



Department  
for Transport

# Targeting net zero - Next steps for the Renewable Transport Fuels Obligation Consultation response form



# 1. Introduction and data protection

The consultation period begins on 25 March 2021 and will run until 11:45 p.m. on 23 April 2021. Please ensure that your response reaches us **on or before** the closing date. Due to remote working for the foreseeable future and health and safety issues with handling physical mail, we strongly encourage responses by email. Please send consultation responses to:

[LowCarbonFuel.Consultation@dft.gov.uk](mailto:LowCarbonFuel.Consultation@dft.gov.uk). If you are unable to respond by email, we would invite you to respond by asking someone to email on your behalf. If this is not possible, then we invite you to provide responses to:

Low Carbon Fuels Team  
Department for Transport  
Zone 1/32 Great Minster House  
London SW1P 4DR

If you would like further copies of this consultation document you can contact the Low Carbon Fuels team at the details above and they can also help if you need alternative formats (Braille, audio, CD):

When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation, please make it clear who the organisation represents and, where applicable, how the views of members were assembled. If you have any suggestions of others who may wish to be involved in this process please contact us or forward the document to them.

The responses to this consultation are likely to be discussed with representatives of the sector, as well as within the Department. Therefore the points you raise may be shared. If you are not content for this to happen please let us know. Subject to the outcome of the consultation the amendments to the legislation will be introduced as soon as practicable.

## Confidentiality and data protection

The Department for Transport (DfT) is carrying out this consultation to gather views on making amendments to the Renewable Transport Fuels Obligation. This consultation and the processing of personal data that it entails is necessary for the exercise of our functions as a government department. If your answers contain any information that allows you to be identified, DfT will, under data protection law, be the Controller for this information.

As part of this consultation we're asking for your name and email address. This is in case we need to ask you follow-up questions about any of your responses. You do not have to give us this personal information. If you do provide it, we will use it only for the purpose of asking follow-up questions. [DfT's privacy policy](#) has more information about your rights in relation to your personal data, how to complain and how to contact the Data Protection Officer.

Your information will be kept securely and destroyed within 12 months after the consultation has been completed.

## 2. Responding

1. Your name and email address. We will only use this if we need to contact you to ask about any of your responses and to update you when we publish our response.

|       |  |
|-------|--|
| Name  | Paul Thompson  |
| Email | <a href="mailto:pthompson@r-e-a.net">pthompson@r-e-a.net</a> |

2. Are you responding: \*

|                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | On behalf of an organisation? <b>Go to question 3</b>            |
| <input type="checkbox"/>            | As an individual? <b>Begin consultation response (section 3)</b> |

3. Organisation details: \*

|  |  |
|--|--|
| Address  | Association for Renewable Energy and Clean Technology (REA)  |
|  | Brettenham House, 2-19 Lancaster Place, London               |
| Postcode   | WC2E 7EN   |
| Email  | <a href="mailto:pthompson@r-e-a.net">pthompson@r-e-a.net</a> |
| Your Role / Position   | Head of Renewable Transport Fuels                            |
| Please tick one box below that best describes your company or organisation.  |  |
| <input type="checkbox"/>   | Academic   |
| <input type="checkbox"/>   | Consultancy  |
| <input type="checkbox"/>   | Fossil fuel supplier/producer                                |
| <input type="checkbox"/>   | Renewable fuel supplier/producer                             |
| <input type="checkbox"/>   | Non-governmental organisation                                |
| <input checked="" type="checkbox"/>  | Representative organisation                                  |
| <input type="checkbox"/>   | Trade union  |
| <input type="checkbox"/>   | Interest group   |
| <input type="checkbox"/>   | Local government   |
| <input type="checkbox"/>   | Central government   |
| <input type="checkbox"/>   | Other (please describe):                                     |
| <p>If you are responding on behalf of an organisation or interest group how many members do you have and how did you obtain the views of your members:</p> <p>The REA has over 550 members across the power, heat, transport and organics sectors. The REA's Renewable Transport Fuel Forum has around 50 members with interests in fuel</p> |  |

production, project development, supply chain and related areas. We gathered members views through a series of topic-focussed online meetings open to all interested members as well as one-to-one emails and calls. This consultation response was shared in draft with members prior to being finalised.

### 3. Consultation questions

The questions below may not apply to all respondents. Please answer as many as are applicable to you or your business. In each case please set out the reasons for your answer and if applicable, alternative proposals.

#### Questions on the main Consultation proposals - Targeting net zero - Next steps for the Renewable Transport Fuels Obligation

|   |               |          |      |
|---|---------------|----------|------|
| Q1. Should we increase, decrease or keep the main obligation at the same level?   | Increase<br>X | Decrease | Same |
| <p>Please provide evidence and reasoning for your answer.</p> <p>There is a pressing need to address climate change. The UK has legislated to be net zero by 2050 and in December 2020 the UK committed to reduce economy-wide greenhouse gas emissions by at least 68% by 2030. Further, on 20 April 2021 the government confirmed it will accept the Climate Change Committee’s recommendation for the sixth carbon budget, setting a legal commitment to reduce emissions by 78% by 2035. Meeting these targets will require major contributions from all sectors of the economy.</p> <p>Although the RTFO has made a significant contribution, there is much more to be done in the transport sector. Continuing demand for transport, combined with faster decarbonisation in some other parts of the economy means that transport now accounts for the largest share of UK GHG emissions – contributing 27% of UK domestic emissions in 2019.</p> <p>We also note that the RED2 will mandate a target of 24% by energy (30% by volume) of renewable fuels in transport by 2030. The UK’s targets will need to increase significantly if it wishes to signal that it is an attractive place to invest and its stated intention to play a ‘leading’ role in this area is to be credible.</p> <p>It is essential therefore to make progress where we can – and building on an existing successful policy is a good way to do this. Given that some parts of the transport sector such as marine and aviation remain highly challenging, we need to maximise savings from those sectors where the opportunities to decarbonise are available now or in the near future.</p> <p>Much of current road transport will be electrified over time, but large volumes of fuels will be needed over the next 20 years while the market share of electric vehicles increases – and a number of sectors will find it difficult or impossible to be powered solely by electricity. Those fuels that will be used over that time should have as low</p> |               |          |      |

GHG emissions as possible. Renewable transport fuels of all types will need to play a strongly-valued role.

|   |      |      |         |
|---|------|------|---------|
| Q2. If you agree that we should increase the RTFO obligation, what level should it be increased by; 1.5%, 2.5% or 5%? | 1.5% | 2.5% | 5%<br>X |
|---|------|------|---------|

Please provide evidence and reasoning for your answer.

We fully support the introduction of E10 and that some increase is needed as a minimum to ensure that this does not cannibalise demand for other existing renewable fuels.

As modelled, the government's proposed increase of 2.5% is only 1% more than the amount required to offset the introduction of E10 in 2022, so this is not going to send a strong positive signal for investment.

Of greater concern is that the modelling presented for a 2.5% increase shows that the total amount of renewable fuels in 2035 is lower than 2022, and the total volume roughly halves over that period under a high EV uptake scenario<sup>1</sup>. We would also note that with a 5% increase and the central EV uptake scenario, the total volume of fuels is estimated to be only slightly higher in 2035 than in 2022.

Given the pressing need to take action on climate change, the RTFO should not be countenancing a policy in which the most likely course of action is that the total amount of renewable fuels supplied is reduced over time, with the consequential loss of GHG emissions reductions. Success in speedy deployment of electric vehicles - combined with continuing decarbonisation of the electricity grid - should be welcomed, but there is no reason this should result in a reduction of effort elsewhere. It is inevitable that reductions in some sectors will prove harder to achieve than anticipated so any over-achievement in the transport sector will surely be needed elsewhere in the economy.

There are also grounds for believing that the decline in the liquid fuels market will be greater than modelled, and therefore the absolute volume of fuels required under the RTFO would be reduced still further.

In addition to potential higher uptake of EVs, this could also be as a result of higher usage of biomethane in commercial vehicles. The modelling anticipates that biomethane makes up a 16% share of HGV fuels by 2035. This appears conservative. We contributed to the Zemo Partnership report on High Blend Biofuels referred to in the consultation, which estimates biomethane supplying 30% by that date.

We would also note that the limiting factor for higher targets is unlikely to be the blend wall. The same Zemo Partnership report outlined significant opportunities for the uptake of high blend liquid fuels in this market. For general road users, work is ongoing at European level to increase the maximum amount of biodiesel permitted in diesel beyond the current 7% limit.

A key limiting factor for the government is on biomass feedstock availability. The RTFO has generally taken a conservative view on this. This may have been justified in relation to crop feedstocks, particularly before the risks on indirect land use change

<sup>1</sup> Figures 6 and 7 of the consultation

effects had been explored in depth. These risks are better understood now and policy at EU and UK level is firmly focussed on encouraging non-crop feedstocks. Within this framework, the UK crop cap is amongst the tightest set under RED2.

We believe there is scope for greater confidence on feedstock availability without going beyond the existing evidence. The REA's 2019 Bioenergy Strategy showed that the current UK biomass supply model, developed by Ricardo AEA and commissioned by BEIS<sup>2</sup>, suggests that expected feedstock availability could meet the estimated increase in feedstock demand to produce renewable transport fuels, albeit with a continued role for sustainable imports.

The government's domestic biomass supply model estimates around 60 PJ of domestic feedstock will be available in the UK by 2030, specifically for liquid biofuel production<sup>3</sup>. The CCC's modelled scenarios for 2050 go further, suggesting domestic sustainable energy crop availability could range from 126 PJ to 288 PJ<sup>4</sup>, indicating there is significant potential for scaling up domestic levels of feedstock availability if landowners and biofuel producers are appropriately supported. These scenarios recognise that a proportion of biofuel demand will still need to come from international markets, however the industry is confident these materials are available and can be imported, meeting the strict sustainability requirements already in place.

The availability of bioenergy feedstocks (either from energy crops or wastes) and their end-uses is a cross-Whitehall concern, interacting with a number of different sectors. The REA encourage the DfT to closely engage with other Government work streams during their response to this RTFO consultation, this includes the development of the 2022 Biomass Strategy, implementation of the Waste and Resource Strategy for England and design of the Environmental Land Management Scheme, all of which will play an important role in increasing feedstock availability.

Given the climate emergency, we should be more active in looking to maximise the contribution that biomass can make sustainably. The Government should continue to keep under review the real-world impacts of policy and adjust as necessary.

What matters in terms of climate change are cumulative emissions to atmosphere, so action taken several years in the future is worth far less than action taken (and sustained) now. This is an argument for setting more ambitious targets, but DfT should also look at introducing whatever total increase they are prepared to make as soon as possible so that the benefits of lower emissions are felt for the entire decade rather than only in 2032.

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<sup>2</sup> BEIS and Ricardo AEA (2017) "*Biomass Feedstock Availability*", available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/597387/Biomass\\_feedstock\\_availability\\_final\\_report\\_for\\_publication.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/597387/Biomass_feedstock_availability_final_report_for_publication.pdf)

<sup>3</sup> REA (2019) "*Bioenergy Strategy Phase 3: Delivering the UK's Bioenergy Potential*", Figure 18 page 52, "*Accessible UK Bioenergy Feedstock Resource, 2030*" available: <https://www.r-e-a.net/re-sources/bioenergy-strategy-phase-3/> based on Ricardo AEA (2017) "*Biomass Feedstock Availability*", available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/597387/Biomass\\_feedstock\\_availability\\_final\\_report\\_for\\_publication.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/597387/Biomass_feedstock_availability_final_report_for_publication.pdf)

<sup>4</sup> CCC (2018) *Biomass in a Low Carbon Economy*, Figure 4.4 page 101, "*Scenarios for 2050 UK biomass from forestry, energy crops and agricultural residue*", Available at: <https://www.theccc.org.uk/publication/biomass-in-a-low-carbon-economy/>

We would also note that this consultation proposes to follow RED 2 in increasing the fossil fuel comparator by 12%. This brings it in line with the Fuel Quality Directive methodology for the 2010 baseline carbon intensity against which GHG reductions over the previous decade are measured.

In other words, the renewable fuels used since 2010 have calculated their GHG savings against an unrealistically low-carbon fossil fuel – and therefore the savings they have already achieved are significantly greater than they have been credited for.

All of this reinforces the need to maximise the amount of renewable transport fuels used, consistent with GHG savings and wider sustainability objectives.

We also repeat that if we want to drive improvements in GHG reductions rather than merely meeting a minimum level of savings, we should move to a system where rewards are directly related to the level of GHG emissions reductions achieved. The Motor Fuel Regulations introduced in support of the UK's obligations under the Fuel Quality Directive proved that this is doable and was generally valued.

We note the consultation refers to the forthcoming Transport Decarbonisation Plan and we hope that this will take the opportunity to set more ambitious targets, both up to 2032 and beyond.

Within this, we hope there will be opportunities to ensure the development fuels sub-target remains appropriate. This would include consideration of increasing this sub-target and protecting the value of the development RTFC buy out price – preferably by a visible measure of indexation to give long-term confidence in the value of certificates.

Although clarity on targets beyond 2032 is of primary importance, also needed is a clearer indication of preferred decarbonisation pathways in those sectors with multiple options. This has been highlighted as a particular area of concern by operators of fleets of commercial vehicles.

|   |           |    |
|---|-----------|----|
| Q3. Do you agree or disagree that recycled carbon fuels should be eligible for support under the RTFO given their potential to deliver GHG savings? | Yes.<br>X | No |
|---|-----------|----|

Please explain your reasons:

We broadly agree with the reasons given, so long as significant GHG savings result and the feedstock is genuinely residual – in other words that use of these feedstocks does not undermine the waste hierarchy.

|   |       |               |
|---|-------|---------------|
| Q4. Do you agree or disagree that only RCFs derived from refuse derived fuel and industrial wastes gases should be eligible for RTFO support? | Agree | Disagree<br>X |
|---|-------|---------------|

Please explain your reasons, and if you disagree please provide an alternative approach and set out why.

We agree that the feedstocks proposed are acceptable. We do **not** agree that support should be limited to these feedstocks.

We note that the stated intention of the policy is to encourage innovation, building on existing strengths wherever possible. The aim is to ‘provide more options for suppliers to use to meet their RTFO obligations and unlock more biomass’.<sup>5</sup>

When designing first of a kind plant one would wish to be able to take as flexible a range of feedstock as possible. The policy should not limit at the outset what technologies will make sense commercially and technically so long as they are able to meet the policy principles.

We understand the underlying policy intent is to support feedstocks that are genuinely residual waste. This means the policy must not undermine the operation of the waste hierarchy, including the use of existing recycling options such plastics recycling and treatment by composting or anaerobic digestion, as appropriate.

There is scope for a far wider range of feedstocks than is proposed here, without compromising this goal. Other feedstocks that have been proposed include a number of liquids, including solvents, sludges and waste oils.

With regard to tyres, if the evidence is clear that these would risk being over-rewarded if included in the policy then that is an argument for adjusting the number of certificates that are awarded to the finished fuel, not for deciding that the feedstock should be excluded.

We do not believe that the application of the principles described above should be unduly difficult. The RTFO unit has many years of experience in dealing with classifications of feedstocks under the RED sustainability criteria, where the distinctions between products/byproducts, wastes and residues are extremely convoluted and require effort to untangle.

The RTFO unit seeks to provide a transparent approach to industry by publishing lists of current interpretations (with version control dates) and informing stakeholders of its emerging thinking in advance of changes of interpretation. The practice of pre-approving proposed development fuels provides further clarity to industry while ensuring that fuels produced meet the policy goals.

We see no reason why an equivalent process could not be used to assess whether certain other proposed feedstocks should also be regarded as genuinely residual and therefore suitable for support.

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<sup>5</sup> P31, main consultation

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| Q5. Do you agree or disagree that RCFs produced from solid feedstocks should contain at least 25% biogenic content, by energy?  | Agree | Disagree<br>X |
| <p>Please explain your reasons, and if you disagree please set out an alternative approach with evidence as to why.</p> <p>The rationale for setting a limit – and for setting it at 25% - is unclear. It may be that the purpose is to try to rule out the risk of use of feedstock to make RCFs undermining existing mechanical recycling (ie if material has 25% biogenic content then this is unlikely to be suitable for such recycling).</p> <p>There are significant risks of unintended consequences from this approach, some of which are set out below. We would recommend that an alternative approach is taken to eligibility as suggested in our response to question 4.</p> <p>Setting a minimum level in this way becomes a cliff edge where the resultant fuel cannot be an RCF if it falls short (and we understand from the proposals that it would then be a non-eligible fuel and result in an obligation falling on its producer). An RCF producer would likely mitigate this risk by specifying a feedstock to their supplier of considerably higher than 25% biogenic material.</p> <p>The result of that would be to increase the use of biomass and possibly draw in other forms of waste biomass that might have had better uses elsewhere (such as alternative uses for waste wood or material being treated by composting or anaerobic digestion). This would cut against Defra’s waste policies of aiming to segregate and recycle materials as much as possible - including food waste – and thereby minimising the amount of biogenic material in the residual waste stream. If these policies are successful then Rdf will tend to have lower amounts of biomass over time so it seems odd to create an incentive that is pulling in the opposite direction.</p> <p>In the case of material that would have been suitable for composting or anaerobic digestion, this means the loss of material that could have been returned to the soil, providing long term benefits for soil productivity and health. At the very least, the case for supporting RCFs would be seriously undermined as they would not be offering significant GHG savings compared to the real counterfactual use of that feedstock.</p> <p>We appreciate that the real-world impacts of RTFO support for RCFs will be very small in the short term, but the policy intent is, presumably, that in the longer term RCFs will have a more significant contribution to make.</p> |       |               |

|   |              |                       |
|---|--------------|-----------------------|
| <p>Q6. Do you agree or disagree that support for RCFs should focus on those RCFs which can meet the UK's future strategic needs? That is, that only RCF types which are equivalent to current development fuels should be eligible for support. As such they would be eligible for development fuel certificates and to count towards the development fuel sub-target under the RTFO.</p> | <p>Agree</p> | <p>Disagree<br/>X</p> |
|---|--------------|-----------------------|

Please explain your reasons.

We agree that those RCFs which result in development fuels should be eligible for development RTFCs.

If RCF feedstocks can be used to produce fuels that are not development fuels, we do **not** see why they should be excluded from conventional RTFCs. Examples that have been given by our members include renewable diME and bioLPG.

DfT's working assumption might be that these fuels will not be commercially viable unless they receive development fuel RTFCs, and that assumption may turn out to be correct. But if these feedstocks are appropriate in principle for support then the door should be left open for them to receive normal RTFCs, so long as they otherwise meet the requirements of the scheme.

As above, if the intention is to create an environment in which innovation is encouraged then there is no reason to limit unduly either the feedstocks or the applications in which the resulting fuels are used, so long as they meet the stated policy goals.

|   |              |                       |
|---|--------------|-----------------------|
| <p>Q7. Do you agree or disagree with the proposed GHG minimum thresholds and the timeline for increasing GHG emission saving criteria for RCFs?</p> | <p>Agree</p> | <p>Disagree<br/>X</p> |
|---|--------------|-----------------------|

Please provide an explanation as to why.

It is unclear why the savings required for RCFs should be lower than those for other fuels.

The usefulness of expressing limits in terms of % GHG savings is to express the policy in terms that are accessible to the non-specialist (as opposed to an absolute maximum level of gCO<sub>2</sub>eq/MJ). We do not see why this figure should not be the same as for the rest of the RTFO. To have different limits risks complexity and confusion when communicating the policy and its aims.

We also note that setting lower level of savings for RCFs is given on page 39 of the consultation as a reason for providing a lower level of reward for these fuels. See also our response to question 9.

The proposal for any changes to be made stepwise is acceptable, as in reality people will plan around firm dates rather than make annual incremental savings.

We also note the proposal not to grandfather minimum savings requirements by installation given expected decarbonisation of the electricity grid. While accepting this, we would want to be clear that the grandfathering principle should still be applied to the wider GHG approach. In other words, if the calculation methodology changed significantly over the lifetime of an installation so that it became materially harder for an existing installation to comply then that installation should be protected against the impact. If this is not the case this will likely hinder current and future investment.

Q8. Do you agree or disagree with the proposed GHG emissions methodology to assess the GHG savings for recycled carbon fuels?

Agree  
X but with  
caveats below

Disagree

Please provide an explanation as to why.

We acknowledge that this is a developing area and that the UK has played a leading role in working towards a viable methodology for these fuels.

We understand that the EU is expected to provide further details of its approach to GHG savings from RCFs but that this may not be fully finalised until the end of 2021. When the EU's position is clear, DfT should consider its approach in the light of it and whether any differences are material and could lead to unintended consequences. Given that supporting RCFs in the RTFO is expected to require changes to primary legislation, this should not affect the timeline for implementation of these measures.

We agree with the logic that leads to incineration as the counterfactual for solid fuels.

Within this, there is an argument that the carbon intensity of the counterfactual has been understated – and the likely savings that would be achieved by RCF-derived fuels would also be correspondingly understated. This feeds into the discussion around appropriate rewards in question 9:

- We understand that the 26% efficiency cited for R1 plant relates to the overall efficiency. The electrical efficiency figure is lower, in the range of 19-22%
- Of the 48 fully-operational incineration plants in the UK, only 16 are R1<sup>6</sup>. Others are less efficient, so it would make sense to use a lower/blended figure to reflect reality

<sup>6</sup> Figures from 2019: 48 fully operational, 6 in late commissioning, 11 in construction, 1 mothballed. 28 EfW plants are accredited as R1 – 16 on operational data and 12 on design only. Source: Tolvik [Tolvik-UK-EfW-Statistics-2019-Report-June-2020.pdf](#)

Further, we do not agree that the same counterfactual should be used for waste gases. It is clearly not a plausible scenario that if those gases were not used to create an RCF fuel they would become solid and be sent to an incinerator. The counterfactual for these gases is surely that they would be flared or burnt to provide power or heat for the industrial process. DfT should reconsider what would be an appropriate counterfactual using a similar approach to that used to identify a comparator for solid feedstocks.

Q9. Do you agree or disagree with our proposal that RCFs from solid feedstocks are eligible for two x 0.25 dRTFCs per litre, and RCFs produced from gaseous feedstocks are eligible for two x 0.5 dRTFCs per litre?

Agree

Disagree  
X

Please explain your reasons.

We agree with the proposals for RCFs from gaseous feedstocks.

We disagree with the proposals for RCFs from solid feedstocks. At this level of reward, there would be an incentive to maximise the use of biogenic material (which would be able to get conventional development RTFCs) and remove as much of the dense plastics as possible – which would likely then be incinerated. This would be the opposite of what the policy is trying to achieve.

Since the argument for lower reward has not been expressed on the grounds of technology costs and the need to avoid over-compensation, we do not see why RCFs from solid feedstocks should get a lower reward if they deliver equivalent GHG savings and otherwise meet the scheme's policy goals.

More broadly, we would also note that the proposed RCF methodology is essentially based on indirect effects of these fuels whereas other fuels only assess the direct life cycle emissions, so there is a sense in which the RCF methodology is more comprehensive than for other fuels. Again, this would suggest a higher rate of support rather than a lower one.

This logic would be an argument for giving RCFs 2 x 1 dRTFC per litre, but as a minimum RCFs from solid waste should receive the same level as that proposed for those from industrial waste gases.

If the intention of the proposal for RCFs from solid feedstocks is to avoid potential impacts on existing mechanical recycling then some other approach must be found to mitigate this risk. We suggest the proposals set out in our response to question 4 would be preferable. It is self-defeating to address this risk by setting the reward so low that it is unlikely to be an incentive to do anything.

|  |     |         |
|--|-----|---------|
| Q10. RCFs from industrial waste gases have the benefit of avoiding release of the industrial gases to the atmosphere. Do you have evidence as to how it can be demonstrated that avoided GHG emissions have not been claimed elsewhere (e.g. under the Emission Trading Scheme), and that they have been attributed to the final fuel? | Yes | No<br>X |
| Please provide evidence.   |     |         |

|  |                               |    |
|--|-------------------------------|----|
| Q11. Is “renewable energy that would not have been available to the grid in the absence of power demand from the RFNBO plant in question” an appropriate definition of additional renewable energy?  | Yes<br>Agree, with<br>caveats | No |
| <p>Please provide your reasons.</p> <p>This seems like a reasonable high-level definition, depending on the level of flexibility in how it is interpreted.</p> <p>Thought needs to be given to the interaction with the use of electricity storage such as batteries. This also links into consideration of temporal correlation between generation and use.</p> <p>On a related point, members have raised concerns over the current rules and the requirement for a site to ensure it has not imported electricity from the grid. Given that there is no <i>de minimis</i> threshold in this respect, it can lead to significant additional expense to ensure that import cannot happen, which is disproportionate to the amount of electricity that the site would reasonably have expected to import. We would suggest some kind of <i>de minimis</i> threshold below which a small amount of import is not considered as affecting the overall determination.</p> <p>There also needs to be flexibility in situations where the generator’s local grid turns out to be less constrained than expected, putting the onus on the RFNBO producer to match that constraint exactly.</p> <p>Finally, some technologies require energy input so as to be kept safe and ready to operate before they start electrolysing, in which case the site will either need to import electricity from the grid or have local electrical storage or start up generation from another source – most likely a diesel generator. Given the continuing decarbonisation of the grid, the drawing of small amounts of power from the largely decarbonised grid will be a better option than obtaining that power from a diesel generator. Again, some form of <i>de minimis</i> threshold would seem appropriate for this situation, or else an accounting of the actual emissions from the grid electricity consumed if that was not deemed acceptable.</p> |                               |    |

|   |                  |           |
|---|------------------|-----------|
| <p>Q12. Should the Administrator be able to take into account the use of power purchase agreements (PPAs) as evidence that suppliers have purchased additional renewable energy in order to allow the renewable power generation to be located in a separate location from the RFNBO production facility?</p> | <p>Yes<br/>X</p> | <p>No</p> |
|---|------------------|-----------|

Please provide your reasons.

Although there can be significant advantages in co-locating RFNBO production with electricity generation, we support the intention of allowing electricity generated elsewhere to be used, so long as the link between the two is robust and the other RTFO requirements are met.

We would appreciate more clarity on what is proposed in relation to the use of PPAs. We agree that they can in principle provide a link between the generation of electricity and its consumption.

The most common situation would be one in which the generator sells its power to a supplier (via a PPA) and the RFNBO producer buys power from that supplier (also via a PPA). How will the RFNBO producer be able to demonstrate the link between the generator and themselves? We note that the original power could be resold multiple times before it is eventually sold to the RFNBO producer.

If the intention is that the RFNBO producer will need to show the RTFO administrator the original PPA between the generator and supplier, then this is unlikely to be available given that it will contain commercially sensitive information. It would certainly not be in the RFNBO producer's power to compel this information. Moreover, if the generating site is already in operation it is likely to have its commercial arrangements in place and is unlikely to be willing to alter these to assist a prospective RFNBO producer.

Even if the documents were made available, it would not necessarily show that such generation was the electricity that was provided to the RFNBO station or that there was no double counting of the renewable electricity.

This issue does not necessarily arise in cases where the electricity is being supplied via a private wire arrangement between the generator and RFNBO producer, but in these cases the site could be eligible under the current rules.

We would also note that PPAs come in many forms, and may not always be straightforward around volumes and timing of export. They generally involve a commitment by the purchaser to buy all the output of a site over a given period rather than stipulating a specific amount that will be generated (or even a minimum). They may also be power-only, so that the ROCs and/or REGOs are sold separately from the power generated. In those circumstances, the power is effectively being sold as 'brown' power, allowing the renewable benefits to be sold on separately.

Given the above, we would suggest that there needs to be further consideration of how this approach would work in practice and avoid double-counting of renewable electricity.

As a minimum, this would suggest that a flexible and pragmatic approach will need to be taken on how these rules are applied.

Further, as noted in the consultation, there will be losses via the electricity grid so that the renewable energy available to the RFNBO generator will be less than that exported to the grid by the generator. Please also see our response to question 14.

As we understand it, the requirement for additionality does not prevent the generating site having received support via the FIT, RO or CfD schemes. We think there is a good rationale for this in that the electricity support schemes drive the production of renewable electricity while the RTFO supports making a transport fuel using that electricity.

Care will need to be taken, however, in how this interaction is managed in the context of the UK's future trading arrangements with the EU. Now that the UK has left the EU, there is no mechanism for pre-approval of support schemes, meaning there is the risk that new support measures could be challenged **after** they have been implemented. In order to avoid disruption to the industry and investors it is essential to avoid this if at all possible.

Q13. A consequence of allowing the use of PPAs to demonstrate renewability, in combination with also permitting other suppliers to use a grid average renewability, is that the same renewable energy could be accounted for more than once. We consider this to be low risk when hydrogen energy and other RFNBO demand is small compared to the total renewable energy available on the grid. We are seeking views on whether this risk is acceptable. Is this risk acceptable?

Yes  
X

No

Please provide your reasons.

We agree that the practical impact of this would be negligible unless there is very wide take up of this policy.

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|---|----------|----|
| Q14. Should appropriate adjustments be made to the amount of renewable energy supplied to a RFNBO production facility to account for transmission losses where renewable energy is transferred over the electricity grid? | Yes<br>X | No |
|---|----------|----|

Please provide your reasons.

In the case where renewable generation is demonstrated by the use of PPAs it is appropriate to take account of transmission losses.

Taking these losses as 9%, if a RFNO producer buys electricity via a PPA and consumes 100 units of electricity then the following scenarios are possible:

- 1) The RFNBO producer buys 100 units of renewable electricity. Due to the losses, 9 of the units consumed were not from that renewable electricity and should be accounted for – presumably the proposal is to use the grid average emissions
- 2) The RFNO producer buys 110 units of electricity. After losses, there will still be enough renewable electricity so that all the electricity consumed by the RFNBO producer is renewable

So long as these two scenarios are accounted for fairly, we agree with the approach proposed. Please also see our comments in response to question 15 around the use of battery and other storage.

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| Q15. Do you have any comments on the proposal to use a 30-minute time period for temporal correlation of renewable energy production and use? | Yes<br>X | No |
|---|----------|----|

Please provide your comments.

Please also see our response to question 12.

In general, a 30-minute time period seems appropriate, although we would note that this may not occur in all PPAs - co-located private wire PPAs may be less likely to do so, for example.

It is unclear what the evidence requirements on the RFNBO for this will be. In order to demonstrate the correlation, would the RFNBO producer need to provide the invoicing information between the generator and the initial purchaser? If so, then this would appear to be more commercially sensitive than the underlying PPA . If this is **not** required, then how is the temporal correlation to be shown with this level of granularity? The generator could make a statement to that effect but it is unclear what incentive there would be for the generator to do so or what audit/enforcement powers would exist so that the RTFO administrator could confidently rely on it.

Even if these issues are addressed, it is unclear how the RFNBO producer could ensure they only took electricity from the grid at the right time unless they also had constantly-updated live information from the generating site. This would be a very

high level of ongoing co-operation, even if it was in practice reasonable to operate the RFNBO plant in such a flexible way – in other words, making a decision every 30 minutes whether to continue or shut down.

DfT should consider the extent to which this degree of temporal correlation is actually needed in order to align RFNBO production with periods of ‘excess’ renewables. We would note that RFNBO producers are already exposed to price signals on low or negative pricing, which already gives them some incentive to respond accordingly. We would expect the strength of those signals to increase over time, while the average GHG emissions of the electricity grid will reduce.

Another possibility to address concerns around additionality is to accurately calculate the carbon intensity of the electricity sourced from the grid and this is regarded as eligible if it is below a set threshold. It would be possible to calculate this figure quite precisely, because all electrolyzers have half-hourly electricity meters. An annual audit of all half-hourly readings could be carried out and the annual average carbon intensity could be obtained from the National Grid data on generation. This carbon intensity value could be checked against a threshold. Hydrogen below the carbon intensity threshold would be considered ‘green hydrogen’ and should be eligible. A similar approach has been set out under the European CertifHy project.<sup>7</sup>

It would also be important to take into account the use of battery storage. Where electricity is generated at a time when the site is constrained and used later by the RFNBO plant, the relevant correlation must be when the electricity was generated rather than when it was used.

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| <p>Q16. Should the Administrator be able to permit fuel suppliers to use local grid GHG emissions factors in RFNBO GHG emission calculations? Circumstances in which this might be appropriate include where there are local grid constraints or other local conditions which mean that the local grid GHG intensity differs substantially from that of the national grid.</p> | <p>Yes<br/>X</p> | <p>No</p> |
| <p>Please provide your reasons.</p> <p>We agree with the approach proposed. This is consistent with the broader approach to allow RFNBO production and electricity generation to take place at different sites.</p>  |                  |           |

<sup>7</sup> The EU CertifHy project uses a value of 36.4gCO<sub>2</sub>/MJ of hydrogen, below which hydrogen is classified as green. <https://www.certifhy.eu>

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| <p>Q17. A consequence of allowing local grid GHG emissions to be used in calculating the GHG intensity for a RFNBO is that GHG savings may be claimed by a production facility on a low GHG emission regional/local grid which have also been accounted for in the average national grid GHG intensity. Is this risk acceptable?</p> | <p>Yes<br/>X</p> | <p>No</p> |
| <p>Please provide your reasons.</p> <p>The risk of unintended consequences seems small, so long as there is clarity on which grids this would apply to.</p>  |                  |           |

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| <p>Q18. Have we captured all the additionality scenarios as set out in the proposals in the chapter and in the decision tree (Figure 13)? Please suggest alternatives with evidence</p>  | <p>Yes</p> | <p>No</p> |
| <p>Please provide your reasons.</p> <p>One member suggestion is to consider the potential use of standby power generators at a site to provide a form of renewable electricity in the case where the standby generator uses a biofuel of some description for all or part of the time? If so, evidence of the source of the biofuel used should be part of the validation process.</p> |            |           |

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|---|--------------------------------|----------|
| Q19. Do you agree or disagree that biohydrogen produced from biomethane reformation should be eligible for standard RTFCs rather than development fuel RTFCs? | Agree<br>Agree with<br>caveats | Disagree |
|---|--------------------------------|----------|

Please suggest alternatives with evidence.

We understand the general reasoning around support for biohydrogen produced without CCS using biomethane. We also agree that if such biohydrogen is no longer eligible for development RTFCs it should remain eligible for standard RTFCs.

There are a number of circumstances, however, where we believe the approach proposed is too broad brush and the biohydrogen produced **should** be eligible for development RTFCs. Similar considerations to those set out below have been taken into account in the context of other fuels supported in the RTFO, including the proposals on RFNBOs.

Smaller sites

The arguments around costs and mature industries relate primarily to large-scale SMR processes. No small-scale commercial biohydrogen facilities exist in the UK currently, so it is not correct to classify applications at this scale as mature.

A number of our members are looking at smaller-scale modular biohydrogen production, which can be co-located with the AD site, resulting in benefits around the local economy, reduced losses of gas through the network and reduced emissions from transportation of the hydrogen from its production site to the intended user. In addition, some facilities are in development that are not connected to the gas network at all, while support for production of biomethane under either the RHI or planned GGSS is limited to biomethane injected to the gas grid.

Development RTFCs should still be awarded in the case that the hydrogen production capacity of the plant is less than 5000kg/day. There is a strong case that biomethane to hydrogen produces a feedstock that is already carbon neutral or negative carbon. The RTFC should be encouraging a wide range of zero emission fuels and production techniques. Producing hydrogen from biomethane requires additional capex equipment that needs support in its early days of commercial deployment.

Putting additional constraints around requiring CCS is overburdensome. There remain many question marks around CCS technology. Smaller, distributed production of biohydrogen facilities, such as those sited at waste food or animal waste facilities will be put at a large disadvantage to other fuel production methods if development RTFCs are removed.

If there was a willingness to continue to support smaller projects but not at the full current rate of 2 x development RTFCs, feedback from our members is that 1.5 x development RTFCs would still be sufficient for a number of projects to be viable.

Constrained sites

Biomethane sites can be constrained in what they produce, along similar lines to electricity generators. Such constraints can be the result of local gas network limitations – demand for gas and heat varies more than electricity both over the course of a day and between seasons. Further, the support schemes that enabled the project to be funded are generally capped at the level of production that was envisaged when the support was first applied for. For most sites this effectively rules out expansion. The Green Gas Support Scheme explicitly rules out giving support to expansion of existing sites whether currently registered as a biomethane producer under the RHI or in receipt of support under the FIT or RO.

It would make sense for biomethane produced from new or expanded sites to continue to receive development RTFCs if hydrogen is produced as a result. Alternatively, factors around constraint could be taken into account, along similar lines as those proposed for RFNBOs.

| Q20. Certain advanced production methods for biohydrogen are likely to be of strategic future importance and require new investments, such as addition of CCS. Do you agree or disagree that when these methods are used, biohydrogen produced from biomethane reformation should remain eligible for development fuel RTFCs?   | Agree<br>X | Disagree |
|---|------------|----------|
| <p>Please provide your reasons.</p> <p>CCS has the potential to result in very high carbon savings from the use of biomass-derived fuels, with the potential in some cases to achieve negative GHG emissions.</p> <p>We agree that biohydrogen produced using CCS should remain eligible for development RTFCs. Further, use of CCS enabling the biohydrogen to remain eligible for development RTFCs should apply to the use of CCS at either the biohydrogen site or the biomethane production site.</p> <p>All biomethane sites injecting gas into the grid are required to strip out the CO<sub>2</sub> from their biogas, resulting in a relatively clean stream of CO<sub>2</sub>. Some biomethane producers have invested in equipment that cleans the CO<sub>2</sub> to food grade quality where it is sold to users in the food industry and elsewhere. The demand for this is relatively modest and the equipment to upgrade to food grade quality is expensive, so most of this CO<sub>2</sub> is vented to atmosphere. Even where the CO<sub>2</sub> is currently captured, the CO<sub>2</sub> is released to the atmosphere shortly afterwards when (for example) the fizzy drink to which it has been added is opened.</p> <p>There is currently no other incentive for existing or prospective biomethane projects to capture the CO<sub>2</sub>. Allowing biohydrogen produced from biomethane where the biomethane production has used CCS could provide an incentive for this investment, with substantial benefits in terms of GHG savings.</p> <p>If this suggestion is adopted, it should be perfectly possible to adapt the existing systems used to demonstrate sustainability and origin of biomethane to evidence that the relevant biomethane was produced using CCS.</p> |            |          |

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| Q21. Hydrogen is likely to be an important power source for parts of the railway that are not possible to electrify. Do you agree or disagree that renewable fuel used in trains powered by fuel cells should be eligible for RTFCs? | Agree<br>X | Disagree |
|--|------------|----------|

Please provide your reasons.

We agree, on the understanding that this is a relatively small market and is consistent with the current position for fuels used in internal combustion engines.

It will be important to ensure that the fuel duty regime and how it is applied for this and similar proposals does not result in market distortions and perverse incentives between fuels and particular applications.

This will need to be kept under review, alongside other proposals to extend the scope of the RTFO. If the cumulative effect of these additions is to be paid for by users of road transport fuels then these could start to have a real impact on users and perceptions of fairness – particularly as electric vehicles become more mainstream.

This policy should therefore be kept under review and prompt action taken before any downsides become acute. This is for everyone’s benefit, in that it is not in the interests of developers of innovative fuels and applications to have short-notice changes to the RTFO that undermine them.

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| Q22. Hydrogen also has the potential to be an important power source for construction and other non-road vehicles. Do you agree or disagree that renewable fuel used in these vehicles powered by fuel cells should be eligible for RTFCs? | Agree<br>X | Disagree |
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Please provide your reasons.

See also our response to Q21.

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| Q23. Hydrogen supplied to retail customers is already eligible for RTFCs. Do you agree or disagree that the assessment time for hydrogen should be amended to make clear that fuel supplied to commercial customers can also qualify for RTFCs? | Agree<br>X | Disagree |
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Please provide your reasons.

Agree. There is no reason to exclude commercial customers from using such fuels.

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| <p>Q24. Do you agree or disagree that the default and disaggregated default values for calculating renewable fuel CI values under the RTFO should be updated in line with those published in the RED II Annexes?</p> | <p>Agree<br/>X</p> | <p>Disagree</p> |
| <p>Please provide your reasons.</p> <p>Given that these fuels are produced and traded internationally, it is appropriate to mirror provisions in RED2 unless there is a very good reason to differ.</p>              |                    |                 |

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| <p>Q25. Do you agree or disagree with our proposal to remove the GHG emissions credit for cogeneration of electricity from the greenhouse gas saving methodology to prevent overstating the GHG emissions savings achieved by the finished fuel?</p> | <p>Agree<br/>X</p> | <p>Disagree</p> |
| <p>Please provide your reasons.</p> <p>See response to Q24.</p>  |                    |                 |

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| <p>Q26. Do you agree or disagree that biomethane suppliers should be able to apply a GHG emissions saving credit for avoided emissions when calculating the carbon intensity of biomethane produced from manure?</p> | <p>Agree<br/>X</p> | <p>Disagree</p> |
| <p>Please provide your reasons.</p> <p>See response to Q24.</p>  |                    |                 |

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| <p>Q27. Do you agree or disagree that when biomethane is created via the codigestion of multiple feedstocks, the supplier should continue to be required to report the CI of each individual consignment? That is, the supplier should not be permitted to average the CIs across feedstocks, in line with the mass balance rules which apply to other biofuels.</p> | <p>Agree</p> | <p>Disagree<br/>X</p> |
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Please provide your reasons.

As set out in our response to Q24, the RTFO should remain aligned with RED2 unless there is very good reason otherwise. Biomethane produced in the UK is sold to end users within the EU and EU-produced biomethane is sold to end users in the UK, including for use as a renewable transport fuel. This proposal will introduce additional complexity which is better avoided.

The approach proposed is also inconsistent with the treatment of biogas for electricity in the Renewables Obligation and biomethane produced under the Green Gas Support Scheme, which published its final government response 17 March 2021.

We do not see that the proposed approach is justified on the stated grounds that allowing the RED 2 approach will ‘potentially provide biomethane with a competitive advantage over other renewable fuels’. Given that the RTFO gives double rewards to fuels made using wastes, biomethane claiming RTFCs is highly likely to be made from waste feedstocks.

Even if using crop feedstocks, no one would invest in a biomethane plant with the intention of using (crop) feedstocks that were at significant risk of non-compliance with the sustainability rules. Other than poor record-keeping, the most likely causes of failure are poor performance of the digesters/upgraders or low yields from the crops. If the latter, it is very unlikely the crops would be available at a lower price – and if poor yields were due to weather conditions in the local area that may well result in that feedstock being more expensive to source rather than cheaper.

Nor do we see any grounds where the sale price of the biomethane produced would be cheaper, such that potential users of biomethane as a transport fuel would see a competitive advantage for biomethane over other fuels. Even if that were the case, however, the decision by an individual or company to use biomethane as a fuel rather than an alternative fuel (or battery-powered vehicle) will be made based on a range of factors and would not be anticipating cheaper biomethane due to a change in the sustainability methodology. Once the vehicles are in use, the choice to use biomethane rather than the alternatives has been made and those vehicles will not be using other biomass-derived fuels.

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| <p>Q28. Do you agree or disagree with our proposal to update the fossil fuel comparator from 83.8 gCO<sub>2</sub>e/MJ to 94 gCO<sub>2</sub>e/MJ to better reflect the real world GHG emissions associated with fossil fuels?</p>  | <p>Agree<br/>X</p> | <p>Disagree</p> |
| <p>Please provide your reasons.</p> <p>As set out in our response to Q24, it is appropriate to align with RED2 unless there is good reason to do otherwise. It is also clearly appropriate for the fossil fuel comparator to be based on the best available evidence, so long as any changes that have an impact on past or future investments are carefully handled.</p> <p>As set out in our response to Q2, we note that the changes brought in by RED2 align it with the methodology used under the Fuel Quality Directive in relation to the 2010 baseline used to calculate GHG savings. In other words, this figure is an assessment not merely going forwards, but of what the carbon intensity of fossil fuels in transport <b>was</b> from 2010 onwards. The GHG savings from the RTFO policy to date have therefore been understated by some margin and there are reasonable grounds for believing that the carbon intensity of fossil fuels used in transport will get worse rather than better over time.</p> <p>If nothing else, this should provide some additional comfort to the management of the risks from indirect land use change effects of crop-based biofuels.</p> |                    |                 |

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| <p>Q29. Do you agree or disagree that we should update the minimum greenhouse gas saving thresholds to offset the impact of the revised fossil fuel comparator? This would prevent support for renewable fuels which have worse GHG emissions than those supported now.</p>   | <p>Agree<br/>X</p> | <p>Disagree</p> |
| <p>If you agree - do you agree with the levels of the new proposed GHG savings thresholds? If you disagree - please provide your reasoning.</p> <p>It is appropriate that changes to the fossil comparator do not result in allowing fuels to claim RTFCs in future that would not currently be able to do so.</p> <p>This is also critical for demonstrating GHG savings and stakeholder support for the RTFO.</p> |                    |                 |

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| <p>Q30. Do you think we should consider introducing a tighter GHG emission savings threshold for fuels produced in new production facilities in the future? This would be in addition to the existing thresholds that we are proposing and would only apply to installations not yet built.</p>  | <p>Yes</p> | <p>No<br/>X</p> |
| <p>Please provide your reasoning.</p> <p>Given that many of the new installations involve first of a kind technologies it is not appropriate to tighten the rules until these become more established – particularly when the policy intention is to encourage innovation in fuels and end uses of long term strategic importance.</p> |            |                 |

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| <p>Q31. If you answered yes to Q30 - what do you think the minimum GHG emission savings threshold should be and what should the start date be? Do you agree or disagree that we should increase the RFNBO GHG threshold to 65%?</p>   | <p>Agree<br/>X</p> | <p>Disagree</p> |
| <p>Please provide supporting evidence.</p> <p>We agree with the proposed change to the RFNBO GHG threshold. It is appropriate to have a level playing field between these technologies and consistent minimum requirements also aid in communication to developers, users and wider stakeholders.</p> <p>See also our response to Q7 in relation to GHG saving requirements for RCFs.</p> |                    |                 |

We do not have comments to make on questions 32-38.

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| Q39. Are there any impacts that we have not foreseen?  | Yes | No |
| <p>If yes, please explain your reasoning and provide evidence.</p> <p>As noted in our response to question 2, the Government's preferred target increase of 2.5% would result in a decline in volumes of renewable fuels, and this decline would be very steep under a 'high EV uptake' scenario.</p> <p>If this were to happen, or even looked likely, the effect could very well lead to the closing of facilities and a lack of capability to deal with used cooking oils and associated feedstocks. Already two of the U.K.'s principal biodiesel manufacturers have invested in manufacturing plants in the Netherlands where there is a very strong fiscal and addition rate requirement for biodiesel.</p> <p>A similar effect was seen around decisions in support of greater use of bioethanol, which resulted in the closure or mothballing of UK facilities and investments being made elsewhere.</p> |     |    |

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| Q40. Do you agree that the specified amount used in determining civil penalty amounts related to the main obligation, should change to twice the buy-out price? This would be in line with the development fuel obligation and previous obligation periods.   | Yes<br>X | No |
| <p>If yes, please explain the reasons you agree.<br/>If you do not agree, please state what you think the multiplier should be, and why.</p> <p>This is a logical consequence to the increase in the buy out price and it is important that there are no perverse incentives to suppliers not to comply with their obligations.</p> |          |    |

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| Q41. We propose that RTFCs should not be awarded if the renewable fuel or chemical precursor benefits from other support schemes such as feed-in tariffs and premium payments. Do you agree that we should we further limit multiple reward of renewable energy and chemical precursors? | Yes<br>X | No |
| <p>Please provide reasoning and evidence for your answer.</p> <p>It is important to avoid double-dipping of support, and this should be assessed on a truly international basis.</p>   |          |    |

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| <p>Q42. We have set out some circumstances where support in addition to that offered by the RTFO might be appropriate. These include if the production facility receives investment aid, including government grants or government loans. Should there be other exceptions when limiting multiple reward of renewable energy and chemical precursors?</p> | <p>Yes</p> | <p>No<br/>X</p> |
| <p>If yes, please list them and provide reasoning and evidence for your answer.</p> <p>We agree with the exceptions proposed.</p>   |            |                 |

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| <p>Q43. Do you anticipate any unintended consequences with this change?</p> | <p>Yes</p> | <p>No<br/>X</p> |
| <p>Please provide reasoning and evidence for your answer.</p>               |            |                 |

## Questions on the Role of the RTFO in Domestic Maritime Deep Dive Consultation (Annex A)

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| <p>Q1. Do you agree with the Governments current position not to support biofuels for use in maritime transport under the RTFO and instead promote the use of bioenergy in other sectors of the economy that have fewer decarbonisation options compared to maritime?</p> | <p>Agree</p> | <p>Disagree<br/>X</p> |
|---|--------------|-----------------------|

Please provide reasons for your answer.

We do not agree with this approach. Marine has always been categorised alongside aviation as sectors that have high levels of GHG emissions and relatively few options to reduce them.

Renewable liquid fuels have some barriers to their use in marine but these are far less difficult than those identified for alternatives.

We see no reason not to encourage these fuels into marine, even if concerns around feedstock availability mean this might come at the expense of use in road vehicles – where there are definitely easier options for decarbonisation at all scales.

Please see our response to Q2 of the main consultation in relation to the level of targets and feedstock availability.

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| <p>Q 2. Do you consider that there could be biofuel options that would be suitable for use in maritime transport under the RTFO, including sub-sectors like fishing, that address concerns about feedstock availability?</p> | <p>Yes<br/>X</p> | <p>No</p> |
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When replying please provide any additional evidence you feel is useful in explaining your response.

See response to Q1.

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| Q 3. Do you agree that RFNBO's for use in shipping such as renewable hydrogen and ammonia should be eligible for reward under the RTFO? | Agree<br>X | Disagree |
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Please provide reasons for your answer.

Please see our response to Q21 of the main consultation around the cumulative impacts of supporting renewable fuels in other sectors being paid for by road transport fuel users.

We note that the intention of support for hydrogen and ammonia is to learn through doing, but the risks around ammonia emissions need careful monitoring, as this is a key area of concern for Defra and the Clean Air Strategy. As a point of fairness, it should also be noted that biogas production is receiving and is likely to continue to receive considerable scrutiny on ammonia emissions (primarily around storage and use of digestate).

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| Q 4. Do you agree that renewable ammonia should be eligible for reward under the RTFO when used in marine fuel cell applications? | Agree<br>X | Disagree |
|---|------------|----------|

Please provide evidence and reasons for your answer.

See response to Q3

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| Q 5. Do you agree that renewable ammonia should be eligible for reward under the RTFO when used in marine combustion applications, if air quality concerns can be adequately addressed? If yes, do you have any views on what standards should apply to the use of ammonia in ICE applications that might be eligible for this support, for example IMO (International Maritime Organization) NOx Tier III? | Agree | Disagree |
|---|-------|----------|

Please provide evidence and reasons, including any evidence on air quality implications arising from the use of ammonia in ICE applications.

This beyond our technical area of expertise, but see response to Q3

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|---|------------|----------|
| Q6. Do you agree with the proposed treatment under the RTFO for RFNBOs used in shipping, including the proposed level of reward for renewable hydrogen, ammonia and methanol? | Agree<br>X | Disagree |
| Please provide an explanation as to why you agree or disagree.  |            |          |

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| Q 7. Do you agree that the point at which RFNBOs are dispensed to a ship for use as a navigation fuel is an appropriate 'assessment time' for these fuels? | Agree<br>X | Disagree |
| Please provide an explanation as to why you agree or disagree.   |            |          |

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| Q 8. Do you agree that the proposed powers for the Administrator are sufficient to ensure the independent verification of the amounts of RFNBOs used in shipping? | Agree<br>X | Disagree |
| Please provide an explanation as to why.  |            |          |

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|---|------------|----------|
| Q 9. Do you agree that the requirement for a reasonable level of assurance, rather than the lower limited level of assurance, is appropriate?   | Agree<br>X | Disagree |
| <p>Please provide an explanation as to why.</p> <p>We agree with the use of these international standards. We also agree that a greater level of assurance is required than with sustainability audits as this has to do with the quantities of material produced as well as their sustainability.</p> <p>In the case of electricity generation or biomethane production the amounts of energy are measured independently of the requirement for audit under this standard. The fuels and processes used would ordinarily be expected to meet the sustainability requirements, so independent auditing provides an additional measure of confidence on what is already likely to be true.</p> |            |          |

## Questions on the Cost benefit analysis (Annex B)

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| Q1. Do you think that the marginal fuel is still FAME UCOME biodiesel? | Yes<br>X | No |
| Please provide reasoning and evidence for your answer.                 |          |    |

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|---|-------|----------|
| Q2. Do you agree that the assumptions made within our modelling are reasonable?   | Agree | Disagree |
| Please provide reasoning and evidence for your answer.<br><br>More assessment on the levels of electrification is needed and the resulting impacts, and this should continue to be kept under review. |       |          |