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Potential Role of EIB and Public / Private Partnerships

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Abstract
<p>Within Dynamis, WP6.2 has a remit to look into the practical aspects of creating suitable financial arrangements which can fund the construction of HYPOGEN demonstration plant. A first report, “Identification of Base Conditions for Debt Finance”, D6.2.1, November 2006, has already been produced looking at the general requirements and constraints on the design and arrangement of a demonstration plant which will allow it to be bankable.</p> <p>This second report, D6.2.3, reviews in more detail the possible nature of the funding arrangements for such plant. In particular, it focuses on the role that could be played by the European Investment Bank (EIB), what types of funding solutions may be available and how a public / private partnership type of arrangement could be relevant to the HYPOGEN circumstances.</p>

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1. Introduction

Dynamis, as the pre-cursor project for HYPOGEN, is concerned with deriving suitable specifications for a candidate European demonstration plant. An important aspect of this work, covered within WP6.2, is to look into the practical aspects of creating suitable financial arrangements which can fund the plant. A first report, “Identification of Base Conditions for Debt Finance”, D6.2.1, November 2006, has already been produced looking at the general requirements and constraints on the design and arrangement of a demonstration plant which will allow it to be bankable.

1.1 Role of EIB

This deliverable D6.2.3 reviews in more detail the possible nature of the funding arrangements for a HYPOGEN demonstration plant. In particular, it focuses on the role that could be played by the European Investment Bank (EIB) and how a public / private partnership type of arrangement could be relevant to the HYPOGEN circumstances.

The information provided in this report is based on the EIB Annual Report 2005 (both the Activity and Statistical Reports) and on information provided at a useful meeting with key representatives of the relevant areas of the EIB in February 2007.

2. European Investment Bank

2.1. Background

The EIB was founded in 1958 under the Treaty of Rome, which created the European Economic Community, with the aim of fostering integration, balanced development and economic and social cohesion in the Member States by providing long-term financing for capital investment furthering attainment of European Economic Community objectives.

It is owned collectively by the member states and capital shares for each member state are calculated according to their relative GDP at the time of accession to the European Union.

2.2. Energy / Environment

Energy and the Environment are key areas for the EIB. In particular, considerable support is provided to a wide range of European states for establishing and improving Trans-European Networks. In 2005, total TEN support was €7.7bn of which around €1bn was for trans-European energy networks. A further €2.5bn was provided for energy infrastructure within Member States. Examples of supported projects covering energy network infrastructures from 2005 are as follows:

Member State	Project	Funding (€m)
Spain	Upgrading and extending electricity transmission / distribution system	750
Italy	Upgrading EHV power grid	300
	Renewal / expansion of gas network	185
Greece	Upgrading and extending electricity transmission / distribution system	260
UK	Gas transport form Ormen Lange field	100
	Upgrading EHV power grid	293
Ireland	Upgrading and extending electricity transmission / distribution system	200

The five main themes which are supported as priorities by the EIB in the general area of energy are:

- Energy efficiency
- Energy R&D, Demonstration & Innovation
- Renewable energy
- Internal energy security

- External energy security

Examples of supported projects covering energy issues from 2005 are as follows:

Member State	Project	Funding (€m)
Italy	Construction of CCGT at Gissi	100
UK	LNG terminal at Isle of Grain	177
	Offshore windfarm in Irish Sea	95
Latvia	Replacement of CHP plant in Riga	40
Portugal	Construction of 11 windfarms	230

2.3. Support for EU Commission Initiatives

The EIB is particularly charged with maintaining a dialogue with the EU in order to remain able to support its policy initiatives. This has resulted in a range of initiatives being brought forward by the EIB. An example of this is the EIB participation in the launching of Technology Platforms, such as the ZETP. Of particular relevance in this context, is the Risk Sharing Finance Facility (RSFF) that has been developed since 2005 specifically to complement the Structured Finance Facility area of the bank's activities and to meet the challenges of the FP7 programme. The idea of the RSFF is that it combines the use of EIB funds and EU grant resources to cover part of the risks associated with projects that have a higher risk profile than the EIB would normally accept. The RSFF is discussed in more detail in subsequent sections, below.

2.4. Funds

In 2005, the EIB raised around €50bn through 330 transactions in 15 currencies, around half of which is targeted at EU regional development in Objective 1 and Objective 2 areas¹. The EIB has an AAA credit rating which allows it to raise funds from worldwide capital markets at advantageous rates. As it is a non-profit organisation, this allows it to pass through structural funding at potentially beneficial rates and tenor.

2.5. Geographic Coverage

The primary focus of the EIB is on the countries within the European Union. However, around 10% of its funds are directed to Partner Countries, both locally within greater Europe and around the globe.

¹ Regions of the EU identified for economic support.

Of relevance to Dynamis is the fact that all of the relevant funding arrangements discussed in this report are available on a level basis throughout the EU25. In addition, "Associated Countries" are also eligible. These are currently Iceland, Liechtenstein and Norway (subject to amendment procedures of EEA Agreement) and Switzerland, Israel (subject to satisfactory conclusion of bilateral S7T agreements).

Hence there should be no geographic restriction to the location of demonstration plant based on funding solutions provided by the EIB.

3. Involvement of the EIB

There is considerable compatibility of Dynamis with some of the key objectives of the EIB, including Efficiency improvements, R&D in the energy sector and the enhancement of both internal energy security in relation to the infrastructure networks and external energy security through widening fuel sources. Within this context, the EIB also sees support for Carbon Capture and Storage (CCS) as a strategic priority.

It is considered that a hydrogen-based power plant and the evolution of a hydrogen – based economy is entirely consistent, to a greater or lesser degree, with each of these objectives. To this end, the involvement of EIB in any financing alternative would be both logical and, from the perspective of attracting other funding sources, highly desirable.

3.1. Corporate Status Requirements of Applicants

Any application for corporate debt could be made either (i) directly by a joint venture company that was developing a project and which had its own legal status; or (ii) through each or any of the individual corporate sponsors of the project, in order to assist in their funding requirements of such. Whilst the most likely funding option will be attractive financing rates, as indicated previously, the EIB is also able to offer additional debt tenor and also additional flexibility in the “profile” (ie the amount and timing of each principal repayment) of the debt.

Whilst there are inevitably certain conditions required as well as certain contractual conditions to be met for such finance to be made available, these are substantially of an administrative and credit-related nature.

3.2. Roles that could be played

The funding roles that could be played by EIB in relation to supporting the objectives of DYNAMIS were described to us in two categories, “Conventional” and “Innovative” funding.

Initially, the Conventional financing may be provided through bilateral funding. In the event that the DYNAMIS initiative was funded by each of its shareholders / key sponsors to the project, then it would be within the parameters of EIB to offer bilateral finance to each of these sponsors, provided that they could demonstrate that the financing is consistent with the objectives of the EIB. As indicated in the introduction to this section, it is anticipated that this can be proven on a number of different criteria.

Alternatively, if DYNAMIS were to be developed on the basis of a single project company, EIB could either lend on a bilateral basis to the company (substantially on the same basis as outlined above) or on the basis of a non-recourse or limited recourse

transaction. Under this latter basis, there would also be the substantial benefit of the EIB involvement being perceived as an endorsement of the project which should have the beneficial impact of attracting other financial institutions.

In addition to Conventional funding, EIB is also developing Innovative sources of either direct financing or credit support. The former could take the form of carving out certain elements of risk, whilst, for the latter, EIB indicated that they are in the process of developing a support mechanism for projects that are reliant on the value of carbon certificates (see below). Whilst any such mechanisms would need to evolve and be more clearly articulated, as well as requiring substantial due diligence to understand its exact nature, nevertheless for a project like DYNAMIS, the potential benefits would be substantial in securing larger volumes of debt for a substantially longer period than would otherwise be the case.

3.3. Types of Funding Solutions

As indicated above, EIB has the ability to lend on advantageous terms on a corporate basis and this could be either to a project company or to one or more of the sponsor companies, depending on the ultimate financing strategy employed for the development of the project. We are aware of previous precedent where similar finance has been provided for the development of “clean” energy projects such as hydro development / refurbishment, with the advantageous terms relating either to very aggressive pricing or extended tenor for the debt. In the event of the sponsors either funding the development through their own financial resources or through supporting the debt of the development / project company through guaranteeing the debt, then the provision of such competitive financing would be extremely beneficial in optimising the overall value of the development.

Alternately, as we discussed in D6.2.1², the development may take place through a non- or limited-recourse financing, with the project company being funded on the basis of full risk sharing between the sponsors and the lenders. On this basis, the EIB would lend directly to the project vehicle. We are aware of previous energy projects, particularly in the liquefied natural gas (“LNG”) sector where this has been successfully utilised in the past. The basis for seeking such funding may either be for the competitive terms that may be available or, where there is an expectation that the raising of sufficient funds to meet the debt requirements will be challenging, in order to diversify the sources of finance available for the project.

In any event, these Conventional funding advantages would take the form of (i) additional tenor (ie length of the loan); (ii) advantageous pricing (lower interest rate); or (iii) benefits in the profile (ie the timing and amounts of each principal repayment).

² Deliverable D6.2.1, “Identification of Base Conditions for Debt Finance”, November 2006, available in the Dynamis eRoom.

Whilst the Conventional approach offers certain financial advantages, the Innovative approach is of a more fundamental nature and could well be a key determinant in whether a project is able to secure debt finance.

As briefly outlined above, the Innovative approach relates to alternative approaches of either (i) EIB providing a form of support mechanism in order to provide additional certainty of features such as the market value of carbon, in particular beyond 2012; and (ii) potentially the allocation of certain specified risks to EIB, though it is not clear whether this would refer to a particular funding tranche (eg a subordinated tranche), a facility similar to a cost overrun facility (which could therefore mitigate the risk associated with completion of the construction phase) or some other mechanism to be determined.

Though clearly the final form and nature of the Innovative financing support or facility will need to be determined, nevertheless it is considered particularly relevant that EIB has considered the impact of the Emissions Trading Scheme only being committed in its existing form until 2012 and the negative impact this will have on investment decisions. As any major infrastructure investment will only be in its early operation by 2012 but will require substantial investment in the very near term, EIB has been considering developments that will allow for such committed investment and potentially with certainty on carbon value for significant numbers of years after 2012.

In particular, in March 2007, the EIB has announced³ that it is leading discussions with a group of banks and national development agencies on the establishment of a **Post 2012 Carbon Fund**, with a target date for commencement of activities in the second half of 2007. Such a Fund would acquire Post 2012 credits only, thereby providing significant support for the development of environmentally beneficial projects by extending their carbon-based revenue stream.

3.4. Potential Relevance of PPP-type arrangement

The concept of a Public Private Partnership (“PPP”) relates to the financing of infrastructure that might otherwise have been undertaken through the public sector (national or local government bodies) and generally has a clear social benefit. In this instance, whilst power generation may no longer be fully applicable given the movement across Europe towards liberalisation of this sector (though clearly this has not yet been accomplished in all member states), nevertheless for certain elements of the project, most probably the development of the related infrastructure for carbon capture, such a PPP model might be entirely appropriate.

In order for this to be achievable, the carbon capture element of the project would have to be financed separately from the other areas. On this basis, one could envisage two specific elements of the project. First, the gasification / hydrogen production and

³ Paper at the conference on ‘Financing Clean Energy: Building Public And Private Partnerships To Address Climate Change’, London 12th March 2007

power generation element, which would be viable on the basis of the sale of electricity and / or hydrogen, would be developed as a separate element. Thereafter, the transportation and storage of the carbon could be developed as a separate “downstream” project. However, in order for this second part to be viable, there would need to be a clear and determinable revenue stream for the transportation and storage of the carbon and this is currently not identifiable. As indicated in 3.3 above, the relevance of EIB Innovative funding sources may again be of major significance.

3.5. Comparison with Alternative Sources of Debt

Traditionally, the EIB has focussed particularly on investment grade credit rated opportunities and has therefore been reluctant to take development risk (ie it would not finance the construction of projects except in very isolated circumstances). However, we understand from the recent meeting with EIB that this position has modified and that they are now able to embrace both construction and operating risk. Given this change, there would appear to be considerable merit in considering EIB as potentially a very strong source of finance.

As detailed above, there are a number of reasons for the attractiveness of EIB, namely through their ability to offer bilateral loans, their potential to attract additional sources of debt and through the additional Innovative sources of finance or financial support they may be able to offer.

Whilst commercial banks will be able to compete with EIB on the Conventional sources of finance, they are not able either to contemplate the Innovative sources of finance and nor will they have the same impact in potentially being able to attract additional lenders into a syndicated facility.

4. Conclusions

There is a clear consistency between certain of the objectives of the EIB and those of DYNAMIS and consequently there should be an appetite for EIB to seriously consider funding opportunities with such an initiative. It is anticipated that this could be positive for DYNAMIS not only through the ability to access an additional source of funding, but also because of the ability of EIB both to attract other commercial banks as a result of their involvement or, potentially, to mitigate certain risks through their bespoke products.

We would caution, however, that the credit process for approval of the implementation of any such bespoke product of EIB is as yet unclear. Consequently, there must be some risk as to whether the product is deliverable and what the final terms and conditions for such a product may be. In any event, to achieve such an approval could well be time-consuming with no guarantee of success.

Nevertheless, the advantages of continuing an active dialogue with EIB would certainly outweigh any disadvantages and strong consideration should be given to them as a potential source of funding for DYNAMIS.