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Application by Ayrshire Power to Scottish Government to Construct a Coal Fired Power Station at Hunterston, North Ayrshire: Addendum – Response from Friends of the Earth Scotland

On 20th August 2010, Friends of the Earth Scotland (FoES) submitted an objection to the application by Ayrshire Power. Ayrshire Power have failed to address our concerns with this addendum so our objection stands.

We formally maintain our objection to the application, and urge the Scottish Government to reject outright the planning application from Ayrshire Power.

Our original application is appended. It considered 13 different aspects of the proposal that FoES was troubled by. Here we will reproduce the headings for those 13 aspects, and comment on developments or reasons why the addendum does not nullify the concerns expressed. We will not repeat the additional information available in our initial objection here, but would reiterate that we consider that original objection to still be ‘live’.

1. The proposal should be rejected because it would increase emissions of greenhouse gases and is incompatible with the targets and duties established by the Climate Change (Scotland) Act 2009.

In particular, given that the Scottish Government are committed not just to reducing emissions but to doing so in a way that has regard to a fair and safe level of cumulative emissions, we remain concerned that this proposal will not be capturing enough of its emissions either in the run up to or beyond 2020 to allow fulfilment of the 2020 emissions reduction target of 42%. Our emissions must peak and decline BEFORE this power station will even be completed, let alone fully fitted with carbon capture and storage (CCS) technology.

Concerns over inconsistencies in the original application led Friends of the Earth Scotland, RSPB Scotland and WWF Scotland to commission Element Energy to undertake an independent review of the climate implications of this proposal. The main conclusions are:

- Emissions from year one of the proposed power station would be equivalent to adding 63% to Scotland’s annual power sector emissions.
- By 2050 emissions from Hunterston could be equivalent to 57% of all the emissions allowed, from all sectors, under the Climate Change (Scotland) Act 2009.
- Even if the plant is fully retrofitted with carbon capture technology in the 2020s, lifetime emissions will significantly exceed those from a practical alternative portfolio of renewable backed up by gas and pumped storage.
- Co-firing with biomass would not only result in negligible carbon emissions savings but is also contrary to Government policy on the utilisation of biomass.
- The Hunterston proposal is incompatible with the Scottish Government’s commitment to decarbonise electricity supply by 2030.

- The proposals could impose unnecessary additional costs on electricity consumers and taxpayers of at least £500m.

The summary report, which will be made available to all interested parties on publication, also explains why the development is not needed for Scottish national energy security and why it is unlikely to deliver national economic benefits.

2. The proposal should be rejected because the measures proposed to mitigate greenhouse gas emissions are not credible.

The addendum provided by Ayrshire Power is noticeably lacking in any further information about the technical aspects of the Carbon Capture Readiness (CCR) or future CCS capacity. Transportation and storage are STILL not addressed. These aspects are fundamental to the viability of the plant, both technically and financially.

Additionally, Ayrshire Power are relying on New Entrant Reserve (NER) funding to provide financing for the CCS aspects of the plant. In competition with Ayrshire Power are nine other proposals, three of which may be supported by the NER funding. The seven CCS applications include Scottish Power Generation Limited: post-combustion amine capture retrofitted to an existing subcritical coal-fired power station at Longannet, Scotland; and SSE Generation Limited: post-combustion capture retrofitted to an existing CCGT power station at Peterhead, Scotland. There are also five innovative renewable applications, four of which are in Scotland¹. It will be February 2012 at the earliest before any results of the competition are known. Retro-fitting CCS at Longannet or Peterhead is a much more socially and environmentally just proposal as it will limit existing emissions (rather than potential emissions such as from a new plant). Priority should be given to these two proposals and the innovative renewable applications, for environmental and financial reasons. Demonstrating retrofit and establishing a CCS storage network on the east coast of Scotland would be beneficial for Scotland's economy going forward, (as would developing innovative renewables). Developing a new coal fired power station, when this is unnecessary, not immediately linked to a potential hub, transportation and storage intentions are unclear, and there are other useful projects that could otherwise be progressed, would not provide these benefits. Recent analysis from Imperial College London Carbon Capture and Storage experts supports this conclusion, stating: "clustering of projects (e.g. in the North East or Scotland) is likely to reduce financial outlay and planning issues by connecting to a planned CO2 network linking a limited number of storage sites."

Given the amount of uncertainty, and arguably, unlikelihood, of this funding being received, the CCS elements of this proposal seem unviable. The same Imperial College report states: "A lack of alignment between Government funding and NER300 will provide a financial barrier to consortia setting up demonstration plants."

The report goes on to say: "Even in an optimistic scenario however it seems unlikely that the projected target of 20-30GW of CCS plants necessary to decarbonise the power sector by 2030 will be met." FoES would suggest that given this independent, expert analysis the continued insistence by Ayrshire Power that their development is a 'clean coal' development seems naive at best and wilfully misleading at worst.

It is also worth highlighting that given the flawed comparison made between the lifetime emissions scenario of complete retrofit on coal versus no CCS retrofit on gas, the inclusion of the SSE proposal for CCS retrofit at Peterhead in the NER competition further brings this comparison into question. The question of CCS retrofit on gas as a comparator not being addressed in the addendum,

¹ http://www.decc.gov.uk/en/content/cms/news/pn11_39/pn11_39.aspx

demonstrates a lack of awareness of this project, and thus of developments in the sector, and ongoing denial of the recommendations of the Committee on Climate Change (CCC) that CCS on gas should be pursued as part of the energy sector strategy for emissions reduction. To repeat the statement from our original objection: *“This is highly significant as it is only by such a misleading comparison that the developers are able to claim that their plans would lead to less lifetime emissions than a comparable gas station.”*

3. The proposal should be rejected because it fails to provide adequate mitigation (using Best Available Technology (BAT)) for the impacts of thermal pollution on the Clyde.

It is incredibly concerning that whilst thermal pollution is given considerable attention in the addendum, sea temperature rise of at least 2degrees and up to 10 (on top of existing predictions and impacts²) is not considered to be problematic.

Marine air and sea surface temperatures (SST) have been rising at a similar rate to land air temperature, but with strong regional variations. Since the 1980s the rate of rise has been about 0.2-0.6 °C per decade. Climate change models indicate that SST will continue to rise in all waters around the UK coast³

Global-average sea level rose during the 20th century at an average rate of 1-2 mm/year, with some consensus on the larger value by the research community. The third assessment of the IPCC presented a range of projected sea-level rise between 1990 and 2100 of 9-88cm, with the largest contribution coming from thermal expansion⁴. The most recent information for the UK from the UK Climate Impacts Partnership (UKCIP) forecasts a range of relative sea level rise by the 2080s (relative to the 1961-1990 mean) of between 20 and 80cm in south-west England and 0 and 60cm in Scotland⁵.

The impacts of thermal pollution and expansion on marine species and therefore on marine ecosystems are not adequately assessed in the addendum. Additionally, there is a failure to model what thermal expansion might mean for sea level rise around the Ayrshire coast. It is unacceptable that this level of thermal pollution has not been more carefully analysed. We would also argue that in the face of reaching a tipping point where climate impacts become ever more unpredictable, a development that not only increases carbon emissions but also contributes to local thermal pollution is a reckless proposition.

4. The proposal should be rejected because the environmental and social impacts of the supply of biomass for co-firing are unacceptable.

Nothing in the addendum leads us to amend our comments about sourcing of biomass. Indeed, since our original objection was submitted, additional large scale biomass plants have been proposed on the east coast of Scotland and have met with considerable objection, both locally and internationally⁶. There is no reason to believe Ayrshire Power would be able to source more sustainable biomass.

Political debate surrounding these biomass proposals has centred around the difference between small scale combined heat and power biomass, which could help Scotland bring down energy costs

² <http://ukclimateprojections.defra.gov.uk/content/view/1956/518/>

³ <http://www.mccip.org.uk/annual-report-card/2007-2008/marine-environment/temperature.aspx>

⁴ <http://www.mccip.org.uk/annual-report-card/2007-2008/marine-environment/sea-level.aspx>

⁵ <http://www.ukcip.org.uk/resources/publications/documents/124.pdf>

⁶ http://www.foe-scotland.org.uk/sites/files/Response_Forth31may2011.pdf

and move people out of fuel poverty, and large scale power plants that do not plan to capture heat and are masquerading as 'renewable'. A recent briefing from our colleagues at Friends of the Earth England, Wales and Northern Ireland goes into more detail⁷.

The debate has prompted the Scottish Government to restate their policy in answer to a written question⁸. Fergus Ewing MSP, Minister for Energy stated: "The Wood Fuel Task Force previously recommended that the development of the biomass industry in Scotland follows the approach adopted by the Scottish Government, prioritising the use of biomass for renewable heat at a scale appropriate to local supply." FoES welcomes the Scottish Government's approach and does not feel the Ayrshire Power proposals meet this.

5. The proposal should be rejected because the environmental and social impacts of the supply of coal for the plant are unacceptable.

Nothing in the addendum causes us to revise our objection on these grounds. Our original objection was supported by many of our partners in the Friends of the Earth International Federation who struggle against the environmental degradation and human rights abuses inherent in coal exploitation around the world.

6. The proposal should be rejected because it threatens unacceptable damage to important recognised biodiversity interests.

The addendum contains no revision of site layout, and in fact lessens the area available for the suggested habitat compensation by including an offshore wind turbine facility in the area previously identified for habitat creation.

At this point, FoES would point out that whilst we support renewable energy generation in the right place, and think that investing in offshore wind production is a necessary and sensible proposal, it rather feels to us as if this is merely an add-on to soften the impact of the damage the coal fired power station development would do to the local economy and the global climate.

7. The proposal should be rejected because the EIA is seriously inadequate in multiple respects, and cannot be relied upon to provide a fair assessment of impacts.

The addendum provides no further information on the potential environmental impacts of sourcing biomass and coal for the plant or on the environmental impacts of alternative ash disposal locations, should no market for waste ash be found. Our comments on these issues in our original response remain unaltered.

8. The proposal should be rejected because it could undermine more socially and economically viable investment decisions elsewhere in Scotland (such as the Longannet CCS demonstration).

Nothing in the addendum causes us to alter our original comments on this issue, and we would also reference the information above regarding NER300 funding and the analysis from Imperial College about the viability of multiple CCS demonstrations, especially distant from potential hubs of CCS development.

9. The proposal is not necessary to ensure energy security in the Scottish electricity grid.

⁷ http://www.foe.co.uk/resource/briefings/energy_biomass.pdf

⁸ <http://bit.ly/pF5dKO>

Our comments from our original objection remain valid in relation to this issue. Since our original objection was submitted, the work undertaken by Garrad Hassan on our behalf has been published⁹, debated and supported by a wide variety of organisations, stakeholders and decision makers¹⁰.

10. The proposal does not offer overriding economic benefits of an appropriate scale or significance.

Again, nothing in the addendum causes us to revise our conclusions on this issue.

11. The proposal should be rejected because the development would create significant and unnecessary risks and liabilities for Scotland.

Not only have Ayrshire Power failed to address our concerns in relation to these issues, but recently they revealed that they intend to sell on the site with the planning permission once it is secured¹¹, and admitted "We have no experience of running a power station of this size." It seems that the interest of Ayrshire Power (who are based in the Isle of Man) is limited to lining their own pockets, with scant regard for what may or may not be best for the people of Ayrshire or Scotland as a whole.

12. The proposal should be rejected because local consultation and community engagement has been inadequate.

The legal challenge to the inclusion of Hunterston in the National Planning Framework (NPF) 2 has yet to be concluded. It would seem premature to make a decision prior to the court ruling, but regardless, the views of the community and the strength of feeling regarding the lack of consultation demand that if this proposal is not rejected outright a full public inquiry into all aspects of the development, - including the need for it – should be held.

13. The proposed development does not meet the criteria set out in the NPF for the site as it cannot be reasonably be described as 'clean coal', and moreover is unlikely to operate at baseload capacity.

Since our original objection was submitted the Scottish Government released their Draft Electricity Generation Policy Statement¹². Among other conclusions it suggests "there is no current need for an increase in overall thermal capacity" and that by 2030 only 2.5GW of thermal capacity would be needed. Longannet alone is 2.4GW, and Peterhead up to 1.6GW. As noted above, both plants have submitted applications to NER300 and intend to retrofit carbon capture and storage technology.

The study is based on highly conservative assumptions about the growth of renewables, interconnection and peak demand. It suggests renewable capacity will grow only to around 13GW by 2020, while leading industry estimates suggest it could be over 20GW. It suggests that even with just 13GW, renewables capacity will be curtailed from exporting all it could for part of the year due to limited interconnection improvements. Additional thermal power would compete for that limited connection capacity. It suggests peak demand for electricity will grow by up to 25% in 2030, even though smart meters, electric vehicles and other deferrable demand technologies are set to cut peak demand, and the Scottish Government recently set a target to reduce overall energy consumption

⁹ <http://www.foe-scotland.org.uk/power-secured>

¹⁰ <http://www.foe-scotland.org.uk/power-explored-presentations>

¹¹ <http://www.largsandmillportnews.com/news/hunterston/articles/2011/08/24/416528-if-they-build-coal-planttheyll-sell-it/>

¹² <http://www.scotland.gov.uk/Publications/2010/11/17094217/0>

by 12% by 2020. FoES would suggest that even these conservative assumptions should lead Ministers to reject the Ayrshire Power proposal.

The pace of developments around Electricity Market Reform also demand that Scotland should not compromise our genuine opportunities in renewables and retrofit CCS by permitting the development of this unnecessary and ill thought through development.

Conclusion

The failure of Ayrshire Power to address any of the above concerns, or to have taken note of any of the developments we highlight, means that FoES continues to object to the development. We call on the Scottish Government to reject the application. Should the application be considered at a Public Local Inquiry for any reason, we would strongly urge Ministers to ensure that Inquiry have a broad remit, including consideration of the need for this energy development.

Yours sincerely

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