Response by the Joule Centre to the Statutory Consultation "2005/6 Review of the Renewables Obligation".

1) The Joule Centre for Energy Research was established in October 2005 by the North West Development Agency, as a partnership of North West universities, commercial organisations and other stakeholders associated with the energy industry. Its mission is to support the work of the North West Energy Council on both energy policy issues and economic development. The Joule Centre is hosted and operated by the University of Manchester. The vision of the Joule Centre is:

"To create an internationally-leading energy research centre in England's North West which will significantly increase the region's research capabilities in key areas of new sustainable energy technologies and energy systems"

2) This response to the RO Consultation was developed following a seminar held by the Joule Forum, which is a broad grouping of academics and other stakeholders in the Joule Centre.

3) **Q1**. Making the RO neutral to waste was considered to be broadly helpful. However it was noted that a perceived lack of clarity in the operation of the RO was inhibiting both Energy from Waste schemes and the development of relevant technology in the region.

The current RO allows for credits to be gained for Energy from Waste projects, only for specific technologies which are already widely available and technically proven such as anaerobic digestion, pyrolysis and gasification. In reality, the uptake of these projects is slow because the economics, even with ROCs are not good. The need is therefore for technical innovation in this area.

It would appear, from talking to both technology developers and potential project developers in the region, that the current RO is in effect acting as a barrier to the development of new technologies, since for any new technology it is not possible to say whether ROCs will be available and thus it is difficult to construct a sensible business plan to gain funding for research and development.

The need is for additional clarity in what is and is not to be encouraged, together with a straight forward route for technology developers to consult with DTI to gain a quick decision as to whether a new development would be eligible for ROCs. Technologies which need to be considered will obviously be diverse but would include autoclave treatment, partial gasification/partial combustion and partial pyrolysis/partial combustion techniques.

A second problem for EfW projects, which needs to be considered, is the classification of fuel such as chipped wood as waste or as fuel. If these fuel streams are classified as waste then another layer of bureaucracy and cost is

added to the project and this adds as a further barrier to the development of EfW projects, since the operator is now regarded as a waste handler and must gain the necessary licenses.

4) **Q6-Q10**. The RO has been established as a market-based mechanism with a self-limiting feature that, once the Obligation level has been reached, the value of the certificates would fall. Thus, it is not considered to be helpful to introduce additional caps on the output of particular technologies. The main objective of the RO was the “expansion of electricity generated from renewable sources” and intervening in this manner is unlikely to contribute to this goal. Thus, although it is recognized that a combination of high electricity kWh prices and high value of ROCs might provide significant returns to lower cost technologies, the introduction of limits on the RO, initially to landfill gas output, was likely to result in a reduction in confidence in the stability of the RO support mechanism. Many renewable energy projects have long (up to 3 years) project development phases and uncertainty in the operation of the RO mechanism is likely to reduce the number of projects taken through this expensive process. .

The scope for additional land-fill gas projects in the North West was considered to be modest but if a limit were to be imposed on eligibility for ROCs then one based on a fixed volume of output was likely to be give greater certainty to the generator. However this approach leads to the difficult question as to how to calculate this allowed output and how to assess the rating of the generator.

5) **Chapter 5**. Although a specific question was not asked, there was concern that not increasing the Obligation level beyond 2015/16 was not helpful for large, Round 2 offshore wind projects, some of which are planned off the North West coast. These large projects are likely to be necessary if the UK carbon reduction targets are to be achieved and, given that some are scheduled only to be constructed in 2010, not increasing the obligation beyond 2015/16 was disappointing.

6) **Chapter 6, Q11**. The impact of exempting CHP from the Obligation base was considered to be limited and although it is clearly desirable to stimulate uptake of CHP, it was considered that this proposal was unlikely to make a significant difference to CHP uptake in the present circumstances. It was considered that that a modification to the Obligation of this nature would not contribute to the confidence of those investors considering implementing renewable energy schemes, the support of which is the prime objective of the Obligation.

Prof N Jenkins FREng.
Director, Joule Centre for Energy Research.