GREENPEACE **Briefing**

Power Plant Emission Performance Standard (EPS) for CO_2

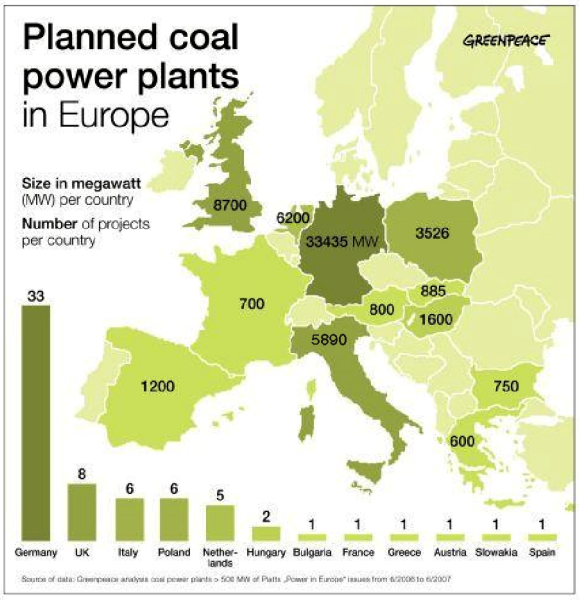
The urgency of the climate crisis necessitates swift action on the part of governments to reduce emissions from the electricity sector. Climate scientists warn that in order to avoid the worst effects of rising global temperatures, greenhouse gas emissions must peak between 2015 and 2020 and fall dramatically thereafter. By immediately mandating an emission limit of **350 grams of CO_2 per kilowatt hour** (g CO_2/kWh) **for fossil fuel-derived energy**, policymakers will be sending a clear signal to power companies that only the cleanest fossil fuel power stations can have a place in our energy future.

Electricity Generation and CO_2 emissions in the European Union

Approximately 39% of CO_2 emissions in the EU are generated by the electricity sector. Coal-fired power stations are the largest source of CO_2 emissions, responsible for three-quarters of the sector. To meet the 30% emission reduction targets by 2020, this sector will need to be significantly decarbonised in the short-term.

The coming decade will witness a large turnover in electricity generating plants in the EU. Existing plants will need to be retired. Decisions made by nations and power utilities today on how to manage this turnover will define our energy supply for the next generation.

A snapshot compiled by Greenpeace of the plans for new electricity generation in the EU reveals one-third of proposed and planned capacity could rely on coal (64,026 MW) and less than 10 percent on renewable energy resources. If the average 1000 MWe power station generates 7 million tonnes (Mt) of CO_2 annually, these 64,026 MW would be responsible for an estimated 448.2 Mt of CO_2 every year. This is more than the entire annual emissions of greenhouse gases from Spain.



A Greenpeace analysis of large (greater than 500 MW) power generation projects in Europe, as of June 2007, reveals a total of 210 power projects, of which 68 are coal-fired. Of the total 188,883 MW of capacity in the pipeline, 64,026 MW (or 34 per cent) will be coal-fired while only 16,239 MW, or 9 percent, will be renewable energy. By far the most coal-fired power stations in the pipeline, 33, are in Germany. Next in line is the UK with 8 projects, followed by Poland with 6 and the Netherlands with 5. The figure to the left details the country breakdown by project number and total MW.

** Projects listed for Italy refer to the conversion of existing power stations from oil to coal*

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An EPS complements the Emission Trading Scheme (ETS)

Mechanisms such as the EU emissions trading scheme aim to encourage a shift towards lower emission trajectories, yet this tool will not single-handedly drive the rapid change needed in the energy market in the short term. The EU ETS in particular will take time before it materially affects investment decisions in the energy infrastructure, due to the fact that the projected carbon prices will not be high enough to deter investment in high carbon fuels.

To guard against the prospect of lock-in to a long-lived, high carbon electricity sector, an intervention such as setting an EPS is justified. Such a performance standard would complement the ETS in the same way that regulations can be used to remove the least efficient appliances from the market, while market instruments incentivise the best performers. Even further, an EPS would act as a backstop to the ETS.

Precedents for this kind of intervention can be found in the Californian market and in the establishment of limits to SOx and NOx emissions in the EU through the Large Combustion Plant Directive.

Greenpeace's position

Greenpeace supports the immediate implementation of an EPS given the need for global greenhouse gas emissions to peak by 2015. A power station constructed today will be emitting for about 40 years. The EPS should apply to all new fossil fuel power stations and mandate a limit of 350 grams CO_2/kWh. This will ensure that only the lowest emitting fossil power stations are constructed while other binding and effective policies are being put in place to create an energy system that relies on renewable energy, energy efficiency and conservation technologies.

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