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SISTech response to recent press coverage of Manomet 'Biomass Sustainability And Carbon Policy' study

There has been much press coverage of the recent report (produced by the Manomet Center for Conservation Sciences) on the use of forest biomass for energy generation in Massachusetts. This coverage included headlines such as *Green energy plant 'not carbon neutral for 40 years'*, in the Scotsman (23 June 2010).

The Manomet report's authors have since sought to clarify misinterpretations of their report, stating that "Many of the resulting press articles have oversimplified the results. Indeed, a key lesson of the study is that understanding the greenhouse gas (GHG) impacts and benefits of using wood for energy is more complex than most people have assumed, and that a lifecycle assessment is needed in order to assess these GHG costs and benefits." The report and Manomet's statement of clarification can be found online at www.manomet.org.

SISTech recently carried out a lifecycle carbon assessment of the biomass renewable energy plant being proposed by Forth Energy for Dundee, and found that the plant would save 89-91% of the carbon emissions caused by equivalent electricity generation using coal, even when the carbon associated with processing and shipping the fuel is taken into account. These results are based on Forth Energy's proposed plant parameters, fuel types and sources. Forth Energy intends that the majority of the fuel will be delivered to the plant by ship, with road transport of fuel limited to no more than 15%; and that the fuel will comprise mostly virgin wood chip or pellet, with between 10-30% anticipated to comprise other biomass fuels, such as purpose grown energy crops, agricultural residues and recovered biomass materials like wood, paper and cardboard. Forth Energy has made a commitment to ensure that all forest-derived fuels used at the proposed plant are certified by internationally accepted sustainability certification systems such as the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC). Another key factor affecting the carbon footprint of the plant is Forth Energy's plans to make use of the heat produced by the plant, as well as the electricity.

The Manomet report is one of very many reports on this topic, many of which have been published in peer-reviewed journals. Overall, there is a substantial body of evidence available to suggest that biofuels sourced from well-managed forests can provide a low carbon energy source in contrast with the use of fossil fuels. The SISTech report uses the methodology set out in the European Commission's *Report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling*, which reflects the substantive body of peer-reviewed and related literature.

The size of any short-term 'carbon deficit' associated with the use of biomass fuel (i.e. the carbon deficit that arises between CO₂ emissions from combustion of the first cropping and subsequent CO₂ re-capture from the re-growth of replacement crops) depends on the source of the biomass and the management of the biomass resource. Using hardwood timber with a re-growth period of 40 years will obviously lead to a bigger deficit than using other species which achieve maturity in a shorter timeframe. Even then, this could be further reduced by re-planting at an increased rate or at an earlier date. In comparison, with fossil fuels the carbon deficit is for all practical purposes permanent. The Manomet assessment considered only "existing low-grade forest resources in Massachusetts and surrounding counties", rather than the wider range of forest and other biomass fuels that would be used in the Dundee plant.

As Manomet have stated, it is an over-simplification to apply their results to proposed biomass plants the design, fuels and policies of which will differ widely from those considered in their report.

Yours sincerely,
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