3rd March 2017

Renewable Heat Incentive Consultation,
Department of Communications, Climate Action and Environment,
29-31 Adelaide Road,
Dublin 2,
D02 X285

Re: Consultation on the Design and Implementation of a Renewable Heat Incentive in Ireland

Dear Sir/Madam,

With reference to the above consultation process, Stream BioEnergy welcomes this opportunity to contribute to the discussion on Ireland’s energy future.

Company Background

Stream BioEnergy (SBE) is an independent, Irish owned, renewable energy development company with an emphasis on delivering infrastructure to process organic waste in Ireland. As part of a vision for an improved, safer, more secure and sustainable clean energy future, SBE promotes the use of Anaerobic Digestion (AD) to generate renewable energy from organic materials in a way that safeguards our environment. SBE specialises in project development and plans to deploy this proven and established waste treatment technology as part of Ireland’s integrated waste management treatment infrastructure. The management team of Stream has significant experience of developing and operating renewable energy infrastructure projects throughout Europe.

SBE recently started construction of a €30m AD facility at Ballymena, Northern Ireland that will generate 3MW of renewable electricity. SBE has also acquired planning permissions to develop urgently needed large scale AD facilities in north County Dublin and Little Island in Cork. When operational these plants would provide a sustainable way of managing organic wastes as well as each generating up to 4MW of renewable electricity to power local homes and businesses.

As a developer of critical energy and waste infrastructure we would be obliged if you would consider our comments set out below.
The Benefits of Anaerobic Digestion

AD is a proven and efficient technology that delivers multiple energy, climate, environmental, societal and economic benefits. It can help Ireland meet a number of important energy and non-energy EU and national policy commitments and it has wide ranging cross-sectoral benefits.

Biogas is a valuable product of AD which will play an important role in helping to achieve our EU Renewable Energy Targets for 2020. Biogas can be converted to energy via an on-site Combined Heat & Power Plant (CHP) and electricity generated from the CHP process can be used in neighbouring industrial or commercial enterprises or can be fed into the national grid. The surplus heat generated can be used in industrial processes or for district heating systems. Alternatively the biogas can be upgraded on-site for use as a natural gas substitute to help achieve our renewable heat and transport targets. The upgraded renewable gas can be injected directly into the gas network to maximise efficiency in distribution and usage.

AD provides a constant supply of electricity, gas and/or heat. It therefore can be used to provide a stable base-load of renewable energy to the grid. It has the potential to supply enough electricity to power 20% of Irish homes, or to replace 7.5% of the fossil-based natural gas used via the national gas grid with renewable 'green' gas, saving Ireland €200 million in imported fuel.

As well as producing heat and power that can be fed into our communities, AD has an important role to play in the fight against climate change as it can reduce Greenhouse Gas Emissions (GHG) which Ireland has international commitments to decrease. Landfilling and landspreading of organic wastes generates uncontrolled emissions of methane to the atmosphere as the waste degrades. By diverting these wastes to AD, the organic materials are processed in a totally enclosed system which prevents the uncontrolled release of methane. Replacing fossil fuels with renewable energy generated in this manner also reduces GHG emissions. The challenge facing the agriculture sector to moderate its GHG emissions (32% of Ireland's total) and convert to a low carbon sector in the context of major growth to achieve the Food Harvest targets, could be addressed by AD.

AD not only recovers the energy from organic waste, but it also produces a nutrient rich digestate that can be suitable for use as an organic soil conditioner or biofertiliser for agricultural and horticultural purposes thus reducing reliance on artificial fertilisers that are becoming increasingly expensive to manufacture. The nutrients in digestate are more amenable to plant uptake than other organic fertilisers and thus its use has water quality, environmental and health benefits as it decreases organic pollution potential as well as reducing risk of spreading microbial contamination.

If the full potential of AD development is realised, 2,250 direct permanent jobs could be created across Ireland, with many more generated in the construction phase (Ref: 'The Development of Anaerobic Digestion in Ireland' – Report prepared by the Joint Committee on Communications, Energy and Natural Resources, 2011, and the 2014 European Biogas Association Report). Employment would also be created in support industries such as engineering and manufacturing and other local professional services. There would be new business opportunities for sectors that can provide services to the AD industry and the development of the AD sector would also promote more balanced regional economic development as revenue from the plants is likely to be spent locally. As well as boosting jobs in the rural economy, AD could also provide another farm income stream and better control of energy costs for farmers.
Responses to Specific Questions

1. What are the respondent’s views on the inclusion or exclusion of the ETS sector?
   The focus of any future RHI scheme should be on the non-ETS sector. However, if the future scheme is designed so that the payment will be provided to the user of the biogas rather than the producer of the biogas (where these are different) then the ETS sector should be allowed to qualify under the scheme as a user where they are purchasing the biogas from non-ETS companies.

2. Do respondents agree that energy efficiency standards should be included as part of the RHI?
   We agree that minimum energy efficiency levels should be specified to provide tighter control and avoid abuse of the system. However, any energy efficiency levels should be introduced in a balanced way in order not to create a barrier to implementation of the RHI scheme.

3. Do respondents agree with the requirement to ensure minimum technology standards for each technology should form part of the RHI?
   We agree that minimum technology standards should form part of the RHI. The RHI should incentivise high quality performance installations.

4. It is proposed that the RHI beneficiaries in Ireland will be required to show that heat is supplied to meet an economically justifiable heating requirement that would otherwise be met by an alternative form of heating such as a gas boiler. In addition, heat load should be an existing or new heating requirement, and not created artificially purely to claim the RHI?
   Heat used in the AD process should be deemed eligible for the RHI. Under REFIT 3 it was determined that heat used in the anaerobic digestion process is deemed useful heat. This includes the heating of the digesters, the pasteurisation of feedstock and the drying of digestate. Should that determination not have been made plant operators would not have met the 75% HECHP efficiency requirement.

   Also, if that determination was not made, for plants to meet 75% efficiency standard the parasitic demand of the plant would be met by installing a fossil fuel boiler. This situation is one that is undesirable and counter-productive with regard to meeting our renewable targets and should be avoided.

   The consultation document states that “anaerobic digestion plants, the pasteurisation of feedstock before they enter the digester, and the digestate is regarded as eligible processes”.

   Please note that in Ireland some anaerobic digestion plant pasteurise at the end of the process after the digester step.

   The mechanism to demonstrate that heat use is economically justifiable should be appropriate to the technology type.

5. The preferred option of DCCAE is that the WFQA is a mandatory requirement for participation in the RHI scheme for the purpose of fuel quality assurance. What are the views of respondents to this proposal?
   SBE agrees with the Wood Fuel Quality Assurance Scheme (WFQA) and its use to ensure the quality of biomass.
6. The DCCAE is minded to adopt minimum standards for PM and NOx emissions in line with the U.K. which is implemented through an Emissions Certificate and on-site emission testing where necessary for biomass appliances. What are the views of respondents to this proposal?

Any requirements to monitor emissions and meet emission limit targets set for waste management facilities should be consistent with the Waste Treatment BREF requirements to avoid unnecessary burdens. The new Waste Treatment BREF should be finalised by the EU Commission in 2017, replacing the 2006 BREF that currently applies. The BREF requirements specific to different technologies are generally applied to large scale facilities that are regulated by the EPA (in IED/Waste licenses).

7. Should the same criteria apply for domestic and imported biomass?

No, imported biomass will have higher transport emissions than domestic biomass and should not have the same criteria. The RHI is an opportunity to support the growth of a domestic industry. The Biofuel Obligation Scheme did not differentiate between domestic and imported fuels and was a missed opportunity to grow the domestic sector.

8. Should the same standards apply to both forestry and energy crop based biomass?

A forestry standard should not be applied to energy crop based biomass used as a feedstock in AD plants.

9. The preferred position of the DCCAE is to ensure a robust set of environmental sustainability standards for imported biomass. Should the E.U., U.K. or other sustainability criteria apply?

SBE suggests the ‘other sustainability criteria’ should apply.

10. What type of supply chain for GHG certification is appropriate (U.K. or other)?

No comment.

11. The DCCAE could include a maximum biomass lifecycle emissions eligibility criterion as part of the sustainability criteria for the RHI. What are respondents’ views on this?

No comment.

12. What is the most appropriate method for demonstrating compliance with the environmental sustainability criteria?

No comment.

13. Should the certification of GHG and wider sustainability issues be mandatory?

No comment.

14. Should the RHI scheme differentiate tariffs by CO2 intensity of the biomass? If not, why not?

This proposal would have the potential to complicate an RHI scheme.
15. What is the most appropriate method for demonstrating minimum GHG reductions are being achieved in specific supply chains? 
No comment.

16. The preferred option of the DCCAE is to introduce an RHI scheme with tariff differentiation by renewable technology. What are the views of respondents on the question of tariff differentiation by technology type?
We agree with the tariff differentiation by technology type in order to allow for a diverse mix of technologies. Different technologies have varying support requirements as well as potential impact on CO2 savings and as such there should be tariff categories specific to each qualifying technology.

11. The preferred option of the DCCAE is to introduce a tiering approach based on metered heat output (c/kWh). What are the views of respondents on this proposal?
The IWMA agrees with a tiering approach but suggests that the tiers are individually set within different technology categories as in the UK system. With this approach plants can find their own scale and not be restricted by banding.

12. Age of Existing Fossil Fuel Heating technologies being targeted for replacement. What are the views of respondents on this matter?
No comment.

13. The preferred option is that the RHI will be paid for a 15 year period. What are the views of respondents on a shorter or longer tariff payment period?
SBE suggests that the RHI should be paid for a 20 year period which is line with the typical lifespan of a plant. If the payment period is too short, plants could close prematurely.

14. The preferred option is that the RHI will comprise of ongoing payments over a period of years with no front loading. On balance, this decision would minimise the impact on the Exchequer while ensuring the RHI remains attractive for investment. What are the views of respondents on this approach?
We agree, providing that there are RHI guarantees for the full payment period and that payments are index linked.

15. Payment based on Metered Heat or Deemed Heat Use. What are views of respondents on the proposals for metering and deemed heat use as outlined?
We agree with the preferred approach that the metered option is allowed for all installations, but that the deemed option is allowed as an alternative for small installations. However, when a secondary heating source or backup heat supply is required, payment will be made based on metered readings only.

16. The DCCAE preferred option is to index the RHI tariff to the Consumer Price Index. This is the case in the existing Renewable Energy Feed-in Tariff and has worked well. What are the views of respondents on this proposal?
We agree with indexing the RHI to the CPI.
17. The preferred approach of the DCCAE is to introduce a tariff degression and budget cap mechanism along the lines of the U.K. scheme. What are the views of respondents on this proposal?

The preferred approach only mentions degression but there should be a mechanism to allow for a review of the system to make adjustments and increase the tariff if it is determined that it has been set too low and there is no deployment of AD infrastructure.

To date, the only incentive that has been in place for AD has been REFIT 3. The incentive is for electricity export from AD CHP and offers a higher incentive for demonstrated use of usable heat. REFIT 3 was amended in August 2014 reducing the cap for Anaerobic Digestion projects to 50MW.

In July 2005 a further reduction to the AD cap was made, the reason offered for the reduction from 50MW to the proposed 15MW is that “Demand for the biomass CHP category has exceeded the original allocation and for the other two categories [AD and biomass combustion] is significantly below the original allocations”. In reality, the biomass CHP tariff was sufficient to support its growth whereas the AD incentive was too low and as a result its capacity was cut. A 1MW biomass CHP plant had a higher tariff than a 1MW AD CHP.

SBE suggests a threshold of 120MW of biogas is specified for AD that when reached triggers a degression to the tariff level. If this threshold is not reached within a defined timeframe, for example 24 months, then a review to increase the tariff should be commenced to ensure that there is adequate incentivisation to stimulate the industry.

18. What are the views of respondents on the question of pre-accreditation for larger more complex installations?

Pre-accreditation will be required for large scale plants to receive funding. However, to avoid hoarding of capacity planning permission should be a requirement of applying for pre-accreditation.

**Additional Comments**

**Allowed Rate of Return**
Section 6.16 of the Consultation document states that “......the cost of capital in Ireland is expected to be lower than it was in the UK when the RHI was launched” and “.....a somewhat lower IRR could be considered acceptable to project developers”.

SBE does not agree with the latter statement. Ireland is a smaller market compared to the UK with less sources of funding available. As there will be smaller project portfolios available to fund there will be no economies of scale benefits for funders so the cost of capital will not be cheaper in the Irish market.

**Eligibility**
The RHI should examine the support it might give based on feedstock types for anaerobic digestion. The agriculture sector faces a significant challenge to moderate its GHG emissions (32% of Ireland’s total) and convert to a low carbon sector. The processing of manures in AD plants makes a greater contribution to CO2 reductions than the treatment of energy crops. However, plants processing only animal manures would require a higher level of support to make them viable.
CHP on bio methane to grid (BtG) plants

One point which appears to be missed in the RHI Consultation Document and which needs to be captured is future support for the CHP on bio methane to grid (BtG) plants.

Generally, BtG plants have an onsite CHP sized between 500kW and 1MW to provide power and heat to the plant. In the UK these plants are eligible for anc supported through FITs. Because REFIT III has now expired the CHP installed on new biogas units will no longer be eligible for support. However, any existing biogas plants that seek to expand to incorporate bio methane to the grid will be at a commercial advantage. In addition to the RHI support this CHP FIT is a critical source of revenue on BtG plants.

We trust that you will consider these points carefully in the preparation of a new Energy Policy for Ireland and Stream BioEnergy is available at your convenience for further engagement in relation to any of the issues raised in this correspondence.

I would be grateful if you could please acknowledge receipt of this submission.

Sincerely,

Morgan Burke
Development Manager
Stream BioEnergy