



for a living planet

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number 1081247 and in Scotland number SC039593 and a company
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VAT number 733 761821
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Scottish Government
Energy Consents
4th Floor, Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

March 30th 2010 30 August 1994

Dear Sir/Madam,

**ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND)
REGULATIONS 2000
SCOPING OPINION REQUEST FOR THE PROPOSED RENEWABLE ENERGY PLANTS AT
LEITH, GRANGEMOUTH, DUNDEE AND ROSYTH.**

Thank you for inviting WWF Scotland to comment on this scoping request and providing a short extension to the consultation period. The proposed development by Forth Energy is to construct four biomass energy plants ranging in size from 120MW to 200MW. As currently proposed these plants will make no use of waste heat or capture CO₂ emissions.

The Environmental Impact Assessment (EIA) for this development must provide a full assessment of the climate change impacts resulting from each of the four proposed power stations and a comprehensive assessment of the alternatives and the greenhouse gas emission reductions that these provide compared to the current development proposal. These alternatives should include operating as combined heat and power plants (CHP) and using Carbon Capture and Storage (CCS) technology. Any such assessment should include a full carbon lifecycle analysis of the fuel source.

Fuel

The use of biomass will have an important role to play in achieving the 20% renewable energy target for Scotland and in turn meeting the targets under the Climate Change (Scotland) Act 2009. Although biofuels are a renewable source of energy, depending on where and how they are produced their carbon payback can be very lengthy and, if particularly badly sourced may result in a net increase in emissions. This is especially true if the biomass is sourced from forest or peat soils that are cleared to make way for production. WWF believes that effective robust and strict sustainability criteria and standards which minimize the direct and indirect impacts of biomass use are essential and need to be applied across the board for all types of biomass, including uses for heat and power production.

The EIA should set out the sustainability criteria applied to sourcing the biofuel and the guarantees in place to ensure these criteria are met. As a minimum the developer should satisfy the proposed EU sustainability criteria¹ and ensure any woody biomass has achieved Forestry Stewardship Council (FSC) certification.

Biomass use is not automatically climate friendly, climate benefits vary widely depending on how and where biomass is produced, and how is it converted to energy. Emissions related to bioenergy production and use should be subject to full carbon accounting to ensure that bioenergy is delivering real climate benefits.

The EIA should assess the environmental impacts arising from the fact that "*the majority of the fuel will be procured from overseas*" and compare these to the predicted impacts of sourcing as much of the fuel as possible from within Scotland.

¹ See http://ec.europa.eu/energy/renewables/bioenergy/sustainability_criteria_en.htm

Efficiency and use of waste heat

Although the Scoping Report makes frequent reference to the importance of increasing Scotland's consumption of renewable heat and includes a commitment to produce a Heat Plan as part of the sustainability statement, the proposed power station makes no use of waste heat. WWF requests that the EIA describes the efficiency of the power station in terms of gCO₂/kWh as it is proposed and then assuming the station captured and used the waste heat.

The use of biomass as a fuel type cannot excuse the development of an inefficient power station. The sites for each of the four plants should be chosen following a heat mapping exercise to ensure they are sited close to sufficient heat demand. The proposed Heat Plan should then set out the required infrastructure and agreement between Forth Energy and the source of the heat demand to supply the renewable heat.

Carbon Capture and Storage

The urgency with which we must reduce our emissions may mean that Scotland will want to capture emissions from all combustion plants, even those using close-to-carbon-neutral fuels. The EIA should describe the power plant efficiency and practical implications if it were to have CCS fitted at a future date.

I hope these points are useful and please do not hesitate to contact me if I can be of any further assistance.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Richard Dixon', with a long horizontal stroke extending to the right.

Dr Richard Dixon - Director

cc Forth Energy