



carbon sole

Carbon Sole Group Ltd

Submission Responses to Consultation on the
Introduction of a Renewable Heat Obligation.

Carbon Sole Limited is a developer of Green Bioenergy Parks targeting delivery of renewable energy to Irish industrial and residential users. At the core of Carbon Sole's strategy is a secure supply of Renewable Energy Directive II compliant biomass comprising mainly wastes and residues from existing forestry operations across Ireland. From this renewable source, Carbon Sole is developing projects to deliver green electricity, heat and transport fuels for consumers.

Below are Carbon Sole's responses to the current consultation on the introduction of a Renewable Heat Obligation

Q1. Do you think that a Renewable Heat Obligation is an appropriate measure to Introduce?

Response: Yes, Carbon Sole believes that a Renewable Heat obligation is an appropriate measure to introduce provided that it is designed in such a way that it will incentivise appropriate responses from suppliers and investment in measures which actually reduce GHG emissions in a sustainable way.

Q3. Do you agree that the obligation should apply to all non-renewable fossil fuels as set out above?

Response: Yes, Carbon Sole agrees that the obligation should apply to all non-renewable fuels used for heating. These should be defined as those not meeting the carbon and sustainability criteria required by RED II.

Q4. It is intended that electricity used for heating purposes and renewable waste/district heating systems would be exempt from this obligation. Do you agree with this approach?

Response: Carbon Sole agrees that electricity used for heating purposes should be exempt at the point of supply. We also agree that any heating schemes based on energy from renewable and waste sources (meeting the REDII carbon and sustainability criteria) should also be exempt from the obligation?

Q5. Do you agree that the portion of fossil fuel input used in CHP plants to generate heat would be considered part of the obligation?

Response: Carbon Sole agrees with the principle but believes that this approach could incentivise the wrong behaviour. This would obligate a party with an operation which recovered and used exhaust heat from power generation (CHP) but would not obligate a party which simply exhausted that heat to the atmosphere. A better approach would be to obligate all fossil fuels used in power generation minus that directly generating power on an equivalent energy basis. This would remove the disincentive to recovery of waste heat created by the proposed approach.

Q6. Are energy suppliers the most appropriate bodies to become the obligated parties in the heat sector?

Response: Carbon Sole agrees with this approach provided that the point of supply is clearly defined.

Q7. Is the 400GWh of energy supplied an appropriate level for a supplier to become obligated.

Response: Carbon Sole agrees with this threshold for triggering the obligation. It should not be necessary however to reach this threshold in order to generate credits through supply of renewable heat/fuel. The opportunity to deliver renewable heat and earn tradeable credits from that should not be limited to obligated suppliers of non-renewable heat. That would apply an unnecessary limitation to this policy which would restrict investment opportunities and ultimately slow the development and market penetration of renewable heat projects.

Q8. Do you agree with the 2023 start date for the obligation

Response: Yes – Carbon Sole believes 2023 is an appropriate start date.

Q9. In terms of the obligation rate, do you agree with the proposed initial level of obligation of 0.5%.

Response: Whilst understanding the approach of a slow ramp up in obligation rate to give suppliers time to react, Carbon Sole believes that if the initial obligation is not set sufficiently high, it will not stimulate operators, developers and investors to implement the projects necessary to deliver the desired renewable fuels and heat. An initial level of 1% would be more appropriate, rising linearly to the 2030 level.

Q10. In terms of ambition for a 2030 target, what level of ambition do you think is appropriate?

Response: Carbon Sole believes that the higher level of ambition is appropriate. This is in the context of supply of obligated fuel to the market reducing over the period caused by improved energy efficiency (e.g. insulation initiatives) and alternative heating such as heat pumps driven by a decarbonised power network. Without this high ambition level, operators, developers and investors would see risk that the traded price of certificates would fall over time making their investment unviable. A higher level of ambition would reduce this risk and encourage the necessary investment.

Q11: Do you agree with the first obligation period being multiple years (2023-2025) to give the industry time to develop supply lines?

Response: Carbon Sole does not agree with this approach. There must be an incentive for development of projects which can be brought to market quickly. This proposed approach would reduce that incentive with certificates from early delivered projects trading at the same price as those

from later delivered projects in the 3rd year of the initial obligation period. Making it an annual obligation from day 1 would bring forward overall project delivery.

Q12: Once the first period 2023-2025 expires, do you agree with the obligation then becoming an annual obligation.

Response: Carbon Sole agrees that this should be an annual obligation.

Q13: Do you agree that suppliers should be able to trade credits in order to meet their obligation.

Response: It is essential that suppliers (and other parties) be able to trade credits to make the scheme work efficiently. Any party (not just obligated suppliers) should be able to earn credits through supply of qualifying renewable heat/fuel and then trade these credits. Restricting this opportunity to obligated suppliers of non-renewable heat would apply an unnecessary limitation to this policy which would restrict investment opportunities and ultimately slow the development and market penetration of renewable heat projects.

Q14: Do you agree with allowing 10% carry over of renewable credits to be used in the following year's obligation

Response: It is not clear to Carbon Sole what the limitations in this measure are intended to achieve. For the purpose of this response, we have assumed that the intent is to drive appropriate behaviours i.e. supply of renewable heat and fuels to the market. In that case, Carbon Sole does not agree with this approach. If carry over of credits from previous years does happen then it should only be because there has been an over supply, i.e. more renewable heat and fuel has been supplied to the market than the sum of the obligations (it is difficult to see a situation where an obligated supplier chooses to pay the penalty in a particular year rather than sourcing credits through trading). The greater the risk perceived by project developers and investors of an early over supply situation, the less likely they are to invest early (as desired). If they see the ability to trade credits in future years with higher obligations then that perceived risk will reduce.

This scheme will function best with a liquid trading market for the credits without artificial constraints such as the 10% cap and that 10% cap being limited to 'non-traded' credits.

Q17: Do you agree that for renewable fuel delivered direct to a consumer, this will be the point of supply.

Response: Carbon Sole agrees that supply to the consumer should be deemed the point of supply. This should not only cover fuel however but also heat generated from renewable or waste fuels meeting the carbon and sustainability criteria of REDII.

Q18: Which option do you think should be applied for renewable energy that is indirectly supplied (e.g. via the natural gas grid?)

Response: Carbon Sole believes that it is appropriate to allow energy suppliers to market renewable fuels to specific customers provided that the total sales volume of these fuels is no more than that represented by the certificates surrendered by that supplier in that obligation period. As suggested, this may allow higher margin generation from these sales, in turn stimulating investment in projects to deliver more renewable fuels.

Q21: Do you agree with the intended position in relation to penalties for non-compliance?

Response: The cost of non-compliance must significantly exceed of the cost of compliance otherwise the scheme will not deliver on its objective. Carbon Sole agrees with the level of penalties proposed. The regulation must also be sufficiently flexible to allow these to be revised upwards if necessary as the scheme progresses.

Q24: Do you agree with the outlined approach for additional support for green hydrogen.

Response: Carbon Sole agrees with this approach but also believes that this multiple credit approach should be extended to fuels and heat derived from waste as described in REDI including fuels partially produced from green hydrogen. An example would be synthetic natural gas. This would bring the Renewable Heat Obligation in line with the Biofuels Obligation scheme.

Q25: Do you think that offering multiple credits for green hydrogen in the heat sector might have unintended consequences for other sectors such as transport

Response: Carbon Sole assumes that green hydrogen will also receive multiple credits as a RFNBO transport fuel under the recast BOS. Provided that the RHO approach is similar, it is difficult to see unintended consequences. There are technical challenges to overcome in expanding hydrogen use in both heat and transport sectors.

General Input:

In section 10.2 of the document, 'it is not proposed that district heating systems using waste heat/renewable heat should be subject to the obligation'. This is logical and welcome but does not go far enough and will not match the intent of this scheme. The operation of such CHP and district heating schemes using waste and renewable fuels meeting the carbon and sustainability criteria of the REDII should also earn RHO certificates at the point of supply of that heat to the final consumer.

CHP from renewable fuels especially when associated with district heating schemes should be a key part of decarbonisation of power and heat sectors. Current however, the policy framework is not in place to support investment in such schemes and, the way it is currently drafted, it does not appear that this proposed Renewable Heat Obligation will improve that situation.

There is already a significant barrier to investment in these projects due to the approach taken in the Renewable Energy Support scheme (RESS2). This requires these projects to qualify as High Efficiency CHP effectively from day 1 in order to attract power price support from the RESS even though they are fuelled by qualifying renewable biomass. This is a difficult standard to reach when district heating

schemes may involve many users and can only be developed once the heat source is in place. The RESS is intended to support renewable power generation and yet, when compared to the non-renewable technology it is looking to compete with (NG fired combined cycle), it has an extra hurdle to overcome in order to receive RESS support.

A better approach would be to provide RESS support to power generation from renewable biomass and support under this scheme for delivery of the renewable heat from such schemes. A condition could then be applied to qualify as HECHP within a certain time period in order to maintain support under both of these schemes.