# Mandatory Carbon Reduction Commitment - Traction Energy

## Purpose

This briefing has been written to enable the rail industry to make a consistent response to the Government's consultation on the Carbon Reduction Commitment (CRC) by 9 October 2007 deadline, presenting a convincing case for rail traction to be covered by a separate voluntary scheme.

## Background

In November 2006, Defra consulted on the Energy Performance Commitment (EPC[1]). In response, rail companies argued for the exclusion of both traction and non-traction energy from the scheme, and proposed instead a voluntary industry-led agreement to reduce carbon emissions.

In June 2007, Defra released a second consultation on the Carbon Reduction Commitment[2] , formerly EPC, confirming that non-traction energy will definitely be included. The Government proposes that the introductory phase starts in 2010, followed by the first capped phase in 2013. The qualification year will be calendar year 2008.

The consultation also states, that Defra is minded to exclude traction. Rail industry stakeholder views are being sought on *'the best ways to ensure energy efficiency benefit and absolute emission reduction from train energy use'* [3].

From subsequent discussions, it is clear that Defra is seeking rail's consultation response to include a strategy for the industry to reduce carbon emissions, which will provide an effective alternative to inclusion within the mandatory scheme. The response is due on 9 October 2007.

## Considerations and Risks

The inclusion of traction energy (diesel and electricity) within the CRC scheme presents a significant risk to the industry, which includes, inter alia, the following:

- The CRC will increase the relative cost base of rail, potentially creating a modal shift away from passenger and freight rail to competing transport modes which are not included in the scheme.
- Electricity (40% of rail traction energy) is already included in the EU's Emission Trading Scheme, which has increased wholesale electricity price by approximately 15-20%[4]. There is a disproportionate carbon cost to rail when compared to other competing modes and it also internally skews the cost advantage from electric traction towards the less carbon efficient diesel.

1. EPC is a UK mandatory cap and trade scheme for all large non-intensive organisations.
2. The threshold value for entry to the scheme was raised to >6000 MWh of electricity p.a.
3. Consultation on implementation proposals for the Carbon Reduction Commitment, June 2007, page 35
4. The Community of European Railways suggests that 15 to 20% of the total wholesale electricity price is now attributed to the EU ETS

- The proposed scheme has no mechanisms to value the major contribution that rail makes, as a low carbon alternative transport, through modal shift from less sustainable passenger and freight transport modes.
- Furthermore, whilst a metric taking account of ‘efficient’ growth is proposed, the dominant focus of the scheme is on reducing absolute emissions. This presents a conflict as rail is obligated to accommodate 22.5 per cent[5] growth as announced in the DfT White Paper.
- The unique structure of the industry presents difficulties associated with the mix of long life, high value assets and the short-term nature of franchises, putting rail industry at a disadvantage when compared to other participants in the scheme.
- Carbon allowances will be purchased and surrendered by participants annually, with the number of allowances available decreasing year on year in line with absolute emission targets from 2013. A risk of financial penalty will therefore arise if allowances are reduced more quickly than the investment by industry can deliver energy savings, given the long life of assets.
- The scheme does not take account of the existing mechanisms for rail regulation and can therefore create tensions, perversity and unnecessary administration and cost burdens.
- Taking the above into account, rail is likely to be disadvantaged in the scheme's league table precipitating financial penalties, sending mixed messages about rail's green credentials. This may potentially create a modal shift away from the more carbon efficient rail.

## Cross-industry Response

In June 2007 the Sustainable Development Steering Group[6] requested the formation of a Carbon Reduction Working Group (CRWG) to respond to Question 16 of the CRC consultation, primarily to justify the exclusion of traction energy from the scheme, and propose an effective, alternative, industry-led, voluntary agreement in support of the DfT’s White Paper.

It is expected that the voluntary agreement will work within the existing industry structure and seek to maintain and strengthen rail’s competitive advantage supporting modal shift. It will support the environmental aims of the Government's White Paper and ensure continued DfT support for research and investment in energy efficiency measures.

Hence the CRWG cross-industry group is developing a strategy for carbon reduction which will feed into the industry's CRC response.

Specifically, this group will seek to:

- Establish the current annual freight and passenger traction energy consumption data for electricity and diesel and resultant $CO_2$ emissions
- Establish an approach to separate traction and non-traction energy sources
- Propose a baseline year against which performance improvements can be measured and reported to Defra
- Develop a model that will identify potential passenger and freight carbon reductions through existing and planned initiatives, eg regenerative braking, driver training, factoring predicted passenger/freight growth.
- It is not expected that this model will be completed by 9 October,  Defra's response deadline for the CRC consultation, so the industry's response will need to outline the plan for its delivery

A copy of RSSB's response to Defra's CRC will be forwarded to you in October 2007 for your information. Individual organisations’ responses to Defra would also be encouraged.

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5. DfT Delivering a Sustainable Railway, July 2007
6. The SDSG is a cross-industry group of senior railway industry executives, formed to drive sustainable development across GB rail