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

**On the implementation of The European Energy Programme for Recovery**

{SWD(2013) 457 final}  
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# **REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL**

## **On the implementation of The European Energy Programme for Recovery**

### **I PROGRESS IN PROGRAMME IMPLEMENTATION**

The European Energy Programme for Recovery (EEPR)<sup>1</sup> provides financial support to selected, highly strategic, projects in three areas of the energy sector: gas and electricity connections, offshore wind energy and carbon capture and storage. By co-financing these projects, the programme helps the European Union to progress towards its energy and climate policy objectives: security and diversification of energy supply; completion and smooth operation of the internal energy market; and reduction of greenhouse gas emissions.

Most of the budget available was allocated to 59 promoters and 61 projects in the following sub-programmes: gas infrastructure (€1363 million); electricity infrastructure (€904 million); offshore wind energy (€565 million); and carbon capture and storage (€1000 million). Overall, by the end of 2010, grant decisions and grant agreements had been made for a total amount of €3833 million i.e. 96.3% of the total EEPR budget. An amount of €146.3 million that could not be committed to projects in these sectors by the deadline of 31 December 2010 was reallocated to a new financial facility, the European Energy Efficiency Fund <sup>2</sup>(EEE-Fund), focusing on energy efficiency and renewable energy investments.

Since last year's report (COM (2012) 445 Final), the implementation of the EEPR has continued progressing. A substantial number of projects are now completed; others are well on track and will be operational soon. The present Report provides information on the state of play since the last report (August 2012) in qualitative terms as well as data related to the payments and the de-commitments as from the start of the programme up to June 2013. It also provides an overview of the current state of play and of the mid-term evaluation of the EEE-Fund (see CSWD).

#### **(1) Success Stories**

##### **Gas and electricity infrastructures**

From an energy policy perspective the programme succeeded in improving the way the gas and the electricity internal markets work: It contributes to increasing interconnections capacities and to ensuring a better integration between the western and the eastern parts of the Union. The programme is helping some Member States, notably the Baltic and Iberian Peninsula, towards the 10% target of electricity interconnection. It has created additional storage capacities in peripheral Member States and in Central and Eastern Europe. It has contributed to the completion of a bi-directional gas pipeline network in Europe and to the fulfilment of N-1 of the infrastructure standard as required in the Security of Supply Regulation<sup>3</sup>.

The reverse flow gas projects, located in Central and Eastern Europe, are up and running and avoided a gas supply crisis during February 2012's cold spell.

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<sup>1</sup> 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. OJ L 200 ,31.7.2009,p.39

<sup>2</sup> Regulation (EC) No 1233/2010 of the European Parliament and of the Council of 15 December 2010 amending Regulation (EC) No 663/2009.OJ L346,30.12.2010,p.5

<sup>3</sup> Regulation (EC)N°994/2010 of 20/10/2010 OJUE N° 295 of 12/11/2010

The reinforcement of the interconnections both for gas and for electricity have contributed to the integration of the internal market. The most prominent examples are the following: gas interconnections on the Africa–Spain–France corridor; electricity interconnections between Portugal and Spain which contribute to the development of the Iberian electricity market; electricity interconnection between the United Kingdom (Deeside) and the Republic of Ireland (Meath) for the establishment of a regional market between the UK and Ireland; and the electricity interconnections in the Baltic region and their integration into the Nordpool Market.

### **Offshore wind energy (owe)**

Through EEPR support for the supply and installation of innovative foundation structures and wind turbine generators, the realisation of the first large size (400 MW) offshore wind farms, located far from shore (more than 100 km) and in deep waters (more than 40 m), has been secured. Indeed, EEPR money has been instrumental for the selected projects in the German and Belgian North Sea to obtain the necessary loans from banking consortia in order to achieve financial close. The EEPR action on the Thornton Bank in Belgium was finalised in September 2011 and the first offshore wind electricity generated through infrastructure co-financed by the EEPR had already been fed into the German grid in autumn 2010.

In the area of the grid integration of offshore wind electricity, EEPR co-financing has been crucial for the final investment decision regarding the 'Kriegers Flak-Combined Grid Solution' project in the Baltic. This flagship project is the first offshore link that is utilised both as a connection of offshore wind farms and as a cross-border interconnector. It will use innovative HVDC VSC (High Voltage Direct Current-voltage source converters) equipment and constitutes a first important building block in the modular development of an offshore grid.

More generally an in-depth analysis of the impacts of the EEPR was provided by an independent mid-term evaluation<sup>4</sup> carried out in 2011. It appears that the programme, by setting in motion construction work and the procurement of equipment and intermediate manufactured goods, is already generating a meaningful impact on the real economy.

Several projects are now finalised and many others are on track, while in some cases project implementation remains challenging and is advancing slower than initially planned, as illustrated in the following chapters. The economic context proved to be particularly challenging for the Carbon Capture and Storage sub-programme.

## **(2) LESSONS LEARNED**

The EEPR is the first example of large-scale support from the EU Budget to the energy sector managed through direct grants to companies.

However, despite the progress made, some structural obstacles in the implementation were encountered by the sector.

The integration into the grid of offshore wind energy was partially successful despite some technical difficulties which have not yet been solved by energy companies. In general terms, Member States were not proactive enough in the successful implementation of the EEPR. The insufficient cooperation between the National Regulatory Authorities (NRAs) can create in some cases a big uncertainty on the business case for the promoters. This aspect is particularly critical for some new offshore wind projects.

A common problem to the three sub-programmes lies in the complex and lengthy permit granting procedures. These difficulties and lessons learned from the EEPR implementation

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<sup>4</sup> [http://ec.europa.eu/energy/evaluations/doc/2011\\_eepr\\_mid\\_term\\_evaluation.pdf](http://ec.europa.eu/energy/evaluations/doc/2011_eepr_mid_term_evaluation.pdf)

were taken into account by the Commission when drafting the new Regulation of the European Parliament and the Council on guidelines for trans-European energy infrastructure (EU) n° 347 of 17 April 2013<sup>5</sup>. The Regulation contains provisions to accelerate permit granting procedures, establishing a three and a half year time limit for the permit granting decision and increasing transparency and public participation. It also foresees measures to develop regulatory incentive measures and to allow financial assistance if necessary.

In addition, infrastructure projects faced difficulties in accessing long term financing on competitive terms. This remains an important issue. The Commission proposal on the Connecting Europe Facility (CEF)<sup>6</sup>, a cross-sector infrastructure Fund, is designed to help projects put together the necessary financing package and trigger their fruition. The commercial viability gap of projects of European importance will be complemented with CEF grants. Furthermore, the financial instruments under CEF should help project promoters in accessing the necessary long-term financing for their projects by bringing in new classes of investors (pension and insurance funds) and mitigating certain risks. The Project Bonds Initiative which is one of the financial instruments proposed under CEF, has already been made available to project promoters under a "pilot phase" with the use of the budgetary resources available under 2007-2013 budget. The first project bond was launched in July 2013 with the support of the European Investment Bank the Commission's partner for this initiative, and further operations are expected later in 2013.

The EEPR funding, as intended, enabled a fast start to the CCS projects. However, as was already known at the beginning of the programme, the EEPR funding was never intended to cover all the very high investment and operational costs of the CCS projects. The low carbon price under the Emissions Trading System (ETS) has rendered the short and medium-term business cases for CCS unattractive. In addition, the current economic context makes it more difficult for projects to access the additional financing needed. Hence, the CCS sub-programme is facing major uncertainties that risk undermining its successful implementation.

Knowledge sharing on CCS is crucial to the success of the technology. Under the EEPR CCS programme the CCS Project Network was established to exchange experiences and best practices. It is the first such knowledge-sharing network worldwide and its members (EEPR CCS projects and Sleipner project in Norway) are working together and produce common 'good practice' guides. The Network furthermore published reports of the lessons learned by projects on CO<sub>2</sub> storage, public engagement and permitting.

Regarding the future of Carbon Capture and Storage (CCS), the Commission adopted on 27 March 2013 (COM (2013) 180 final) its communication and reaffirmed that "*An urgent policy response to the prime challenge of stimulating investment in CCS demonstration is required to test whether the subsequent deployment and construction of CO<sub>2</sub> infrastructure is feasible. The first step on this path is therefore to ensure a successful commercial-scale demonstration of CCS in Europe that would confirm CCS's technical and economic viability as a cost effective measure to mitigate GHG in the power and industrial sector*".

Together with the adoption of the CCS communication a public consultation was open until 2 July, and received more than 150 responses.<sup>7</sup> The Commission will publish later this autumn a summary of the responses alongside the individual contributions, on the public consultation webpage<sup>8</sup>.

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<sup>5</sup> OJ L 115,25.04.2013,p.39

<sup>6</sup> Proposal for a Regulation of the European Parliament and of the Council establishing the "Connecting Europe Facility", COM(2011)665

<sup>7</sup> [http://ec.europa.eu/energy/coal/ccs\\_en.htm](http://ec.europa.eu/energy/coal/ccs_en.htm)

<sup>8</sup> [http://ec.europa.eu/energy/coal/ccs\\_en.htm](http://ec.europa.eu/energy/coal/ccs_en.htm)

### **(3) NEXT STEPS FOR THE PROJECTS**

Aside from the projects already fully completed, the remaining projects can be classified in two main categories: projects on track where the financial support should continue; and projects that are not progressing adequately and for which the Commission is going to take the decision to terminate the support.

For eight important infrastructure projects, the beneficiaries have not been in position to take a Final investment decision (FID) or implement the project according to the initial schedule. For one, HVDC Hub, the promoter has agreed to terminate the project. For two others (Aberdeen offshore wind and Gravity Foundations) the FID is expected within the next 6 months. For Cobra Cable, the Commission is currently seeking assurances that the FID will be taken by mid-2016, which, if not forthcoming may lead to the Commission terminating the grant agreement.

The Commission may therefore take decisions in view to terminate the financial aid for four gas projects (ITGI Poseidon, Nabucco, Galsi and reverse flow project in Romania). However, the termination of the financial aid does not prejudice that these gas projects could be qualified as projects of common interest (PCI)<sup>9</sup> for Europe in the context of implementation of the guidelines for TEN-E infrastructures.

As regards the six CCS demonstration projects, the EEPR action for one of the projects will be completed in October 2013 (Compostilla), 3 have been terminated, and the remaining 2 are unlikely to be completed without additional and substantial financial efforts by Member States and/or industry.

The Commission has officially informed by letter the companies concerned by a termination process.

The Staff Working Document (SWD) accompanying this report provides the state of play of each project.

Since July 2011 the European Energy Efficiency Fund is operational. A specific CSWD reporting on a mid-term evaluation is presented in addition to the present report.

## **II OVERALL SITUATION**

At the end of 2012, 20 projects out of 61 were already fully technically completed, and a total amount of €1,416,970,178,64 has been actually paid to the beneficiaries (June 2013).

The rate of payments remains low but this confirms the difficulties in the planning of such big and complex projects. Indeed, the complexity of the technologies involved, especially for the OWE integration in the grid and CCS, the difficulties for the public authorities both at government and regulatory level to offer a proper regulatory framework, the lack of public acceptance, as well as difficulties linked to environmental issues and public procurement have all constituted additional challenges for the projects promoters. Furthermore, the permit granting procedure forms the basis for many of the delays.

At the moment €12 million funds unspent were recovered from the German CCS project. For the terminated electricity and gas infrastructures projects, €12.millions were de-committed. This is partially explained by the fact that the final costs are below the initial estimated costs.

### **1. Gas and Electricity Infrastructure**

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<sup>9</sup> The Commission adopted by a Delegated Regulation a first list of PCI projects on 14 October 2013

- The EEPR infrastructure sub-programme supports 44 projects in three major areas of activities.

The projects are implemented by the transmission system operators (TSO) in each Member State or by project promoters. An amount of €2268 million has been committed, of which about €777 million, i.e. 34.25% has been disbursed to the beneficiaries by the June 2013. Payments are subject to the firm commitment of the promoters to implement the project through a FID.

Projects cover three areas:

- Gas infrastructure and storage projects: the infrastructure for transporting and trading gas across the EU needs to be further integrated by constructing the missing links between Member States. Further diversification of the EU's energy sources and routes should continue, including Liquid Natural Gas (LNG).
- Gas reverse flow projects: During the 2009 gas supply crisis between Russia and Ukraine, most of the Central and Eastern European Member States were left without gas, not because of lack of gas in Europe, but because the existing infrastructure lacked the technical equipment and capabilities to reverse the gas flows from an East-West to a West-East direction. EEPR financing provided support to address this difficulty and reverse flows infrastructure is now in place in Central and Eastern Europe.
- Electricity infrastructure projects: The integration of an increasing amount of electricity from variable Renewable Energy Sources, require huge investments in new infrastructure. Furthermore, a number of Members States are still "energy islands" because they are poorly connected to their neighbours and the internal energy market.

## 1.1 Progress to date

To date 19 projects out of the 44 are completed, as compared to 13 at the beginning of 2012. In the **electricity sector**, 4 projects are completed. The remaining 8 projects are progressing well, with some projects expected to be completed by 2014. In the **gas sector**, 15 projects are completed; 13 are progressing according to schedule. Most (10 out of 15 projects) of the reverse flow and interconnections projects in Central and Eastern Europe have been completed. The EEPR funds helped the projects to secure their financing and therefore to become operable without delays. Hence both the safety and reliability of the gas network have been improved, security of supply and diversification has been increased and critical bottlenecks were removed.

The following examples can be pointed out: the EEPR funds have secured the development of the project of development of the Larrau gas branch by upgrading the Spanish (Vilar de Arnedo compression station, pipeline between Yela and Vilar de Arnedo) and the French networks (Bear Artery). The security of supply in the region and market competition will be thus increased and the Iberian gas market will be better integrated into the remaining European one.

The completion of the two electricity interconnections in 2011 between Portugal and Spain, in the Douro and the Algarve regions, helped to connect to the renewable energy sources. The EEPR funds significantly contributed to upgrade and extend the Portuguese network and as a result to increase exchanges capacities with Spain.

The EEPR funds also supported establishing the first electricity interconnection between Ireland and Great Britain. By contributing to increase electricity interconnection capacities and allowing possible integration of offshore wind energy, this interconnection has enhanced the security of supply and diversification of sources of energy for Ireland.

Three EEPR projects in the Baltic region aim at improving the functioning of the internal energy market and ensuring a level playing field. When completed, those projects will significantly contribute to enhancing the security of supply, enabling electricity trading and reducing the region imports' needs.

However, despite the good progress made, four projects in the gas sector are facing serious delays that might result in their termination:

- The competition for Shah Deniz resources regarding the final route has been concluded between the **Nabucco** and **TAP projects** (not covered by EEPR) in favour of TAP. The decision of the Shah Deniz Consortium will have an impact on the EEPR grant.
- By a decision of 18 May 2013, the Algerian gas company has decided to postpone, for the third time, the decision on the construction of the pipeline between Algeria and Italia (Galsi project). Hence, this EEPR-supported project is significantly delayed. The authorisations to build the project have not yet been granted after 5 years of procedures and the commercial agreements for the gas supply have not yet been concluded.
- The ITGI Poseidon project is facing difficulties to secure the gas sources required to underpin its construction.
- Finally, the reverse flow project in Romania, which also includes the linking of the "transit" gas system to the national gas system, is seriously delayed. However, the project is crucial for the further development of the gas market in Romania and in the wider South-East European region.

For all these projects facing major delays and where progress remains insufficient, the Commission has sent pre-termination letters to the project promoters.

## **1.2 Conclusions**

Substantial progress has been demonstrated for electricity and gas infrastructure projects. A large majority of the projects (40 out of 44) are either completed or progressing. For some projects, the final date of implementation has been extended (see CSWD)

The EEPR is concretely improving the way the internal market works, by providing interconnections between Western and Eastern parts of the EU, and increasing the security of supply of the country and regions concerned. Some remarkable steps forward are being taken: the reverse flow gas projects are up and running and avoided a gas supply crisis during the recent February 2012 cold spell. The electricity projects supported are lending strong impetus to the completion of the internal market. The electricity network projects will contribute to absorbing the electricity produced from renewable sources. The completion of an EU-wide energy infrastructure system is progressing thanks to the clearing of bottlenecks and the progressive integration of "energy islands" such as the three Baltic States, the Iberian Peninsula, Ireland, Sicily and Malta.

To date, it is foreseen that the majority of the 25 on-going projects should be completed during the years 2013/2014 whilst only a few projects will run until 2017. The remaining projects, those undergoing serious difficulties, may be terminated by the end of 2013.

Many of the delays and difficulties encountered by some projects could have been avoided should an early involvement of the NRAs and ACER been foreseen. This is a lesson learnt that the Commission has taken into account in the process of assessment and identification of the PCIs under the CEF.

## **2. Off shore wind energy (owe) projects**



The EEPR OWE sub-programme consists of 9 projects in two main areas of activities:

- Support to the large scale testing, manufacturing and deployment of innovative turbines and offshore foundation structures;
- Support to the development of module-based solutions for the grid integration of large amounts of wind electricity generation.

The beneficiaries of the grants include project development companies, engineering companies, renewable energy producers and TSOs. The full available EEPR envelope of €565 million has been committed and payments to all 9 projects totalled €204 million at the end of June 2013.

## **2.1 Progress to date**

Out of the 9 projects, 1 has been successfully completed (**Thornton Bank**). 3 other projects are progressing well and their completion can be expected in 2013-2014. Some others could last until 2016/2017 (gravity foundations), 2017/2018 (Aberdeen, Krieger Flak), 2019 (Cobra Cable) and will require the Commission's close monitoring.

The Cobra Cable (link between DK and NL) has experienced serious delays and the partners, the Danish and Dutch transmission system operators, have yet to have approval from their regulators for the investments needed or the permits for the cable's route. Following receipt of a pre-termination letter from the Commission, the partners renewed their efforts and obtained agreement from their regulators for a process that should lead to regulatory approval in April 2014. The Commission is currently seeking assurances from the partners on the milestones that would have to be met before allowing the FID to be taken beyond the end of 2013.

One project, the HVDC hub, will terminate in agreement with the beneficiary because of the accumulated and continuing delay and the significantly modified and reduced scope.

## **2.2 Progress to date by sector**

### *2.2.1 Offshore turbines and structures (six projects)*

Through the EEPR grants, the installation of the first large size (400 MW) offshore wind farms far from shore (more than 100 km) and located in deep waters (more than 40 m) has been secured. Indeed, EEPR funds have been instrumental for the selected projects to obtain the necessary loans from banking consortia in order to achieve financial close.

The EEPR action on the Thornton Bank in Belgium was completed in September 2011. Three of the German wind farm projects are already in the offshore installation phase. It is anticipated that two of them will be completed by the end of 2013 and the third one by end of 2014. The first offshore wind electricity, generated through infrastructure co-financed by the EEPR, has already been fed into the German grid in Autumn 2010. While these projects are advancing very well, they do show some delays as compared to the original planning, mainly because of delays of the guaranteed grid connection. The fourth German offshore wind farm project, aiming to manufacture and install gravity based foundations, has been rescheduled after serious delays in the permitting process. It is expected to be fully realised by 2017.

The project aimed at installing an offshore wind energy technology test centre off Aberdeen (UK) has obtained full consent. However, this consent is currently legally challenged. The final investment decision for this project is due to be taken early 2014.

### *2.2.2. Offshore wind-grid (three projects)*

In 2012 the FID has been taken for the project 'Kriegers Flak - Combined grid solution' in the Baltic. This flagship project is the first offshore link that is utilised both as a connection of

offshore wind farms and as a cross-border interconnector. As such, it constitutes a first important building block in the modular development of an offshore grid. The technical solution for the Kriegers Flak area, involving important HVDC VSC technological components, has been defined and a market and business model for the combination of renewable electricity allocation and cross-border electricity trade has been developed. Important impact for the future design of combined inter-connections and offshore wind integration can be expected.

However, the overall situation for offshore wind-grid projects remains very challenging. In particular the offshore deployment of innovative HVDC technology in multi-terminal solutions faces a complex combination of technological, regulatory and commercial barriers.

Delays in decisions on the co-financing by national regulatory authorities (NRAs) hinder a timely implementation of offshore grid projects. The role of NRAs is key in these projects as demonstrated in the case of gas and electricity infrastructure where the economic models and the experience in cooperation between NRAs are far more advanced. The Commission takes the view that NRAs should act in a more coordinated manner as requested by the third internal energy package<sup>10</sup>.

### 2.3 Conclusions

The EEPR support to "turbines and structures" projects results directly in an additional 1500 MW of carbon-free electricity production capacity. The EEPR projects are also generating important learning effects, for instance shortening the production time of offshore foundations and decreases in the installation time of foundations.

For the wind-grid integration projects, the maturity and cost of the HVDC technology, the licensing of the wind farms to be connected as well as the co-financing to be obtained through the regulatory authorities are the crucial hurdles to be addressed before the FID can be taken.

## 3. Carbon capture and storage (ccs)

### 3.1 Introduction

Achieving the decarbonisation of the energy system by 2050 with fossil fuels as part of the energy mix requires the deployment of carbon capture and storage (CCS). The EEPR targets the demonstration of integrated CCS projects with a view to making this technology commercially viable by the end of the decade. The programme awarded financial support of €1 billion to projects in the power generation sector, out of which €399,5 million have already been paid to the beneficiaries by June 2013. Integrated CCS projects are a novel technology challenge and their demonstration needs to address the range of technical, economical and regulatory challenges. The coordinators of the projects are utilities or energy companies. Other beneficiaries include energy transmission companies, equipment suppliers and research institutes.

### 3.2 Progress to date

Under the EEPR six CCS projects (from Germany, the United Kingdom, Italy, the Netherlands, Poland and Spain) were initially supported.

The project Jämschwalde (Germany) was terminated on request of the promoter with effect on 5 February 2012, due to the lack of a regulatory framework for CO<sub>2</sub> storage as well as public acceptance issues. The promoter concluded at that time that the failure to transpose the CCS

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<sup>10</sup> Directives 2009/72/EC and 2009/73/EC establishing common rules for the internal market in Electricity and Gas

Directive into German Law would not have allowed the necessary CO<sub>2</sub> storage permits to be obtained within the project's timeframe.

The Polish project (Belchatow) was terminated on 6 May 2013 at the request of the promoter due to the absence of a realistic plan to close the gap in the financial structure of the project, due to technical risks and failure of the Member State to timely transpose the CCS Directive on time with the resulting lack of a suitable legal framework for CO<sub>2</sub> storage and public acceptance issues as regards CO<sub>2</sub> storage.

The Italian project (Porto Tolle) was terminated on 11 August 2013 at the request of the promoter due to insurmountable delays in project execution caused by the decision of the Italian State Council to annul the environmental permit for the Porto Tolle power plant. Additionally, the promoter saw no prospects for achieving the closure of the financial structure of the project. However, the project promoter is not going to stop all activities regarding CCS, it will continue to work on different aspects of CCS in the pilot plant in Brindisi.

None of the three remaining projects has yet adopted the Final Investment Decision (FID). The Commission is strongly committed to supporting the successful implementation of all the remaining projects.

Their state of play is the following:

Regarding the UK project (Don Valley), the promoters are committed to going ahead and aim at securing operational support via the UK's Contract for Difference (CfD) scheme which is currently under preparation. The implementation of the project would create opportunities for synergies with one of the projects short-listed by the UK government for support under the UK CCS Commercialisation Competition.

The Dutch project (ROAD) is the most advanced and ready to adopt FID if the increase in project costs, notably due to the low carbon price, can be matched by additional funding. Discussions with additional investors are on-going with the aim to achieving closure of the financial structure of the project within 2013.

As regards the Spanish project (Compostilla) the EEPR Action will be completed as planned in October 2013. By then three pilot plants on CO<sub>2</sub> capture, transport and storage will be operational and will provide very useful testing facilities for the full CCS value chain. The potential next step of the project, outside the EEPR Action, should be an integrated industrial scale CCS demonstration plant which, however, would require additional funding to be found.

### 3.3 Conclusions

Despite the good progress achieved so far as regards preparatory work for implementing CO<sub>2</sub> capture, transport and storage solutions, the actual implementation of most CCS projects remains uncertain. Public acceptance for CO<sub>2</sub> onshore storage remains a significant hindrance. The costs of investments and operation are very high and, as known from the beginning of the programme, the EEPR funding alone provides a kick start for projects but is not sufficient to cover all additional costs for applying CCS in power plants. The combination with the NER 300 and the Regional Fund has yet to be fully exploited. In addition the technical challenges were not all mastered by the companies and permits have in many cases not been secured in time.. At current carbon prices, which are very low, and without any other legal constraints or incentives, there is no rationale for economic operators to invest in CCS.

The 27 March 2013 Communication on the Future of Carbon Capture and Storage in Europe<sup>11</sup> aims to re-start the CCS agenda and to initiate a debate on how best to encourage demonstration and deployment and to stimulate investment. Based on the contributions received in the context of the on-going consultation, the full analysis of the CCS Directive transposition and implementation in the Member States, and in the context of its work on the 2030 Climate and Energy framework, the Commission will consider the need to prepare proposals, if appropriate, for the short, medium and long-term.

The CCS Directive provides a legal framework for capturing, transporting and storing CO<sub>2</sub>. By the transposition deadline in June 2011 only a few Member States reported full or partial transposition. The situation has substantially improved in the meanwhile and currently only one Member State has not notified any transposition measures of the Directive to the Commission. While the majority of Member States with proposed CCS demonstration projects have completed the transposition of the Directive, several Member States are banning or restricting storage of CO<sub>2</sub> on their territories. The full analysis of the CCS Directive transposition and implementation in the Member States will also look at this in detail.

For the immediate future, the second call of proposals, launched on 3 April, in the framework of the NER300 programme, is a second chance to improve the current prospects for CCS demonstration in Europe.

Also in the context of the EEPR, the Commission will assess the results of the on-going consultation and the NER 300 second call (in which only one CCS project applied for funding) and will draw the appropriate conclusions as regards the future of the remaining EEPR CCS demonstration projects.

### **III EUROPEAN ENERGY EFFICIENCY FUND (EEE F)**

#### **1. Introduction**

As required by the EEPR Amending Regulation, a mid-term evaluation providing information on the status of the "financial facility" (the EEE-F, the Technical Assistance and the awareness-raising activities) is included in the Commission Staff working document linked to this report.

The evaluation shows some fair first results and a reasonably promising outlook for the Fund.

So far, 6 projects have been approved and signed leading to a total of around €79, 2 million allocated.

In addition, the project pipeline contains, in the most mature category, potential investments worth €114 million.

It is therefore expected, although challenging, that the full EU contribution will be allocated to investments.

Regarding the Technical Assistance (TA), 8 requests were approved for a total amount of € 6.3 million.

#### **2. Main results of Mid-Term Evaluation**

##### **Meeting the objectives of the Regulation**

The first objective of the Amending Regulation was to establish a specialised investment Fund to reallocate the EEPR uncommitted appropriations leveraging additional contributions. This has been achieved with the support of the European Investment Bank to which the establishment of the Fund and the management of the EU contribution were delegated.

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<sup>11</sup> COM(2013)180 final

The second objective of the EEE-F was to facilitate the financing of energy efficiency investments (portfolio target of 70%), renewable energy (20%) and clean urban transport (10%). The Fund thus mostly concentrates on alleviating specific financial and non-financial barriers to energy efficiency such as high transaction costs, fragmented and small investments, limited access to credit, complex deal structuring, and low confidence of investors and lack of capacity of project promoters.

In order to do so, the Fund supports the development of a credible energy efficiency market through the provision of non-standard project finance<sup>12</sup> and dedicated financial products (both debt & equity)<sup>13</sup> supporting in particular the development of Energy Performance Contracting.

To tackle the lack of financing and the risk aversion of investors, the EEE-F was established as a layered investment Fund, with three classes of shares. The EU invested in junior C shares, absorbing the first losses and taking most of the risk to attract additional investors, including private ones.

The EEE- F also serves as a role model for innovative financial instruments investing in cost-effective and mature sustainable energy projects (with payback periods of up to 20 years) and attracting private capital while demonstrating the business case behind these investments and creating a credible track record.

### **Cost-effectiveness**

The 2013 indicative budget foresees €1.48 million of administrative expenditure and €160 million of investment allocation. In concrete terms, if achieved, this will represent €1 spent on administrative expenditures leading to approximately €108 of investment. This does not take into account income generated in the form of interest rate and principal reimbursement (€21,804 for 2012), which is first allocated to cover EEE F's administrative expenditures.

### **Additionality**

The additionality of the EEE- F has been demonstrated by its ability to provide long term financing, promoting market-based and quality investments with replication impacts, while maintaining a geographical balance in the project pipeline.

The Fund's TA can effectively address project promoters' lack of capacity and administrative barriers hindering the bundling of larger projects to reach a critical mass.

The establishment of the Fund and its first operations have raised awareness of energy efficiency business opportunities and innovative project finance, attracting private sector's and financial institution's interest.

### **Leverage effect**

At programme level, the EU contribution (€125 million) has been more than doubled by additional investor commitments (€140 million). For every €100 committed by the EU in project financing, more than €110 is being provided by other investors, giving a leverage of

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<sup>12</sup> Project finance is based on the project's cash-flow rather than on the balance sheet of its sponsors, creating value and risk assessment benchmarks for energy efficiency projects themselves.

<sup>13</sup> Such as senior and junior debt, mezzanine instruments, guarantees, equity, leasing structures and forfeiting loans. The EEE F does not provide grants or subsidised interest rates ("soft" loans), as these financial incentives are not considered appropriate for projects generating sufficient revenue.

more than 2. In the future, it is of course desirable that more investors decide to invest, however this will not happen until the EEE F has achieved a convincing track record.

### **Sound financial management**

The financial management of the EEE-F is based on investment guidelines and principles laid down by the European Commission and the EIB and follows high banking standards monitored and assessed in the various investment steps.

The Investment Manager (Deutsche Bank) produces monthly investment portfolio reports, quarterly reports and annual business plans in which yearly targets are set and impacts on the EEE-F's balance sheet are forecast.

The Commission ensures continuous monitoring of the EEE-F at working level and through its representation in the Supervisory and Management Boards of the EEE-F. It is also responsible for approving Technical Assistance requests prepared by the Investment Manager.

### **3. Main Conclusions**

Experience with the EEE-F has helped to understand the dynamics of the energy efficiency market, suggesting that:

- Financing instruments for sustainable energy need to be flexible, reflecting local market needs;
- The gap in capacity to develop and finance energy efficiency investments can be effectively tackled by the provision of project development assistance, which would enable the creation of a verified track record of the impacts of energy efficiency investments, building the sector's credibility and investor confidence;
- EU-level instruments should address common barriers, market failures and impacts of the financial crisis, while complementing national or regional schemes in place, avoiding duplication and avoiding crowding out private investments;
- To overcome market fragmentation, demand aggregation through bundling single projects into larger ones is needed as well as working through financial intermediaries and provision of guarantees;

Overall, the evaluation shows some fair first results and a reasonably promising outlook for the Fund.

At present, an increase of the EU financial contribution does not seem justified inter alia due to the amount still to be allocated. However, once this amount is spent and the Fund will have reached its maturity level and proved its attractiveness to the market, additional contributions could be considered provided there is a large increase in leverage.

## **IV PUBLIC PROCUREMENT**

Following the Court of Auditors remarks about errors in the procurement procedures of an EEPR project, the Commission decided to launch systematic actions and sent a detailed questionnaire to 59 promoters (61 projects) at the end of 2012 aimed at collecting information on procedures they applied to award contracts in the framework of the implementation of the action.

The analysis performed clearly demonstrated that the EEPR project beneficiaries overall demonstrated a mature knowledge of their situation under public procurement and award

rules. It is expected that the systematic aware-raising actions undertaken by the Commission with respect of the EEPR beneficiaries will help avoid future shortcomings in the procurement procedures (the shortcoming identified so far did not affect the implementation of the EEPR program).