

European Investment Bank energy lending policy

Submission by Health and Environment Alliance, Brussels



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The European Investment Bank (EIB) is the biggest public lending institution in Europe and has a large lending portfolio for energy projects. The Health and Environment Alliance (HEAL) decided to contribute to the review process of the EIB energy lending policy with regard to the protection of public health as well as coherence with EU environmental and climate objectives.

The Health and Environment Alliance (HEAL) is a leading European not-for-profit organization addressing how the environment affects health in the European Union. We demonstrate how policy changes can help protect health and enhance people's quality of life. With the support of our over 70 member organizations, which represent health professionals, not-for-profit health insurers, patients, citizens, women, youth, and environmental experts, HEAL brings independent expertise and evidence from the health community to different decision-making processes.

HEAL would especially like to point out the importance of a reform of EIB energy lending policy towards a phase-out of financial support to fossil fuel-based energy generation, especially from coal and lignite, which causes high external costs to public health, and instead prioritize lending to renewable energies and energy efficiency improvements.

GROWING EVIDENCE FOR HEALTH IMPACTS

The World Health Organization (WHO) stresses that climate change is going to be the greatest public health challenge of the 21st century. Europe is already experiencing an increased burden of disease as well as mortality due to climate change impacts, a recent assessment by the European Environment Agency shows.ⁱ Future risks from climate change for human health in Europe are projected to be substantial.

Energy generation from coal, lignite and oil not only contributes significantly to Europe's greenhouse gas emissions (about 20% for coal and lignite in power generation) but is also responsible for huge emissions of major air pollutants such as sulphur dioxide, nitrous oxides and particulate matter. It is important to note that sulphur dioxide and nitrogen oxides act as precursors for secondary particulate matter and ground-level ozone, the two most health damaging air pollutants. The emissions from power plant smoke stacks can travel over several hundred or even a thousand kilometers and are thus causing health impacts across national borders.

According to another report by the European Environment Agency, the energy sector has a greater impact on air quality than all other industries combined. Thermal power plants are responsible for two thirds of industrial air pollution and cause damage to human health and the environment worth Euro 66-112 billion every year.ⁱⁱ

Industrial air pollution impacts people's health as it enhances the rates of chronic respiratory and cardiovascular diseases, for example chronic obstructive pulmonary disease, and causes additional premature deaths, especially due to higher respiratory and cardiovascular mortality. Cardiovascular and respiratory diseases are among the leading chronic diseases in Europe and lead to massive costs for public health systems, but also for the individuals and families affected. The European Union has committed itself

to halting the increase of these major chronic diseases. Furthermore, the Europe 2020 strategy foresees a reduction in poverty and social exclusion, for which ill-health is an important risk factor. Air pollution is the most important environmental risk factor for people's health in Europe and causes almost half a million premature deaths every year.

The lending policy of the EIB has to be in coherence with other European policies and instruments and the greatest coherence should be achieved with health, environmental and climate policies. Currently the EU has a target of reducing greenhouse gas emissions to 20% below 1990 levels by 2020, however, recent analysis shows that the EU is already likely to reach a 25-27% emissions reduction.ⁱⁱⁱ

Given this, there is a high chance that the EU increases the 2020 climate target to 30% and the EIB lending policy should thus anticipate this move to more ambitious climate action in the EU and fully reflect it in their ranking of lending objectives. A joint report by HEAL and Health Care Without Harm Europe found that the move from a 20% to a 30% domestic climate target for 2020 could yield health benefits worth Euro 30.5 billion per year in the EU.^{iv}

Earlier this year the Danish EU Presidency published Presidency Conclusions on A Roadmap for moving to a competitive low-carbon economy in 2050^v in which an indicative milestone of 40% greenhouse gas reduction by 2030 is noted and in which the Presidency highlights the benefits that the transition to a low-carbon economy has for air quality and health. These conclusions were supported by 26 EU Member States.

HEAL urges the EIB to make health protection and environmental integrity a prerequisite in their future lending policy. This implies prioritizing climate action as the most important lending objective compared to security of supply. The EIB needs to increase the share of investments in energy efficiency measures and renewable energy generation in their portfolio in order to support the transition to a European low-carbon economy. Secondly, the EIB should update the project screening criteria to feature effects of the investments on air quality and human health more prominently.

COAL POWER PLANTS

The high amount of pollution from thermal power plants in Europe gives rise for concern. People's health needs to be protected from hazardous levels of air pollution and thus every major contributing sector has to undertake increase efforts to improve air quality. Currently the US and China have set stricter legally binding limit values for air pollutant emissions from coal power plants, which shows that with regard to technology there are Best Available Technologies (BAT) than what is required in Europe.

Currently many coal power plants are not complying with new emission limit values introduced by the Industrial Emissions Directive, which will enter into force in 2016. Thus many plants will potentially be retrofitted, which would result in enormous benefits for public health. The EIB lending policy has to better reflect this increased need for retrofitting over the next couple of years.

For investments in new energy generation capacity a clear prioritization of climate action in the EIB lending objectives and the integration of health protection in the EIB lending policy imply an immediate phase-out of all investments in fossil fuel-based new capacity, especially coal and lignite. A new coal power plant would be in operation for several decades, thus locking in massive emissions of air pollutants and greenhouse gases. Even emerging technologies for coal power generation like Carbon Capture and Storage do not change substantially the impact of coal power generation on climate change nor on air quality. The EU-funded research project NEEDS (New Energy Externalities Developments for Sustainability) found that both lignite and coal with CCS would still create substantial external costs due to health and climate change impacts (see Table 1).

Currently external costs related to air pollution, health and climate change impacts are not appropriately reflected in the EIB project screening guidelines. First of all, the impacts on air quality and human health are transboundary in their nature and thus every project screening should ask for the inclusion of these transboundary impacts in environmental impact assessments. This is all the more true for climate change impacts. Secondly, for any cost-benefit analysis of environmental, health and climate change impacts of a project, the newest available methodology for estimating external costs should be applied.¹

Table 1: External costs of coal power generation in € per MWh (by 2025). Source: NEEDS project 2009^{vi}

power plant type	lignite 900MW	lignite 800MW, CCS	hard coal 600MW	hard coal 500MW, CCS
health impacts	6.7	4.7 – 9.5	10	8.3 - 11.5
biodiversity	0.6	0.3 – 1.6	0.8	0.7 - 1.7
crop yield losses	0.3	0.1 – 0.3	0.3	0.2 - 0.3
material damage	0.1	0.1	0.2	0.2
land use	0.1	0.2	0.5	0.6
sub-total	7.8	5.4 – 11.6	11.8	10 - 14.3
climate change	5.9 – 72.1	0.5 - 14	5.8 – 69.6	1.3 – 21.6

Future cost-benefit analyses as part of Environmental Impact Assessments for EIB candidate projects should be based on the revised NEEDS methodology and be carried out on a plant-by-plant basis, reflecting the individual levels of expected air pollutant emissions. Table 2 gives an example for the wide range of external costs due to health and climate change impacts from coal power generation as assessed with the NEEDS updated methodology NewExt.

Table 2: External costs of coal power generation with different abatement technology in € per MWh. Source: NewExt^{vii}

	Name	Size MWe	Abatement technology	Power generation			Fuel chain		Total
				health	climate	other	climate	other	
BE	Genk	300	No FGD nor SCR	40.7	16.9	-0.7	0.9	5.4	63.3
BE	Genk	300	With FGD and SCR	6.5	17.5	-0.3	0.9	5.4	30
FR	Cordemais	600	Pulverized fuel, hypothetical FGD, steam turbine	17.7	20.6	1.4	2.5	8.1	50.3
FR	Cordemais	600	(new data) Pulverized fuel, FGD (actual), steam turbine	16.3	15.5	1.6	nd	nd	33.4
DE	Lauffen	652	Pulverized fuel, FGD, DENOX, and dedusting	5.1	15.1	0.2	2.1	3.6	26.1
UK	West Burton	1800	Coal-fired station with FGD	7.5	16.6	-0.5	1.6	nd	25.3

nd = no data; FGD = Flue gas desulphurization; SCR = scrubber; DENOX = nitrous oxides abatement

The EIB lending policy should also better reflect the fact that coal power plants are the most important source of mercury emissions in Europe. Mercury especially effects cognitive development in children and has irreversible neurotoxic effects, thus the EU has committed itself to reducing the exposure of the population, and especially of women of reproductive age as well as children to this toxic heavy metal. On health grounds an environmental impact assessment should especially entail a comparison of abatement options for mercury emissions to air.

¹ For power generation projects this should be based on the results of the FP6 funded research project NEEDS (New Energy Externalities Developments for Sustainability), the follow-up project of ExternE, as well as the Clean Air For Europe (CAFE) methodology, which have been applied in cost-benefit analyses for the European Commission and the European Environment Agency. The results of the NEEDS project specifically show that external costs of energy generation from coal greatly differ between individual plants, depending on a number of plant properties such as plant size and thermal efficiency, as well as on the type of filter technology installed.

COHERENT REVISION OF ENERGY LENDING POLICY FOR EU AND THIRD COUNTRIES

To sum up, the European Investment Bank should revise its lending objectives and project screening as well as cost-benefit-analysis guidelines towards a full reflection of climate mitigation and the protection of human health as top priorities. Due to the transboundary nature of air pollution, the same standards have to be applied for projects in EU neighborhood and candidate countries, which are also contributing to good or bad air quality in Europe. However, health protection and climate change deliberations hold equally true for EIB lending in third countries outside Europe. Especially in low-income countries health is one of the most important public goods that should not be compromised.

Lastly, in accordance to the second of the EIB's objectives concerning their social and environmental responsibility – to promote projects that are in accordance with the targets of the Sixth Environmental Action Program (6th EAP) – the EIB has to put a clear emphasis on protecting public health from air pollution and climate change impacts. The 6th EAP sets the target to achieve “[...] levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment [...]”. It further gives an indication of the need to reduce greenhouse gas emissions substantially by 2050, which was reflected in the Danish Presidency Conclusions on a low-carbon roadmap.

CONCLUSIONS

- Public money for public goods: The EIB energy lending portfolio should promote public goods such as good air quality, safe water and food, healthy ecosystems and climate stability. Lending to thermal power plant projects that will cause high impacts on air quality, health and/or climate change should be ceased on these grounds.
- The EIB energy lending should support the implementation of EU laws, thus more funds should be allocated to support the retrofitting of old coal power plants to the new pollution control standards of the Industrial Emissions Directive.
- The EIB energy lending should be targeted towards measures that contribute to achieving ambitious climate targets domestically, thus energy efficiency measures and energy generation from renewable sources should be prioritized, given that environmental integrity and high air quality and health protection standards are ensured.
- Greater coherence of EIB lending for energy project has to be addressed in the revision of lending objectives and project screening criteria. These have to reflect higher standards for health protection and climate mitigation, as high rates of chronic diseases and climate change are among the most important challenges for the EU in the next few decades.
- The environmental proofing for EIB energy lending has to be updated, reflecting new estimates and methodologies for external costs. Also, an assessment of alternatives for abatement technology to reduce mercury emissions should be taken up in the energy proofing guidelines.

ⁱ EEA (2012): Climate change, impacts and vulnerability in Europe 2012.

<http://www.eea.europa.eu/pressroom/publications/climate-impacts-and-vulnerability-2012/>

ⁱⁱ EEA (2011): Revealing the costs of air pollution from industrial facilities in Europe.

<http://www.eea.europa.eu/pressroom/publications/cost-of-air-pollution>

ⁱⁱⁱ Climate Action Network Europe (2012): Closing the Ambition Gap: What Europe Can Do.

http://www.climnet.org/resources/publications/position-papers/doc_download/2127-closing-the-ambition-gap-what-europe-can-do-dec-2012-

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- iv HEAL and HCWH Europe (2010): Acting NOW for Better Health. A 30% Reduction Target for EU Climate Policy. <http://env-health.org/policies/climate-change/acting-now-for-better-health/>
- v http://eu2012.dk/en/NewsList/Marts/Uge-10/~media/Files/Council%20meetings/Envi/140312_Presidency_conclusions-Low%20Carbon%20Roadmap.pdf
- vi New Energy Externalities Developments for Sustainability NEEDS (2009): External costs from emerging electricity generation technologies. http://www.needs-project.org/docs/RS1a%20D6_1%20External%20costs%20of%20reference%20technologies%2024032009.pdf
- vii IER Stuttgart et al. (2004): New Elements for the Assessment of External Costs from Energy Technologies. NewExt. Final Report to the European Commission, DG Research, Technological Development and Demonstration (RTD). http://www.ier.uni-stuttgart.de/forschung/projektwebsites/newext/newext_final.pdf