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Response of Wien Energie GmbH to the

Public consultation on the EIB's Energy Lending Policy

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Chapter 4.1 General energy and economic context

Particularly in the current economic climate, is there a trade-off between promoting a competitive and secure energy supply and which one is environmentally sustainable? Where should the balance lie and what implications does this have for energy sector investments?

Response of Wien Energie GmbH:

In these difficult times of economic crises investment in the Energy sector needs to be even more effective and it has to be ensured that in particular those solutions are prioritized that serve all three top priorities of European Energy Policy.

Current European legislation has identified Energy Efficiency as a key priority, with the recent Energy Efficiency Directive bringing about essential changes for the energy sector. As identified by this Directive, Energy Efficiency on both, the demand and the supply side bring about urgently needed stimulus for Europe by decreasing our businesses' and citizen’s energy bills, thereby making our continent even more competitive and keeping jobs at home, while at the same time reducing harmful emissions. Therefore Europe but also many member states deem CHP as one of the most important technologies to reduce our primary energy consumption and increase the efficiency of Europe’s energy supply.

Anyhow, the current economic climate in combination with rising primary energy costs and low electricity prices, do in many cases not allow anymore for investment in CHP technologies. As a result of this situation and in order to implement the relevant EU sector policy, which has changed due to the Energy Efficiency directive, EIB financing has to put CHP projects on equal footing with renewables and put even more focus on investment in supply side efficiency measurements.

How does investment in the energy sector contribute to growth and employment? Are investments in all energy sub-sectors equally valuable? And how does investment in the energy sector rank relative to other investments in the economy which support growth and employment?

Response of Wien Energie GmbH:

The European energy system serves as a backbone of the European economy. In addition to labour cost, energy costs have become critical location factors for businesses, whether in the industry or service sector. This has obviously a serious impact on the job market and national budgets. The more efficient, effective and reliable our energy system of tomorrow is, the better for all European citizens.

What impact do you consider the current economic crisis will have on the energy sector (demand, policies, supply)?

Response of Wien Energie GmbH:

Electricity prices have fallen while the price of secure, available natural gas has risen. The result is that natural gas-fired co-generation power plants (which are particularly efficient as they produce electricity and useful together) are increasingly uneconomical. Existing plants are being brought online more rarely and it is no longer commercially viable to construct new plants. This situation obviously is opposing the purpose of the recently adopted Energy Efficiency Directive (see also comment above), which is why EIB investment should strengthen its funding for CHP projects.
Chapter 4.2 Renewable Energy

The Bank’s economic justification for supporting emerging renewable energy technologies, whose cost is significantly above that of conventional and mature renewable energy technologies, is that continued investments in these technologies will eventually lead to cost reductions and will ultimately be the least-cost approach to meeting the EU’s renewable energy targets. Do you agree with this approach? Is there an alternative approach to the economic justification of these technologies which you consider more appropriate?

*Response of Wien Energie GmbH:*

Obviously there also exist a number of mature renewable energy technologies, which also require funding. Small and medium hydro projects, hydro storage and onshore wind parks fall under this category and should be prioritized by the EIB.

Do you agree that there is significant scope for investment in renewable heating and cooling?

*Response of Wien Energie GmbH:*

There is tremendous potential to decarbonise the giant heating sector by increasing the share of renewables within it. At the same time energy efficiency measures such as CHP installations connected to a District Heating network or electrification through the use of heat pumps might come to the same results in a much more cost effective way due to economics of scale. Hence, both efficiency and renewable measures should be seen as complimentary rather than prioritizing one over the other.

Chapter 4.3 Energy Efficiency

What do you think are the main barriers to energy efficiency investments? What might be done to overcome these?

*Response of Wien Energie GmbH:*

While theoretically Energy efficiency seems to be the obvious solution to achieve Europe’s threefold Energy policy goal, certain barriers such as high upfront costs, market uncertainties, unawareness of customers and national policies and unbalanced support schemes often stop businesses to invest in theses technologies. Therefore the political framework should be streamlined and financing made available to reduce the immanent investment risks.

Chapter 4.5 Fossil Fuel
Gas is an important bridging fuel source in the transition to a low carbon economy: to what extent and under what conditions should gas-fired generation be supported?

**Response of Wien Energie GmbH:**

*As with any other fuel, whether biomass or natural gas, the efficiency of the transformation process should be the key indicator for support. A primary energy approach would therefore lead to the best results.*

*As indicated under 4.1 Electricity prices have fallen while the price of secure, available natural gas has risen. The result is that natural gas-fired co-generation power plants (which are particularly efficient as they produce electricity and useful together) are increasingly uneconomical. Existing plants are being brought online more rarely and it is no longer commercially viable to construct new plants.*

*Gas fired generation should therefore be primarily supported where the use of this finite fuel is most efficient and thereby has the best effect on the overall energy system. As a result CHP installations would be at the top of a supporting hierarchy of gas fired installations. Co-generation plants meet the demand for district heating or industrial heat demands – in addition to generating electricity – and therefore make a considerable contribution to reducing the emission of gases such as CO2, SOx and NOx, as well as the concentration of fine dust particles. District heating has become a central element of providing heating in urban areas. The amount of primary energy consumed can be reduced significantly if electricity and heat are generated together (co-generation).*

**Chapter 4.7 RDI**

Which are the key innovative energy technologies under development?

The development of which key innovative low-carbon energy technologies should receive most financial support?

**Response of Wien Energie GmbH:**

*Currently energy storage, Power to Gas storage technology and geothermal energy are the most important innovative technologies under development.*

**To have the highest impact the following low-carbon technologies should receive most financial support:**

**Hydro**
- *Economic use of small penstock/drop height (1-3 metres)*

**Geothermal**
- *Exploration and reservoir modeling in large cities to plan the construction of a maximum number of geothermal power plants in the urban area.*
- *Geomechanic Model: Development und test of procedures to estimate the probability of induced seismicity*
- *Materials for thermal waters with high salt contents and high temperatures (150–200°C)*

**Gas**
- *Optimised operation of CHP power plants by implementing a heat reservoir*
- *Modeling of the operating conditions of the heat accumulator in conjunction with CHP power plants for a Day ahead optimization of the overall system*

**Storage general**
- **Developments of long term storage for mid-sized and low exergy (e.g. chemical storage)**
- **Heat accumulator: Increase of the energy density, ensure optimum operating mode of the storage (efficient and resource conserving operation),**
- **Optimization of the load distribution**

**Batteries**

- **Demonstration projects in combination with Photovoltaic for residence buildings and medium-sized enterprises needed to allow commercialization**
- **Demonstration of central control of decentral PV-storage needed**

**Power-to-Gas**

- **Development and optimisation of the components for Methanation (catalysator)**
- **Conversion of CO2 and H2 to CH4, optimisation of the Conversion efficiency.**
- **Optimisation of electrolysis and methanation in respect to the dynamic load conditions.**
- **Industrial-scale demonstration projects for the whole conversion chain (electricity to methan) needed to allow commercialisation.**

**Electric vehicles**

- **Demand side management for charging infrastructure for parking garages**
- **Load management to ensure optimum interoperability with electric grid**
- **Central register of charging points with specifications of charging requirements and integration into route planner**

Should financial support be spread across a large number of small research projects or be selective and concentrated on a few promising large research projects?

**Response of Wien Energie GmbH:**

**A combination of both options would achieve the best results.**
Note on Wien Energie GmbH:

As an energy service provider, Wien Energie GmbH supplies two million people, 230,000 businesses and industries with electricity, gas and heating in and around Vienna.

Wien Energie is Austria’s largest energy service provider. Wien Energie safeguards the uninterrupted supply of energy to the city of Vienna and the surrounding area. A reliable partner for approximately two million people, 230,000 businesses and industries, and 4,500 farms.

Wien Energie is also involved in waste recycling, facility management, telecommunications, energy advice and energy services. Moreover, Wien Energie is active in a number of projects at a European level.

With a turnover of EUR 2,040.1 million (2010/11), Wien Energie can be counted among Austria’s top 30 companies in terms of turnover. As of 30.09.2011, Wien Energie GmbH employed 2,738 people and Wien Energie Group 5,493 people across a diverse range of corporate divisions. Wien Energie Group is therefore one of the largest employers in the Austrian capital.

[Website link]