11 January 2012

Renewables Obligation Team
Department of Energy & Climate Change
Area 4A
3 Whitehall Place
London
SW1A 2AW

robr@decc.gsi.gov.uk.

RE: Consultation on proposals for the levels of banded support under the Renewables Obligation for the period 2013-17 and the Renewables Obligation Order 2012

Dear Sir / Madam,

Thank you for providing the North London Waste Authority with the opportunity to respond to the Renewables Obligation Order Consultation.

The North London Waste Authority (NLWA) is the second largest waste disposal authority in England, handling 1 million tonnes of municipal solid waste (MSW) collected in the seven London boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest. In addition, the NLWA is the owner of the existing 500,000 tonne Energy-from-Waste (EfW) facility at Edmonton that is generating electricity.

The NLWA is currently undertaking a major procurement exercise for future service delivery including major investment in new waste and energy infrastructure. Among other ambitions the procurement seeks to realise substantial carbon and other environmental benefits through the production of Solid Recovered Fuel (SRF) from municipal waste, and the subsequent use of the SRF to generate energy in the form of both electricity and heat. There are good prospects for delivering this as we have attracted market interest from all major waste companies operating in the UK and major energy producers. We have a shortlist of two Waste Services solutions and three Fuel Use solutions, all of which involve the production of renewable energy and potential heat use. The NLWA is therefore at the forefront of delivering the Government's and local ambitions for a smart waste and energy solution including renewable heat use.

The Authority's detailed response to your consultation responses is attached. In summary, the Authority considers that the Government's proposed reductions in ROCs

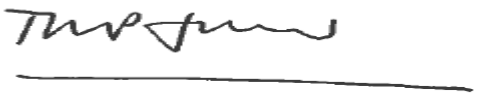
are disappointing as such a reduction will not help make EfW CHP facilities economically attractive compared to electricity-only EfW facilities. We believe that reducing ROC support for EfW with CHP will therefore inhibit or even prevent the deployment of such technologies as there will not be sufficient financial support to make EfW with CHP attractive to investors or affordable to Local Authorities or address the key barriers associated with implementing EfW with CHP. This includes identifying a heat demand and then securing that long term demand, along with developing heat infrastructure networks that require sufficient financial support. The introduction of RHI does not provide a greater financial support for EfW facilities with CHP as an alternative to ROCs particularly as both subsidies cannot be claimed jointly, thereby further reducing the incentives for EfW CHP solutions. This is further exacerbated by the reduction in the RHI from £0.26/MWh to £0.10/MWh for large scale biomass facilities in October 2011, which significantly undermine the confidence of businesses intending to invest in new heat infrastructure.

This comes at a time when it is critical to secure the uptake of new renewable technologies in order for the Government to meet their renewables commitments as outlined in UK Renewable Energy Roadmap and the UK's climate change targets. The Authority believes that waste treatment processes generating EfW with CHP have a considerable contribution to make to the renewable energy sector and that Government should take steps to ensure that the right level of support is available to such projects.

In providing this response the NLWA has not drawn on commercially sensitive information from bids that are currently being evaluated in a competitive procurement environment. We would, however, encourage DECC to discuss detailed calculations with, among other industry stakeholders, the three bidders on our fuel use procurement to ensure your analysis is grounded in commercial reality.

The NLWA would be pleased to assist you further with your analysis if that would help. Please contact Kirsten Roberts (kirsten.roberts@nlwa.gov.uk) in the first instance.

Yours sincerely,



Tim Judson

Director of Procurement.

North London Waste Authority, Lee Valley Technopark, Unit 360, Ashley Road, Tottenham, London, N17 9LN
Tel: 020 8489 4367 Fax: 020 8489 1775 Email: procurement@nlwa.gov.uk Web: www.nlwa.gov.uk

CONSULTATION QUESTIONS

In relation to the consultations put forward within the Renewables Obligation Order Consultation Document, the North London Waste Authority has set out its response below:

PERSONAL DETAILS
Respondent Name: Tim Judson
Email Address: procurement@nlwa.gov.uk
Contact Address: Lee Valley Technopark, Unit 360, Ashley Road, London, N17 9LN
Contact Telephone: 020 8489 4367
Organisation Name: North London Waste Authority
Would you like this response to remain confidential? No

Chapter 10: Energy from Waste with CHP

44. Do you agree with the Arup analysis on costs and potential on EfW with CHP, including the estimates of gate fees used? Please explain your response with evidence.

The Authority disagrees with the Arup analysis on costs and potential on EfW with CHP, including the estimates of gate fees used. The Authority's comments are as follows:

1. The net surplus of £30 per MWh quoted by Arup in their EfW with CHP Medium scenario for the production of 1 MWh of electricity at an EfW facility (Page 171 of Arup report) is incorrect. This is because this figure implies that the new facilities would be built without any electricity or ROCs income; whereas actual gate fees for new facilities always reflect income from electricity in order to be competitive in securing the fuel supply. Therefore, this figure implies that the assumed gate fee income has been set too high (as is acknowledged may be the case in the report).
2. In the scenario above, real gate fees will reduce to erode this £30 surplus, which has been shown to have occurred in the £24 reduction in the 2011 WRAP gate fee[1] from the 2010 WRAP gate fee (i.e., from £78 to £54 per tonne).
3. The assumption used by Arup/DECC to assess the economic viability of EfW suggests that the levelised cost calculation has assumed an average load factor of 83% and an economic life of 29 years. These assumptions are unlikely to be shared by providers of debt unless contractual commitments are in place that guarantees this level of income.

   In order to finance long term projects it is unlikely that the short term gate fees will provide sufficient security for funders, over the longer term prices are usually less subject to fluctuation. We have used the average prices to estimate the total revenue required over the longer term. If this gate fee cannot be obtained then the project will not be able to secure funding. The average gate fee is £19 higher than the lowest gate fee in the WRAP 2011 Gate Fees report.

[1] Gate Fees Report, 2011, WRAP July 2011.

It is more likely that funding viability will be assessed by lenders on much more conservative terms, requiring higher levels of income to be guaranteed during the term of the lenders debt. Inevitably this means that gate fees will have to rise to fill this income gap; in the absence of other revenue streams. As discussed above, the current market is moving in the opposite direction i.e. gate fees are falling. This suggests that it will be increasingly difficult for developers to assemble EfW CHP projects that are competitive, viable and fundable. A reduction in income from ROCs will make this problem worse.

The cost analysis also does not appear to account for the fact that SRF facilities typically have higher operating costs due to the nature of the fuel being accepted. Our procurement proposes a recycling-led solution which will result in a high calorific fuel being produced for a SRF facility. In taking this approach the overall solution will achieve multiple targets, in terms of recycling, landfill diversion, as well as contributing to the UK renewable energy and carbon targets.

The Authority recommends that the following updates are made to the Arup report:

1. The Authority recommends that the Arup report is updated to reflect the WRAP 2011 Gate Fees report;
2. That a positive cost is assumed for an EfW generating electricity given the revenues available for electricity generation; and
3. That heat income is not assumed without subsidy based on the fact that any heat income received without ROCs would be required for the investment into the heating network and therefore would not produce any net income above electricity generation foregone. This is evidenced by the large number of existing EfW facilities and other power stations that have heat available but no offtake.

45. Do you agree that 0.5 ROCS is an appropriate support level for EfW with CHP? Please explain your response with evidence. We would particularly welcome evidence relating to levels of gate fees received by generators and additional capital costs relating to heat offtake.

The Authority does not believe that 0.5 ROCs is an appropriate support level for EfW with CHP. The Authority's comments are as follows:

Costs

The Authority agrees with the calculation of costs in the initial Arup EfW with CHP Medium analysis showing that for a new CHP EfW the costs are £146 per MWh in 2010. Based on our back calculations, we understand this to be made up of revenues less net cost:

- £156 per MWh gate fee based on £78 per tonne from the WRAP 2010[2] report and 0.5 MWh of electricity generated per tonne;
- £20 per MWh for heat income (based on the equivalent cost of gas heating) assumed to be £30 per MWh from the EfW with equal production of heat and electricity. This reflects the prioritisation of heat production until the heat demand is exhausted but with only limited heat demand assumed to be equal to the electricity production; and
- Less the £30 per MWh surplus from the Arup calculations of cost per MWh in the

[2] Gate Fees Report, 2010, WRAP July 2010.

Medium Scenario.

Revenues

For existing EfW with CHP the gate fee should be set at a level which includes all forms of income and expenditure including:

- Electricity Income;
- ROCs assumed to be zero due to the very low number of existing EfW facilities charging gate fees (i.e. burning waste not biomass) qualifying for ROCs;
- Heat Income assumed to be zero due to the low number of existing EfW facilities which can obtain heat income; and
- Capital costs and operating costs.

The current long term gate fee of £54 per tonne for EfW without heat income is equivalent to £108 per MWh to cover the above costs, after assuming electricity income of £50 per MWh. Working backwards this establishes an EfW (without CHP) capital and operating cost of £158 per MWh which agrees with the 2010 WRAP gate fee estimate of £156 per MWh. This shows there is basically no forecasting of heat income in gate fees and there are few generators which receive payment for the heat as this income stream is normally used to pay for the heat network and/or forgone electricity.

The Authority has updated the revenue assumptions for the following elements:

- A more realistic assessment of gate fees based on the WRAP 2011 report showing gate fees of £108 per MWh based on £54 per tonne from the WRAP 2010 report and 0.5 MWh per tonne; and
- Assumed heat income to be zero in line with existing energy projects where there is heat availability but no offtake.

The revenue of £108 per MWh would need to support costs of £146 per MWh (as calculated in the cost section above). This would require an additional £38 per MWh of income to be supplied through ROCs from income of at least £25 per MWh from 1 ROC sold at £50 per ROC (including the buy- out and recycle price) which is deemed to be 50% Biomass. Therefore justifying that at least 1 ROC at 50% biomass is required.

Currently there has been a very low use of heat and the take-up rate by EfWs of the 1 ROC on offer. This suggests that there is already not enough incentive for the planned EfWs to move to CHP EfWs. Reducing this incentive even further to 0.5 ROC will therefore significantly further reduce the deployment of EfW with CHP in the UK.

46. In addition to municipal solid waste, do you consider that there are any other types of wastes which could benefit from provisions deeming their biomass content or benefit from more flexible fuel measurement and sampling procedures? If so, please specify and provide evidence on how we might determine accurately the renewable content of these wastes.

The Authority welcomes the proposal to find ways to simplify arrangements to determine the renewable content of non municipal solid wastes such as Solid Recovered Fuel. The Authority considers that there are promising prospects associated with recently developed carbon-14 testing and would welcome this approach which would seem to allow for much simpler and cheaper testing, focused on the output from an energy plant rather than frequent testing of the

input material. However, the Authority also considers that SRF generated from MSW should have the same deeming provisions on the renewable content as for MSW.

The Authority has also provided a consultation response to Ofgem on the Renewable Heat Incentive Guidance Consultation Document, which included a response on the definition of Municipal Solid Waste and is provided below.

"The NLWA recommends that Ofgem provide further information about how it will determine whether commercial and industrial (C&I) waste will be considered as 'municipal waste' or 'mixed waste' and that the steps that would be required from applicants to confirm the classification of waste entering their EfW facility are outlined.

The NLWA recommends that Ofgem also considers classifying a facility as a 'municipal waste' facility for the purpose of RHI accreditation if the majority of waste and/or solid recovered fuel (SRF) treated at the facility is collected by the Local Authority to reduce, what appears to be, a complex process to prove eligibility.

The NLWA recommends that Ofgem provides a direct reference to the eligibility of using SRF in EfW facilities and how SRF would be defined in relation to the 'municipal waste' and 'mixed waste' definitions."

Chapter 11: Anaerobic Digestion

47. Do you agree with the Arup analysis on costs and potential on AD and AD with CHP, including the estimates of gate fees used? Please explain your response with evidence.

The Authority disagrees with the Arup analysis on costs and potential on AD and AD with CHP, including the estimates of gate fees used. The Authority's comments are as follows:

1. While the initial Arup medium cost per MWh analysis appears to be credible, the reduction in gate fees shown over time suggests the costs of capital and/or capital expenditure are understated; and
2. Between 2010 and 2011, the gate fee of £50/t quoted by WRAP for AD fell to £36 per tonne and could well be expected to reduce further over time. This loss of revenue will almost certainly prevent any reduction in cost per MWh of electricity and may in fact lead to an increase in cost per MWh.

48. Do you agree with the proposed level of 2 ROCs/MWh for Anaerobic Digestion, stepping down to 1.9 ROCs in 2015/16 and 1.8 ROCs in 2016/17? Please explain your response with evidence.

The Authority disagrees with the proposed changes to the levels of support for Anaerobic Digestion. The Authority's comments are as follows:

1. The reduction in ROC levels are mainly based on a proposed reduction of the costs of capital by 1.3% from 13.2% to 11.9% which lead to a £12 per tonne reduction in cost per MWh based on the medium facility presented in the Arup report;
2. The reduction in cost of capital is even more unlikely given the increasing reluctance of banks to invest without long term guaranteed waste streams as shown by the number of

banks withdrawing from major waste projects and the increasing uncertainty over the future ROC revenue (in part due to the proposed reduction); and

3. In an environment where gate fees are declining (see £14 reduction between WRAP 2010 and 2011 report), this shortfall needs to be made up by enhanced ROC revenues otherwise AD projects with become unviable and new facilities will not be built.

Currently there has been a very low take-up of the 2 ROCs available for AD facilities processing solely municipal mixed food waste. This suggests that there is already not enough incentive for such AD facilities to be viable and further reducing this incentive will increasing hinder the deployment of such AD facilities in the UK.

In addition to reducing gates fees and increasing cost of capital from the Euro crisis, any reduction in ROCs will make the construction of future facilities increasingly unlikely.