Department for Transport

DfT Modelling Inputs and Assumptions

Thomas Robertson, Low Carbon Fuels

Department for Transport

Waste availability

- Without a binding crop cap, the central scenario assumes that up to half of B7 (B3.5) will be available from waste-derived sources.
  - Given the uncertainty involved, there is also a ‘low’ scenario (1/4 of B7) and a ‘high’ scenario (all of B7).
- With a binding crop cap, it is assumed that there is sufficient waste-derived biodiesel available to meet the gap.
  - Higher demand increases the price of waste biodiesel, unlocking further supply.
  - Under these scenarios, the cost of waste biodiesel is raised accordingly to take account of this.

Department for Transport

Prices

- 1st generation fuels
  - These have been modelled as a spread above their fossil fuel equivalent.
  - These have been derived from recent historical Platts price data.
- 2nd generation fuels
  - In-house analysis based upon publicly available data on existing/planned biofuels plants.
- Further information is available in the final report of the Transport Energy Taskforce, Annex A.
- No explicit assumptions have been made around other member state approaches
  - As the UK is only a small part of a global market, we do not anticipate UK policies will have a major impact on prices

Department for Transport

Dieselisation

- Taken from DECC's Updated Emissions Projections (UEP) 2014.
  - Projects a 71/29 diesel/petrol split in 2020, rising to 72/28 by 2030.
  - Takes into account committed government policies.
- What drivers could reverse this, and what level of diesel/petrol split do you think these would lead to?

Department for Transport

Emissions

- Direct
  - Based upon historical RTFO data from year 4b onwards.
    - Excepting advanced fuels, which are taken from the RED, Annex 5, part E.
- Indirect
  - Crops taken from European Commission impact assessment, SWD(2012) 343.
  - Tallow taken from Ecofys research.

Department for Transport

E10

- If E10 is successfully introduced, our modelling assumes a 66% market penetration in 2020
  - This is likely to be the upper limit of possible scenarios, given that even in Finland only 61% was reached as of 2014
- Under central dieselisation assumptions, this should not breach a 1.5% crop cap.

Department for Transport

Further areas

- Crop caps
  - Under central waste assumptions, only crop caps below 4% are binding
    - Anything higher acts as safeguard against high levels of crop biodiesel

Department for Transport

Further questions / areas of interest?