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To:	Woods, Michael (DETI); Bagdonaite, Dovile
Subject:	Non Domestic RHI
Date:	04 April 2016 17:34:28
Attachments:	image001.gif

Michael, Dovile

As agreed, I have been through the following three documents:

- DARD (CAFRE) paper on Poultry Shed Heating Requirements
- Addendum Business Case
- State Aid Notification/Decision

I have summarised my thoughts below and outlined what I think needs taken to the draft report.

DARD/CAFRE paper

This is a very short paper which doesn't provide us with a great deal of relevant information. It primarily looks at the cost differential between a biomass heating system Vs LPG on a kWh basis. The report states that is costs approximately 4.81p/kWh from wood pellets and 4.51p/kWh from wood chip against 3.79p/kWh for LPG. I have few issues with this comparison.

1. There is no rationale/documentary evidence for any of the underlying financial assumptions. For example, it estimates the cost per tonne of wood chip at £179 but I have no idea if this is the current market rate. It also estimates increased electricity requirements, boiler servicing costs and remedial repairs to be 30p, 25p & 10p per kWh produced. Again no rationale/explanation is provided therefore it is difficult to have any confidence in these estimates.
2. The comparison is with LPG. My understanding was that the Department generally compared against an oil counterfactual as this made up 77% of our heating market. Perhaps Poultry houses are different?
3. The costs do not take into account any upfront capital expenditure which is obviously a major element of the costs

The paper also stated that a typical broiler house in NI uses 365,500 kWh of biomass heat per year, however this can range between 365,000kWh and 388,000kWh depending on size, insulation, age and type of house. The new Tier 1 tariff is based on the maximum output (i.e. 388,000kWh). In light of the budget pressures being faced by the Department surely it would have been more prudent to base the Tier 1 tariff on the average usage. Another potential flaw is the accuracy of the usage figures which have been provided in the paper. No underlying data, assumptions were provided by CAFRE, and there is no explanation as to how these figures were arrived at. It is therefore difficult to have confidence that this is an accurate reflection of a "typical" boiler house.

Two additional points on this which are also relevant:

1. Why, if only 40% of biomass installations are for broiler houses, is the tier 1 tariff set on the basis of "typical" usage in a broiler house?
2. The paper talks about improved animal welfare as a result of biomass installations, and how there are less infections , breast blister, hock burn etc. These are all issues which affect the gross margin of producers and lead to loss of sales. Therefore, surely the improvement of welfare results in improved margins and increased sales, ultimately leading to greater profitability. Whilst very difficult to quantify, should this have been

considered when assessing the level of intervention/compensation?

Addendum Business case

In late 2015, the Department submitted a business case addendum to DFP with the objective of regularising the expenditure under the scheme both retrospectively from 01 April 2015 and prospectively to 31 December 2016. The business case portrays a relatively positive case for additional funding (notwithstanding the well known budget issues). It talks about the positive NPV of the scheme, which now takes in to account carbon benefits and estimated jobs GVA. Neither of these benefits were taken into consideration when calculating the NPV in the original business case. It would appear that these factors were taken into account in order to boost the value for money aspect of the scheme, however I think it would be difficult for us to criticise for benefits which are actually derived, despite the fact they aren't the primary benefits of or key objectives of the scheme. Also I'm not sure we have the knowledge or understanding to fully challenge the economists assessment of VFM, particularly as this has gone through casework committee already.

The addendum business case also outlines various other issues which we have commented as part of our review such as affordability, budget management and scheme administration.

State Aid – Potential Overcompensation

I have been through the state aid notification and some of the supporting guidance. I don't think it is our role to work out if tariffs have led to overcompensation, however based on all our discussions and other anecdotal information I would take an educated guess and say that this is the case. I have outlined below what I think our recommendation should be.

IAS reviewed the European Commission's State Aid decision letter (dated 12 June 2016) and notes that the Commission were satisfied that the scheme was compatible with the common market in accordance with Article 107(3)(c) of the Treaty for the Functioning of the European Union.

One of the key aspects in Commission's decision on State Aid compliance, was that the scheme must not allow for overcompensation of scheme beneficiaries. As such the level of compensation offered was specifically designed to cover the cost differential between a renewable heat alternative and a traditional fossil fuel heating system (which in the case of Northern Ireland is oil), plus an appropriate rate of return set at 12%, to incentivise installations.

In order to calculate the levels of compensation (i.e. tariffs) external consultants prepared a detailed economic model factoring in capital, operating and barrier costs of various renewable heating installations against a fossil fuel counterfactual (i.e. oil). The proposed rates, which are outlined in the Annex of the Commission's decision letter, were accepted by the Commission, with the caveat that the UK authorities (including NI) review the scheme periodically, "including analyses of tariffs, technologies and the overall results achieved". The letter also stated that reviews "will take place periodically" as part of a programmed schedule and that they would "in particular be used to monitor the performance of the scheme and the development of underlying costs for each technology, so as to ensure that overcompensation is prevented". In addition, the decision letter referred to the commitment of the UK authorities to carry out early reviews "where they became aware of significant changes in production costs".

There are a number of factors which have affected the level of compensation provided to recipients. These are as follows:

- **Capital costs**
  There has been a significant reduction in the capital costs of purchasing and installing renewable heating technologies since the introduction of the scheme in 201X.

- **Average output assumptions**
  When the scheme was designed it was anticipated that users of biomass boilers (which make up 97% of all installations) would generate on average XXX kWh per annum resulting in a payment of £XXX per month. The actual average usage since 201X is XXX kWh per annum, and this has resulted in average payments of £XXXX per month.

- **Changes in oil prices**
  There has been significant reduction in the price of oil over the past 2 years. Prices of crude oil have fallen by approximately 65% between March 2014 and March 2016. As oil was the counterfactual used to determine the appropriate tariffs in 201X, a significant rise or fall will affect the level of compensation provided to suppliers.

Risk
As there has been significant changes to capital, operating and barrier costs of renewable technologies there is a potential risk that scheme participants are being overcompensated at current tariff rates. If overcompensation has taken place then the Department may be in breach of State Aid regulations.

Recommendation
The Department should undertake a comprehensive review of historic tariffs to ascertain whether or not overcompensation has taken place, particularly in respect of biomass boilers producing up to 100 kWh which make up XX% of installations. If the levels of compensation have changed through incorrect assumptions or changes in capital, operating or barrier costs, then the Department should liaise with the Commission to ascertain whether or not a breach has taken place.

FYI I have focused the recommendation on "historic tariffs" as these make up the vast majority of cases and continue to be paid at the historic rate. There is less risk attached to new cases which will be paid under the tiered payment arrangements.

PS I didn't have the exact facts and figures at hand when writing this up (hence the XXXX peppered through the state aid finding). We can slot these in when we get to the draft report stage.

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