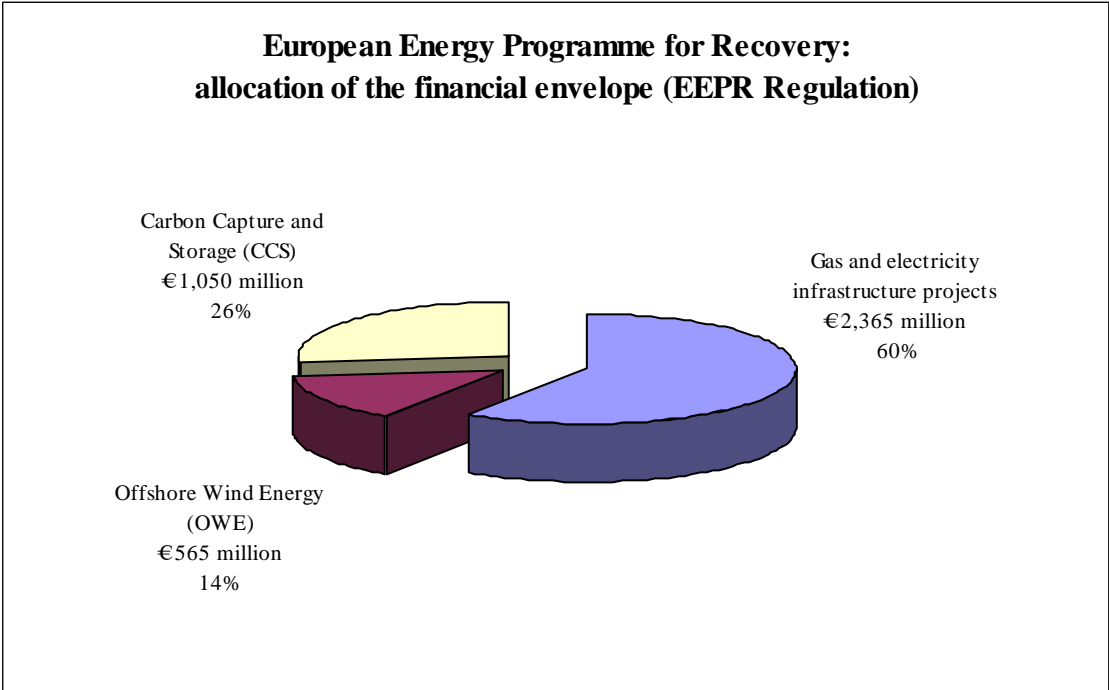
It was against this background that the European Parliament and the Council adopted Regulation (EC) No 663/2009¹ establishing the European Energy Programme for Recovery (EEPR). The EEPR is a financial instrument whose overall objective is to stimulate recovery from the downturn affecting the EU economy while bringing the EU closer to meeting its energy and climate policy objectives, namely the security and diversification of energy supply, the operation of the internal energy market and the reduction of greenhouse gas emissions.

An innovative approach

To pursue these objectives, the EEPR is endowed with a financial envelope of €3 980 million in support of three sub-programmes. The Regulation allocates €2 365 million to gas and electricity infrastructure projects; €565 million to offshore wind electricity projects (OWE); and €1 050 million to carbon capture and storage projects (CCS). This Union contribution is awarded in the form of grants to the promoters of the projects in the three areas of the programme. The projects are pre-identified and listed in the Annex to the Regulation, while

¹ Regulation (EC) No 663/2009 of the European Parliament and of the Council of 13 July 2009 establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy.

the practical measures to implement these projects, as well as their promoters, are selected through a call for proposals on the basis of detailed eligibility, selection and award criteria. The grants can cover up to 50% of the eligible investment costs in the case of gas and electricity infrastructure and OWE projects, and up to 80% in the case of CCS.



The EEPR represents an innovative approach to Union financing of infrastructure and technology deployment in the energy sector. In terms of financial effort, it is the first time that such a large amount of funding has been made available under the EU budget. This represents a major change compared to the relatively small sums provided so far by the Commission in the framework of the Trans-European Networks for Energy (TEN-E) programme, the RTD Framework Programmes and the Intelligent Energy Europe (IEE) programme. On average, TEN-E, RTD FP7 and IEE provide energy projects with an annual envelope of about €20, €300 and €100 million respectively. It should be noted however that the EU also supports energy projects through financial instruments such as the Structural Funds as well as the European Investment Bank loans and specific financial instruments.

The design of the EEPR instrument reflects its specific objectives. From the perspective of economic recovery, if a stimulus plan is to be effective money must be injected into the economy quickly. This principle is reflected in the EEPR Regulation, which requires that legal commitments implementing the EEPR are made by 31 December 2010. Moreover, the Regulation requires that the criteria for awarding grants include the maturity of the measures proposed for EEPR funding, namely their ability to start incurring capital expenditure in 2010.

In order to maximise the impact in terms of both energy policy and economic recovery objectives, the EEPR focuses on a relatively small number of highly strategic projects. The identification of the projects was driven by the EU energy policy orientations set out in the Second Strategic Energy Review and in the Strategic Energy Technology Plan, taking into account progress made in the implementation of the TEN-E programme and an adequate geographical balance, and consultations with stakeholders in the areas covered by the programme. In line with this approach, grants are awarded on the basis of the applicants' ability to contribute to the modernisation and the completion of EU-wide energy networks as well as to the development and the deployment of strategic low carbon technologies. Other

key award criteria are: the extent to which lack of access to finance is delaying implementation of the action; the extent to which the Community grant will stimulate public and private investments; and the social, economic and environmental impact.

2. How the EERP fits into EU energy policy

To deliver secure, competitive and sustainable energy supplies over the coming years and decades, the EU faces the urgent task of expanding, renewing and making interoperable its energy infrastructure and decarbonising its energy production through the deployment of strategic low carbon technologies. These developments are crucial if the EU is to reach by 2020 the targets to which all Member States are committed, namely reducing greenhouse gas emissions and primary energy consumption by 20% and increasing the share of renewable energy to 20% of final energy consumption. The EERP addresses these challenges with its three sub-programmes.

Gas and electricity infrastructure projects

Investments in gas and electricity infrastructure are necessary to facilitate energy trading and help a truly functioning internal energy market develop. A seamlessly functioning internal energy market will provide end-users with a quality service at a lower cost and will also enable the European Union to deal effectively with any supply disruptions, such as the one that occurred in January 2009.

The network infrastructure for transporting and trading energy across the EU needs to be further integrated by constructing the missing links. A number of Member States, particularly in Eastern Europe and on the edges of the EU, need to be better connected to the rest of the EU. Thus the EERP is also an instrument for enhancing solidarity between Member States. Moreover, security of supply requires integrated energy networks within the EU, as well as the diversification of energy transport routes and resources outside the boundaries of the EU, including resources that arrive in the EU in the form of liquefied natural gas (LNG).

Within this framework, the EERP supports mature projects that, once they are operational, will:

- supply the European Union with about 50 Bcm/y of additional gas from outside Europe entering through the pipelines Nabucco, ITGI-Poseidon, GALSI, and the new liquid natural gas terminals in Poland and Cyprus;
- help strengthen the European gas pipeline network by developing new interconnections, or reinforcing existing ones, between Portugal / Spain / France (bi-directional), Germany / Belgium / UK (bi-directional), Romania / Bulgaria / Greece / Italy, Slovakia / Hungary (bi-directional), and the Baltic countries / Poland / Denmark / Germany;
- implement reverse flow in critical interconnecting parts of gas transportation systems in Portugal, Romania, Austria, Slovakia, Czech Republic, Hungary, Latvia, Lithuania and Poland to allow cooperation and gas trading in both directions with adjacent countries and, by extension, with more distant countries;
- help enhance the European electricity grid by strengthening interconnection capacity between Spain and France, Portugal and Spain, Austria and Hungary, Ireland and the United Kingdom and also in Central Germany;
- integrate isolated regions and ‘energy islands’ by building new important interconnections from the Baltic states (Estonia, Latvia, Lithuania) to the Nordic electricity market (Finland,

Sweden, Denmark, Norway), as well as from Malta to Italy, and from Sicily to mainland Italy.

Offshore Wind Energy (OWE)

The projects selected to receive an EEPR grant are forerunners in the offshore wind sector. The technologies that will be demonstrated and deployed on a large-scale — innovative foundation structures (gravity, jackets, tripods, tripiles), multi-MW offshore turbines, modular based grid integration technology — are indispensable in order to achieve the ambitious EU goals of offshore wind penetration in 2020 and beyond. The projects address the key challenges as identified in the Commission's Communication on offshore wind energy and in the Strategic Energy Technology Plan's Industrial Initiative for the wind energy sector². The EEPR grants will secure the installation of the first large size (400 MW) offshore wind farms and are expected to result directly in additional carbon-free electricity production capacity of about 1500 MW. They play a crucial role in helping EU Member States achieve the binding targets for renewable electricity in 2020. The grants will also be fundamental for taking the first steps towards a European offshore grid, thus enhancing trading capacity for electricity in the internal market.

The EEPR OWE supports the large scale testing, manufacturing and deployment of innovative turbines and offshore foundation structures through:

- 4 projects installing large offshore wind farms in the German North Sea (Bard I, Global Tech I, Nordsee Ost, Borkum West II) ;
- 1 project realising an offshore wind testing facility off Aberdeen (UK) ;
- 1 project realising the next phase of the wind farm on the Thornton Bank in the Belgian North Sea.

The EEPR OWE also supports the development of module-based solutions for the grid integration of large amounts of wind electricity generation through:

- 1 project providing an integrated inter-connection solution for the windfarms in the Kriegers Flak area in the Baltic sea (Germany, Denmark) ;
- a cable interconnecting the Netherlands and Denmark, using HVDC technology, that enables the connection of offshore windfarms to the onshore grid ;
- an offshore hub on the planned HVDC link between the Shetland islands and Scotland (UK), that will serve as a multi terminal platform for the connection of planned windfarms and marine energy generation.

Carbon Capture and Storage (CCS)

Fossil fuel power plants and heavy industry are among the largest emitters of CO₂, accounting for 52% of total CO₂ emissions worldwide. Fossil fuels will continue to be used in electricity production and even if renewable sources do gain a greater share of the market, the use of coal is not expected to drop in the decades to come. Thanks to its ability to decarbonise power generation, the CCS can make a major contribution, along with energy efficiency and

² COM(2008)768 and COM(2007)732

renewable energy sources, to achieving our CO₂ emissions reduction targets. However, this technology is not yet commercially viable and needs to be tested. The EEPR addresses this problem by supporting six large scale CCS demonstration projects that are expected to develop the CCS concept, reduce its investment and operating costs and build up public awareness of this technology. The EEPR represents the first step towards the objective of making CCS-based power generation commercially viable by 2020. These pioneering projects can pave the way for many more to come, since they demonstrate all three main CO₂ capture technologies, namely post-combustion, oxyfuel and integrated gasification combined cycle (IGCC). They also use all of the main storage options: onshore as well as offshore saline aquifer and depleted hydrocarbon fields.

In this context, the EEPR supports the following mature CCS projects that aim to be operational by 2015:

- The project in Jaenschwalde (Germany) aims at demonstrating Oxyfuel and post combustion technology on an existing power plant site. Two storage and transport options are being analysed.
- An installation of post combustion CCS technology on a new 660 MW coal power plant is done by the project in Porto Tolle (Italy). The capture part will treat flue gases corresponding to 250 MW electrical output. Storage is planned in an offshore saline aquifer in the Adriatic Sea.
- In Rotterdam (The Netherlands) post-combustion technology will be tested on an installation of 250 MW equivalent. Storage of CO₂ is planned in a depleted offshore gas field near the plant. The project is part of the Rotterdam Climate initiative that aims at developing a CO₂ transport and storage infrastructure for the region.
- The project in Belchatow (Poland) will demonstrate post combustion technology in a new supercritical unit of a large lignite-fired plant in Europe. Three different saline aquifer storage sites located close to the plant will be explored.
- In Compostilla (Spain) oxyfuel combustion and fluidised bed technology will be tested on a 30 MW pilot plant which will be upscaled by December 2015 to a demonstration plant of more than 320 MW. Storage is planned in a saline aquifer nearby.
- The project in Hatfield (United Kingdom) will demonstrate pre-combustion technology on a new, 900 MW IGCC power plant. Storage is envisaged in an offshore gas field in the North Sea. The project is part of the Yorkshire Forward initiative that aims at developing a CO₂ transport and storage infrastructure for the region.

3. EEPR implementation - state of play

On 19 May 2009 the Commission launched a single call for proposals covering the three sub-programmes, inviting potential project promoters to submit proposals by 15 July 2009. The Commission received 87 applications: 46 for gas and electricity projects, 29 for Offshore Wind Energy and 12 for Carbon Capture and Storage. For each sub-programme a separate evaluation exercise was carried out. The evaluation started in the second half of July 2009 for the three sub-programmes. It was completed in September for the OWE and the CCS, while for gas and energy infrastructure projects, due to the complexity of the projects and the large number of applications, the evaluation took longer and was finalised in November 2009.

On the basis of the evaluation committees' recommendations, the Commission prepared award decisions for each sub-programme. The proposed award decisions obtained the favourable opinion of the relevant committees³ and were submitted to the European Parliament for scrutiny. The Commission adopted the award decisions, on 9 December 2009 for the OWE and CCS sub-programmes and on 4 March 2010 for the gas and electricity infrastructure projects.

Sub-programme	Proposals received	Proposals selected	Grants awarded (€billion)
Infrastructure	46	43	2.299
- Gas (including reverse flow)	33	31	1.391
- Electricity	13	12	0.908
Offshore Wind Energy	29	9	0.565
Carbon Capture and Storage	12	6	1.000
TOTAL (€billion)			3.864

It is currently estimated that almost the entire EEPR financial envelope ((€3.98 billion) will be committed in the spring of 2010. There remains an amount of around €15 million (less than 3% of the total) which can not be committed. This amount is not expected to change, unless one or more project promoters fail to take up the grants because of regulatory constraints and technological or market-related risks. The precise amount of uncommitted funds will be known in the autumn of 2010. The Commission departments are currently assessing options for the possible reallocation of unspent funds, in line with Recital 7 and Article 28 of the Regulation as well as the Commission Declaration annexed to the Regulation

As soon as the award decisions had been adopted, the Commission started to make the individual legal commitments. In the case of the OWE and CCS, the legal commitments take the form of grant agreements, to be signed by the Commission and the beneficiary. For the gas and electricity infrastructure projects, the Commission adopts individual grant decisions and notifies them to the beneficiary.

Gas and electricity infrastructure projects

The Commission received 46 proposals, amounting to a request for financial support of €2.364 billion in total. The proposals were evaluated by an internal evaluation committee, composed of Commission officials supported by a team of external independent experts. The evaluation committee recommended 43 projects for funding and the Commission decided to award financial support of €2.3 billion (31 gas and 12 electricity projects). The 43 individual grant decisions are being prepared and should be adopted and notified by May 2010.

Offshore wind energy projects

The OWE sub-programme was particularly successful, with 29 proposals asking for financial support of €1.669 billion in total, largely in excess of the allocated envelope of €565 million. Based on the recommendations of the evaluation committee, composed of Commission officials, the Commission awarded €565 million to the 9 highest-ranking proposals within the

³ The FP7 Programme Committee for the OWE and CCS sub-programmes and the TEN-E Financial Assistance Committee for the gas and electricity infrastructure projects.

limits of the available budget. Four grant agreements have already been concluded while the remaining five are at the signature stage.

Carbon capture and storage projects

A total of 12 proposals were submitted. Overall, financial support of €1.770 billion was requested, against a financial envelope of €1.050 billion allocated to the CCS sub-programme. Based on the recommendations of the evaluation committee, composed of Commission officials and experts from the European Investment Bank acting as observers, the Commission awarded €1 billion to the six best-ranked proposals. Three grant agreements have been signed and three more are in progress.

4. First assessment of results and achievements

Given the short time which has elapsed since the EEPR call for proposals was launched, it is too early to assess the results of the programme. However, even at this stage of its implementation, a first qualitative appreciation of the impact of the EEPR is possible. First of all, the success of the call for proposals must be stressed. The high number and quality of the proposals received confirms the relevance of the EEPR approach and the readiness of the industry.

Most interestingly, from the start the EEPR appears to have been an accelerator of infrastructure investments. Indeed, the technical maturity of the selected projects meant that pre-feasibility studies, cost and market analysis and investment strategies, in some cases funded by the TEN-E programme, had already been completed before the EEPR came into the picture. However, the perspective of the EU financial support for capital expenditure has proven to be decisive in the actual launching of the projects. In particular, EEPR funding has acted as a stimulus, attracting co-financers and encouraging them to make investment commitments. Thus it has been possible to set up projects that otherwise would have been delayed or abandoned given the particularly severe funding constraints prevailing in the current economic circumstances. The EU contribution will have an important leverage effect. In the case of gas and electricity projects, it is expected that the €2.3 billion of EEPR grants will help to mobilise up to €22 billion of private sector investment over the next 3 to 5 years.

However, the growth enhancing effect of the EEPR grants is not limited to direct investments in the selected projects. It also spills over into the supply chain. This can already be seen in the OWE sector, where the projects contribute to creating or securing numerous jobs in new factories or production lines for the manufacturing of foundation structures and wind turbine components as well as their assembly and offshore installation. Some of this new manufacturing activity is taking place in regions where unemployment is particularly high, for example near the coastline of Cuxhaven in northern Germany. The OWE projects are the most advanced in terms of budgetary execution. As of the end of March 2010, the Commission had made pre-financing payments totalling over €65 million. Further payments, totalling approximately €155 million, are planned in the period April – June 2010.

CCS projects are also making good progress. The presence of the EEPR as co-financer has been decisive in giving these projects a kick-start. The demonstration effect is already being felt in the Rotterdam and Hatfield projects, which are aspiring to become CCS hubs with a potential to attract other investments for CO₂ transport and storage infrastructure from other big CO₂ emitters in the region. First orders for installations will be placed during 2010 and will lead to substantial capital expenditures and job creation.

5. Potential risks in project implementation and mitigation measures

The projects supported by the EEPR may present a high degree of technical, organisational and financial complexity and therefore involve some level of risk. Successful project implementation requires that all relevant environmental legislation⁴ is complied with, construction permits are obtained on time and project promoters stick to their funding commitment. The active cooperation of national, regional and local authorities plays a key role in the administrative procedures to deliver the necessary authorisations. To address these risks, the Commission's individual grant decisions for gas and electricity projects will state that, before payments can be made, the beneficiaries must have:

- obtained the necessary environmental and construction permits, and
- signed an investment decision, namely a formal commitment by the project promoters to go ahead with the project, by the end of 2010.

Should these conditions not be met, the Commission will assess the situation with a view, possibly, to cancelling the decision and de-committing the funds.

In some OWE projects, the main risk is technological. For example, one project will demonstrate offshore deployment of 6 MW turbines for the first time, while others will use innovative high voltage direct current (HVDC) technology for the grid integration of wind electricity at yet to be proven capacities. In other projects, the risks are more financial (financial close foreseen in the next few months) or administrative (possible delays with permits). The technical annexes to the grant agreements explain how the beneficiaries manage the risks involved and include plans for obtaining the necessary co-funding and permits.

As for CCS projects, implementation is progressing smoothly. There are, however, sensitive issues which need to be monitored. First, continued national funding and industrial commitment will be necessary if the CCS demonstration projects are to be successfully completed by 2015. In addition, Member States need to provide the necessary legal framework for CO₂ storage by transposing the CCS Directive⁵ into national law. This is to avoid delays in the delivery of CO₂ storage authorisation and ultimately in the timely approval of the final investment decision. Finally, public awareness of CO₂ storage safety should be properly addressed as this is critical in the implementation of the CCS projects.

The responsible services of the Commission, in close cooperation with Member States and/or project promoters, will ensure project management. They will rely on technical implementation reports and cost statements to be provided by the beneficiaries on a regular basis, and will follow-up progress with on-site visits. Where appropriate, the Commission will be supported by external independent experts in the monitoring of the EEPR projects and the overall assessment of the impacts of the EEPR programme.

⁴ Important EU environmental acquis is to be complied with, in particular Directive 85/337/EEC *on the assessment of the effects of certain plans and programmes on the environment*, as amended by Directive 97/11/EC and Directive 2003/35/EC; Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment; the Convention on Environmental Impact Assessment in Transboundary Context (Espoo, 1991); and Directive 92/43/EEC *on the conservation of natural habitats and of wild fauna and flora*.

⁵ Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide