

Department of Energy & Climate Change

The Rt Hon Philip Hammond MP Secretary of State

Foreign and Commonwealth Office

The Rt Hon Oliver Letwin MP Chancellor of the Duchy of Lancaster Cabinet Office

The Rt Hon Greg Hands MP Chief Secretary

HM Treasury

The Rt Hon Patrick McLoughlin MP Secretary of State

Department for Transport

29th October 2015

Dear Philip, Oliver, Greg and Patrick,
EU 2020 RENEWABLES TARGET

I am writing to inform you of current UK progress towards the EU 2020 renewables target and the work underway to agree the Government's strategy for meeting the target. We will need to reflect further on the viability of the emerging strategy once the outcome of the Spending Review is known, and at that point I will formally write round to seek agreement to the proposed approach.

The target sets a legally binding obligation on HMG to deliver 15% of the UK's final energy consumption across electricity, heat and transport from renewable sources in 2020, with a binding sub-target for 10% of transport fuels to be from renewable sources in 2020.

Beyond a flat rate of renewables for each member state, the effort share for meeting the EU-wide 20% target was based on GDP. As a result of this, and the fact that the UK started from a very low base of renewables deployment, our target requires amongst the most significant annual growth in renewables deployment (16% average annual growth from 2011 to 2020) of any member state.

The absence of a credible plan to meet the target carries the risk of successful judicial review, and failing to meet the overall target in 2020 could lead to on-going

finances imposed by the EU Court of Justice (which could take into account avoided costs) until the UK reaches the target level.

Current position

The UK continues to make progress towards the target and preliminary figures show we

are set to exceed our interim milestone for 2013¹¹⁴ (at a level of 6.3% against a target of 5.4% final energy consumption from renewables) and continue in line with the required trajectory until 2017/18. The trajectory then increases substantially, and currently leads to a shortfall against the target in 2020 of around 50 TWh (with a range of 32 — 67T1Nh) or 3.5%-points (with a range of 2.1 — 4.5% points) in our internal central forecasts (which are not public). Publically we are clear that the UK continues to make progress to meet the target.

Whilst accurate and up to date information on performance across the EU is unavailable, DECO analysis highlights that some other major Member States are in a similar position to the UK. In particular, my officials have identified that Germany, France, Poland, Spain, the Netherlands and Ireland are currently off track to meet the target to varying degrees. Whilst it may be tempting from a UK perspective to take comfort from this list, it should be noted that Germany in particular sees the target as a cornerstone of the EU's climate agenda and has a strong domestic policy framework in place which may well allow it to make up any shortfall. In addition, the failure of other Member States to meet their target would not provide the UK with a formal defence in legal proceedings.

Emerging principles for the UK's approach to the target

I am clear on the need to decarbonise the economy in line with our long term climate commitment of decreasing emissions in 2050 by 80% from 1990 levels. This has to be done in a way which minimises the cost on households and businesses. To this end my officials have been working closely with teams across Whitehall to prepare a proposed strategy for the 2020 renewables target that is consistent with our broader approach to decarbonisation,

The emerging principles of which are:

1. Maintaining and improving existing policy performance towards the target This

would require us:

to maintain our commitment to achieving at least 30% of electricity generation from renewables;

to meet the 10% sub-target for renewable fuels in transport; and

to continue support for the deployment of new renewable heating installations after the current funding settlement ends in 2015/16.

Should the support for renewable heat be in line with the proposals in my letter to the Chief Secretary of 4th September, we would expect this element of the strategy to add 1.5%-points (with an range of 1.0 — 2.1%-points) or around 20TWh (with a range of 15 — 32TWh) to our progress to the target, leaving a central shortfall of 2%-points or around 30TWh.

These forecasts are subject to significant uncertainty as the market for renewable heat is at an early stage and as a result of market and technical performance factors relating to renewable electricity.

1. Additional UK renewables deployment

Officials across Whitehall are reviewing policy options open to us to address this c.30TWh shortfall through additional deployment of renewables in heat, electricity and transport.

In the case of transport, reaching the 10% sub target for renewable fuels already requires almost doubling the current levels of renewable fuels between 2017 and 2020 (adding around 2 pence per litre on pump prices). An additional 12.9TWh or 0.9%-points could theoretically be delivered above the sub target, at an estimated cost of £850m/year (adding a further 2.1 pence per litre on pump prices). Due to limited availability of sustainable feedstocks, supply beyond the sub target appears likely to increase carbon emissions by increasing deforestation through new demand for agricultural land.

The highest potential for additional renewable heat is from bio-methane injection into the gas grid, which could deliver up to 6TVVh (or 0.4%-points) by 2020. However a significant proportion of this (up to 4TVVh) is already included in the proposals for continuing support for renewable heat post 2015/16.

Additional deployment of electricity focuses on importing renewable electricity from Norway via the planned interconnector. This could deliver a maximum of 10TWh, depending on market forces. However, my officials do not expect the interconnector to be in operation until late 2021 at the earliest, and therefore would not strictly help the UK to reach its 2020 target. Should this change, we believe that an intergovernmental agreement would be necessary, under which the UK would be required to make payment(s) to the Norwegian government (on top of that which would be paid for the electricity supplied through normal market mechanisms).

2. Use of co-operation mechanisms

In the absence of other measures to increase renewable energy consumption in the UK, a strategy to meet the target (and to ensure that the target is met in the most cost-effective way) would need to involve the UK purchasing renewables deployment later in the decade from other EU Member States which have over-achieved their target.

There are two ways to do this. The first would see HMG directly support a specific renewables project in another EU or European Economic Area Member State or third country, with an agreed proportion of the renewable energy generated being transmitted to the EU where the project occurs in a third country. However, at this stage there are no projects we have identified with the potential to deploy in the right time frames.

The alternative is to reach an agreement with an EU or EEA Member State, which is likely to over-achieve on its target, to buy 'statistical credits' from it in 2020. The market for such transactions does not yet exist, and there is a low likelihood that sufficient credits will be available to meet the total UK shortfall of 50r/Vh (i.e. the shortfall should action not be taken to improve baseline performance), we believe

there is a medium — low likelihood that sufficient credits will be available to meet a shortfall of 30TWh. Costs are, however, also highly uncertain. Nevertheless, trading has the potential to make a cost effective contribution towards meeting the target alongside a package of domestic action.

4. Engaging with other EU Member States

In tandem with this emerging strategy, officials will seek to build a consensus with other EU Member States which we believe to be in a similar position to the UK, in particular in relation to their renewables target but also to other 2020 targets for greenhouse gas emissions or energy efficiency. This may allow us to negotiate some flexibility in meeting the target; but entrenched positions in Brussels and the need to defend broader HMG policy objectives mean that we cannot rely on this to deliver anything to significantly improve UK progress against the target.

Next steps

My officials will continue to assess progress to the target and will review options once the Spending Review settlement has been announced.

I will then write round to colleagues to seek agreement to the proposed strategy for meeting the target. In the meantime I would welcome the opportunity to meet with colleagues to discuss in more detail the emerging principles outlined in this letter.

I am copying this letter to Jeremy Heywood and Tom Scholar.

A handwritten signature in black ink, appearing to be 'Amber Rudd', with a stylized, cursive script.

AMBER RUDD

=====

To:	Andrew Jones	From:	Ignacio Vazquez Low Carbon Fuels
Date:	4 November 2015	Location:	1/32 GMH
Copies:	At end	Tel:	3296

PROGRESS TOWARDS MEETING 2020 RENEWABLE ENERGY OBJECTIVES

ISSUE

The Department for Energy and Climate Change (DECC) have written to Patrick McLoughlin to inform him of progress made towards achieving the 2020 Renewable Energy Targets in advance of the Spending Review (see letter in the attached Annex A). This note provides detail on DECC's emerging strategy for addressing the potential shortfall and includes a suggested response from you.

TIMING

Urgent. A response should be sent as soon as possible in order to influence a follow up confirmatory write round letter to be circulated after the spending review.

RECOMMENDATIONS

That you:

- note potential impacts of DECC's emerging strategy on renewables on your preferred approach for low carbon fuels to 2020 and beyond;
- send the response attached in Annex B (Chapter document ID 381393) to Amber Rudd outlining our concerns and taking up her offer of a meeting as soon as possible.

BACKGROUND

3. The Renewable Energy Directive requires the UK to ensure that 15% of total energy consumed in 2020, including 10% of transport energy, comes from renewable sources. While DECC has responsibility for the overall renewable energy objective, DfT is responsible for its transport elements. Biofuels are expected to be a significant contributor to these targets.
4. The production of biofuel feedstocks is subject to sustainability criteria preventing the conversion of land of high carbon content or biodiversity value. However, due to an effect called indirect land use change (ILUC), where biofuel production displaces other crops onto previously uncultivated land such as rainforest, there is strong evidence that some biofuels made from crops do not deliver greenhouse gas (GHG) savings.

5. In fact, when ILUC GHG emissions are taken into account, crop derived biodiesel (i.e. vegetable oils) can result in *higher* greenhouse gas (GHG) emissions than fossil diesel, while crop derived bioethanol (i.e. cereals and sugars) leads to modest GHG savings. Biofuels from waste oils, which do not use land, offer significant GHG savings and currently make up around half of the UK's supply and more than 90% of the UK's biodiesel supply. We expect the supply of these oils to become a limiting factor at higher obligation levels.

4. Concerns around ILUC emissions associated with biofuels led the European Commission to propose measures allowing Member States to set limits on the contribution of food based biofuels towards their Renewable Energy Obligations in 2012. The UK Government was instrumental in pushing for such measures at EU level, which were finally adopted in 2015 after overcoming significant initial opposition from a majority of Member States.
5. Our primary instrument to meet the transport targets in the UK is the Renewable Transport Fuels Obligation (RTFO), currently mandating that a minimum volume of biofuels (i.e. 4.75%) is supplied for use in road transport. You have asked officials to develop trajectories for increasing biofuel supply to achieve 2020 targets and provide long-term industry certainty post-2020. You have asked for these trajectories to include low levels of crop derived biofuels and increase consumption of biofuels from waste and residues.

CONSIDERATION

Progress towards 2020 Renewable Energy Targets

6. The UK continues to make progress towards its 2020 objectives, with 6.3% of all energy being consumed originating from renewable sources. Despite the consumption of renewable energy continuing to increase significantly, there is currently a projected shortfall of 3.5 percentage points against the target (range of 2.1-4.5 percentage points) in 2020.
7. Ahead of the forthcoming spending review, DECC are keen to secure cross-Whitehall support on a strategy to meet the overall renewable energy target. This includes maintaining existing levels of support for renewable electricity generation, increasing renewable energy consumption in transport sufficiently to meet the transport sub target in 2020, and extending support for new renewable heating installations beyond 2015/16. All these measures are expected to provide an additional supply of renewable energy enough to narrow the gap towards the 2020 targets to 2 percentage points (around 30TVVh).

Proposed options for additional renewables deployment

8. DECC officials are considering additional policy options available to 2020 to increase renewable deployment and address the remaining gap. These include a potential additional deployment across all sectors of around 30TVVh (i.e. 12.9TWh, 6TWh and 10TVVh in the transport, heat and electricity sectors respectively) and/or buying "credits" from Member States that overachieve their renewable energy objectives. However, the feasibility of the options being put forward, particularly for heat and electricity, seems questionable. As the ability to trade with other Member States remains uncertain, there appears a risk that increasing levels of renewable energy supplied in transport is being presented as the only realistic, albeit undesirable, alternative.
9. We are concerned that an increase in renewable energy supply in transport beyond our current 2020 plans is likely to have negative economic, social and environmental impacts. Our commitment to achieve the 10% renewable transport target already requires doubling current biofuel supply at a further penny per litre on pump prices (in addition to the 1 pence currently added by the Renewable Transport Fuel Obligation). Delivering this objective in a cost effective and publically acceptable way will be challenging, as it will require putting in place measures to focus the growth on the most sustainable biofuels from waste, and working together with oil and car industry to overcome barriers to technical deployment issues (e.g. potential roll-out of E10, etc). The

transport option DECC suggest retaining would add a total of around 3 pence per litre at the pump (in addition to the 1 pence currently added by the Renewable Transport Fuel Obligation). There are also uncertainties around its technical deployment. Moreover, it is likely to attract strong NGO opposition, as a significant increase in consumption of crop biodiesel, with its unfavourable ILUC and deforestation impact, would be required.

10. Other possible options for increasing the deployment of renewable energy have not been included in the letter. For example, the deployment of off-shore wind is likely to be costly in absolute terms but much more beneficial towards long-term carbon reduction objectives than further increasing biofuel supply. Such options require longer-term planning and would need to be approved at this stage.
11. Other Government Departments are likely to be divided on this issue. For example, the Department for the Environment, Fisheries and Rural Affairs and the Department for International Development are likely to oppose any increase of food-based biofuels. However, the current letter has only been sent to Ministers in the Foreign and Commonwealth Office, Cabinet Office, HM Treasury and DfT.

PRESENTATION / HANDLING

12. This submission contains no public announcements. Press office will work with policy colleagues to develop reactive lines if there are any media queries.

CLEARANCES

13. This submission has been cleared with Legal.

ANALYTICAL ASSURANCE

STATEMENT

14. Our overall level of analytical assurance is medium. The cost estimates presented in this report has been developed by experienced DfT analysts, working closely with industry stakeholders. There is significant uncertainty around how fuel suppliers might choose to meet 2020 RED targets. In particular there is uncertainty around waste biodiesel availability, the decision to introduce an E10 fuel supply stream and future energy prices. Assumptions around GHG emissions from indirect land use change are controversial and open to challenge. The analysis presented here is based upon the best currently available data. We will continue to develop the evidence base as new evidence emerges.

Ignacio Vazquez

ANNEX B

RESPONSE TO DECC SoS ON THE EU 2020 RENEWABLES TARGET

Dear Amber

I am writing in response to your letter of 29 October to Patrick McLoughlin about the EU 2020 Renewables Target.

In your letter, you articulate the significant challenge we face in meeting our commitments to increase renewables penetration significantly over the course of this Parliament. Given the significant increase required, I firmly support your intention to extend support for the deployment of new renewable heating installations after the current funding settlement ends in 2015/16.

In transport, as you are aware we have ambitious but realistic plans to reduce carbon emissions. Alongside electrification and improvements in vehicle efficiency, it is clear that low carbon liquid fuels will be required to meet our climate change and renewable energy commitments. Today biofuels are making a useful contribution to reducing emissions in cars, and in the longer term they are likely to be essential to decarbonise sectors such as road freight and aviation. I concur with you, however, that meeting the 10% sub-target for renewable energy in 2020 is challenging. It requires a doubling of current biofuel inclusion rates right up to the limits allowed for by fuel standards in regular petrol and diesel in just a few years, and it will also require great care to secure sustainable sources of biomass supply and avoid consumer opposition. My officials are developing a strategy for achieving this target and will write seeking Cabinet Committee clearance next spring for a public consultation on revised legislation.

I should highlight that I do not consider it appropriate to go beyond the transport sub target. As you point out, we understand that demand at such levels appears likely to cause deforestation through new demand for agricultural land, and it could also increase food as well as fuel prices. This is why the UK Government argued strongly for the introduction of recently adopted measures to limit food based biofuels at EU level. As a consequence, environmental and social NGOs would be expected to campaign strongly against it. I believe such campaigning would be likely to win public support, not least given the estimated total increase of around 3 pence per litre on fuel costs that could result.

I would welcome the opportunity to meet with you to discuss this in more detail ahead of the further write round you are planning to conduct after the spending review.

I am copying this letter to, Philip Hammond, Oliver Letwin, Greg Hands, Sir Jeremy Heywood and Tom Scholar.

Yours sincerely

ANDREW JONES