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Your Ref: **Direct Dial: 01291-621821**
Date: 25 July 2005

Peter Fletcher
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Dear Mr Fletcher

Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999
Renewable Energy Facility – Land at Dagenham, East London
Novera Energy Limited

Our clients, Novera Energy Limited, propose to construct a Renewable Energy Facility that will be fuelled by Solid Recovered Fuel (SRF) on land included on the edge of the Ford Motor Company complex at Dagenham in the London Borough of Havering. It is our view that the planning application will need to be supported by an Environmental Impact Assessment (EIA) and the purpose of this letter is therefore twofold. In the first instance we seek your confirmation under Regulation 5 that an EIA is necessary and, secondly, we seek a formal scoping opinion under Regulation 10 as to the nature of the EIA should you confirm that it is necessary. In accordance with the Regulations and the Guidance in Circular 2/99 this letter sets out:

- A brief description of the proposed development;
- A plan to show the location of the development; and
- A description of its possible effects on the environment.

The Proposed Development

The proposed development is a gasification/power generation facility designed to provide a renewable energy facility in East London by providing clean energy in the form of synthetic gas for use in a power generation plant that can export electricity into the grid or to a specific user.

The facility would predominantly be fuelled by the SRF materials produced by the nearby Frog Island Bio-MRF and would recover value from it by processing the materials to make a clean gas that will, in turn, be used to generate renewable energy.

It is intended to construct a conveyor route from the Bio-MRF Facility at the Frog Island Depot directly to the facility (which lies 100m away). As a contingency, the material will be

delivered by road transport via Creek Way and Frog Lane. This would require the use of less than 300m of public highway in an underused industrial location.

The facility would generate some 13MW of electricity exporting in the order of 10MW .to a major industrial end user after providing power to the plant itself. The power plant would be fuelled by some 13 tonnes per hour of SRF.

The technology to be used is a propriety fluidised bed system that will gasify the SRF to produce a clean syngas which is conditioned and then fed to a steam boiler, the steam from which drives a steam turbine generator fuelling a steam boiler.

Emissions to land, air and water

- The residue from the process (a char) is inert and if no beneficial use can be found can be safely landfilled. For c90,000 tonnes per annum of SRF the facility would produce approximately c20,000 tonnes of residual char.

- The emissions to air will be the flue gases discharged from the steam boiler.

- With regards to emissions to water, the plant will produce an effluent stream of approximately $3m^3$ per hour which will be treated on site to ensure compliance to the standards required by the regulatory authorities plus boiler and cooling water blowdown of approximately $20m^3/h$..

The Site Location

The proposed location of the site is shown on the attached Drawing JER2943-003.

The facility would be located on land included on the edge of the Ford Motor Company Complex at Dagenham in the London Borough of Havering. The site lies less than one mile by road from the Shanks Frog Island facility - approximately 100m as the crow flies.

The whole site comprises hardstanding and is currently used for vehicle storage.

Possible Effects of the Development on the Environment

The purpose of this section is to set out what are, in our view, likely to be the key issues to be addressed in the EIA and indicate how we would propose to examine these matters. The remainder of this section is set out in the broad order of the chapters that will ultimately comprise the Environmental Statement (ES).

1. *Introduction*

This section will include narrative on:

- The format of the ES and the statutory background to the EIA process;
- The development company;
- The existing site and its history; and
- The proposed development.

2. *Planning Policy Context*

This section will include a summary of the policy context of relevance to the project at the national, regional and local level. The relevant policies will be reviewed and the key points of relevance summarised. This will set a context for the more detailed topic analysis that will be included in the specific chapters of the ES. The policy documents that are likely to be referred to will include:
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- Relevant PPGs, PPSs and emerging PPSs, particularly PPS 22 Renewable Energy and the PPS10 Planning for Sustainable Waste Management insofar as this is relevant;
- Other relevant government guidance, for example, the national waste strategy and 'Guidance on Policies for Waste Management Planning' published by the, then, DETR IN 2002;
- The London Plan adopted in February 2004 which is the RSS for the area.
- 'Green light to clean power - The Mayors Energy Strategy'.
- 'Rethinking Rubbish in London - The Mayor's Municipal Waste Management Strategy'.
- The Havering UDP
- The Thames Gateway Planning Framework
- The Strategic Planning Guidance for the River Thames
- The Urban Strategy for London Riverside
- Other local policy documents such as the Local Transport Plan, the Biodiversity Action Plan and other relevant documents.

3. *Need and Alternatives*

In preparing an ES it is good practice to consider the need for the development and the alternatives that have been considered. In this respect the availability of energy supplies in the local area from the national grid will be explored and commented upon.

The alternative sites that have been reviewed will be discussed and the reasoned argument for the selection of the development site will be put forward in the context of the known end user for the energy to be generated.

The fuel that is to be used is the residual material from the waste treatment facility permitted at Frog Island and now under construction to be operated by Shanks on behalf of the East London Waste Authority. The proposed development is a renewable energy facility. The assessment will consider the extent to which the intended means of process material transfer to site by conveyor is a sustainable transportation option. Furthermore, the fact that the two facilities are in very close proximity to one another will be assessed in this context. These issues will be examined fully and, in the circumstances and in the light of the contents of PPS10, it is not our intention to undertake a full BPEO assessment.

4. *Air Quality & Emissions*

All the potential emissions from the process and the site will be identified. Early discussions will be held with the local authority Environmental Health Officer and the Environment Agency to confirm and agree the scope of the work that is necessary.

Air dispersion modelling will be undertaken for all identified gases in accordance with the UK regulatory framework for protection of air quality, following the Environment Agency guidance on environmental risk assessment for waste management facilities and using a new generation air dispersion model, namely Aermod. Aermod represents the most

appropriate methodology for air quality assessments of this type in the UK and is accepted as such by the Environment Agency.

Discussions with the regulatory authorities will identify whether odour will be an issue that require a quantitative assessment. Where potential impact from odour is identified to be of significance, an odour assessment based on the EA Draft Horizontal Guidance for odour and using the Aermod model will be undertaken.

The scheme will also have significant benefits to regional and global air pollution as the production and use of the gasification will result in reductions in the emission of greenhouse gases, including methane and carbon dioxide and these benefits will also be taken into account in the assessment.

The proposed methodology for the assessment is as follows:

- The assessment of air quality effects would follow the guidance set out in the DEFRA technical guidance on the R&A of air quality. Where possible, the effects of the scheme will be quantified and compared to the Government's Air Quality Strategy objectives and interpreted in the context of the Local Authority's obligations regarding local air quality management.
- Information on air quality in the UK will be obtained from a variety of sources, including local authorities, national network monitoring sites and other published sources such as the local authority's Review and Assessment (R&A) of air quality.
- Potential sources of dust, during construction and operation, will be identified and mitigation measures will be proposed to reduce any effects to an acceptable level.
- Potential sources of odour will be identified and mitigation measures will be proposed to reduce any effects to an acceptable level. If necessary, the most significant odour sources will be modelled using the advanced dispersion model, Aermod, in order to calculate maximum acceptable emission rates.
- The emission of pollutants from the gas combustion exhausts will be modelled using the advanced dispersion model, Aermod. The effect of emissions from these sources at local receptors will be calculated.

5. *Human Health*

Human exposure to contamination is controlled through a number of statutory requirements and/or guidance depending on the nature of exposures. A common framework for risk assessment and management is however provided by DEFRA in risk assessment guidance as a key part of the process of appraisal for environmental decision making.

This guidance sets out some basic principles which the regulators would normally intend to use in the assessment and management of environmental risks and which are recommended for all public-domain risk assessments. They are intended to provide decision-makers, practitioners and the public with a consistent language and approach for environmental risk assessment and management.

The guidance provide a framework for a tiered approach to environmental risk assessment and management where the level of effort put into assessing each risk is proportionate to its priority (in relation to other risks) and its complexity (in relation to an understanding of the likely impacts).

The assessment of potential impact on human health from such processes on receptors, including residents and workers within the surroundings of the plants (excluding the site workers), commonly follows an air emission and dispersion modelling. The receptors of this kind of exposure may also be subdivided into those that are at risk through acute (short-term event or fault driven) exposure and those that are at risk through chronic (long-term) exposure.

A site-specific human health risk assessment for this type of exposure will be undertaken in the following circumstances:

- where no appropriate air quality or environmental assessment threshold are available for use as environmental benchmark,
- where pathways other than direct inhalation are being considered or '
- where multiple pathways are identified to be present.

The assessment will make use of toxicity data to produce a tolerable daily intake for the purpose of assessing hazard indices from multiple pathways exposure.

6. *Noise Assessment*

Although the process will be entirely contained within buildings, the effect of noise on local sensitive receptors will be assessed as set out below:

- A meeting would be arranged with the Local Authority Environmental Health Officer to discuss and agree the chosen criteria and methodology for the noise monitoring and assessment. Noise monitoring would be carried out at a representative selection of noise sensitive properties. Sufficient monitoring would be undertaken so as to be representative of all periods of the day and night for which permission to operate the Power Generating Facility is being sought.

- Ambient noise measurements would be undertaken in accordance with BS 7445:1991 'Description and Measurement of Environmental Noise'. The parameters to be measured and recorded would be $L_{Aeq,}$ L_{A10}, L_{A90}, and L_{Amax} values.

- Once background levels at sensitive receptors have been determined, noise levels which are likely to be produced by the proposed development and the impact of this upon the existing noise climate would be predicted. The prediction methods used would incorporate the following:

  - BS 4142: 1997 'Method for Rating Industrial Noise' – This standard describes a method for assessing whether the noise produced by an industrial development is likely to give rise to complaints.

  - BS 5228: Part 1: 1997 'Noise and Vibration Control on Construction and Open sites''- This standard provides guidance and recommendations on how to predict and measure the impact of construction activities on the local amenity.

- A predictive assessment would be undertaken to calculate the impact of this development at sensitive receptors. BS 5228 provides guidance on the prediction of noise levels over varying distances and differing ground conditions.

- Road traffic noise levels at sensitive receptors adjacent or in close proximity to the road would be predicted using 'Calculation of Road Traffic Noise', DoT, 1988 (CRTN). This

assessment would aim to establish the impact of additional traffic, if any, generated as a result of the scheme.

- The above standards and methodologies would be utilised and compared against recommended noise thresholds and assessed according to the impact on the local residential amenity. Conditions would be recommended to ensure that ambient noise levels at these receptors are unaffected.

- Analysis of the noise levels would be made with reference to BS 8233 as this defines a range of ambient noise levels for a number of design criteria. The World Health Organisation guidelines for community noise would also be referred to.

- BS 5228: 1997 would be used to predict the noise impact of the construction phase on the neighbouring properties. Noise levels can be predicted using a plant or equipment inventory, alongside details of the proposed hours of working and methods of working.

7. Surface Water and Flooding

The site is located downstream of The Thames and Barking Flood Barrier systems. However, it is protected from flooding by the tidal defences, which, at this location, comprise a combination of flood walls and embankments on The Thames and it's tributaries. The standard of protection is generally between 200 and 1,000 years for the tidal Thames. Hence, direct flood risk to the site is not a major issue. PPG25, the planning guidance for Development and Flood Risk does specify the need to demonstrate the adequacy of defences with consideration of the potential impacts of climate change, and also to ensure that the development does not exacerbate flood risk elsewhere.

The key aspects are:

- The adequacy of the flood defences compared with the 1 in 200 and 1 in 1000 year flood levels
- Impacts of climate change and potential flood levels
- The integrity of the flood defences
- The surface water drainage solution for the site, based on baseline and post development.

Because the emphasis to maintain the defences rest with the land owner, in order to ensure the long-term safety of the site a suitable maintenance strategy will be agreed with the Environment Agency. This agreement would outline inspections, maintenance work and review of requirements for the defences relating to the site.

The scope of the work required for the FRA for the proposed development would primarily be focused on reviewing existing surveys of the flood defence as well as current and proposed site layout to assess the drainage impacts.

8. *Landscape and Visual Appraisal*

A landscape and visual impact assessment in accordance with current best practice as set out in the joint LI/IEMA publication 'Guidelines for Landscape and Visual Assessment', 2nd Edition (2002) will be carried out. Reference would also be made to Countryside Agency guidance 'Landscape Character Assessment' (2002). Particular attention will be given to the landscape and visual effects of the massing and appearance of the proposed

structure(s), including the flue/stack, and the access arrangements. The key points from which views will be assessed will be agreed with the local planning authority.

In addition to reviewing the proposals for the site, a review of the following policies and guidelines will be undertaken:

- Planning Policy Guidelines
- Local Authority Local Plan (UDP).
- Countryside Agency Character Areas
- East London Heritage Strategy
- East London Landscape Character Assessment
- Landscape Assessments of the Local District
- Others environmental studies as appropriate

9. *Transport Issues*

Given the nature of the proposals to import the SRF from the nearby Frog Island Depot via a conveyor system, it is considered that the transportation impacts arising from the development will be limited.

Should the introduction of a conveyor system prove unfeasible, the SRF material would be transported using HGV's via Creek Way and Nash Way then the impacts associated with this traffic would be assessed.

The impacts of all increased traffic to and from the site as a result of the proposals will be assessed using a methodology and to a level of detail to be agreed with the Local Planning Authority.

10. *Nature Conservation*

As the site is predominantly hardstanding, it is not considered that ecological and nature conservation issues are likely to be an issue.

In order to confirm this, an Enhanced Phase 1 survey will be undertaken which comprises:
- Desktop Study
- JNCC Standard Phase 1 Habitat Survey
- A Protected Species Audit

Arising from this we would agree the scope and nature of any further protected species and other surveys that may be required. These could include surveys for bats, nesting birds, badgers, dormice, water voles amphibians and reptiles and otters given the proximity of the River Axe to the site. These would be agreed with the County ecologist and English Nature as appropriate.

11. Geology, Hydrogeology and Contamination

The site is located adjacent to the River Thames and is underlain by Alluvium. Based on experience we would anticipate a significant thickness of soft and compressible alluvial clays, underlain by River Gravel at depth.
In addition, it is likely that made ground is present, used to raise levels historically as part of the land reclamation scheme, commonly undertaken in this area.

This chapter will summarise the results of a desk study examining the geology, hydrogeology and potential contamination at the site and identify a suitable site investigation programme.

10. *12. Other Issues*

We believe that the above addresses all of the issues that are key to the appropriate assessment of the environmental effects of the development. In our view it should not be necessary to consider archaeology in depth in the ES. The site has been previously developed and is considered therefore to be a 'brown field site. The current SMR will be reviewed and, if appropriate, an investigation in accordance with the policy undertaken.

Each of the substantive chapters will follow a common format and will be divided into 8 parts as follows:

i. Introduction setting out the scope of the chapter;
ii. Site description in the specific context of the subject matter of the chapter;
iii. The assessment methodology that will be used referencing sources, models, etc.;
iv. Baseline conditions setting out the findings of the baseline studies;
v. Identification and evaluation of key impacts setting out the impact that the development could have;
vi. Enhancement and mitigation proposals setting out the measures that will be taken to deal with the impacts that have been identified and measures to enhance the environment where possible;
vii. Residual impacts identifying those impacts, both positive and negative that will result from the development; and
viii. Summary that will conclude the chapter, drawing out the key points.

The summaries will be in a form that can be incorporated directly into the Non Technical Summary that will be produced in accordance with the Regulations and made available to those who are interested in the project but not necessarily needing to read the full ES.

We understand that you will now wish to consult with statutory consultees and other colleagues within the local authorities in coming to your formal views. We believe there would be considerable merit in meeting with you once you have had some indication of their responses but before you issue your formal scoping opinion. If there is any further information that you need to progress this matter, please give me a call.

Yours sincerely
For RPS Planning, Transport and Environment

Brian Cook
Principal Consultant
Encl.