CEE Bankwatch Network's comments for the review of the EIB's energy lending policy – December 2012

CEE Bankwatch Network welcomes the opportunity to provide input and specific recommendations to the current review of the European Investment Bank's energy lending policy.

This document begins with an introduction and summary overview of our recommendations within the current generalised energy context, and then looks in more detail at the specific energy sectors that fall under the EIB's energy lending policy, namely:

- *Renewable energy*
- *Energy efficiency*
- *Fossil fuels: Gas and coal*
- *Nuclear*
- *Hydropower (within a section on the EIB's non-EU lending)*

As will be seen, we lay out the case for fossil fuels to 'fall out' of the EIB's future energy lending policy – and we look forward overall to a new, more ambitious, and substantially more climate-sensitive EIB energy policy being in place by summer 2013.

General energy context – the climate challenges – key Bankwatch recommendations

- 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? Where should the balance lie, and what implications does this have for energy sector investments?
- 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 that support growth and employment?
- What impact will the current economic crisis have on the energy sector (in relation specifically to demand, policies, supply)?

The European Investment Bank (EIB) – the EU's house bank – is the biggest public financial institution in the world and its mission is to facilitate financing for projects for modernising the economy, for developing fresh activities and less developed EU regions and for financing so called projects of "common interest".

Within this context the EU member states agree on the lending priorities and sectoral lending policies and directions that should govern the EIB's operations. This current review of the EIB's energy lending policy, therefore, provides an opportunity to assess the EIB's lending to projects within this sector in terms of EU policies and objectives and to identify a new role for the EIB to play in the facilitation of financing the implementation of the EU's energy and climate objectives.

As an EU institution bound by the policies and strategies of the EU, the EIB needs clear political guidelines to set the directions for its future energy sector lending and the types of projects it supports. The bank operates within the framework of EU energy policy that is based on three pillars: sustainability, security of supply and competitiveness. In December 2007, 27 member state governments endorsed the Europe 2020 Strategy that set out 2020 targets in order to:

- reduce carbon emissions by 20 percent;
- increase energy efficiency by 20 percent; and
- ensure 20 percent of electricity generation is from renewable sources.

These targets have in subsequent years been transformed into European law, constituting the so-called 'climate and energy package'.

The European Council, in its conclusions of 4 February 2011, looked forward to the elaboration of a low-carbon 2050 strategy providing the framework for longer term action in the energy and other related sectors, with due consideration for fixing intermediary stages towards reaching the 2050 objective. As a result the European Commission presented its Communication on "a Roadmap for moving to a competitive low-carbon economy in 2050"

followed by the elaboration of several 2050 roadmaps, among them the Energy Roadmap 2050 that sets out the need to reduce EU emissions by 80 percent by 2050.

Within this framework, the EIB on its own tries to strike a balance between EU policy objectives. This approach has led the EIB to support projects such as the Sostanj coal power plant in Slovenia and a number of other coal-fired power plants that will lock in assets, as well as the countries involved, into the dirtiest sources of energy. At the same time the bank has introduced the Climate Action programme in an effort to mainstream climate considerations into its lending.

While we understand that energy security is a concern, it is possible to reconcile these needs with climate protection through the financing of climate-friendly technologies. The development of renewable energy technologies and the potential for energy and resources savings presents enormous investment potential, coupled with the possibility of creating millions of jobs across Europe. This aspect is particularly strong in investments in demand side energy efficiency. According to one well regarded study from the Central European University: "The labour intensity for deep renovations […] 26 full-time job equivalents (FTE) units per million Euro invested is more than double the labour intensity of the entire construction industry – 12 FTE/million EUR".[1]

The recently published World Energy Outlook from the International Energy Agency (IEA) recognises the fact that "policy makers looking for simultaneous progress towards energy security, economic and environmental objectives are facing increasingly complex – and sometimes contradictory – choices". The IEA acknowledges that energy efficiency is an option fulfilling all three of these criteria; however even with existing policies in place such as the EU's 2020 objectives, a significant share of the potential to improve energy efficiency still remains untapped.

It is, in our view, both a responsibility and a potential speciality of the EIB to **in the future focus its investments on projects and programmes that can bring 'win-win-win' solutions for the EU in terms of economic, social and climate benefits.**

EIB lending for renewable energy and energy efficiency projects has in recent years increased from 32 to 47 percent of total energy lending, reflecting the strong growth and development of these markets and the priority given to these sectors during this period. However, the unrelenting message from climate science is clear: we have no more time to spare, and in this context the EIB, as the EU's policy bank, must take a stronger lead. It must play a key role in catalysing the increased investments needed in Europe's low carbon economy and in ensuring that the EU maintains an effective response to the climate imperative. **We therefore challenge the EIB to do more.**

Key climate tasks for the EIB

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1 Cited in 'Home is where the heat is**.** Thermal insulation programs for buildings in the Czech Republic and its positive effect on job creation', available at: http://bankwatch.org/publications/home-is-where-heat-is

The common denominator underpinning all of the EIB's lending to the energy sector and for all the policy pillars should be to de-carbonise the energy sector in line with climate science and the Energy 2050 Roadmap; the bank can do so via those interventions that deliver the most value added.

A major effort is required to decrease absolute GHG emissions in the context of the reductions that are necessary in order to reach the internationally recognised goal of keeping the global temperature rise below two degrees compared to pre-industrial levels.[2]

Achieving this goal is no easy task. The level of CO2eq in the atmosphere accepted by the EU authorities and the scientific community as a level that allows for an acceptable degree of certainty for humanity not to face the most dire consequences of climate change is 450 PPM (with 350 PPM concentration deemed to be safer, especially for developing countries in the Global South).

According to the Intergovernmental Panel on Climate Change (IPCC), the most authoritative source in the field, this would require dramatic GHG emissions reductions in the Annex-I countries – at least 80 percent emissions decreases in 2050 compared to 1990 levels.[3] According to the European Commission's estimations, the most technologically and economically feasible scenario for achieving this means the almost total decarbonisation of the energy sector by 2050.[4]

According to calculations by the IEA, 80 percent of the cumulative CO2 that can be emitted between 2010 and 2035 if the world is to have a chance of keeping the global mean temperature rise below two degrees centigrade is already locked into existing capital stock. Thus, to achieve a two-degree scenario, all investments after 2017 will need to be in zero-carbon utilities, unless existing infrastructure is scrapped before the end of its economic lifespan. In such cases, investments that prolong the overall lifetime emissions of a project actually add to the cumulative total annual GHG emissions of the country in question, thus taking up space in the country's GHG emissions quota.

From this perspective, and at the very least, any replacement in energy generation after 2013 for coal, and 2014 for gas, should be turned down by the EIB on the basis of climate science, unless carbon capture and storage (CCS) is proven to be commercially viable and technically effective.

No more excuses

Relative energy efficiency gains, regularly the justification used by the EIB for making such investments, do little to limit the climate impact of oil refineries and gas, oil, LNG and CO2 infrastructure as these types of infrastructure are designed to last decades – such investments from the EIB, and others, thus intrinsically generate demand for fossil fuels by lowering their costs or by the need to recover the investments in such infrastructure. They also hamper efforts to decarbonise the power sector by using up a portion of the resources

[2] This goal was recognised by parties to UNFCCC in the Copenhagen Accord, as well as in the Durban Platform.
[3] Intergovernmental Panel on Climate Change, The fourth assessment report, 2007.
[4] European Commission, A Roadmap for moving to a competitive low carbon economy in 2050, March 2011

that are needed to transform the economy into a resource-efficient, new renewables-based one and are at risk of ending up as stranded assets.

Cooperation in the energy sector is one of the EU's key priorities in its relationships with neighbouring states. Although the strategic documents and policies suggest that the promotion of energy efficiency and the use of renewable energy sources should be the primary areas of cooperation along with 'energy security' (understood unfortunately as security of supply of gas and oil to the EU), it is the latter that receives the lion's share of attention from the EU. This approach, though, deepens the EU's vulnerability to high carbon dependency while at the same time failing to bring about development in partner countries.

The EIB's energy investments outside of Europe (Bankwatch believes that EIB investments outside of the EU should be limited to the neighbourhood region – see page 27 for the rationale behind this conclusion) should focus on poverty eradication and access to energy for local people, targeting local demand, while avoiding export-oriented energy investments or the provision of energy only for energy intensive industries like mining and carbon-intensive production. For each project the EIB should seek to establish and make transparent whether there are direct benefits for local populations, and in particular it should address the needs of rural population that lack electricity access.

The EIB's mandate should be clearly defined and focused to make the bank a lead institution to promote the decarbonisation of the energy sector and of our societies in general. The bank's energy investments strategy should focus on 'triple win' investments (social, economic and environmentally beneficial investments that address the three pillars of the EU energy policy) instead of trying to satisfy competing demands for trade-off type of investments.

For example, the EIB does not need to tangle itself up in the false choice between secure and competitive energy on the one side and sustainable energy on the other.

Currently, when justifying its financing operations, the EIB predominantly uses arguments based most often on only one of the three pillars. In the case of a gas combined heat and power generation plant, for instance, the EIB will tend to use arguments based on efficiency gains, i.e. the sustainability pillar, yet the EIB's justification for investments in coal power plants will tend to be based only on "security of supply considerations". Achieving one objective must not take place at the expense of, and in contradiction to, other policy objectives as tends always to be the case for the EIB's investments into high carbon energy sources.

A new approach is needed to ensure that EIB investments are adding value to EU sustainable development. Seeking synergies between the objectives of all three pillars of the EU energy policy, the EIB should develop investments that prioritise projects that can fulfill the requirements of all the three pillars and ensure that the most sustainable solutions over a longer period of time are selected. Such an approach will guarantee that the EIB is adding value to EU and global decarbonisation efforts. For example, by favouring projects involving demand side energy efficiency and renewable energy sources, the EIB will help to reduce EU dependency on imported hydrocarbons, contribute to sustainability and deliver initiatives

that are fully cost competitive, especially when factoring in social and environmental externalities.

Thus, our key recommendations are that the new EIB energy policy introduces much-needed thinking and language – that is implemented in timely fashion – on the following:

- Every project is examined in terms of its compatibility with the 80-95 percent reductions in GHG emissions, in line with the EU Energy Roadmap 2050.
- The EIB ends its support for coal and lignite power plants, including for their replacement (by new coal and lignite based technology) and retrofitting.
- The EIB no longer support energy generation from gas which is a mature technology which does not need EU public financial support
- The EIB no longer supports the extraction of fossil fuels, their transportation, storage and refining in any region of the world.
- The EIB aims to achieve implementation of the EU energy policy pillars by focusing on energy efficiency, new renewables technologies and related infrastructure, especially such projects that have a local or regional scope where the value added is most visible.
- Outside of the EU, the EIB will focus on poverty eradication, targeting local demands and access to clean and sustainable energy for local people.

Renewable energy

- What are the barriers to investment in renewable energy outside Europe? How might these be overcome?

Cooperation in the energy sector is one of the EU's key priorities in its relationships with neighbouring states. Although EU strategic documents and polices suggest that the promotion of energy efficiency savings and the use of renewable energy sources should be the primary areas of cooperation along with 'energy security', it is the latter that receives the lion's share of attention from the EU side.

The EU's ambitious target to cut its GHG emissions by 80-95 percent in 2050 requires significant efforts as a major shift in thinking is needed to ensure a rapid transition away from modes of living based on constantly increasing energy consumption. The apparently easier path to 'solve' this problem involves securing more energy imports in order to cover the gap between demand and internal production. Securing increased electricity imports from neighbourhood countries has already received a great deal of EU attention in the Western Balkans, Ukraine and Georgia.

In the case of the Western Balkans, Italy plans to import energy derived from renewables and large dams in these countries so as to meet its own renewable energy targets, as set out in its Renewable Energy Action Plan. The total amount of electricity to be exported to Italy from Albania is not much less than the amount being produced right now.

The EIB should not support this kind of approach to renewables financing. These export-oriented projects have a number of negative implications for the environment and people, including: the degradation of ecosystems, the risk of flooding, and negative impacts on the livelihoods of local people.

The question of benefit distribution is also important – in some of these projects the conditions under which private companies are involved means that the majority of revenues flows into private hands, with ordinary people having to deal with the real project risks. It is important to stress that people in the EU are also at risk of being exposed to some of the negative impacts that may arise from these 'energy grabbing' ambitions.

Thus when it comes to the EIB investing in renewable energy outside Europe, the main question to be addressed is the aim of these investments in renewable energy outside Europe. **EIB investments in renewable energy outside Europe should be targeting local demand first and foremost.**

For those countries of south-east Europe aspiring to become EU members, there are still significant legal and administrative barriers for renewable energy, including lack of differentiation for permitting procedures between small and large installations, difficulties with agreeing on grid connection with the electricity grid companies, and lack of support from governments who see renewable energy as a side dish to go with the main meal of fossil fuels and large hydropower plants.

Given that certain renewables projects do have significant potential to harm the environment and communities, any renewable energy project should be based on the environmental impact assessment (EIA) procedure in line with the EU EIA Directive. Such projects should preferably be small in scale and decentralised, based on sustainability criteria that can limit the possible negative impacts of renewable energy projects.

Proposed sustainability criteria are attached in Annex I of this document.

Energy efficiency

Reducing energy consumption in industrialised countries is one of the most important steps to combat climate change. Given the huge potential for energy efficiency in the housing and industrial sectors, the EIB can provide significant value-added by investing in projects that reduce the consumption of energy in buildings. At the same time, the EIB should always assess whether energy gains might produce 'rebound' effects, such as whether energy savings are nullified by more energy use through an increase in automobile or plane transportation, and so on.

Energy efficiency should be priority area in the EIB's the energy investments as it is the most effective way to increase security of supply, while meeting other EU objectives such as GHG emissions reductions target and creating jobs.

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

The EIB needs to introduce more creative schemes to overcome the barriers to implementing energy efficiency projects.

There are quite well documented obstacles to the introduction of energy efficiency. With a large group of actors having to take comparatively small actions and investments makes it difficult for energy efficiency measures and initiatives to be handled by major investment banks. As a result, it is natural for a bank such as the EIB to look for major projects where there is a single action implemented in an industry where projects will be handled by one company with clear sources to repay the loan.

However this approach results in a large proportion of the energy efficiency potential untouched. The most obvious issue – or 'the lowest hanging fruit' – concerns the energy consumption of buildings. Due to the large number of actors and the small size of projects, this cannot be addressed via standard lending practices. Yet, of course, this sector requires the support of public financial structures more than any other.

Look to, and learn from, the success stories so far

To date, a range of different financial schemes implemented in the EU states have overcome such problems in various ways. And although such schemes have been created with different preconditions and with different types of financing involved, there is a space to build on that experience and develop financial schemes that will be new for EIB.

For example, experience can be drawn from the utilisation of resources received through state initiatives in individual member states. The Green Investments Scheme in the Czech Republic is widely regarded as a successful arrangement to involve citizens and businesses in energy efficiency actions. In addition, efficiency investments have created jobs that are spread evenly over the region involved and benefit small- and medium-size enterprises in the building sector, one that has been especially devastated by the economic crisis.

A study by Miroslav Zamecnik[5], of the Czech government's economic committee, shows that the Czech Green Investment Scheme, supporting efficiency measures in private housing, has created 11,100 new jobs annually. Zamecnik writes: "In terms of how each Czech crown invested benefitted the national economy, I can see no better anti-crisis measure."

- What role can Energy Service Companies (ESCOs) play in developing energy efficiency investments?

There are different experiences with ESCOs in central and eastern Europe. Although in many countries Energy Saving Companies have been effective in implementing business projects to reduce energy consumption, the concept should not be viewed as the one to focus on. There are limitations to what ESCOs can do, outlined by the European Commission Joint Research Centre (JRC), among other sources[6]:

- Classic ESCO services are usually provided to large energy users, spending at least 100,000 €/a on energy.
- Only large energy users can have energy retrofit projects large enough to absorb the ESCO fees needed to cover the costs.
- Single households are unable to benefit from ESCOs because of minimum size criteria.
- Social Housing special case – main issue: how to recuperate investment costs from tenants?
- ESCOs are for-profit organisations – they should not be expected to tackle projects with too high level of risk and/or low expected profit.

- What is the potential for energy efficiency outside Europe?

5 Cited in 'Home is where the heat is. Thermal insulation programs for buildings in the Czech Republic and its positive effect on job creation', available at: http://bankwatch.org/publications/home-is-where-heat-is
6 http://www.iea.org/media/workshops/2012/energyefficiencyfinance/2d4Langenheld.pdf

Energy efficiency should equally be a priority for the EIB's actions in the energy sector outside the EU. By lending for energy efficiency, the EIB will contribute to EU objectives in actions to combat climate change and improve security in selected regions. In neighbouring countries the potential for energy efficiency is at least as high as in the EU's new member states.

- Do you consider the criteria used by the Bank to categorise projects as Energy Efficiency projects appropriate (see Annex 1)? What alternative would you propose?

"For projects to be considered for financing by the Bank as energy efficiency projects, they must demonstrate that they will reduce energy consumption by at least 20% compared to the situation before their implementation, or ensure that the energy savings resulting from the project account for at least 50% of the investment cost over the project's life."

"Combined heat and power (CHP) projects, including coal and lignite fired stations, can also be considered for financing by the Bank under the EU's energy efficiency objective provided that they are high efficiency CHP projects as defined in the relevant EU directives".

While energy efficiency measures at power plants can lead to increased efficiency at the facility, they bring only relative improvements and do not take into account that closing the plant and replacing it with a different kind of generation capacity may bring a much greater improvement in terms of emissions reduction. Therefore the baseline with which the new level of efficiency is being compared should not be only the old plant, which in any case may have to be closed due to legal requirements, but rather projects to improve energy efficiency at an existing plant should only be financed by the EIB if carrying out the improvements would lead to the plant having lower GHG emissions than other feasible alternative solutions.

Criteria for defining the feasibility of alternative solutions could include:

- Technological feasibility and efficiency.
- Greenhouse gas emissions.
- Other environmental impacts: water and land use, pollution.
- Social impacts.
- Costs.

For example, implementing energy efficiency measures at coal plants can improve efficiency – however it is not likely that, even with the gained increase in efficiency, that replacing the plant with another type of electricity generation would not have led to greater emissions reductions.

Energy efficiency measures implemented at coal-fuelled power plants can also conflict with the underlying need to phase out use of coal in the power sector if such measures end up extending the lifetime of the plant in question, thus diminishing the chances of countries meeting the EU's long-term climate goals. Therefore, energy efficiency measures at power plants run on coal should not be financed by the EIB.

It is also currently unclear how the EIB calculates the energy efficiency components of combined heat and power projects. For example, the total EIB loan of EUR 200 million for

the construction of a natural gas-fired combined-cycle power plant in Pego, central Portugal, was classified as an energy efficiency investment, while in the case of other similar projects only parts of the respective loans are classified as energy efficiency.

There are also a number of EIB financed projects outside of the energy sector classified as 'energy efficiency' projects, or projects with energy efficiency components, for which it is unclear what energy efficiency criteria were used. Notable examples of such are:

1. **Vodafone IT Universal Mobile Broadband**, a project with the objective of: (i) mobile access network extension and upgrade applying HSPA+ technology; (ii) mobile access/backhauling capacity and quality enhancement to support the improved access network, and; (iii) modernisation to improve cost efficiency, respond to strategic challenges and prepare the adoption of LTE/4th generation technology.
It is neither assessed nor described how this project contributes to a reduction in GHG emissions, what would be the level of the reduction and – further – it is not mentioned in the project's description that such an objective exists.

2. **SAP Software Innovation**.
This project is supposed to support the European software development industry in retaining its global market leadership. The project involves the latest technologies and substantial R&D to provide competitive software applications for related target markets. Furthermore the promoter is cooperating with European partners in European R&D initiatives, such as the FP7.

Again, it is not clear what energy efficiency criteria were used to classify the project as an energy efficiency project and what are the GHG emissions reductions expected after the project is implemented. The EIB should always make such crucial details clear in the relevant project information document.

3. **Construction of a 544-bed hospital designed to consolidate all services in a new building on the site of the Maria Middelares Hospital (Ghent)**.

According to the EIB, by merging the services on one single site, this project will lead to the reorganisation of service delivery, of logistics and to an improvement of the general functioning of the hospital. Unit-cost reductions, shorter patients' stays and greater patient comfort are the expected results of the project.

Although the EIB classified part of the project as being energy efficiency relevant, it is unclear – again – which energy efficiency criteria were used and what are the final expected GHG reductions.

It is obvious that new buildings are more energy efficient when compared to older buildings, however this should not mean that the EIB simply classifies all new constructions as being 'energy efficient'. Only specific installed measures that go beyond the current normal practice (for example not just standard energy efficient double-glazed windows) should be classified by the bank as energy efficiency and supported as such by the EIB.

The EIB should place a much greater emphasis on the refurbishment of existing houses and public buildings, where energy efficiency potentials are large and often untapped. Closer cooperation with municipalities, towns and cities may bring positive results. The bank should consider this to be its top priority within its energy efficiency lending.

Further, energy efficiency criteria should be officially integrated in all of the EIB's official documents, including lending policies and application documents. Improved energy efficiency should be a condition for obtaining funding – becoming a consideration at least as important as a project's financial viability and its respect for environmental and procurement policies.

The EIB should verify that these criteria are met and that no funding should end up in projects that do not reduce energy consumption by at least 20 percent compared to the situation before their implementation.

Such EIB project conditions, energy efficiency assumptions and their results should be transparent and publicly available.

Fossil fuels

Gas

- 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?
- What would be the best approach to increase security of gas supply and reduce import dependency?
- Given the large uncertainty on future gas demand, what is the risk that investment in natural gas infrastructure may be stranded?

EIB lending to fossil fuels is dominated by natural gas. Natural gas is promoted as the cleanest and most 'environmentally friendly' fossil fuel – however, it is still a fossil fuel and is clearly not widely accepted as a solution for combatting climate change[7].

The EIB's claims that investing in natural gas-based CHP installations is implicitly accepted in the EU (and by some environmental groups) are untrue.

This may have been the case a few years ago, but now it is widely recognised that some marginal efficiency gains are not enough to decarbonise the energy sector and to reduce GHG emissions by 80-95 percent by 2050. It is also recognised that there is a substantial difference between the decisions of EU member states and investors on the issue of whether to continue investing in gas, and if such investments should be supported from public funds like EIB loans.

The EIB's investments in natural gas based CHP installations (and gas pipelines and storage facilities) do not necessarily replace old ones and, thus, they are likely to contribute to the expansion of gas infrastructure and deepening the energy supply problem due to the lock-in effect of new gas infrastructure for the coming decades.

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[7] International Energy Agency press release, 6 June 2011, www.iea.org/press/pressdetail.asp?PRESS_REL_ID=415

Relative energy efficiency gains (as the in case of gas fired co-generation plants) do little to limit the climate impact of gas infrastructure as this type of infrastructure is designed to last for decades, thus intrinsically generating demand for fossil fuels by lowering their costs or by the need to recover the investments in such infrastructure.

We can see no value in any continued EIB support being provided to this technology – one which is already mature and could attract financing from other sources. The EIB's resources are needed to transform the economy into a resource-efficient, new renewables-based one and should not end up as stranded assets.

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

As mentioned in the EIB's lending policy consultation paper, shale gas is currently being promoted as a 'transitional fuel' or a 'bridging fuel'. As the EU, and its new member states in particular, are seeking to decrease import fuel dependency and increase security of energy supply, they wish to find a 'silver bullet' that can solve these problems. However, unconventional gas resources like shale gas cannot meet these expectations, as a growing wealth of hard evidence suggests.

We anticipate that the EIB is already highly cognisant of the grey areas that surround the potential development of shale gas in the EU, with scepticism towards the nascent fossil fuel sector coming, among others, from a range of financial bodies. Nevertheless, for the purposes of this policy review and for general clarity, we lay out some of the principal egregious issues below.

First, the potential development of shale gas in the EU is in conflict with existing climate and energy policy strategies (Climate and Energy Roadmap 2050), as the development of the shale gas industry would put our CO2 emissions on a "trajectory consistent with a probable temperature rise of more than 3.5 degrees Celsius in the long term", according to the IEA[8].

Shale gas, despite being less carbon intensive than coal (for example), still has a high carbon intensity that cannot fit with the EU's commitment to a low-carbon economy (reducing GHGs to 80-95 percent below 1990 levels by 2050) and, as agreed by the EU's 26 member states, the aim of almost full decarbonisation of the power sector by 2050. Any pick-up in EU shale gas investments would mean a continued fossil fuel lock-in during such a decisive period (for the next 25-40 years) for European climate objectives.

Some scientific research has indeed exploded the myth of 'low-carbon' unconventional gas: owing to attendant methane emissions witnessed already in the US shale gas sector, it has been noted that "compared to coal, the footprint of shale gas is at least 20 percent greater and perhaps more than twice as great on the 20-year horizon"[9].

8 International Energy Agency (IEA), May 2012, 'Golden Rules for a Golden Age of Gas', p.91, http://www.worldenergyoutlook.org/goldenrules/

9 Howarth, R. Ingraffea, A. Santoro, R. "Methane and the Greenhouse Gas Footprint of Natural Gas from Shale Formations", March 2011

Second, the exact extent of Europe's unconventional gas reserves is unknown, although the IEA has estimated it as 35 tcm of "technically recoverable" gas[10]. Given that updated estimations of Polish reserves (originally thought to be the biggest in the EU) are only 1/10 of earlier estimates, there is very likely not enough shale gas exploitable in the EU to regard it as a 'game changer' in the continent's energy supply.

Moreover, the European shale gas scenario is much different from the ('miracle') US one: the shale reserves are geologically different, the EU population is much higher, and the legislative environment is more complex. Not surprisingly, scepticism is widespread about the financial and technical viability of developing and extracting shale gas in Europe, even from major industry players such as Shell.[11]

Third, according to several studies, including European Parliament reports, the potential socio-environmental impacts of unconventional gas exploration and exploitation are highly concerning, including: a high risk of leakage, air pollution, high water use, water and land contamination, extra traffic generation and noise, the risk of earthquakes and vibrations.

Financially, shale gas could "substitute not for coal but for renewables", stifling the growing renewable sector and leaving us facing a looming energy gap.[12] Unconventional gas investments would, in turn, distract IFIs such as the EIB, investors, and operators from the real opportunity to develop the renewables sector – guaranteeing long-term supply – and to invest in greater energy efficiency, both of which will bring added long-term benefits in terms of jobs. A UK cost comparison (conducted in 2011) between gas and wind power found that investing in offshore wind would generate 17 percent more electricity compared to the same level of investment in shale gas. If the same amount is invested in onshore wind, it would generate up to twice as much power.[13]

The IEA has also found that the impact of falling gas prices as a result of increased shale gas development could threaten the viability of low carbon alternatives and put pressure on government support schemes.[14]

Finally, a June 2011 study of the European Parliament's Committee on Environment, Public Health and Food Safety found that: "it is very likely that investments in shale gas projects – if at all – might have a short-living impact on gas supply which could be counterproductive, as it would provide the impression of an ensured gas supply at a time when the signal to consumers should be to reduce this dependency by savings, efficiency measures and substitution".[15]

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10 Quoted in ibid, http://ec.europa.eu/environment/integration/energy/studies_en.htm.

11 http://www.businessweek.com/news/2012-01-12/shell-ceo-says-the-potential-for-shale-gas-ineurope-is-limited.html

12 Stevens, P., "The 'Shale Gas Revolution': Developments and Changes", August 2012, Chatham House (http://www.chathamhouse.org/publications/papers/view/185311%20)

13 "Shale gas: an updated assessment of environmental and climate change impacts", November 2011, Broderick, J et al, Tyndall Centre, pp71 & 72

14 http://www.reuters.com/article/2012/09/13/energy-iea-gas-idUSL5E8KD4ZJ20120913

15 Ibid, page 11, http://ec.europa.eu/environment/integration/energy/studies_en.htm.

Given all of these problems outlined above, not to mention: a) the obvious inadequacy of current EU environmental and other relevant legislation to address unconventional gas issues, and; b) deep public concerns across the EU over shale gas exploration and potential extraction – we recommend that no shale gas activities should be financially supported by the EIB.

The EIB should take no role in the exploration, extraction, transportation and storage of natural gas or shale gas. These are sectors which could be financed by other sources, and not by EU public institutions such as the EIB.

Coal

- 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?
- What will be the role of local coal supplies as input for highly efficient CHPs?

Coal-fired power plants are the largest source of anthropogenic GHG emissions responsible for global warming.[16] According to James Hansen, director of NASA's Goddard Space Institute, ending emissions from coal "is 80 percent of the solution to the global warming crisis".[17] Hansen thus advocates a moratorium on new coal-fired power plants and a phase-out of the existing coal fleet.

Hansen is not the only scientist expressing concerns over the rate with which coal generation and consumption is expanding. The IEA's '450 Scenario' examines the actions necessary for the global climate to have a reasonable chance of staying within the 2°C rise from pre-industrial revolution times levels and finds that almost four-fifths of the CO2 emissions allowable by 2035 are already locked-in by existing power plants, factories, buildings, etc. If action to reduce CO2 emissions is not taken before 2017, according to the IEA's scenario, all allowable CO2 emissions would be locked-in by energy infrastructure existing at that time.

According to HSBC's recent Global Research report, out of a global carbon budget of approximately 1,000-1,500GtCO2 for the first 50 years of this century, we have already appropriated 420Gt in the first 11 years alone.[18] This means that no more than one-third of proven reserves of fossil fuels can be consumed prior to 2050 if the world is to achieve the 2°C goal, unless CCS technology is widely deployed.[19]

Furthermore, according to the IPCC, the most authoritative source in the field, this would require dramatic GHG emissions reductions in the Annex-I countries – at least 80 percent emissions decreases in 2050 compared to 1990 levels.[20] According to the European Commission's estimations, the most technologically and economically feasible scenario for

16 Heffa Schucking, Lydia Kroll, Yann Louvel and Regine Richter, Bankrolling Climate Change, December 2011.
17 Letter from James Hansen to Nevada Governor Gibbons, April 14, 2008.
18 HSBC Global Research, "How to avoid the climate cliff. Doha climate conference preview", 24th October 2012.
19 International Energy Agency, World Energy Outlook 2011, Paris, France: IEA Publications.
20 Intergovernmental Panel on Climate Change, The fourth assessment report, 2007.

achieving this requires the almost total decarbonisation of the energy sector by 2050.[21] In the economics of climate change mitigation, speed of action is crucial. Again, according to the IEA, "every dollar of investments in the power sector avoided before 2020, corresponds to an additional USD 4.30, which will have to be spent to compensate for higher emissions after 2020." The IEA report concludes that: "Delaying action is a false economy".[22]

Growing consensus on ending fossil fuel subsidies – with coal top of the pile

Global coal production reached 7,228.712 million tonnes in 2010 and coal consumption reached 7,238.028 million tonnes. More than 60 percent of the coal consumed was used to generate power.[23] In the EU, coal is predominantly an imported fossil fuel. In 2010, 24 out of the EU's 27 member states (including Poland) imported more coal than they exported.[24] Total EU-27 coal consumption exceeded 725 million tonnes and outstripped the production of EU member states by over 175 million tonnes, adding additional pressure on already strained national budgets and increasing energy insecurity as a result of the EU 27's fossil fuel dependence. Thirteen EU member states have no coal production of their own and thus are fully dependent on coal imports from abroad. Furthermore, of the bloc's 27 members, a whole 18 have no plans to build new coal power stations.[25]

There is a growing consensus that a deep reduction in subsidies for fossil fuel projects, including loans from public banks,[26] is one of the most urgent tasks. In 2009, during the G20 summit in Pittsburgh, world leaders called for the phasing out of fossil fuels subsidies, that would reduce overall human induced GHG emissions by 50 percent by 2050.[27] Calculations provided by the IEA, focusing on subsidies for consumption, estimate that phasing out fossil fuel subsidies by 2020 would reduce growth in energy demand by 4.1 percent and cut growth in CO2 emissions by 1.7 gigatonnes.[28]

Yet in 2011, according to the IEA's World Energy Outlook 2012, overall subsidies to fossil fuels increased by 30 percent to USD 523 billion – they dwarfed subsidies to renewables, being six times greater for 2011.[29] While subsidies for renewable energy are expected to grow – from USD 88 billion globally in 2011 to nearly USD 240 billion in 2035 – this latter figure is still less than half of the current level of subsidies going to fossil fuels.

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21 European Commission, A Roadmap for moving to a competitive low carbon economy in 2050, March 2011.
22 International Energy Agency, World Energy Outlook 2011, Paris, France: IEA Publications.
23 IEA, 2011. World Energy Outlook 2011. Paris, France: IEA Publications.
24 Calculations based on IEA, 2011. Coal Information 2011. Paris, France: IEA Publication.
25 http://www.greenpeace.org/international/en/news/Blogs/makingwaves/will-the-carbon-monoxide-man-end-finlands-rel/blog/42704/
26 In the WTO's definition, loans from public banks are considered a subsidy if 'a benefit is conferred'. We would argue that this is the case with EIB loans, which help to leverage other financing from other lenders, and may have further benefits in the form of low interest rates, grace periods, payback periods etc.
http://www.wto.org/english/docs_e/legal_e/24-scm_01_e.htm
27 Leaders' Statement: The Pittsburgh Summit of G20, September 24-25, 2009.
28 http://www.worldenergyoutlook.org/files/ff_subsidies_slides.pdf
29 IEA, 2012. World Energy Outlook 2012. Paris, France: IEA Publications.

In this highly concerning, coal-specific context, the EIB's actions continue to disappoint: the World Resources Institute this year ranked the EIB the fifth highest public financial institution in terms of lending to coal power plants, with nine projects financed for the total sum of USD 2 510.94 million.[30] If a broader definition of financing of coal projects is applied, taking into account any project that has had a coal component, the number of EIB financed projects rises to 11 in the 2007-2012 period alone.

For this period, the EIB has disbursed EUR 1.88 billion in funding to coal-fired plants, comprising the following projects:

- Advanced Coal-Power Plant Du-Walsum in Germany, EUR 397m (2007).
- PPC Environment in Greece, EUR 80m (2007).
- Enel Energia Rinnovabile & Ambiente in Italy, EUR 90m (2007).
- TES - THERMAL Power Plant Sostanj in Slovenia, EUR 440m (2007 and 2010).
- Power Plant Karlsruhe in Germany, EUR 500m (2008).
- Fortum CHP And E-Metering in Poland, EUR 100m (2009).
- SE Power Plant And Forest Industry R&D, Poland, EUR 65m (2010).
- South Poland CHP in Bielsko-Biała in Poland, EUR 68.1m (2011).
- Paroseni Power Plant in Romania, EUR 32.7m (2011).

In addition to loans from IFIs such as the EIB, coal is subsidised in many other ways. Common forms include: direct subsidies, tax credits or exemption from local taxes, public loans or loan guarantees, favourable accounting treatments, avoided carbon price, and ignored social costs. Direct subsidies for new coal power plants and coal mines are widely applied in the EU.

For example, up to 2020, the construction of new high-efficiency coal plants with CCS implementation can receive financial support of up to 15 percent of total investment.[31] These subsidies create an uneven playing field and thus constitute an additional reason for the EIB not to support coal. By lending to coal-fired generation units the EIB is further tipping the economic balance against cleaner sources of energy, such as renewable energy technologies, that produce far fewer negative externalities.

Fossil fuel subsidies via public banks have also been the subject of criticism from Lord Nicholas Stern, a former World Bank chief economist. During the Durban climate conference in December 2011, Stern commented that rich economies waste money and disadvantage renewable energy by giving away tax breaks, loans, and other subsidies to the fossil fuel industry. Cutting them would save roughly USD 10 billion a year, providing investment potential that should instead be directed towards helping poor countries tackle climate change.[32]

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30 Ailun, Yang, and Yiyun Cui. 2012. "Global Coal Risk Assessment: Data Analysis and Market Research". WRI Working Paper. World Resources Institute, Washington DC. Available online at: http://pdf.wri.org/global_coal_risk_assessment.pdf, p. 19.

31 European Commission, 2012. State Aid: Commission Adopts Rules on National Support for Industry Electricity Costs in Context of the EU Emission Trading Scheme http://europa.eu/rapid/pressReleasesAction.do?reference=IP/12/498

32 Lord Stern: "Rich nations should stop subsidising fossil fuel industry, Guardian, 7 December 2011

The hidden costs of coal financing increasingly out in the open

A broader definition of coal subsidisation includes also the recognised and unrecognised social costs of extracting and burning coal. Air pollution generated by coal imposes significant costs on human health and the environment. Black lung disease, for example, is caused by inhaling coal dust during mining activities. The National Academy of Sciences calculated the non-climate-related external costs associated with coal electricity generation in the United States at USD 62 billion for 2005.[33] Similarly, the European Environment Agency concluded that air pollution from power plants cost Europe EUR 112 billion in 2009[34]. A Chinese study has estimated that the external costs of all the coal used in 2007 totaled RMB 1.7 trillion, or 7.1 percent of China's gross domestic production for the same year[35]. Indeed, coal is much more expensive when all the externalities are factored into the equation.

Phasing out EIB lending to coal mining companies and coal-fired generation units would also help to achieve the European goals of improving air quality and water quality enshrined in the Water Framework Directive – Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy – and the CAFE Directive – Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe.

Both of these are difficult to achieve if more polluting sources of energy generation such as coal or lignite-based units continue to be financed. One of the main anthropogenic sources of mercury ending up in European rivers is coal-based energy production, and even with the existing coal generation fleet it will be hard to fulfill the requirements of the Water Framework Directive. New coal-based generation sources would make it harder still.

This is a further reason for the EIB, guided by EU legislation, to halt lending to coal and lignite-fired power plants as part of its new energy sector lending policy.

Moreover, water required for energy production is also a factor underlined by the IEA in its latest World Energy Outlook for 2012. The IEA identifies the growing importance of water as a criterion for assessing the viability of energy projects, as population and economic growth intensify competition for water resources. This is especially true for the most water consuming energy generation technologies, namely coal and lignite-based generation as well as shale gas extraction based on hydraulic fracturing. In some cases, water availability could threaten the viability of such projects.

EIB lagging behind some private sector banks on coal financing

Major private banks such as HSBC and West LB already have more stringent rules on coal-fired power plant financing than the EIB. The technical criteria of HSBC's energy sector policy are the most stringent ones and exclude any new CFPP deals in developed countries

33Hidden Costs of Energy" Unpriced Consequences of Energy Production and Use; http://www.nap.edu/openbook.php?record_id=12794&page=340

34 Revealing the costs of air pollution from industrial facilities in Europe; Technical report 15/2011, European Environment Agency

35 Mao Yushi, Sheng Hong and Yang Fuqiang, 2008. True Cost of Coal, http://www.greenpeace.org/eastasia/PageFiles/301168/the-true-costof-coal.pdf

by requiring an emissions intensity of no more than 550g CO2/kWh. West LB also requires its clients "to ensure that there is no feasible less GHG-intensive alternative/fuel/energy source", and to have "GHG reduction targets (to) be in place, monitored and audited in accordance with the 2 degrees Celsius target of the EU and UNFCCC".[36] Notably, both of these institutions are private banks and, unlike the EIB, they are not obliged to follow EU policy objectives such as on climate change.

Moreover, some US financial institutions have mainstreamed climate requirements into their lending. The US Overseas Private Investment Corporation (OPIC) has a greenhouse gas cap37 that limits the emissions OPIC can have 'on its books' for any fiscal year. The policy requires a 30 percent reduction in portfolio GHG emissions by 2018 and 50 percent by 2023. OPIC must account for the direct GHG impact of any project it finances and count it against its target. Given legacy emissions from past projects, OPIC now does not have enough cap space to finance new large fossil fuel projects. In 2011 it financed USD 1.3 billion in clean energy and no fossil fuel projects.

There are several good reasons for private banks to be wary of coal financing. HSBC identifies four factors beyond carbon pricing that can change coal's upward trend: structural change, energy substitution, air pollution and water scarcity.[38]

Coal-fired power companies in China have suffered significant financial losses in recent years — a reality that receives little attention outside of China. According to a State Electricity Regulatory Commission report, the top five Chinese power companies lost a total of RMB 15 billion (USD 2.4 billion) in their coal-power generation business in 2011. Chinese power companies face the dual challenges of rising coal prices on the one hand, and a government-imposed electricity price freeze on the other. Investments in new coal-fired plants dropped 26 percent in 2011 to less than half of what they were in 2005.[39] Coal-based generation capacity in the EU is also in decline, falling from roughly 200GW in 2006 to 177GW in 2009. HSBC expects this trend to continue.[40]

Given the urgency of climate change and the need for investment into a resource-efficient, renewables-based economy there is no space for new coal and lignite fired generation in the EU power system in the medium term as in this timeframe CCS technology is very unlikely to be commercially available as a competitive energy option. Thus the role of coal and lignite generation in Europe will diminish over time constituting an ever declining portion of the EU's energy mix. This will be especially visible with the effects of the EU's Large Plant Combustion Directive that will lead to the closure – by the end of 2015 – of approximately

36 http://www.portigon.com/cm/content/portigon/i/en/ueber-portigon/unsereverantwortung/nachhaltigkeit/_jcr_content/contentparsys/box_2/download_0/file.res/WestLB_Policy_Coal-Fired_Power_Generation.pdf

29 http://www.wri.org/stories/2007/06/opics-greenhouse-gas-initiative
38 HSBC Global Research, "How to avoid the climate cliff. Doha climate conference preview", 24th October 2012.
39 State Electricity Regulatory Commission of China (SERC),2012. Electricity Regulatory Annual Report (2011), http://www.serc.gov.cn/ jggg/201208/P020120817333010586438.pdf, <in Chinese>.
40 HSBC Global Research, "How to avoid the climate cliff. Doha climate conference preview", 24th October 2012.

20GW of coal plants that have decided not to install pollution control equipment[41], and the Industrial Emissions Directive that will result in further closures in the 2016-2023 period.

The EIB's evaluation criteria for coal and lignite power plants

Relative energy efficiency gains can no longer be deployed as an excuse for the life-time expansion of existing coal-fired units, or what the EIB refers to as 'replacement'. Replacement or lifetime extension can be considered as a two-phase process:

1. Old obsolete technology is coming to the end of its economic or technological life, and thus it needs to be scrapped or closed.
2. New investment is undertaken that will perform the same functions as the technology/facility that has been scrapped or closed.

However, treated as one process, choosing a new plant at the same site is treated as a default option.

An appropriate link with the climate policy targets is, however, missing in the decision to replace or expand the lifetime of existing plants. The so-called 'replacement' of a large-scale fossil fuel generation unit from the 1970s or 1980s with a new BAT (best available technology) unit ignores developments in climate science and cumulative knowledge indicating the urgency and scale of the challenge posed by climate change. If such a new unit will not bring about an increase in CO2 emissions, but maintain them on a similar or slightly reduced level to current ones, the EIB tends to assume that this is good enough, without analysing the unit's impact on long-term climate goals such as the EU 2050 targets.

Two categories of projects are a good example of this clash. The first category is refurbishment of an existing industrial or power generation facility, and the second category is the replacement of an obsolete generation power unit with the latest best available technology (based on the same fuel type).

For the first category, it is true that a refurbishment can seriously limit the emissions of various types of organic and toxic particles and thus lead to an overall improvement of air quality in the area or region where the industrial or power generation facility is located. However, when it leads to an increase in the absolute lifetime GHG emissions, an alternative way to look at refurbishment is that it prolongs the time before that generation or production technology is replaced by a more environmentally friendly and less polluting one, or that demand is reduced so that it does not need to be replaced in the first place.

Any lengthening of the lifetime of fossil fuel power plants also means that the owner of the facility continues to extract profits from passing the external costs onto society at large (at least in countries not covered by the EU ETS). Even in the EU, the costs of emissions other than CO2 are not fully accounted for, and with CO2, the uncertainty of the future CO2 price makes such accounting a difficult task.

41 Ibid.

Closing the old facility down and either replacing it with sustainable renewable energy investments, or working with the local authorities or local communities to reduce energy consumption by investing in demand-side energy efficiency measures and decentralised, locally-owned small-scale renewables, would be a more sustainable and climate friendly option than a replacement – the second category mentioned above. Replacements of old plants with more modern versions of the same technology endanger the below two degree Celsius trajectory and in the near future will contradict the recommendation of the IEA that all investments after 2017 should be in zero-carbon utilities, unless existing infrastructure is scrapped before the end of its economic lifespan.

Thus, the EIB needs to look much more critically at planned fossil fuel refurbishment and replacement projects and examine whether they are compatible with 50-70 percent global GHG reductions by 2050 and 80-95 percent reductions in the EU. The bank also needs to tighten up its project selection criteria accordingly, to ensure that it brings real added value with its investments rather than financing projects that may bring plants into compliance with current legislation but may inhibit the transition to an energy efficient, new-renewables-based economy. From this point of view, **any replacement in energy generation after 2013 for coal, and 2014 for gas, should be turned down by the EIB on the basis of climate science.**

- What evaluation criteria should the Bank use to assess the economic, environmental and financial viability of coal and lignite fired generation?

From the climate protection point of view, which we consider to be part of 'environmental viability', no EIB investment in energy generation from coal or lignite after 2013 should take place. The justification is provided above.

In order to assess further the economic, environmental and financial viability of any lignite and coal project, the EIB should conduct a Life Cycle Analysis of the proposed coal or lignite-fired power plant, including all the external costs the plant produces, using the ExternE methodology[42]. This methodology is widely accepted for assessing the external costs of energy generating technologies. If applied, the methodology would lead to the abandonment of any investment in new coal or lignite based-fired generation due to its higher total costs (including the external costs) in comparison to other energy generation alternatives.

The EIB should also fully include the EU ETS allowance prices during the whole proposed lifetime of the assessed coal or lignite-fired generation unit.

42 http://www.externe.info/externe_d7/

Nuclear

- What role do you expect nuclear power to play in the European energy market?
- As nuclear power stations are ageing, should their life be extended (where possible) or should they be replaced with other generation sources?
- 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?

Nuclear energy is intrinsically unsafe and poses serious environmental and social risks. The only acceptable investments can go into the decommissioning of nuclear facilities for those countries or companies that have decided to abandon the use of nuclear power.

IFIs such as the EIB should support steps to make nuclear companies responsible for their waste, rather than taking over this responsibility and starting to finance waste management on their own. Companies involved in nuclear energy projects should not receive EIB financing for any project.

The EIB should cease all lending for nuclear power, adopt a ban on future loans to nuclear, and instead focus on energy investments that are truly environmentally sustainable.

EIB expertise in nuclear projects should be utilised solely for projects that directly and clearly lead to the early closure of reactors.

EIB energy lending outside of the EU

- In a developing market context, where should the balance lie between meeting local energy needs at least cost and reducing global greenhouse gas emissions – the trade-off between affordable energy for all and sustainable energy for all?

- What should be the role of the EIB in promoting new technology and helping to transfer existing technologies to new markets?

- Where can sources of low-cost finance be more effectively used by the private sector to develop energy projects?

- What are the main barriers to developing sustainable energy sources in developing markets?

In its energy lending outside of the EU, the EIB as an EU institution is obliged to adhere to the objectives of EU external action set out in Article 21 of The Treaty on European Union. Among others these are: support for democracy, the rule of law, human rights and the principles of sustainable economic, social and environmental development of developing countries with the primary aim of eradicating poverty.

In the second revision of the Cotonou Agreement guiding EU cooperation with the developing countries of the Africa, Caribbean and Pacific (ACP) regions, for the first time there is a clear recognition of the importance of climate change. Article 20 identifies climate change as one of the areas that should be mainstreamed into all areas of cooperation between the EU and other signatories of the treaty. This commitment should also govern the EIB's lending in the regions covered in the agreement.

The Decision of the European Parliament and of the Council from 25 October 2011, on an EU guarantee for the EIB against losses under loans and loan guarantees for projects outside the Union, contains clear guidance for EIB energy lending in countries outside of the EU not covered by the Cotonou Agreement. This legally binding document obliges the EIB to develop a strategy for increasing the percentage of projects promoting the reduction of CO2 emissions and phasing out financing projects detrimental to the achievement of EU climate objectives (Article 6). The strategy should be ready by the end of 2012.

This Decision of the Parliament and the Council gives a clear direction for EIB lending outside of the EU. In its energy lending outside of the EU, the EIB should increase mitigation efforts and phase out detrimental projects that would lock the developing world into high-carbon energy infrastructure.

EIB financing should be complementary to corresponding EU policies, programmes and instruments in different regions. In terms of EIB performance outside the EU, the bank should ensure policy coherence for development as the main means of cooperation outside the EU through the promotion of dispersed sources of renewable energy in response to the needs assessed by the countries of the investment. Alignment with country strategies defined by the European Commission and host countries, as well as anticipated by the Paris Declaration

ownership of the partner countries in the process of planning the investments to be undertaken, should be implemented as a major part of the EIB's assessment procedure.

The prepared Results Measurement Framework, especially Pillar 1, should respond to the challenge of policy coherence and alignment to the needs of the countries of investment. It should include performance indicators in relation to the development, environmental and human rights aspects of projects funded, which will ensure that the EIB's performance is in line with the EU's development policy.

- In a developing market context, where should the balance lie between meeting local energy needs at least cost and reducing global greenhouse gas emissions – the trade-off between affordable energy for all and sustainable energy for all?

The dilemma of 'affordable versus sustainable sources of energy' in question can clearly be resolved through the application of the European Commission's approach to cooperation with countries outside the EU within the long-term development policy, envisaged in for example the Agenda for Change, the Commission's communication that seeks to increase the impact of EU development policy, specifically concerning support to sustainable economic growth or policy coherence as an approach to development.

The European Parliament has also already addressed the issue of how to resolve this potential trade off in its resolution on the World Bank's energy strategy for developing countries, where it specifically underlined that "the best way to resolve potential trade-offs is to examine supply security, health, environmental and economic impacts on local communities and the development and transfer of technology needed both at national and local level in order to guarantee access to sustainable technologies and renewable energy sources".[43]

Too often, under the objective of providing "affordable energy for all", fossil fuels and large dam projects have been promoted and financed by the EIB. Such projects not only bring about negative environmental and climate impacts but also fail to provide access to electricity for local populations.

Here is just a selection of such projects financed by the EIB in recent years:

1. Bujagali Dam in Uganda
2. Inga Power Rehabilitation in DRC
3. Dos Mares in Panama
4. Mozambique-South Africa Natural Gas exploration and export to South Africa Republic
5. West African Gas Pipeline in Ghana

It appears that the EIB is currently not well equipped to finance clean energy projects in the least developed countries. In the last few years hardly any EIB loans were granted in ACP countries for renewable energy and energy efficiency (excluding large dams). As things currently stand, we suggest **that EIB lending operations outside the EU in the least**

43 European Parliament resolution of 17 February 2011 on the World Bank's energy strategy for developing countries: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:188E:0040:0042:EN:PDF

developed countries are halted until such time as the EIB can demonstrate consistent fulfilment of its development obligations.

Cooperation, not exploitation

Cooperation in the energy sector is one of the EU's key priorities in its relationships with neighbouring states. Although the strategic documents and policies suggest that the promotion of energy efficiency, energy savings and the use of renewable energy sources should be the primary areas of cooperation along with "energy security", it is the latter that receives the lion's share of attention from the EU.

In a variety of ways energy security also receives a disproportionately large amount of financial support both directly from the European Commission, through the Neighbourhood Investment Facility (NIF) and from the IFIs, namely the EBRD and the EIB.

The EU's ambitious target to cut its GHGs by 80-95 percent by 2050 requires significant efforts as a major shift in thinking is needed to ensure a rapid transition away from modes of living based on constantly increasing energy consumption. The apparently easier path to "solve" this problem involves securing more energy imports in order to cover the gap between demand and internal production. Securing increased electricity imports from neighbourhood countries has already received a great deal of EU attention in the Western Balkans, Ukraine and Georgia.

These export-oriented projects have a number of negative implications for the environment and people, including chiefly: the degradation of ecosystems, the risk of flooding, the risk of accidents and uncompensated impacts from nuclear power plant operations, and negative impacts on the livelihoods of local people. The question of benefit distribution is also important – in some of these projects the conditions under which private companies are involved leave the majority of revenues going into private hands, with ordinary people left to deal with the real risks.[44]

EIB energy investments outside the EU (ie, limited specifically to the neighbourhood region) should focus on poverty eradication and access to energy for local people, targeting local demand, while avoiding export oriented energy investments or providing energy only for energy intensive industries such as mining and carbon intensive production. For each project the EIB should seek to establish and make it transparent whether there are direct benefits for the local population, and in particular it should address the needs of the rural population that lacks access to electricity.

Sharpened due diligence and project oversight needed

It is important too for the EIB to improve its practice and performance when it comes to the environmental and social impact assessment of projects. Projects implemented outside the

44 "A partnership of unequals. Electricity export from the eastern neighbourhood and Western Balkans"; CEE Bankwatch Network 2012, available at: http://bankwatch.org/sites/default/files/partnership-of-unequals.pdf

EU should meet both local and EU standards in terms of environmental and social issues. Projects should undergo an adequate appraisal process, including: consultation with the local population and country representatives at all levels, transparency (revenues, monitoring, evaluations) and an ex-post evaluation of each project.

Project assessment should not be limited to those projects financed, but should also consider impacts related to connected projects. For instance, any financed pipeline projects should also consider the impacts of wells and the climate impact of the transported fuel when it is combusted; transmission lines projects should consider the associated impacts of power plants or the impact of electricity production and its potential export. Similarly, the assessment of new energy facilities should include the possible impacts of related infrastructure.

For all energy projects outside the EU, the EIB should include in its ex-post evaluations performance indicators that relate to the development, environmental and human rights aspects of the projects funded – this can help ensure that the EIB's performance is measured in line with the EU's development policy and the EU Policy Coherence for Development.

EIB investments into projects involving state ownership or guarantees should also be assessed as an integral part of the national strategies (and the impacts of those energy strategies). In such cases, strategic environmental assessments should be required and taken into account by the EIB. Individual national strategies (or even positions taken during international climate negotiations) to combat climate change should also be considered.

- What should be the role of the EIB in promoting new technology and helping to transfer existing technologies to new markets?

In order to promote an urgent transition toward an energy efficient, renewables-based economy, the EU should concentrate its financial resources in its member states, in particular at a time of still severe economic crisis and difficulties for national governments to mobilise additional public resources. Therefore, the EIB should significantly redirect its energy lending to the EU itself, instead of increasingly concentrating on lending for large-scale fossil fuel infrastructure in neighbouring countries and sub-Saharan Africa, as a means of boosting the export of energy resources to Europe.[45]

In EU neighbouring countries, the EIB should support the development of renewable energy and energy efficiency through investment in the delivery of these technologies in the countries outside of the EU. The UN report *A Global New Green Deal* states that: "[...] the price of renewable energy has not fallen fast enough to save the world from experiencing dangerous climate change. Nor will it fall rapidly enough, on its own, to do so. But this problem is actually an enormous opportunity in disguise – for it is a problem the world can do something about. By working together to push down the price of renewable energy, as

45 Beyond our Borders. A critique of the external dimension of the EU energy policy and its financing mechanisms; http://www.counterbalance-eib.org/wp-content/uploads/2012/04/BEYOND-OUR-BORDERS.pdf

rapidly as possible, we can lift up the prospects of people everywhere, both environmentally and economically".[46]

Thus, the EIB can ensure unique additionality through supporting renewable energy and energy efficiency investments outside the EU, improving the affordability of new technologies by investing in smaller scale renewable energy investments. Currently, there is an uneven distribution of clean energy investments within and outside the EU, and this situation needs to be addressed and changed.

In general, the EIB should follow the European Parliament's resolution[47] directly advising the World Bank to "focus its energy strategy on making sustainable technology projects commercial and competitive through innovative financing and institutional development programmes, in order to promote a combination of energy efficiency and renewable energy as a viable and attractive option", and "that the development of clean technologies in poor countries is linked to technology transfer, which requires the main barriers to the dissemination of green technologies in developing countries to be identified in order to address climate change, as well as though to be given to new flexibilities with regard to intellectual property rights".

The major obstacle for the development of truly renewable energy and for ensuring energy efficiency in the immediate neighborhood is the lack of a suitable legal framework to provide the long-term sustainability of projects and programs. In addition, there is a lack of awareness about such projects, a high perceived risk and a lack of availability of new more efficient technologies.

To help address this, in the EU neighbouring countries the EIB should support the development of renewable energy and energy efficiency technologies and technology transfer, involving also the involvement and development of the local private sector, mainly via small- and medium-size enterprises. In order to do so the EIB could utilise different financial instruments available in individual member states and other IFIs and propose targeted instruments to the Neighborhood region.

Given that renewables do have significant potential to harm the environment and communities, any renewable energy project should be based on the environmental impact assessment procedure in line with the EU EIA Directive. Such projects should preferably be small in scale and decentralised, based on sustainability criteria (see Annex 1 below) aimed at limiting the possible negative impacts of renewable energy.

For example, the EIB's portfolio of energy funding to African countries has had a strong orientation towards the construction and restoration of hydropower dams and the refurbishment and expansion of power grids. This tendency appears to neglect the potential of investments in new renewable energy technology and decentralised power generation that would provide an alternative option better suited to reaching the poor, especially in rural areas.

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46 A Global Green New Deal for Climate, Energy, and Development, 2009 http://sustainabledevelopment.un.org/content/documents/cc_global_green_new_deal.pdf

47 European Parliament resolution of 17 February 2011 on the World Bank's energy strategy for developing countries http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:188E:0040:0042:EN:PDF

EIB investments into large dams

Large hydropower often has significant negative impacts on biodiversity, affected communities, and in some cases produces significant GHG emissions that often cannot be mitigated or compensated. These impacts have been analysed in great detail by the World Commission on Dams (WCD), which produced a set of recommendations that receives wide international support. However, too many dams are still being built that do not adhere to the WCD standards.

Though it is true that the production of hydroelectric power plants emits very little CO2 compared to the combustion of fossil fuels, this does not mean that the output of dams is neutral in terms of GHG emissions. In fact, the decomposition of organic compounds in the dams' reservoirs frees large quantities of GHGs that may contribute to global warming far more than CO2, such as methane (25 times more powerful than CO2) or nitrous oxide (300 times more powerful). Large dams indeed emit nearly 104 million metric tonnes of methane every year, making them significant contributors to global warming.

According to an early estimation recognised by the WDC, "*the raw emissions from the reservoirs may account for between 1% to 28% of potential global warming through GHG emissions*"[48]. Moreover, according to the National Brazilian Institute of Spatial Research, the 52,000 large dams in the world contribute to more than 4 percent of the climate change linked to human activity[49].

In addition, beyond the recognition of all the GHGs emitted from active dams, it is essential to note that a serious evaluation of their climate impact would require a complete analysis of their life cycle, including the emissions linked to their construction (the production of construction materials, especially cement and steel, the use of fossils fuels by machines, deforestation, road construction, etc), the emissions linked to the modification of land occupancy needed for the dams (deforestation, the conversion of floodplain wetlands to intensive agriculture, the adoption of irrigation on once rain-fed lands, and the increased use of fossil-fuel based artificial fertilizers[50]), and the emissions produced during their disassembly.[51]

However, according to the EIB's own manual, hydroelectric projects above 20 MW cannot be considered as projects with a negative impact on climate change while their net carbon balance is assumed to be positive.[52] Nevertheless, it has been agreed upon by the International Association of Small Hydroelectricity and the working group on renewable energy of the International Energy Agency that "small hydroelectricity" has a capacity limit of

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48 http://hqweb.unep.org/dams/WCD/report/WCD%20report_Barrages%20et%20D%C3%A9veloppement_Chapitre%203.pdf, p.81

49 http://www.internationalrivers.org/node/1361. For more information, Dirty Hydro: Dams and Greenhouse Gas Emissions : http://www.cdm-watch.org/wordpress/wp-content/uploads/2009/07/pub_internationalrivers_dirtyhydro.pdf

50 Mouvement Mondial pour les Forêts Tropicales: Barrages Le combat contre les dinosaures modernes: avril 2003, p.17-18, see : http://www.wrm.org.uy/deforestation/dams/texten.pdf

51 http://www.internationalrivers.org/node/571

52 http://www.eib.org/attachments/environmental_and_social_practices_handbook.pdf, p.15

10 MW.[53] If we add to this that the calculations over the real carbon output of large dams are questionable, it is consequently incorrect to automatically state that hydroelectric projects above 20 MW do not have negative impacts on climate change.

Finally, large dams often cause irreversible impacts to freshwater biodiversity and ecosystem services that are culturally and economically valuable to affected communities living downstream.

For all these reasons, we believe that **the EIB's investments in the large dams sector must be redirected towards true renewable energy sources with great urgency.**

Annex 1. Sustainability criteria for renewables

Definition of new renewables

New renewables are electricity generation installations without significant social and environmental impacts (according to the criteria listed below).

This category includes wind, solar and geothermal installations situated outside of protected areas, while large hydro power plants and some types of biofuels are excluded.

Hydro

IFIs – including the EIB – should only support projects that meet international standards, including the recommendations of the World Commission on Dams.

In practical terms we demand that:

- The project is under 10 MW.
- The project does not involve dam, reservoir and resettlement.
- The project does not affect the water flow regime and wildlife circulation.
- The project does not affect biodiversity, nor people's water needs.
- The project does not affect possible investments to rehabilitate and increase the efficiency of existing units in the project area.

Solar power

Land issues may appear – siting should avoid valuable agricultural land. Potential impact on wildlife should be addressed.

53 http://www.amisdelaterre.org/IMG/pdf/ATIR_Douze_raisons_pour_exclure_les_grands_barrages_des_ENR_dec_05.pdf, p.5-6

Wind energy

- The project is not developed in a nature protected area.
- The project is not developed along a bird migration route.
- The project does not impact bat populations (besides collision and habitat disturbance, the issue of ultrasound emission will be dealt with).
- Wind farm projects will be based on biodiversity baseline studies and will undergo environmental impact assessment, as any industrial project.
- Wind projects will have post-commissioning monitoring programmes to ensure there is no negative impact on communities and wildlife.
- The project will use state-of-the-art equipment, in order to minimise noise, vibration and electric and magnetic fields; old, used installations will not receive funding from the IFIs.
- Offshore wind projects will be based on a thorough analysis of potential impact on both birds and mammals, including their habitats and feeding areas and sources.

Geothermal

- The project injects the water back to the ground – there are no discharges that could thermally pollute river or lake systems.
- Equipment is in place to eliminate harmful GHG emissions, hydrogen sulphide and other gases in the thermal water.

Biomass

- The design and layout of plantations promotes the protection, restoration and conservation of natural forests, and does not increase pressure on natural forests or nature protected areas.
- A biomass origin certification system is in place.
- The plantations do not have a negative impact on natural habitats.
- The crops exclude genetically modified organisms.
- Native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts.
- The project brings about improvements in soil structure, fertility and biological activity.
- The project does not involve the use of harmful fertilizers and insecticides.
- The project does not bring about adverse impacts on water availability and quality, or impact on river and lake systems for that matter.
- No species is planted on a large scale until local trials and/or experience have shown that they are ecologically well-adapted to the site, are not invasive, and do not have significant negative ecological impacts on other ecosystems.
- The project does not raise land ownership, use or access issues.
- The project is not a threat to food security at any level (energy plantations drastically reducing/ eliminating food crops in the area).
- The project does not involve an increase in GHG emissions.

- The biomass resource is of local origin (no imports of biomass from third world countries).
- The project cannot create social conflicts.
- Biomass production must have a substantial positive energy balance (energy output versus input).
- Exploitation of energy biomass from production forests has to be in accordance with the rules of sustainable forestry (all loppings and 30 cubic metres per hectare should not be removed from the forest).
- By-products from biogas plants should be used as a fertiliser only under condition of independent certification (for example, in the case of biogas plants that use waste from slaughter and meat processing factories as an input material).