European Investment Bank
Public Consultation on Energy Lending Policy
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WORLD COAL ASSOCIATION RESPONSE TO THE PUBLIC CONSULTATION ON THE EUROPEAN INVESTMENT BANK’S ENERGY LENDING POLICY

On behalf of the World Coal Association (WCA) I am pleased to respond to the public consultation on the European Investment Bank’s Energy Lending Policy.

Coal is the backbone of modern electricity. Coal currently supplies around 30% of primary energy and 41% of global electricity generation. Coal use is forecast to rise over 50% to 2030, with developing countries responsible for 97% of this increase, primarily to meet improved electrification rates.

Between 2000 and 2010 it is estimated that coal met around half of global incremental energy demand. Despite the rapid deployment of renewable energy technologies, particularly in the context of debates about climate change, it has been coal that has accounted for the largest increase in energy demand among the range of energy sources. The growth in coal usage, in both volume and percentage terms, was greater than any other fuel, including renewables.

Incremental world primary energy demand by fuel, 2000-2010

Note: IEA estimates for 2010.
Source: IEA, WEO 2011
Coal has met this significant growth in energy demand because of its status as a reliable, widely distributed and affordable fuel. Coal is the least subsidised of all fuel sources. According to the IEA, "(...)consumption subsidies to coal worldwide are small and diminishing, compared with those to oil products, natural gas and electricity, accounting for only 0.7% of these subsidies."

Coal will also play a major role as a complement to renewable energy sources. It will be one of the key sources of energy to address gaps in wind and solar powered electricity, both of which include risks of intermittent supply.

In this context, while we are aware that the EIB provides only limited funding to coal energy projects, we believe it is essential that the new energy funding policy continues to adopt an approach that supports coal-fired electricity. Many countries within the jurisdiction of the EIB and particularly those in Eastern Europe rely on coal for very significant proportions of their electricity.

Although the EIB only provides limited finance outside of Europe, the IEA has also made clear that coal has a very significant role to play in addressing the global challenge of energy access. In its World Energy Outlook 2011, it highlighted that coal will play an important role in underpinning the increase in power generation that is needed to provide electricity to the 1.3 billion people that currently do not have it, stating, "more than half of the … increase in on-grid electricity generation capacity is expected to be coal-fired."

The EIB should continue to adopt a funding policy that supports the policy decisions of national governments as to the sources of energy they wish to use based on their economic, technical and natural resources. In many cases this will include using coal for electricity.

Energy efficiency in power generation

While there is a major focus on the role of energy efficiency from a consumption perspective, efficiency is often overlooked from the generation perspective. Efficiency in coal-fired power generation will play an important role in the future production of electricity. This is particularly the case with the potential for high efficiency power generation to reduce CO₂ emissions.

Improving efficiency levels increases the amount of energy that can be extracted from a single unit of coal. Increases in the efficiency of electricity generation are essential in tackling climate change. A single percentage point improvement in the efficiency of a conventional pulverised coal combustion plant results in a 2-3% reduction in CO₂ emissions. Highly efficient modern supercritical and ultra-supercritical coal plants emit almost 40% less CO₂ than subcritical plants.

Efficiency improvements include the most cost-effective and shortest lead time actions for reducing emissions from coal-fired electricity. This is particularly the case in developing countries and economies in transition where existing plant efficiencies are generally lower and coal use in electricity generation is increasing.

The average global efficiency of coal-fired plants is currently 28% compared to 45% for the most efficient plants (see graph below). A programme of repowering existing coal-fired plants to improve their efficiency, coupled with the newer and more efficient plants being built, will generate significant CO₂ reductions of around 1.8 gigatonnes annually. Although the deployment of new, highly efficient plants is subject to local constraints, such as ambient environmental conditions and coal quality, deploying the most efficient plant possible is critical to enable these plants to be retrofitted with CCS (carbon capture and storage) in the future.
Improving the efficiency of the oldest and most inefficient coal-fired plants would reduce CO₂ emissions from coal use by almost 25% representing a 6% reduction in global CO₂ emissions. (By way of comparison, under the Kyoto Protocol, parties have committed to reduce their emissions by “at least 5%.”) These emission reductions can be achieved by the replacement of plants that are < 300 MW capacity and older than 25 years, with larger and markedly more efficient plants and, where technically and economically appropriate, the replacement or repowering of larger inefficient plants with high-efficiency plants of >40%.

**High efficiency low emission power generation**

![Efficiency graph](image)

*Source: IEA Focus on Clean Coal (2006)*

*Note: 1% increase in efficiency = 2-3% decrease in emissions*

The role of increased efficiency as a means to CO₂ mitigation is often overlooked in discussions about climate and energy. As is noted in WEO 2011, “If the average efficiency of all coal-fired power plants were to be five percentage points higher than in the New Policies Scenario in 2035, such an accelerated move away from the least efficient combustion technologies would lower CO₂ emissions from the power sector by 8% and reduce local air pollution.” It is also important to note that the cost of avoided emissions from more efficient coal-based generation can be very low, requiring relatively small additional investments. This is especially the case when compared to the cost of avoided emissions through deployment of renewables and nuclear.

The bank’s lending policy should continue to support the deployment of high efficiency low emission coal-fired power generation through the deployment of advanced coal technologies.

**Carbon capture and storage**

Carbon capture and storage technology will be a key technology to reduce CO₂ emissions, not only from coal, but also natural gas and industrial sources. Figures in the IEA’s *World Energy Outlook 2011* report estimate the potential for CCS to contribute 22% of global CO₂ mitigation through to 2035. Further analysis by the IEA in their *Energy Technology Perspectives 2010 REPORT* also shows that climate change action will cost an additional US$4.7 trillion without CCS.
Key technologies for reducing CO₂ emissions

| Source: IEA Energy Technology Perspectives 2010 |

Like all new low emission energy technologies however, CCS will cost significantly more than conventional technology and requires extended development time. While available on a component-by-component basis, CCS has not yet been commercially proven on an integrated basis or at the scale required to meet global greenhouse gas concentration targets. Once demonstrated, CCS will enable countries to rely on secure and affordable energy sources such as coal without compromising their environmental ambitions.

Further investment is needed to fast-track CCS demonstration and allow for the necessary cost reductions that will support the future large scale deployment of CCS. The EIB’s energy lending policy should look to support financing for CCS projects as a key CO₂ mitigation technology.

Kind regards

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