

# Consultation on the Draft Renewable Transport Fuel Obligations Order 2007

## Response from **CRed** (The Community Carbon Reduction Programme)

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## The **CRed** (Community Carbon Reduction Programme)

The CRed Programme was established in 2003 and has been taking up the challenge declared in the Energy White Paper (2003) to move towards a low carbon economy. It goes further than a 60% reduction by 2050 by recognising the importance (as outlined in the White Paper) that significant progress must be made by the 2020s if this aspiration is to be achieved. The CRed target is thus for a 60% reduction in carbon emission within the leading bodies associated with CRed by 2025.

The CRed Programme recognises the need for a multi-pronged approach towards carbon reduction involving technical measures directed at energy conservation, the promotion of renewable energy technologies, and last, but certainly not least the need to engage the public at large, businesses, and other bodies in an awareness campaign particularly directed at the interface of technology and social acceptance of new ideas.

Details of the CRed Project may be found at [www.cred-uk.org](http://www.cred-uk.org)

The CRed Programme welcomes the opportunity to comment in the present consultation in so far as the Renewable Transport Fuels Obligation could have an impact in reducing carbon emissions in the UK as a whole.

The following submission comments on the specific questions in the consultation document. These are listed as numbered according to the scheme in the consultation document.

### Part 1: detailed design of the RTFO

#### **1. *Is the definition of an obligated supplier appropriate? Are the compliance costs estimated in the attached Partial Regulatory Impact assessment broadly accurate?***

In the context of the Order as presented in draft format, the definition of the obligated supplier is appropriate. Paperwork already set up for accounting.

However, considering the RTFO in the context of the family of renewable obligations, which also includes the Renewables Obligation for electricity and, subject to the climate change bill, the Renewable Heat Obligation, the policies could be unified at the consumer end, by shifting the obligation from supplier to large consumer this will provide a more effective method for carbon reduction as it would permit trade by an individual large consumers between the three obligations to ensure most cost effective carbon reduction. Suppliers would remain the Obligated party for domestic and small business consumers. This alternative approach is explored further in the answer to question 18.

In the case of biomethane from biogas, the supply chain is quite different to that of liquid transport fuels. On an energy basis, the greenhouse gas saving from using biomethane as a transport fuel is typically twice that of biodiesel or bioethanol. It is important that the RTFO is set up in a manner that will encourage the development and use of biomethane, including recognition of biomethane as a renewable fuel when piped via the existing natural gas grid. The present definitions focus on liquid fuels and the obligation is in terms of volume, but as indicated in response to other questions, it is important that this is redefined in terms of energy (as is EU preference) as soon as practical and ultimately in terms of carbon savings.

**2. Is 450,000 litres an appropriate minimum threshold?**

Yes, since the total proportion of fuel from small suppliers is less than 0.5% of the total UK transport fuel supply this makes sense and reduces bureaucracy. However, if the total demand for all road transport fuels should decrease then this threshold should be reviewed such that the total for small suppliers still represents a comparable percentage.

**3. Is it appropriate to calculate the level of the obligation as a percentage of obligated suppliers' fossil fuel sales in this way, despite the fact that this will make it a more stretching target?**

Regardless of the way that the percentage is expressed, the quantities remain the same. 5 litres of biofuel of a total of 100 litres of transport fuel is expressed as 5%. The same 5 litres of biofuel, expressed as a percentage of the 95 litres of fossil fuel sales, is 5.2641%. In both cases, only 5 litres of biofuel is required to meet the obligation. This question is therefore irrelevant. Expressing the target in this manner does not make it a more stretching target.

When considering fossil fuel sales, does this include the proportion of the fuel which consists of additives, or are the additives excluded? Furthermore, the present 5% limits on additives will necessitate the sale of higher blend biofuel products.

**4. Will setting the target in this way provide increased liquidity in the market for RTF certificates?**

This question is irrelevant. As described above, re-expressing the target in the way proposed makes no difference to the volumes of fuel being sold.

**5. Is it appropriate to exclude sales of road fuel gases from the calculation of suppliers' obligations?**

Given that fossil (as opposed to bio) road fuel gases comprise a small proportion of total road fuels, excluding such fossil fuels from the obligation calculation is, at this point in time, the sensible option. If sales of such fossil road fuel gases increase, the calculation of the total obligation should be extended to include fossil gases. On the other hand, bio-gases used as road transport should be included as a means of compliance.

LPG is a fossil fuel providing little greenhouse gas saving and should not be included. CNG/diesel dual-fuel HGVs in use are thought to save about 16% carbon dioxide emissions compared to their diesel equivalent. There is an argument for include such vehicles at a reduced level, at least in the early stages because they also offer benefit in terms of emissions and noise.

Given that fossil road fuel gases comprise a small proportion of total road fuels, excluding such fuels from the obligation calculation is, at this point in time, the sensible option. If sales of such road fuel gases increase, the calculation of the obligation may need to be extended to include fossil gases.

We note that the majority of road fuel gases sold in the UK is LPG. CNG/LNG powers only a few hundred vehicles at present. There are particular historical reasons for this lack of penetration of CNG/LNG in the UK and penetration is significantly higher in some other EU

countries and in some non-EU states. If biogas becomes more widely available, CNG/LNG use may well rise sharply as well.

We approve the promotion of biogas as an eligible fuel for RTF Certificates. The RTFO instrument also has the potential to encourage the production of biogas from waste which could be a more effective pathway to reduce CO<sub>2</sub> emissions.

**6. *Should the RTFO have an end-date defined in the RTFO Order, and if so what should it be?***

The present end date is 2011. However, the related Renewable Obligation has an end date of 2027 even though, at present, there are no formal targets able that set in 2015. There is sense in continuing such an obligation beyond the present end date. However, the opportunity should be taken to review all related Obligations as an integrated package (see response to Question 18).

We also note that the EU is proposing a mandatory biofuel admixture of 10 per cent (in energy terms) for all EU27 countries by 2020. We believe this proposed increase in biofuel blend should depend upon satisfactory sustainability criteria for biofuels being agreed and being shown to be effective in practice. If the intention is to keep the RTFO and Renewables Obligation separate, notwithstanding the comments above, the UK Government should set an end date of 2013 (five years from inception of the RTFO) which would be extended only if satisfactory sustainability criteria are shown to work in the UK situation (including a minimum greenhouse gas saving of 50 per cent calculated on a lifecycle basis – with this figure increasing progressively).

**7. *Does the suggested approach to eligible fuels provide a proper framework for identifying those fuels which should count as renewable fuels for the purposes of the RTFO?***

The energy contents of bioethanol, biodiesel are significantly different, as is the energy content of biogas as measured per kg. Other renewable fuels, not currently in wide use such as DME and 'green diesel' will be different again. The Consultation Document (sections 35 and 36) makes a reference of a kilogram of biogas to a litre of either bioethanol or biodiesel which is confusing. For road transport purposes, the biogas used will typically have biomethane contents in excess of 90% and typically 95%. This increases the discrepancy in the energy content of the different fuels as on a kg basis, the energy content of biomethane can be at least 30% higher than the equivalent 1 litre of diesel.

There is no UK standard for biomethane at present. As an interim step, the Swedish standard could be used. Biogas/bio methane must also maintain its renewable status when injected into the grid so that it can be produced at one point and used at another. This use of the grid in this way greatly facilitates the transport of bio-methane and its flexibly for use as a vehicle fuel. Procedures will be needed to ensure correct proportions of biogases are accounted for if used in this way, but there is already considerable experience in the power sector relating to co-firing of fossil fuels and renewable biomass so this should not present significant problems. We strongly urge that the method suggested by the European Directive, i.e. accounting in energy rather than volumetric or mass terms should be adopted. While the preference is for RTF certificates based on energy content and ultimately carbon saving, we see that, in order to implement the Obligation as soon as possible it may be necessary for an interim period of one year to base allocation of certificates on the average basis of bioethanol and biodiesel with due credit for biogases rather than the confusion which would otherwise occur with the present wording.

**8. *In advance of internationally agreed standards, is there more that can be done to help ensure that biofuels are sustainably sourced, for example through voluntary standards or agreements?***

Given that the RTFO's objectives include increasing the use of renewable fuels by establishing a market within the existing road transport fuels sector, high barriers to the uptake of renewable fuels would be counter-productive in the first instance. When the supply chain and

market become better established, after the first year or so of the RTFO, more stringent sustainability and carbon emission accounting measures should then be introduced. We recommend that only those biofuels which can demonstrate a significant saving in carbon dioxide emissions (including all production and agronomy processes) should be eligible under the obligation. This minimum threshold should be at least 50% and should rise progressively with time.

The Forest Stewardship Commission runs a successful voluntary standard, driven by consumers. If a similar Commission were to be established for biofuels, with a comprehensive set of sustainability indicators, a consumer-driven demand for this voluntary accreditation could be achieved. Such a scheme would be an interim measure before the internationally agreed standards were fully developed and implemented. Public reporting will be essential.

An alternative interim measure is to enforce a moratorium on biofuels from sources that are not already established, until sustainability standards can be applied to potential new sources of biofuels for the UK. While paragraph 43 notes the possibility of challenges to unilateral standards, this is a risk well worth taking if the question of sustainability becomes of concern.

In both voluntary and enforced standards, the methodology is critical and must include all relevant assessment indicators for sustainability, including, amongst others, the carbon footprint, land use, effects on biodiversity, social impact and displacement of previous land uses, for example displacing woodland or set-aside land to grow oilseed rape. The development of a stringent and appropriate accreditation methodology requires adequate time and resource investment to ensure its proper functioning.

**9. *Would obligated suppliers or others wishing to acquire certificates consider these checks and balances to be sufficient to protect against any possible fraudulent claims of RTF certificates from the RTFO Administrator?***

Cross checking of data is important and we support the measures needed to bring this about via an Act of Parliament. It is also important that provision is made where suppliers default on their Obligation and then go into Liquidation.

**10. *Are the proposed arrangements for the recycling of the buy-out fund appropriate?***

Under the Renewables Obligation, the suppliers holding the ROCs benefit from the recycling of buy-out funds, and thereby help promote more sustainable electricity supply within the UK. In the case of the RTFO, there is no indication that any buy out funds will encourage indigenous production or for that matter production for the EU. If the majority of the money finds its way directly or indirectly outside the UK this will not provide the most effective solution for carbon reduction in the UK. Hence, in addition to a focus upon mechanism, the operation of the RTFO must ensure adequate greenhouse gas emission reduction through biofuel use and guarantees of sustainable production of biofuels. The funding arrangements should, therefore, include provision for creation of an infrastructure for monitoring and investigating these aspects in adequate detail.

Adequate arrangements must be in place to ensure that as the target is approached, instability in the market does not occur. In particular consideration must be given to ensure that such instability does not deter suppliers from promoting higher blends of transport fuels such as E85 and higher biodiesel blends.

While it may be necessary to prevent unnecessary barriers in the first year of operation to not set restrictions, it would be desirable to set a maximum level of recycling ending outside the EU or UK in subsequent years just as the level of co-firing permitted is being progressively reduced under the Renewables Obligation.

As indicated in response to Question 18 providing an obligation on larger consumers rather than suppliers is likely to provide a more effective method for achieving the primary aim of carbon reduction.

**11. What are likely to be the impacts of the RTFO on micro-scale biofuel producers, and how might any adverse impacts be mitigated?**

Within the Renewables obligation, small producers of electricity are finding it difficult to acquire ROCS as the major suppliers are reluctant to deal with such small quantities. Though legislation has improved, this is still a significant barrier and where possibilities for consolidation exist the charges for such consolidation services are such that it is hardly worth the effort to achieve any financial benefit by acquiring ROCs. For the RTF Certificates a similar set of barriers might arise, but suitable framing of the Order might partly overcome this.

Such micro scale producers will almost certainly be UK producers, and addressing the issue of where the buy-out funds ends up (see 10 above) might help. The small producer could well face the expense of the production of necessary documentation and the expense of resources to undertake full environmental impacts which is counter productive to achieving any financial benefit. On the other hand an appropriate level of documentation may be necessary as it is with the small producers that issues of quality of products might be most important.

Furthermore, micro-scale producers benefit at present from the duty derogation on biofuels. The Government's intention to combine this derogation and the buy-out penalty with eventual phasing out of the derogation will also adversely affect microscale producers

**12. Are the proposed arrangements for civil penalties and for revocations appropriate?**

CRed does not wish to comment on this.

**Part 2: how the RTFO might develop over time**

Section 1: the conditions that must be met before the Government is prepared to increase the level of the RTFO beyond 5%.

**13. Should the Government specify that, from a given date, credits under the RTFO should be linked to the GREENHOUSE GAS-saving of the fuel? If so, what arrangements should operate and how quickly should this requirement be introduced?**

Such a link is fundamental to the existence of the RTFO. Levels below total 50 per cent greenhouse gas saving on a full LCA analysis should be entirely excluded. There is no point in supporting the continuation of unsustainable practice as this will be environmentally counterproductive and disincentivise innovation. Para 82 raises the question of displacement. As in the CDM, this must be considered as part of certification. If palm oil plantation for biodiesel production elsewhere in the world is causing massive greenhouse gas emissions from soil carbon and fires, then there are serious global problems far more urgent than the details of the RTFO. The answers may be complex, but, we re-emphasise, the only significant point of the RTFO is to encourage reduction of greenhouse gas emissions in a sustainable manner. This aspect must be fully encompassed in the working of the RTFO and it is essential that this is the ultimate method by which RTF Certificates are issued. However, the methodology to assess this is still far from robust and a priority should be given to ensure that such internationally agreed method of analysis are in place before a scheme is introduced which solely relies on this approach. These mechanisms should be in place by 2011/12.

**14. Should the Government specify that, from a given date, only those biofuels meeting certain minimum environmental and social standards should qualify for credits under the RTFO? If so, what standards should be applied, and from what date?**

This is strongly desirable. However, before adopting such internationally agreed robust methodologies should be in place for assessing minimum environmental standard. At an early date a minimum greenhouse gas saving of 50% should be set rising a time progresses. In the case of minimum social standards, these need careful appraisal and discussion. If there are

restrictions on proportion of Obligation satisfied by imports of fuel from outside the EU (see also answer to Question 10) then it would be possible to set these standards at an earlier date. There is also a strong case that once robust appraisal methods are in place that a banding system should be introduced to reward those fuel suppliers which provide higher greenhouse gas savings.

Our preference is for a move away from obligation on a volumetric basis to one on greenhouse gas saving should be considered as discussed previously. Such an approach would have the benefit of encouraging the use of the most environmentally beneficial renewable fuels – something the proposed set-up for the RTFO does not do. It would also encourage the use of those fuels that provide maximum greenhouse gas benefits at higher blends than the 5% limit presently proposed. Such an approach would maximise the greenhouse gas saving across road transport through the use of renewable fuels.

**15. Is the Government right to await the review of the relevant fuel quality standards before setting targets higher than 5%?**

No. Several fleet operators are either doing or about to use higher levels of biofuel blends, and Government should review the situation regarding them, to determine appropriate guidelines for suppliers of renewable fuels.

The Government may be able to explore setting fuel standards that are specific for the UK, just as Germany and Austria set country-specific biodiesel standards when the fuel first became used in those countries. The case for biomethane has been discussed above (Q7)

**16. To what extent should Government support for biofuels be constrained by the impact on fuel prices at the pump?**

Government support for biofuels should not be constrained at all by the impact on fuel prices at the pump. If the government is concerned by fuel prices at the pump, this concern ought to be addressed across all fuels via the duty on fuels.

**17. Will the RTFO have an adverse impact on other sectors? To what extent should this constrain future Government support for biofuels?**

To answer this robustly requires improvements in reporting methodology as it is difficult to assess objectively at the present time. Full sustainability reports should be available annually to address this and subsequent consultation should permit modification of the RTFO in subsequent years on an iterative basis to assess impacts on other sectors.

Section 2: the possible nature of, and level of, future RTFO targets

**18. Do you consider the above analysis of the options [for setting future RTFO targets] correct? Are there any other options that the Government should consider?**

The basic options listed in paragraph 90 are an initial sensible consideration, but the last of these is by far the best way of the options listed. This aspect is discussed further in response to question 19.

As indicated in the Part 1 paragraph 1, the primary aim for the introduction of the RTFO is to promote savings in carbon dioxide. With the Renewables Obligation already in force, and discussions being held relating to a possible Heat Obligation, it is time to consider the opportunity for combining all obligations as an integrated whole for large businesses and pass the obligation from the supplier to those large consumers, i.e. though with energy consumptions (or emissions) above a certain threshold. While such integration is not practical in a phase 1, serious consideration should be made for such in subsequent phases post 2011.

One of the issues concerning a heat obligation, and could also affect some of the biofuels for transport (e.g. vegetable oil) is a question of a definition of supplier. Large businesses already have a reporting system in place with regard to the EU Emissions Trading System, and such business should be considered for an integrated Obligation covering electricity generation, efficient use of heat and also a road transport obligation. The advantage of such an approach is that the decisions for the most effective carbon reduction strategies would be made at the level at which technological and managerial decision making would have a much more rapid and more significant impact particularly to the local UK economy than if the money is distributed to suppliers which have little involvement in the UK. By pricing the buy-out prices of the three obligations in equivalence (e.g. on energy or carbon saving terms) there would be the possibility of trading between the obligations. Thus one organisation might find that investment in one area was not cost effective even with the relevant obligation, but that combining the resources it would be possible to have much more significant reduction in another obligation. If the primary aim of the UK in this area is for carbon savings this opportunity should not be overlooked.

While this is proposed for large businesses, it would remain the responsibility of the suppliers to satisfy the obligation for domestic consumers and small businesses.

We also note that, over the longer term, biomethane from waste could provide a significant proportion of the RTFO ambition. However, this must not be seen as an excuse to relax waste recycling policies. The fuel distribution system would be very different for biomethane than for liquid renewable and fossil fuels. Any system should facilitate not hinder the development of biomethane for transport use. Where biomethane is transported through the existing natural gas system, the opportunity to combine obligations would be present.

**19. What are your views on the relative merits of the different ways in which future RTFO levels might be expressed?**

The first option to express the Obligation in terms of volume is generally undesirable because even fuels such as bioethanol and biodiesel have very different energy contents per litre and also consequential emissions. The EU clearly favour the second approach, and this is the one that should be adopted if at all possible from the outset, although to ensure the legislative mechanisms are in place, the first option might possibly be used for year 1 only. Though the third option is the most desirable, there are questions about its validity until internationally agreed robust methodologies exist for accounting. This option should be adopted as soon as practical to ensure that such methodologies are available by 2010 at the latest.

The second part of the question relating to minimum carbon savings becomes irrelevant if the obligation is expressed in terms of greenhouse gas savings. Having separate obligations for different fuels will not necessarily lead to the most effective reductions in carbon dioxide, and indeed there is a case to argue for more integration with other obligations as outlined in the answer to question 18. However, some newer technologies might not advance to commercialisation in an effective time period without extra incentives. It would be preferable to promote such technologies with capital grants in addition to any RTFO benefit except that a proportion of the capital grant should be retained and only released after say two years if a demonstrable development has taken place. Experience at the University of East Anglia, for instance, has shown that the construction of low energy buildings is not in itself sufficient. Good management and optimisation of systems can reduce the energy consumption in an already low energy building by as much as a further 50%. In a similar way the final proportion of any capital grant issued to promote commercialisation should only be released after a demonstration of performance.

**20. Is the Government right to insist that robust carbon-saving and sustainability criteria are built into future EU-wide biofuel targets and support mechanisms?**

Yes, we strongly support this

**21. What should the level of the RTFO target be in future years (eg 2015 and 2020)? Should the level of ambition be maintained at the 2010/11 level, or increased?**

When setting future targets for the RTFO, the Government should consider the issue of both the proportional and absolute quantities of renewable transport fuels supplied. Should the targets be set as a proportion of transport fuel sales, or as an absolute minimum quantity, such that absolute renewable fuel production levels do not decrease if the overall level of transport fuels decreases in future

For example, at a total fuel sales volume of 50 000 million litres, the current target of 5% demands a supply of 2500 million litres of renewable fuels. If the total fuel sales volume were to decrease to 45 000 million litres beyond 2010/11, the 5% target would be met by 2250 million litres of renewable fuels. However, the prior actual target of 2500 million litres should be retained, to further promote and stimulate the renewable fuels industry. The Government must ensure that the targets become more, not less, demanding with time.

It is important to provide some certainty in the market, and though we favour an integrated approach including all Obligations in the post 2011 period (see response to question 18), and target set should be based on sound data, an appraisal of the sustainability of experience in the first few years. Within the Renewables obligation, the Government has set targets up to 2015 but as also indicated an aspiration of a higher level by 2020 but without a specific target as such. There is scope for perhaps setting both a target for an earlier date, and also an aspiration for a later date.

**22. When should the Government set targets for years beyond 2010/11?**

Such targets cannot be set or even a date fixed for setting them until the information on sustainability issues etc has been addressed.

**23. Is our approach to setting the level of the buy-out price a reasonable one? Does the 30 pence per litre “package” strike the right balance between encouraging the use of renewable transport fuels and protecting consumers? For how many years into the future should it be guaranteed?**

When deciding upon a buy-out price, it is important to consider other factors other than those listed. Thus if the majority of the recycled buy-out funds primarily finds its way outside the EU rather than becoming available for the benefit of the UK the secondary objective as outlined in paragraph 2 of Part 1 will not be met and there may be little benefit for UK farmers and the UK biofuels production industry. Secondly it must also be appreciated that in the case of biodiesel and biogases, the use of such fuel may not be the most effective way of reducing carbon dioxide if designated exclusively for the transport sector. It is highly probable that bio-diesel for instance supplied for CHP units or for domestic heating systems might be more effective in this respect. It is not clear whether suppliers will also have an obligation to provide biofuels in this area also? With regard to price, while 30p might seem reasonable at present, there should ultimately be some form of comparability based on either energy content or green house gas reduction with the other Obligations (see also response to question 18).

Section 3: Support for “second generation” biofuels, and other renewable transport fuels

**24. Will rewarding different biofuels on the basis of their relative carbon saving performance be sufficient to bring these fuels onto the market? If not, in what other ways might the Government support the development and use of “advanced” renewable transport fuels?**

See the response to question 19. In addition, to ensure adequate research and development the Government should support, by means other than the RTFO, the development of fuels that will offer greater greenhouse gas saving and less environmental impact.



The Government should also actively support the development of 'renewable gas' infrastructure based on biomethane and provide infrastructure grants for gas-refuelling. Biomethane should be distinguished from natural gas by being free of excise duty.

**25. Should the Government consider providing additional support to encourage the use of high blend biofuels?**

An approach to encourage higher blends should be welcomed. However, since the ultimate approach for an Obligation should be through carbon savings, there should be no special provision under an obligation apart from perhaps some capital allowance in the early stages with the necessary constraints as outlined in the answer to question 19.

See Q24 for biomethane and gas refuelling. In Switzerland, 'Naturgas' for vehicles is free of any tax, and is very attractive for fleet owners such as taxi companies. A 'green gas' grid system is also in operation and almost all bio-methane is fed into the grid. As a result Switzerland, with a far smaller vehicle fleet than the UK, has over 3,400 bio-methane powered vehicles on the road (the UK has about 400 gas-powered vehicles in total).

In the UK, use of higher blend biofuels of whatever kind is greatly disadvantaged by the operation of Bus Service Operators' Grant (BSOG) which effectively removes the benefits of excise duty reduction. The BSOG is a device that actively disadvantages renewable fuels in one of their most attractive markets, buses. The BSOG must be restructured as soon as possible to remove this perverse disincentive for use of renewable fuels.

In other countries in Europe and elsewhere, the bus market has been the dominant market for gas vehicles because of the associated air quality benefits. If biogas is used then there is both an air quality and climate change benefit. This potential is effectively blocked by the current BSOG arrangements in the UK.

16<sup>th</sup> May 2007