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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 and the
European Energy Efficiency Fund**

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A resilient infrastructure is the backbone of the Energy Union. Last year, in 2018, important interconnection projects were put in operation and regional cooperation was considerably strengthened.

In that context the EEPR played a key role in the financial support to major infrastructures of common interest for the integration of the electricity and gas markets and the reinforcement of the security of supply.

I. PROGRESS IN PROGRAMME IMPLEMENTATION

Energy infrastructure and innovation, the driving forces behind the European Energy Programme for Recovery (EEPR), remain as important now as they were in 2009 when the EEPR was set up.

This report sets out, for each part of the EEPR, the progress made in implementing the projects and the European Energy Efficiency Fund (EEEF). It follows the report adopted in 2018¹. It covers the implementation of the projects between 31 August 2016 and 31 December 2018 and the payments made during that period.

II. OVERALL PROJECT IMPLEMENTATION

By the end of December 2018, 43 (+6 compared to 2017) projects out of 59 have been completed and a total amount of € 2,514,424,758 (after deduction of the recovery orders for an amount of € 196,099,270.83) has been paid to the beneficiaries (see Annex).

The situation for the gas and electricity infrastructures is as follows: most of the projects are completed and two projects are on going.

Substantial progress was made by the promoters for the Offshore Wind Energy (OWE) integration in the grid whilst the project promoters of the last remaining Carbon Capture and Storage (CCS) project decided to stop their financial support to the project.

The Commission has opted for maintaining its financial support to the investors as long as it remains clear that a Final Investment Decision (FID) is possible and the project continues to provide substantial value for society.

¹ Report 2017 adopted on 05.03.2018 COM(2018) 86 final

1. GAS AND ELECTRICITY INFRASTRUCTURE

The EEPR infrastructure sub-programme has supported 44 projects in three major areas of activities (Gas interconnectors, Gas reverse flow and Electricity).

A total amount of € 2,267,574,462 has been committed, of which € 1,669.370.233 has been disbursed to the beneficiaries by 31 December 2018. Payments are subject to the beneficiaries' firm commitment to implement the project through a Final Investment Decision.

1.1.PROGRESS TO DATE

To date, 38 (+3 compared to 2017) out of the 44 infrastructure projects have been completed, four were terminated and two projects are on-going.

In the electricity sector, all the 12 projects (+2 compared to 2017) have been completed.

In the gas interconnectors area, 13 (+1 compared to 2017) out of 18 projects have been completed; two are progressing according to new rescheduling, and three have been terminated.

In the area of reverse flow and interconnection projects in Central and Eastern Europe, 13 projects have been completed, and one project in Romania was terminated by the Commission in September 2014.

Since the last EEPR implementation report, the following progress can be highlighted in particular :

- The Interconnector Greece-Bulgaria (IGB) is a key route to carry gas from TAP and Greek LNG to the north and is an important project for the diversification of gas supply in the South-East European region. It is a project of common interest (PCI 6.8.1) and a Central and South Eastern Europe energy connectivity (CESEC) priority project. The Commission has provided political and financial support to the project since the beginning. The project has received €45 million from the European Energy Programme for Recovery and €39 million from the European Regional Development Fund. In 2018, the project made further progress. At the CESEC ministerial meeting in Sofia in June, a memorandum of understanding was signed between the Bulgarian Energy Holding and the European Investment Bank on a loan for the project. The project received exemption from EU energy law, including a partial exemption from third party access rules from the Commission in July 2018. The Commission also approved the state aid for the public support and the access to Bulgarian structural funds. Project implementation is advancing well, all procurement procedures have been finalized and construction started at the end of May 2019.
- In the Republic of Cyprus, the Ministry of Energy, Commerce, Industry and Tourism is currently preparing the implementation of a natural gas receiving terminal, which will contribute to the diversification of the Cypriot energy mix and contribute to ending the energy isolation of the island, as well as facilitate competition in gas fueled power generation from independent producers. Natural gas is expected to enter the Cyprus market by 2021.

To date, it is foreseen that these two on-going projects should be completed respectively by end 2021 and end 2022.

2. OFFSHORE WIND ENERGY (OWE) PROJECTS

2.1 PROGRESS TO DATE

The Offshore Wind sub-programme consisted of 9 projects receiving € 565 million of support split between two main types of activities:

- Large-scale testing, manufacturing and deployment of innovative turbines and offshore foundation structures (6 projects); and
- Development of module-based solutions for the grid integration of large amounts of wind electricity transmission (3 projects).

4 of 9 projects have been completed and 2 were terminated prematurely. € 341,639,214 (after deduction of recovery orders) were paid to the projects. The three remaining projects are on-going.

2.2 PROGRESS TO DATE BY SECTOR

2.2.1 Progress with Innovative Turbines and Offshore Structures

For the Aberdeen Offshore Wind Farm, the eleven wind turbines with the world's largest capacity started operations at Vattenfall's offshore wind farm 'Aberdeen Bay' on 1 July 2018. In September 2018 the official opening of the European Offshore Wind Deployment Centre (Aberdeen Offshore Wind Farm) took place. Last reporting for the project and final payment are expected in Quarter III 2019.

2.2.2 Progress with Wind-Grid Integration

In general, the execution of the two remaining projects, Kriegers Flak and COBRACable, progressed as expected. For Kriegers Flak, final commercial operation start was planned for end of September 2019. Despite delays and other challenges experienced during the project, the beneficiaries initiated the planning of the commissioning in the second half of July 2019.

For COBRACable, the installation of the converter stations in the Netherlands and Denmark is completed, while there is a delay for the installation of minor segments of the cable. Completion of cable installation and system testing was expected in the 2nd semester 2019; the commercial operation should start right after, at the end of 2019. The project COBRACable includes a study aiming at identifying and describing the important design issues to be taken into account to make the HVDC link Cobracable prepared for future operation as part of multi-terminal network. For this task, new documents have been submitted.

3. CARBON CAPTURE AND STORAGE

The EEPR sub-programme consisted of 6 projects and € 1 billion of support aiming at demonstrating the full carbon capture, transport and storage process.

One project (Compostilla in Spain) was finished providing operational pilot plants for capture, transport and storage. Four projects have been terminated prematurely due to the decision of the project promoters not to invest, one project ended without being completed. € 387,211,547 (after deduction of recovery orders for a total amount of € 48,660,666.85) were paid to these projects.

III. EUROPEAN ENERGY EFFICIENCY FUND (EEEF)

In December 2010, € 146.3 million from the European Energy Programme for Recovery (EEPR) were allocated to a financial facility for sustainable energy projects². € 125 million were used as the EU contribution to the European Energy Efficiency Fund (EEEF). The EEEF was created in July 2011 and has reached a total volume of € 265 million³, supported by a Technical Assistance Grant Facility with a budget of € 20 million and € 1.3 million for awareness-raising activities.

The EEEF provides tailored financing (both debt and equity instruments) for energy efficiency, renewable energy and clean urban transport projects. Beneficiaries are local or regional public authorities or private entities acting on their behalf.

1. PROGRESS TO DATE

In 2018, three new transactions were added to the Fund's portfolio :

- The CIMAC project in Portugal consists in the upgrade of the existing street lighting luminaires from predominantly high pressure sodium vapour lamps to the last generation LED (EEEF investment of EUR 12.1 million, total project size of EUR 16.6 million). The project emerges from the EEEF Technical Assistance facility and is one the largest street lighting upgrades in Portugal where EEEF has been instrumental in development and financing.
- The Illuminated Cities project in Italy targets a portfolio of street lighting projects, benefitting mainly municipalities of small to medium size (EEEF investment of EUR 16 million, total project size of EUR 20 million).
- The Smart Hospitals and Universities is another project in Italy, enabling a portfolio of energy efficiency projects in the healthcare and education sectors (EEEF investment of EUR 7 million, total project size of EUR 22 million).

From its creation and until 31 December 2018, the EEEF has signed contracts with 16 projects worth €170 million, and although this does not represent the maximum possible drawdown available, it has generated an estimated €301.5 million of final investment.

Based on the EEEF's project assessment and reporting framework on CO₂ equivalent and primary energy savings, as of the end of 2016, its investments have achieved savings of close to 388 478 tons of CO₂ and Primary Energy Savings⁴ of 794 124 MWh.

2 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.

3 Additional investments to those of the European Commission have been made by: the European Investment Bank EUR 75 million, Cassa Depositi e Prestiti SpA (CDP) EUR 60 million and the Investment Manager Deutsche Bank (DB) EUR 5 million.

4 Cumulative primary energy savings are presented only for Energy Efficiency and Clean Urban Transport technologies; they include calculations from financial close to loan maturity, based on estimations for projects under construction and less than one year of operations and actual data for projects which have been in operation for over one year. Savings are for total project investment volume (i.e. EEEF and non-EEEF investments).

2. EEEF Technical Assistance facility

In November 2016, the European Energy Efficiency Fund launched a new facility for Technical Assistance (TA). Following on from the European Commission's Technical Assistance facility, managed by EEEF, the Fund has set up a new tool to support ambitious public entities with bankable sustainable energy investment projects. Such projects shall relate to the energy efficiency sector, small-scale renewable energy and/or public transport initiatives. EEEF is supporting beneficiaries – regions, city councils, universities, public hospitals and other public entities located in the EU Member States – by way of allocating consultancy services to the planned investments, for instance performing feasibility studies, energy audits, legal services and analysis of economic viability. EEEF TA facility has received funding from the ELENA (European Local Energy Assistance) facility under the Horizon 2020 Programme of the European Union. By December 2018, it already was supporting 4 beneficiaries in Italy, Spain and Lithuania.

3. Main Conclusions & outlook

The EEEF has progressively established a solid track record of profitable investments and after 7 years of functioning has already supported 18 highly distinctive projects (2 of which have already been repaid with the proceeds reinvested into the fund) in various technologies in 8 different Member States.

IV. OVERALL CONCLUSIONS

The EEPR has delivered good results. All the 12 electricity and the majority of gas projects infrastructure have been completed; whilst two gas projects are on-going with completion expected in 2021 and 2022. The strict control exercised by the European Commission in project implementation and monitoring has helped to increase the efficiency of the instrument.

The Offshore Wind projects were more complex than expected but promoters and constructors managed to find solutions to bring them to finalisation – sometimes extending contracts' duration. Over the 10 years duration of the programme, the EEPR helped to acquire technological knowledge and contributed to the development of the offshore wind interconnection technologies.

Although the financial support of EEPR was not sufficient to prompt companies to realise commercial-scale CCS demonstration projects, the Commission still considers CCS important for decarbonisation (only reliable technology for long term storage of carbon dioxide), for EU in general, and for energy and carbon intensive industries in particular.

The EEEF invested in several energy efficiency projects and will continue to expand its portfolio, providing financing solutions and generating profits for its shareholders. The EEEF also serves as a model for innovative financial instruments investing in cost-effective and mature sustainable energy projects that can attract private capital while demonstrating the business case behind these investments and creating a credible track record.