

Dear Sir/Madam,

Re: Planning application 17/00635/FULL for a biomass plant at Land to West of Whitworth Road, Glenrothes

I am writing on behalf of Biofuelwatch, a non-profit organisation that provides research, advocacy and campaigning in relation to the impacts of large-scale industrial bioenergy. We wish to object to the planning application by "Glenrothes Biomass Energy" for a 19.8 MWe biomass power station in Glenrothes to which we have recently been alerted. We wish to request additional time to submit more detailed evidence in support of our objection.

Before discussing our reasons for objecting to the proposed development, we would like to alert Fife Council to the fact that, according to the application form, the applicant is a company called "Glenrothes Biomass Energy". In the Main Supporting Document for the application, Glenrothes Biomass Energy is described as a "subsidiary of Sainc Energy". We have searched the Companies House website and can find no record of any company called "Glenrothes Biomass Energy". Since they are not incorporated, they cannot be a subsidiary of Sainc Energy either. On 30<sup>th</sup> October 2015, the Scottish Government ruled that a planning application for a wind farm (Talladh-a-Bheithe project) was invalid because the applicant had not been incorporated under the Companies Act 2006 as a private company at the time the application had been submitted<sup>1</sup>.

***We believe that that decision sets a precedent which should be applied to this application by Glenrothes Biomass Energy, i.e. that this application should be rejected on the grounds that it is invalid.***

Leaving aside the question of the validity of the application, we would like to object to the biomass power station proposal on the following grounds:

***1) The application contains contradictory information which puts the accuracy of the Environmental Statement, including the Air Quality Assessment and the Noise Impact Assessment into serious question:***

The document "Supporting Statement: Volume 1" contains the following contradictory statements:

- *"The design capacity of the plant will not be greater than 19.8 MWe...The plant will be available to operate for 16 hours per day (Monday to Friday) with an additional hour at the start (or end) of each 8 hour shift to start up and shutdown the treatment plant and for general housekeeping and light maintenance activities" – This would translate into a maximum of 4,160 operating hours per year*
- *"Operations inside the buildings are expected to be available 24 hours per day based on an 8000 hour annual operation for the FRP [Fuel Reception and Preparation] and 7500 hours for the Gasification plant";*
- *"The fuel plant will be sized for a maximum throughput of 200,000 tonnes per year based on 5720 operational hours per annum of plant";*

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<sup>1</sup> <http://www.energyconsents.scot/ApplicationDetails.aspx>, Project name: Talladh a Bheithe

- *"The plant would [sic] is proposed to operate 24 hours a day, 7 days a week" ... "need for 24/7 operation of the biomass plant" ... "The staff will work shifts (at 3-4 staff per shift) to ensure the continuous 24 hour operation of the facility";*
- *"The annual generation expected from the biomass plant is estimated at approximately 112.7GWh of electricity per year based on a load factor of 65%" – A 65% load factor would translate into 5,678 operating hours per year.*

Technical Appendix 7 refers to the objective to achieve:

- *"Availability of 7,500 hours per annum for the gasifier plant".*

The number of operating hours per year clearly has a significant impact on air emissions, and it also impacts on noise levels. A higher number of operating hours would translate into more wood being used per year, and a higher level of annual air emissions and a greater effect on average annual levels of air pollutants, including nitrogen dioxide. A lower number of operating hours, on the other hand, would likely mean more frequent start-ups and shut-downs. This, in turn, would cause frequent spikes in some pollutants, including dioxins and furans<sup>2</sup>. Shutting down a power station with a steam turbine requires steam venting, which is associated with high noise levels. During 2014/15, frequent shut-downs and start-ups of RWE's biomass power station in Markinch led to high numbers of noise complaints, with RWE acknowledging that the highest noise levels occurred during the frequent shut-downs of the power station at that time<sup>3</sup>.

One of the statements listed above refers to the plant being shut down and started up daily, which we believe would cause unacceptably high noise impacts and emission spikes. The other statements give a large range of anticipated operating hours, between 5,678 and 8,000 hours a year.

Figures given for the total wood processed and used by the plant in the planning documents vary from 200,000 to 220,000 tonnes a year, however those, too, would clearly depend on the number of operating hours per year.

We can find no information as to the number of operating hours per year assumed in the air quality assessment.

We believe that the Environmental Statement cannot be adequately assessed without requiring clarification from the applicant regarding:

- + The anticipated number of operating hours per year, or at least the number of annual operating hours which formed the basis of the air quality assessment and of the annual feedstock and thus transport figures;
- + Whether the statement that the plant would operate 16 hours a day refers to the power plant, or just to the fuel reception and processing centre.

<sup>2</sup> See <http://www.biofuelwatch.org.uk/2014/power-plant-startup-emissions/>

<sup>3</sup> See: [www.fifetoday.co.uk/news/sepa-grilled-over-markinch-biomass-plant-1-3586220](http://www.fifetoday.co.uk/news/sepa-grilled-over-markinch-biomass-plant-1-3586220)

We believe that the public consultation should be reopened once this information has been received and published.

## **2) Low efficiency of the proposed power plant:**

The Scottish Government's Electricity Generation Policy Statement 2013 says:

"Bioenergy – confirmation that biomass should be used in small heat only stations and those fitted with good quality CHP, off gas-grid where possible, the better to contribute to meeting the Scottish Government's target of 11% of heat demand to be sourced from renewables by 2020."

The Scottish Government's 2020 Routemap for Renewable Energy states:

"Given the multiple energy uses to which biomass can be put, the limits to supply, and the competition for that supply from other non-energy sectors, biomass policy and support need to encourage the most efficient and beneficial use of this finite resource. For that reason:

Scottish Government policy supports the deployment of biomass in heat-only or combined heat and power plants, particularly off gas-grid, and to a scale which maximises heat use and local supply."

The applicant has made it clear that no heat customers have been identified and that an additional planning application may be required if the power plant was to export heat in future. The developer states that the potential for heat export is "constrained by lack of infrastructure amongst other factors". There is no commitment to invest in any heat pipes. The plant therefore cannot be considered "good quality CHP" – even if it could theoretically be modified for heat capture and export (as is the case with all thermal power plants). For this reason alone, we believe that the proposal is not compatible with Scottish Government energy policy.

We are further concerned that the plant's efficiency will be further reduced by its design: According to the Supporting Statement: "*The fuel will undergo a preparation phase of sizing, drying and energy intensification via torrefaction before being used a fuel in an advanced conversion technology known as gasification. The facility will make electricity via steam turbine*".

This means that the wood received is to be heat-dried and then charred at a temperature of 250-350°C, before entering the gasifier. Heat-drying wood and then turning it into via torrefaction are energy-intensive processes. We have never come across any other company proposing to heat-dry and torrefy wood before burning or gasifying it in the same plant.

Torrefaction of wood pellets is being developed elsewhere to facilitate long-distance transport, and to produce pellets which are compatible with unmodified coal power station boilers. In this case, however, energy from the gasifier would be used to dry and torrefy the wood. That would reduce

the overall efficiency of the plant, i.e. the amount of electricity generated per tonne of wood received.

The developer has not provided enough information to allow us to estimate the plant's efficiency, given that there is no consistent information about annual fuel input and electricity output. However, it is clear that the plant will be inefficient overall, by virtue of the process used and the lack of heat recovery and export.

3) Unsuitable siting:

a) As confirmed in the planning documents, part of the site is a Greenfield site. The Scottish Planning Policy states that "*Redevelopment of urban and rural brownfield sites is preferred to development on greenfield sites.*" We can see no justification for choosing what is in part a Greenfield site for this power station;

b) Section 182 of the Scottish Planning Policy states:

"The location of large scale biomass plants will be determined by a number of factors including the economic costs of transporting fuel materials from source, the availability of feedstock during the year, the location of the end user and the scale of the plant. In some locations, there will already be an adequate supply of feedstock from managed woodlands and secondary sawmill products which can be accessed immediately. Further options could be provided by growing energy crops and expanding woodland types in other areas."

Although the term 'large scale' is not defined in this context, 19.8 MWe is clearly a sizeable biomass power station. The proposed power station is just 3km from RWE's biomass plant in Markinch, which sourced 277,406 tonnes of virgin and waste wood in 2015/16<sup>4</sup>. RWE is having to source some of that wood from across England, because it cannot obtain sufficient supplies closer by. The new power plant would compete with RWE for local and regional wood supplies, which means that it would rely on long-distance road transport of woodchips and pellets. Given the lack of available local supplies (due to the competition with RWE), and the reliance on road transport, we believe that the location is unsuitable for a new biomass plant.

Yours faithfully,

Almuth Ernsting  
Co-Director  
Biofuelwatch

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<sup>4</sup> <https://www.ofgem.gov.uk/publications-and-updates/biomass-sustainability-dataset-2015-16>