Dear Sir/Madam,

Re: Open Letter Consultation on National Grid proposal to commence generating electricity at Gas Distribution pressure reduction sites

I am writing on behalf of Biofuelwatch, a UK non-governmental organisation that campaigns against unsustainable bioenergy use (see www.biofuelwatch.org.uk). We are deeply concerned about the planned Combined Cycle Biofuel Generation (CCBG) plants which Blue-NG, in partnership with NGG, seek to build at eight different locations. We fear that those CCBG plants will have a significant negative environmental impact, in terms of increasing local air pollution and public health risks, and in terms of increasing global greenhouse gas emissions as well as contradicting the EU's and thus the UK's commitment to halt biodiversity losses by 2010. We have written a more detailed factsheet and would ask you to take this into account as part of our submission to the consultation: http://www.biofuelwatch.org.uk/files/thames_gateway_biodiesel_project.pdf .

Air Quality and Public Health

The proposed plant at Beckton would burn up to 56,000 litres of crude vegetable oil. Eight plants of the same capacity would burn nearly 450,000 litres per day. *This is a significant new source of emissions from combustion into the area, **in addition** to the fuel already being burnt in the area from motor vehicles and other sources.* Vegetable oil burning is associated with increased emissions of NOx which, in turn, is associated with increased respiratory diseases, including asthma. The Local Authorities Coordinators of Regulatory Services (LACORS) has recently highlighted concerns on the effect that biodiesel fumes have on air quality. In a Press Release of 27th March 2008 (http://tinyurl.com/6q5rfy), they state:

> LACORS, which provides councils with advice and guidance on environmental protection issues, says there is a lack of research on the air quality impacts of biofuels. However, the existing research raises some concerns and suggests that this issue needs further investigation:
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> - The London Borough of Camden found that emissions of fine particles and oxides of nitrogen from biodiesel, which are of concern to many local authorities, are higher than most other fuels, including standard diesel.
> - Research carried out in the USA on emissions of school buses showed that bus exhaust particulate emissions rose by a factor of 1.8 when using a 20% biodiesel blend compared to diesel alone. Carbon monoxide and hydrocarbon emissions from the vehicles were also higher. The biodiesel used was apparently of poor quality, and this also highlights the need for stringent, enforceable fuel standards.
> - Also of concern is the potential for the promotion of biodiesel to lead to increased levels of diesel vehicles being purchased. Although diesel vehicles have benefits in terms of fuel efficiency and carbon dioxide emissions, it is known that diesel vehicles emit high levels of particulates when compared with petrol. It has been found that more than 99% of particulate emissions by mass from diesel cars are PM2.5 – very fine particles that are particularly damaging to human health, for which there is no safe level.

LACORS are concerned about emissions from biodiesel vehicles. We suggest that the burning of thousands of litres of vegetable oil a day would be the equivalent adding

many cars to the area, and significantly increase NOx, and CO, and probably also PM 2.5 and PM 10 particulates.

We note that page 7 of the 'Environmental Summary of Technical Assessment' document prepared for Newham Council by Environmental Perspectives LLP (document 11688128.pdf from the Newham Planning website) says that Entran Ltd have carried out a technical assessment of air quality issues. We suggest that their finding that annual mean NOx levels would be 'moderate adverse' must be examined further given the sheer quantity of vegetable oil to be burnt daily.

We are also concerned about the potential for increased PM 10 and, even more importantly, increased PM 2.5. PM 2.5 is a fine particle which is known to penetrate into the deepest part of the lungs; the particles are small enough (2.5 microns) that they cross the air-blood barrier in the lungs. This results in these tiny particles of burnt material directly entering the blood stream and, thereby, having access to the internal organs and potentially the foetus in pregnant women. PM2.5 particulates have been associated with premature death from heart and lung disease, cardiac arrhythias, heart attacks, asthma attacks and bronchitis (Document by U.S. Environment Protection Agency: http://tinyurl.com/5tyxol). There is further evidence linking high levels of PM 2.5 to an increased incidence in Sudden Infant Death Syndrome (in Environmental Health Perspectives Journal, 2006: http://tinyurl.com/646ucm).

We understand that there is insufficient evidence to show that the proposed plant will not emit particulates including PM 2.5 at unsafe levels. *Only a full independent air quality assessment could answer this question, and* ***it is essential to the public health concerns in the Borough of Newham that this is carried out before any planning consent is given.***

Noise and smell impacts on local residents

We note from page 11 of the 'Environmental Summary of Technical Assessment' document regarding the planning application at Beckton that noise levels are expected to affect the residential areas 240m west of the application site. We believe that Easterly wind conditions would make not only these noise levels unacceptable, but also smell, air quality and public health issues (as above) unacceptable for these residential streets. This could also apply to other CCBG plants planned by Blue-NG depending on their location, but we have not seen details of those.

We would ask Ofgem to also consider the experience of residents close another such, but much smaller, installation where a court has recently revoked planning consent. In April 2008, a German court revoked the planning permission granted for a palm oil CHP plant in St Ingbert, Saarland, which had been in operation since 2006 (http://tinyurl.com/5r37zk and, for a translation, http://tinyurl.com/5f5amn), due to noise and air quality impacts.

The application is not for truly renewable energy

The developers have highlighted the use of the geo-pressure technique. This is a technology which, we understand, is suitable to decentralised energy and can improve the efficiency of power distribution. **Our objections do not relate to geo-pressure.**

However, geo-pressure is not a source of energy. The energy source in this case will be vegetable oil – the developers state blends of crude palm, Jatropha and oil seed rape oils. These oils are the same oils that are refined into biodiesel for cars, grown and produced from the same plantations.

There is now a significant body of evidence that these biofuels are highly unsustainable and contribute to an increase in overall greenhouse gas emissions, and have a significant negative impact on communities, food security, forests and biodiversity in the producer countries. They, therefore, can not contribute to a 'renewable energy' system.

Palm oil bioenergy is associated with devastating deforestation as well as displacement of communities and human rights abuses. Recent scientific research shows that it incurs a massive 'carbon debt' of up to 840 years (http://tinyurl.com/5deowo) - this is the amount to time needed to pay back for carbon emissions created by the land clearance for plantations. This publication of this research in February 2008 was the direct trigger for the UK Government to instigate a review into the indirect impacts of biofuels – the review will only publish its initial findings in June 2008.

Jatropha oil is linked to large-scale displacement of rural people and to more hunger and poverty as land is diverted from food production to growing fuel, a development whish is facing growing popular opposition, including in India (see http://tinyurl.com/5x7vzj and http://tinyurl.com/44zg5y).

Using rapeseed oil for bioenergy is one of the main factors behind rising palm oil prices and thus palm oil expansion (see UN Food and Agriculture Organisation, http://tinyurl.com/2o9bab). A recent study by Chemistry nobel laureate Paul Crutzen and others suggests that the overall greenhouse gas emissions associated with rapeseed biodiesel are up to 70% higher than those of burning an equivalent amount of fossil fuel diesel (http://tinyurl.com/2elcyc). The results of this study would also apply to other uses of rapeseed oil for bioenergy, since the study does not take account of emissions linked to the biodiesel refining process.

Deforestation s a leading cause of biodiversity losses worldwide, whilst, in the UK and elsewhere in Europe, the conversion of what used to be set-aside lands to oilseed rape and other crop production, much of it for bioenergy, is a severe threat to our biodiversity (http://statistics.defra.gov.uk/esg/ace/research/pdf/observatory10.pdf and http://www.rspb.org.uk/news/details.asp?id=tcm:9-182116).

Liquid biofuels have also been implicated in the growing global food crisis with Gordon Brown, Alistair Darling, Malcolm Wicks and other ministers all calling for detailed reviews in recent weeks.

This is not a time to be encouraging another use for liquid biofuels, and experience in Germany shows that such facilities tend to use high levels of Palm Oil for reasons of

market price, supply and demand. Germany is, the leading European country for CHP plants using vegetable oil, with a total of 1,800 such developments (most of them much smaller). The vast majority are run on palm oil because rapeseed oil is significantly more expensive and would render such schemes economically unviable.

Global demand for vegetable oil exceeds the global supply. This means that using any type of vegetable oil for bioenergy will inevitably push up all vegetable oil prices, including of palm oil. There is strong scientific evidence that the emissions from converting more land to crops for bioenergy are significantly higher than the emissions saved from replacing fossil fuels. Professor Florian Siegert was interviewed about the climate impact of similar CHP plants in Germany, he said: "We were able to prove that the making of these plantations and the burning of the rain forests and peat areas emits many thousands of times as much CO2 as we then are able to prevent by using palm oil. And that is a disastrous balance for the climate." (tinyurl.com/3xxros).

We understand that this development, if it goes ahead, will be the first of its kind in the UK and could set a dangerous precedent for similar projects elsewhere. Apart from the serious impacts of biofuel production, especially palm oil, there is growing opposition to vegetable oil burning for CHP due to air pollution and noise as highlighted by the Saarlouis case.

We therefore hope that Ofgem will reject the application as being environmentally unsustainable, in terms of air pollution and public health, global warming impacts and biodiversity impacts.

Yours sincerely,

Almuth Ernsting, co-Director Biofuelwatch