EREF response to the European Investment Bank consultation on its Energy Lending Policy

General questions

*Particularly in the current economic climate, is there a trade-off between promoting a competitive and secure energy supply and one which is environmentally sustainable?*

In the context of economic crisis, investment in renewable energy sources (RES) is often presented as a burden on public budgets and it is often recommended that such environmentally sustainable investment should wait for the end of the crisis.

This is a wrong perception. Europe currently is in a transition phase where a lot of generation capacity reaches its end of life and needs to be replaced. From an environmental point of view, making such a trade off would have impacts for the next 2 to 3 or 4 decades as investing in environmentally unsustainable capacities would lock Europe in a fossil fuel energy mix and would mean the failure of the decarbonisation of the European power sector.

Additionally, it is also a wrong solution as it would ignore the economic and social benefits of renewable energies, which are in general underestimated. Renewables can be a way out of the crisis. In Germany alone, the sector has created more than 380,000 sustainable local jobs. Investments made today will pay back tomorrow by cutting its annual coal and gas and decreasing its way more than 50% import dependency on fossil fuels (coal more than 80%, gas more than 60%, according to Eurostat). A Greenpeace study shows that while the energy transition will necessitate some investments that could range as high as 99 billion EUR, it can result in 3 trillion EUR fuel savings.

Rather, non-transparent and biased communication from national authorities on the cost of RES presents a wrong picture of the costs of renewables support. Furthermore, massive and non-transparent subsidies are still given to fossil and nuclear energy, exceeding any subsidies ever given to the RES sector worldwide.

RES are an important factor of growth and innovation and potential international technology leadership in Europe. Therefore promoting renewables does not need to be a trade-off between competitiveness and security of energy supply and environmental sustainability.

EREF is a federation of national renewable energy associations from EU Member States, such as wind, solar, small hydro, bio-energy, tidal, wave, and geothermal sources. EREF is striving to defend the interests of independent power, fuel and heat production from renewable sources and to promote non discriminatory access to the energy market. EREF is a member of EREC, the European Renewable Council.
How does investment in the energy sector contribute to growth and employment?

The development of renewable energies in Europe is a major factor of growth and employment. In Germany alone, the RES sector has created more than 380,000 sustainable local jobs. In Spain, in 2011, it was reported that more than 118,000 people were working in the sector. The deployment of RES contributed in total 10,244 billion EUR to the economy, being 0.95% of Spain’s GDP (6.740 billion EUR as direct contribution and 3.504 billion EUR as indirect contribution to the Spanish GDP).

Despite international competition and the current debate over Chinese dumping of PV panels in Europe, promoting RES in Europe would always be beneficial in term of local jobs as the majority of the jobs created are lower in the value chain (project development, installation, operation and maintenance, balance of system...) and cannot be delocalised.

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

One of the major costs for the development of RES projects is the cost of capital. The economic and financial crisis is having a strong effect on this cost of capital, making it much harder to producers to invest in RES projects.

Therefore by lending money at an affordable price, the action of the EIB allows important cost reductions, especially in countries such as Spain, Portugal or Greece where the cost of capital is very high, often preventing the development of RES.

As an example, due to the crisis the final energy demand has dropped to 2001 levels and the electricity demand to 2006 levels thereby increasing the overcapacities existing in the Spanish electricity market.

Further, the economic crisis could have benefits to some local actors of the supply chain specialized in the maintenance for instance. They could be more flexible in economic disturbed times and declare to better compete with big companies (e.g. wind turbine constructors which especially suffer from the crisis).

Renewables questions

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?
One should always consider the commercial balance (employments, less import fossil fuels...) and externalities (CO2, other environmental impacts such as with shale gas extraction, polluting emissions...), insurance cost (nuclear covered by states) and nuclear waste treatment cost prevention. Considering this all, and without subsidy, conventional energy will cost more than it does cost today.

RES (wind, hydro and PV) is more capex intensive than conventional energy, and a comparison of investments does not make sense. Further, in the cost balance calculations, renewable has to compete with depreciated conventional power plants that have been fully and anticipatively supported by the consumers in the past. A balanced and fair comparison would be to compare the building cost of renewable with the building cost of new nuclear plant for instance instead to prolonging their lifetime with higher accident risks.

RES has also a role to play in a mix, decreasing the pressure on limited resource (fossil, nuclear), meaning that it will never be possible to compare with a full fossil scenario with very high costs.

Still, some renewables technologies will lead to important cost reduction (like PV and more BIPV), to create added value to local resources with a social impact.

**Is there an alternative approach to the economic justification of these technologies which you consider more appropriate?**

As already indicated in the answer to the previous question, the best way to create a level playing field without any subsidy is to ensure the right internalisation of external costs of conventional energy (including e.g. environment, insurance, carbon...). With a fixed price of carbon at a relevant level, most of the RES technologies could make the difference.

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

The heating and cooling sector represents more than 40% of the energy consumption in Europe and investments in this specific sector are still lacking. Member States are primarily focusing on decarbonising the electricity and transports sectors, neglecting the promoting of RES in this sector. It is therefore crucial for the EIB to unlock the potential and facilitate investment in this sector.

**What are the barriers to investments in this sector and how might these be overcome?**

The main barriers are the lack of well adapted and stable incentives for investment. Further it is important to realise crucial infrastructure (such as e.g. district heating) and to strengthen private-public partnership which could accelerate the development.

It is necessary to reinforce the grid in order to guarantee the priority access and dispatching for RES, to release some installation constraints and to clarify the installation criteria in order
to bring a stable framework for renewables development. A sub-sector mid-term target should be adopted to improve investor confidence.

**Grid/system questions**

*Is the traditional model for electricity transmission and distribution changing?*

The traditional model for electricity transmission and distribution is changing as the progressing market integration and penetration of energy produced from renewable energy sources (RES) requires a very different grid system to be in place. The current European grid was built after World War II at a monopoly time for centralised, inflexible large power plant. It does not correspond to the needs of the energy mix and therefore requires changes. Firstly, sufficient cross-border capacity becomes increasingly important because national energy markets at least in times of peak demand rely on imports to secure energy supply. This requires significant investments in transmission infrastructure. This is also underlined by the (new) TEN-E Guidelines and the future Connecting Europe Facility. Secondly, as the increased energy production from RES takes place predominantly at local or regional level, distribution grids need to be enhanced to allow for the uptake of greener energy and the achievement of decarbonisation goals. At the same time, distribution grids need to get smarter, both from the generation perspective and the consumer perspective. The fluctuating feeds from renewable energy require a system that is sufficiently flexible. Modernized distribution grids are also needed to empower consumers (e.g. through smart meters) and to provide them new energy services.

There is an important institutional dimension behind this new way to build and manage our infrastructure (from top-down to bottom-up), where all actors have an active role to play. Smart grid means intelligence in the way producers, transporters, distributors, suppliers, ‘storage facilities’ and consumers are effectively coordinating the whole energy chain.

*What implications does this have for future investments in electricity networks?*

The changing model requires significant investments both on the transmission and distribution level and to make the grid smarter. One of the most striking examples is Germany. According to a recent study commissioned by the Federal Ministry of the Environment, the costs for the additional expansion of the power grid triggered by the energy turnaround (*Energiewende*) come to over EUR 2 billion per year and over EUR 40 billion up to the year 2030. Investment requirements for distribution grids are estimated to run to EUR 25 billion up to the year 2030. Some EUR 30 billion will have to be invested in energy storage facilities to smooth the fluctuations in renewable energy. Similar investments can be demonstrated for other Member States of the EU.

Given the size of investment needs, there is a considerable degree of uncertainty whether the investments can be achieved by private actors or the energy consumer alone. EREF
believes that at least parts of the investments should be incentivized by public spending and financial assistance both on the European and the national/regional level. To ensure that money is spent effectively, financial support should be concentrated on relevant infrastructure projects with a particular focus on the distribution level. The EIB should therefore actively promote investment in this sector.

However, EREF likes to recall that decentralised production is not a problem but part of the solution. Managed properly, it can divide by 10 the cost of reinforcing distribution infrastructures, as current EU projects (such as Meta PV, see: http://www.metapv.eu/) show. Thus investing in local renewables does not mean paying twice, but in fact driving down the costs that would otherwise have to be incurred to modernize the energy system.

What is the future role of smart grids, offshore grids and energy storage solutions?

As outlined before, smart grids and energy storage facilities play a vital role in rendering the energy turnaround successful. Smart grids (including smart meters) will also empower the consumer by giving him the necessary means to make informed choices and to control energy consumption, therefore facilitating energy efficiency. Energy storage facilities will allow for an even higher penetration of RES energy into the energy system, thereby contributing to the decarbonisation objectives. They would also contribute to a more secure system of electricity supply. Offshore grids will contribute significantly to the energy market transformation as well by allowing wind produced in offshore wind farms to be transported to onshore facilities. In this regard, attention needs to be paid to the adjacent onshore transmission infrastructure. This infrastructure must allow for the transport of wind energy to the centres of energy consumption. However, RES is also being developed in a decentralised manner, closer to the consumption centres, limiting in some ways the need for high-transmission lines but requesting a more flexible distribution grid.

One of the many questions to be solved now is at which level should we promote the development of storage? At the site level (one consumer), at local level (several consumers connected on the same local branch of the grid) or at a higher level (balance on the transportation)? Related questions address the security of investment for the second and third levels and whether these investments should not be in the hand of grid operators. Those questions have to be solved and it may be that there is no “one size fits all” solution to them, but that the actors should rather work out together which model best fits their needs.

Fossil fuel questions

What role will coal and lignite fired generation have in the EU power system in the medium term, with or without CCS, and how is this consistent with the EU’s Climate Action goals and its security of supply objectives?
EREF is strongly convinced that coal and lignite fired generation is not in line with the EU’s Climate Action goals and decarbonisation objectives. In the medium-term, generation from coal- and lignite-fired power plants appears unnecessary. Firstly, increased RES energy production allows for meeting energy consumption demands. Secondly – and provided the right regulatory and financial incentives are in place – such plants are not needed as back-up facilities any longer because the energy system can rely on alternative, climate-friendly options such as efficient interconnections, energy storage facilities and effective demand management systems. Investing today in such technologies would lock Europe in an inefficient polluting energy mix.

What is the scope for the development of shale gas resources in the EU?

EREF is not in favour of the development of shale gas resources in the EU and believes that more analysis of this technology should be carried out by the European Union, including environmental and economic impacts. Indeed, the development of shale gas resources is associated with risks that cannot be safely estimated. Human health concerns as well as environmental considerations lead EREF to the conclusion that this technology cannot be authorised without a sound assessment. Further, and as EREF advocates a model which properly internalizes the costs of all energy resources, shale gas would – even though for the environmental and health costs there are no concrete numbers available yet and taking into account a proper and stable fixed price for carbon – unlikely be able to compete with renewables.

Nuclear questions

What role do you expect nuclear power to play in the European energy market?

EREF believes that nuclear power should not and will not play a significant role in the future European energy market. The use of nuclear power is associated with significant risks and externalities that are currently not reflected in the prices for electricity produced from nuclear power plants. This creates price distortions, especially in relation to RES energy production, that are even increased by the fact that nuclear production receives – or received 40 years ago - (hidden) subsidies by States. Also from a mere factual basis, EREF doubts that nuclear power will contribute to the future energy mix. Nuclear power stations in Europe are ageing; therefore large investments are required to modernize these plants or to replace them by new facilities. As recently seen in France and Finland, the cost for new nuclear facilities are being strongly underestimated and as a result new nuclear facilities would already be more expensive than some mature RES technologies (e.g. in Finland the estimations of the costs started at 3 billion EUR, but have recently increased up to 8 billion EUR). Although several projects have been announced across the EU, the implementation of these projects faces serious, insurmountable difficulties. In fact, hardly any of these projects have progressed beyond the project phase. This clearly shows that nuclear energy will not be a reliable pillar for future electricity production. Additionally, due to the strong inflexibility of
nuclear power plants, this technology is not compatible with the development of RES and need to be progressively but surely phased out.

*As nuclear power stations are ageing, should their life be extended (where possible) or should they be replaced with other generation sources?*

With a view to the before-mentioned, EREF strongly opposes the life extension of nuclear power stations. EREF is also convinced that in the medium-term there will be no need for this technology as RES energy production will be sufficient to satisfy energy demand.

*What will be the impact on electricity generation and climate action of the reconsideration of nuclear policies within EU member states, in particular after the Fukushima accident?*

In most EU Member States, the Fukushima accident has lead to a reconsideration and ultimately to a complete turnaround in nuclear policies. The most prominent example is Germany’s decision to phase-out nuclear energy by 2022 at the latest. Other Member States followed this approach. Belgium announced a phase out of nuclear power, closing its oldest reactors by 2015 and the remainder by 2025. Switzerland is planning to phase out its five old nuclear plants between 2019 and 2034. Italy stopped its plan to restart its nuclear program as it was rejected by the Italian population. In Spain, the owners of the oldest nuclear power plants (being a Fukushima type one), after nearly 42 years of operation, shut down the reactor, mostly because of expensive improvements regarding the security of the plant, which became necessary after the Fukushima disaster. EREF acknowledges, however, that at least in a few EU Member States the Fukushima accident did not lead to a reconsideration of nuclear policies. On the contrary and hardly understandable, some Member States (still) believe in the future of nuclear energy although – for the reasons mentioned above – the hopes are exaggerated.