

## Session SBI45 (2016)

Session starts: 01-08-2016 00:00:00 [GMT+1]

Session ends: 28-10-2016 23:59:59 [GMT+1]



Exported from Session final result section

[Question by](#) United States of America at Wednesday, 31 August 2016

[Category:](#) Progress towards the achievement of its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) LULUCF projections

GHG projections show the LULUCF sector going from a net GHG sink in 2015 to a net GHG source of emissions by 2030, and that source growing again by 2035. How does the UK reconcile this growth in emissions with meeting its reduction targets?

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Not all detailed policy proposals for reducing emissions during this period are in place for the 2020s and 2030s. Under the UK's Climate Change Act, we recently set the fifth carbon budget (2027 to 2032) which requires the UK to reduce emissions by at least 57% below 1990. One of the key strengths of the Act's framework is that it requires Government to set out our proposals and policies for meeting carbon budgets. The work is underway across Government to develop this plan, which will be published in due course.

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[Question by](#) United States of America at Wednesday, 31 August 2016

[Category:](#) Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) Renewable resource types and biomass energy

Does the UK have a breakdown of electricity mix projections/targets by renewable resource type for electricity generation? Specifically, what is the UK's use of biomass energy in meeting its renewable targets, and is the UK taking sustainability concerns and impacts of biomass use into account?

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

The Department for Business, Energy and Industrial Strategy publishes annual "Energy and Emissions Projections" containing our estimates of future UK renewable electricity generation and generating capacity. However, whilst in our modelling we do project the use of different renewable generation technologies, our policy is not to disclose the breakdown of renewables deployment by technology. This is because we operate a competitive allocation process for financial support to renewable electricity projects through Contracts for Difference (CFDs). Disclosure risks distorting bidding behaviour in current and future CFD allocation

rounds with potential impact on value for money for UK consumers.

With regard to the sustainability and impact of potentially increased use of biomass, our policies have taken this into account in the following ways:

- To receive government support for heat and power generation from biomass (whether under CFDs, the Renewable Obligation, Renewable Heat Incentive or Investment Contracts) the biomass used must now comply with the UK's sustainability criteria. We are the first country in Europe to introduce such a requirement.
- This requirement includes a minimum 60% lifecycle greenhouse gas (GHG) saving. The calculation requires transport, cultivation and processing emissions to be included.
- All biomass must come from a sustainable source. We have also put in place criteria covering a range of social, economic and environmental issues including protecting biodiversity, land use rights, sustainable harvesting and regeneration rates.
- Generators using wood must source feedstock from sustainably managed forests. The land criteria, derived from the Timber Standard for Heat & Electricity, draw upon the principles set under the UK Government Timber Procurement Policy (UK-TPP).
- Plants using biomass with a capacity greater than, or equal to, one megawatt must also prepare an annual sustainability report, compiled by a third party auditor/verifier, to provide assurance that biomass is from sustainable sources.
- Ofgem (the electricity market regulator for Great Britain) will regulate compliance with the GHG and land criteria.
- Alongside these new measures, SI 2013 No. 233 "Timber and Timber Products (Placing on the Market)" makes it illegal to place illegally logged timber on the European market. Together, the legality and sustainability requirements will prevent the use of fuels derived from illegal deforestation being used in the UK.

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[Question by Israel](#) at Wednesday, 31 August 2016

[Category:](#) Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) Implementation of energy efficiency technologies & impact on GHG emissions projections

(CTF Table 3)

### 1. **EE measures - Actual vs. Planned performance:**

It is unclear whether the energy efficiency savings for all measures are monitored over time, or based on the energy-saving potential calculated prior to implementation (coupled with monitoring of whether or not the measure was implemented).

In certain cases, there could be significant differences between the ex-ante (forecasted / modelled / estimated) energy savings and their ex-post (actual) value – after the technology is installed, with actual savings potentially lower than the projected value. Furthermore, the actual value can only be assessed if it is monitored continuously and over a long period of time.

Given that there could be changes between projected and actual energy savings, how were these differences taken into account in forecasting national electricity consumption and the associated GHG emissions in the "with measures" projection?

2. In what manner were the implemented energy efficiency technologies and their impact on future GHG emissions integrated into the country's GHG emissions projections: **EE measures - Persistence of installed EE measures:**
  - a. In forecasting the resulting nationwide electricity consumption following implementation of these technologies ("with measures" scenario), were the associated savings assumed to last only for the useful life of the relevant technology, or was it assumed that savings, once achieved, would last throughout the forecasting period (i.e, assuming that once the end of the useful life has been reached, the technology would be replaced by with an appliance with similar performance)?
  - b. Was potential degradation of energy efficiency technologies over time included in the GHG projections for 2030?

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Question 1: Energy efficiency savings reported in these tables are estimated using the latest available evidence for each policy at the time, and are updated over time where possible, for example if new evidence emerges from evaluation or monitoring activities. When the projections of energy use/emissions are updated they are calibrated to real data so that they reflect the impact of policy.

We are committed to monitoring and evaluating our energy and climate change policies in order to: improve policy decisions; provide evidence of policy effectiveness and costs; and contribute to building a wider policy and strategic evidence base. In order to maximise value and impact we have prioritised large scale, high cost, complex or innovative policies for detailed evaluation. Evidence from these has fed into improving policy design and delivery. We support strong monitoring across all policies. We also review regulatory policies through post-implementation reviews to assess the effectiveness of the regulation.

Question 2: The assumed lifetimes of energy saving/low carbon technologies differ across the various policies, depending on the nature of the policy and the assumed counterfactual. For example, it may be assumed that some policies result in a permanent change in technology (for example if they require a minimum efficiency standard), whereas for other policies the impact may be assumed to end when the technologies reach the end of their

lifetime.

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Question by Israel at Wednesday, 31 August 2016

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 31 August

Title: Inclusion of soft measures' impact in GHG emissions projections (CTF table 3)

The UK's mitigation measures include several soft measures that focus on provision of information and education (i.e. Carbon Trust measures, Soils For Profit etc.). Estimating the impact of non-measurable measures and integrating the impact into future GHG projections is a considerable challenge. On the one hand, it is important for the government to understand soft measures' potential impacts, but on the other hand, the difficulty of measuring their impact could create uncertainty.

For capacity building purposes, could the UK include information about:

- a. Basic assumptions and forecasting/projection approach used to incorporate the emission reduction impact of these soft measures into the GHG forecasts for 2030 ("with measures" scenario)?
- b. Could information be provided with regards to soft measures, and in particular economic cost, effectiveness and implementation barriers?

Answer by United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Quantified mitigation is only reported where it is possible to calculate values through robust analysis. Historic emissions reductions from soft measures that are not quantified are included in the baseline projection. Where these unquantified emissions reductions are expected to take place in future they are not considered in the projection.

In the case of Soils for Profit it has not been possible to quantify the greenhouse gas mitigation but there has been a mapping of opportunities in the agricultural sector against the objectives of the policy. The Carbon Trust measures were delivered by consultants working closely with organisations and the impacts of measures were quantified.

Multiple UK policies targeting emissions reduction may be wholly or partly considered 'soft measures'. The economic costs, effectiveness and implementation barriers are particular to each of these policies.

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Question by Japan at Wednesday, 31 August 2016

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 31 August

Title: Stakeholder coordination for projections

UK reports that the results of projections are circulated to stakeholders. What kinds of organizations are included in the stakeholders (business communities, relevant ministries and NGO)? In addition, could you tell us the contents of coordination process with stakeholders?

Answer by United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Interim results of emissions projections are circulated by the Department of Business, Energy and Industrial Strategy (BEIS) to stakeholders within BEIS and in other relevant government departments. This is part of the quality assurance process, and feedback is used to improve the results. BEIS also provides the Climate Change Committee (CCC) with interim results on request, to support their development of advice.

Final projections and documentation are uploaded to the Government website ([www.gov.uk/government/collections/energy-and-emissions-projections](http://www.gov.uk/government/collections/energy-and-emissions-projections)) so that stakeholders and the public can access them. An email address ([emissionsprojections@decc.gsi.gov.uk](mailto:emissionsprojections@decc.gsi.gov.uk)) is provided. The projections team provide comprehensive responses to queries from stakeholders and the public, subject to resources. Our projections are also presented to the Interdepartmental Analysts' Group on Energy and Climate Change, which is made up of analysts from across relevant departments.

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Question by Brazil at Wednesday, 31 August 2016

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 31 August

Title: Quantified economy-wide emission reduction target

Taking into account that the GHG emission projections for 2020 in BR2, under a 'with measures' scenario, are above to those projections contained in BR1, could this increase in projections indicate additional challenges for the UK to meet its Quantified economy-wide

emission reduction (QEWER) target?

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Our latest published projections indicate that the UK is on track to meet its Kyoto Protocol, EU 2020 effort share and our domestic third carbon budget (2018 to 2022) targets.

We remain committed to meeting our targets under the UK Climate change Act and have already made great progress. Provisional statistics indicate that UK emissions in 2015 were 38% lower than in 1990, and 3% below those in 2014.

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[Question by](#) Brazil at Wednesday, 31 August 2016

[Category:](#) All emissions and removals related to its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) Emission projections

Regarding BR1, in table 6(a) "Information on updated greenhouse gas projections under a 'with measures' scenario", the GHG emission projected for 2020 were 438,467.18 kt CO<sub>2</sub> eq (with LULUCF ) and 438,896.76 kt CO<sub>2</sub> eq (without LULUCF ). In regards to BR2, the GHG emission projected for 2020 were 454,602.94 kt CO<sub>2</sub> eq (with LULUCF ) and 458,204.56 kt CO<sub>2</sub> eq (without LULUCF ).

Could the UK please explain why the projections in BR2 are above to those projections contained in BR1?

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

The main reasons for emissions projections being higher in BR2 than in BR1 are higher economic growth forecasts and lower projected fossil fuel prices. However, these effects were offset by lower projections for LULUCF reflecting improved methodology.

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[Question by](#) Brazil at Wednesday, 31 August 2016

**Category:** Progress towards the achievement of its quantified economy-wide emission reduction target

**Type:** Before 31 August

**Title:** CTF Table 3

Regarding mitigation actions referred to in “CTF Table 3 Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects”, are there any current estimates of mitigation impacts since the respective years of implementation?

**Answer by** United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Quantified mitigation impacts are reported in Annex D of the UK's annual Energy and Emissions Projections which are available online:

<https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2015> (for the 2015 Energy and Emissions Projections on which the projections in the UK's BR2 are based). These are shown from 2008 onwards.

Annex D shows the mitigation impacts since the respective years of implementation (except for some measures implemented before 2008, where impacts are only shown since 2008).

Mitigation impacts can be updated if new evidence emerges from evaluation or monitoring. The techniques used to calculate mitigation impacts are appropriate to the mitigation action and the sector targeted.

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**Question by** Brazil at Wednesday, 31 August 2016

**Category:** Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

**Type:** Before 31 August

**Title:** MRV of mitigation actions

Regarding “Greenhouse Gas Saving (ktCO<sub>2</sub> eq)” in “CTF Table 3 Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects”, how the actions are being measured, reported and verified?

**Answer by** United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016



Energy efficiency savings reported in these tables are estimated using the latest available evidence for each policy. They are updated when possible, for example if new evidence emerges from evaluation or monitoring activities. However, it is not possible to continuously monitor and evaluate each policy for a variety of reasons such as complexities around being able to define a robust counterfactual. Estimated savings may also be updated on an annual basis to reflect wider changes, such as changes in projections of baseline energy use.

Progress is monitored using UK's energy consumption statistics for policies increasing the use of renewable fuels, such as in road transport. In the agriculture sector, progress is monitored through the UK's energy consumption statistics and mitigation has been modelled using survey data on uptake of specific measures.

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[Question by](#) Brazil at Wednesday, 31 August 2016

[Category:](#) Progress towards the achievement of its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) Quantified estimates

Regarding "Greenhouse Gas Saving (ktCO<sub>2</sub> eq)" in "CTF Table 3 Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects", 27 mitigation actions were listed as "IE", which means: "Included elsewhere. The impact of measure has been included in the UK's emissions projection baseline, however no 'without-measure' counterfactual is available", according to the note included in the end of the referred table.

Please, explain how the other quantified estimates have been made.

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Savings estimates are made using a variety of analytical approaches, depending on the policy in question and the evidence available (see below for specific examples). The latest available evidence is used for each policy. Estimates are updated whenever possible, for example, if new evidence emerges from evaluation or monitoring activities. Projections of energy use and emissions are calibrated to real-world data to reflect the impact of policy. Savings are calculated using a policy hierarchy to avoid "double counting". This means that savings are only counted if they are additional to the policies placed higher in the policy hierarchy.

Two examples for illustration:

The greenhouse gas abatement supported by the Renewable Heat Incentive (RHI) is calculated taking into account the emissions from the renewable heating systems installed rather than against the counterfactual emissions from existing systems and the renewable heating systems' feedstock. These calculations include the amount of heat supported by the RHI (metered for non-domestic properties and assessed at individual domestic property level), the types of fossil fuel systems replaced (e.g. oil or gas), and the in-situ efficiency of the systems.

For cars and vans, 'with policy' estimates are based on incorporating forecasts for new car and van CO<sub>2</sub> in a fleet model which captures fleet turnover over time. This allows us to estimate average emissions (gCO<sub>2</sub>/km) for the car and van fleets, taking account of the make-up of the fleet in terms of vintage in a particular year. This is converted to litres per km or MJ/km depending on modelling requirements using standard fuel energy and emissions conversion factors. Forecast new car and van CO<sub>2</sub> is consistent with manufacturers meeting EU targets, but reflects the UK's future vehicle sales mix.

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[Question by China](#) at Monday, 29 August 2016

[Category:](#) Progress towards the achievement of its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) transport emission

GHG emission of the transport sector is of around a quarter of energy emissions. In its BR2, UK indicates the intention to employ relative EU policy and measures, including the tailpipe emissions standard for new vehicles, to further reduce the GHG emission from road transportation. Will the BREXIT have impact on applying EU standards or PaMs by the UK?

[Answer by United Kingdom of Great Britain and Northern Ireland](#), Friday, 28 October 2016

UK Government action to tackle climate change is framed by the Climate Change Act 2008. This is domestic legislation, supported across the political spectrum, and is therefore unaffected by the results of the referendum. However, we recognise that there may be changes to how the UK achieves this outside the EU. This is the start of a long and complicated process and the Government will need to consider all factors carefully in implementing the decision of the British people.

Within the transport sector the Government is committed to ensuring almost all cars and vans are zero emission by 2050. We are now looking ahead to our emissions reduction plan which will set out how we will reduce emissions through the 2020s, including from vehicles.



[Question by](#) China at Monday, 29 August 2016

[Category:](#) Progress towards the achievement of its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) Influences of Brexit

With the expectation of exiting the European Union before 2020, what is UK's plan on its future involvement in the EU-ETS after the 'Brexit'?

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

The UK remains committed to combating climate change and this will not change. We will consider the UK's future participation in the EU ETS as part of delivering a wider settlement.

We are at the start of a long process of considering options very carefully and in consultation with stakeholders. We cannot therefore set out a timeline at what is a very early stage in that process.

Irrespective of the future decision on EU ETS participation, the UK Government has set ambitious emissions reductions targets and action to tackle these is framed by the Climate Change Act 2008. The UK will continue to act in international fora to progress this important issue.



[Question by](#) China at Monday, 29 August 2016

[Category:](#) Progress towards the achievement of its quantified economy-wide emission reduction target

[Type:](#) Before 31 August

[Title:](#) LULUCF

LULUCF sector has been transferred from net emission source to net sink in around ten years. Could the UK provide further information on the specific actions they took to enhance carbon sink in LULUCF sectors?

[Answer by](#) United Kingdom of Great Britain and Northern Ireland, Friday, 28 October 2016

Total estimated emissions of direct greenhouse gases from the LULUCF sector fell from a source of 0.25 MtCO<sub>2</sub>e in 1990 to a sink of 9 MtCO<sub>2</sub>e in 2014. The land use categories which have the greatest effect on the net LULUCF emissions/removals are forest land (a net sink) and cropland (a net source). Afforestation, reforestation and deforestation activities (Kyoto Protocol Article 3.3) were a net source of emissions in 1990, becoming a net sink from 1993 onwards. This is in part explained by the high rate of forest planting achieved between the 1950s and the 1980s. The majority of the expansion of the UK's woodland area is currently funded through provision of Common Agricultural Policy (CAP)-co financed planting grants. Other policy initiatives are in hand to reduce regulatory barriers to woodland creation and attract private sector investment, such as a voluntary standard, the Woodland Carbon Code. A strong regulatory framework and implementation of the UK Forestry Standard provides control on deforestation and protection against unsustainable management practices.

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**Session SBI45 (2016)**  
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