

**BRIEFING NOTES FOR THE
MEETING WITH ALLAN WILSON MSP
DEPUTY MINISTER FOR ENTERPRISE & LIFELONG LEARNING**

**Tuesday 10th January 2006
The Scottish Parliament, Holyrood, Edinburgh**

Summary

The Scottish Executive has set ambitious targets for both the delivery of renewable energy and the diversion of biodegradable municipal waste from landfill. Advanced thermal treatment of waste can make an important contribution to both these targets simultaneously.

But for this to happen the Executive must take a lead in empowering local authorities to enter into contracts for the disposal of municipal waste outwith the PFI/PPP process. This would, at the same time, remove the discrimination against SMEs that currently prevails.

Renewable energy policy

- The Scottish Executive has set a target of 18% of electricity generated in 2010 to come from renewable sources, and 40% by 2020. An Executive news release dated 22nd July 2005 quotes Minister Nichol Stephen as saying that “Renewable energy projects already in operation, and so far consented to, should allow us to meet the 2010 target”.
- The Forum for Renewable Energy Development in Scotland (FREDS) believes that the 40% 2020 target equates to 6GW of electricity demand. To meet this target, 3.4GW of capacity are still required over and above current, and consented, capacity. The Executive accepts this.
- The Executive believes that, in the short term, there is a particular opportunity to encourage the development of biomass plants and to develop Scotland’s marine energy potential. The Executive also believes that many current proposals for onshore wind development are speculative and likely to drop out of this the system. The Minister is further quoted as saying that “We have made clear our aim to see Scotland’s renewable electricity generation targets being met through the development of a range of technologies and we will bring forward detailed proposals in order to achieve that aim”.
- Scotland currently produces about 7 million tonnes of waste. Even if 40% of this is recycled, this leaves 4.2 million tonnes to be disposed of. If this residual waste has an average calorific value of 12 MJ per tonne, it could generate 350MW of electricity – a tenth of the additional 3.4GW capacity required by 2020. This is the equivalent of 3.4 million tonnes of biomass or 1000 1MW wind turbines (working at 35% efficiency)

Waste management policy

- The Landfill Directive requires Scotland to reduce the amount of biodegradable municipal waste going to landfill from the current level of 1.7 million tonnes to 1.3 million tonnes by 2010 and to 0.6 million tonnes by 2020. In a debate in Parliament on 17th November 2005 Minister Ross Finnie accepted that, in order to meet these targets, the Executive faced “a challenge”.

- The Minister went on to say that the Executive’s aim was to put in place “major waste treatment infrastructure” to complement current recycling efforts. This would be achieved through local authorities working together in the award of large contracts thereby attracting bids from the waste management industry and ensuring economies of scale. This aim runs counter to the policy on SMEs (see below) and will not necessarily bring forward innovative solutions nor, due to the limited number of bidders, competitive solutions.
- SEPA’s *Guidelines for Thermal Treatment of Municipal Waste (August 2004)* state in Guideline 2 that “Thermal treatment of appropriate segregated waste, with efficient energy recovery (for example, combined heat recovery and power generation), may be an appropriate method for management of waste”. In supporting this statement SEPA declares its encouragement of energy recovery systems that are capable of recovering both heat and power. These systems could include the use of correctly scaled thermal treatment plants integrated into business and industrial parks where the energy recovered can be used in the immediate vicinity, or a district heating system.

Policy on Small and Medium Sized Enterprises (SMEs)

- The aim of Executive policy, as expressed in the Scottish Procurement Directorate’s *Buyers’ Guide to Working with Small and Medium Sized Enterprises (March 2004)* is to ensure that, wherever possible and consistent with the need to secure value for money, suitably qualified SMEs have the opportunity to compete for Scottish Executive business. This is to ensure that they are not unduly discriminated against in the procurement process.
- Procurement Staff are advised not to automatically consolidate contracts into the largest possible mass but to look for small/niche requirements that are more attractive to SMEs. Staff are also advised of the benefits of contracting with SMEs. These can be lower overheads, flexibility, innovation, ability to cater for niche markets, better service and increased competition.

Small scale energy from waste (EfW) using advanced thermal technology (ATT)

- Typically small scale ATT plants process up to 90,000 tonnes per annum, but can process as little as 10,000 tonnes per annum commercially if only heat is generated.
- ATT plants can process a wide range of wastes and are not therefore dependant on a single waste stream such as MSW. As product re-use and recycling increase over time the efficient operation of such plants is not therefore prejudiced by a reducing supply of residual waste – they merely look to other wastes to make up the balance.
- ATT is here and now. Robust, reliable technology that meets the strictest of environmental standards is available today. ATT plants are required to operate to higher air quality standards than biomass burning plants, for example.
- Small scale ATT plants can be sited close to the sources of waste which keeps the fuel haulage on major roads and the haul distance to a minimum. By implication these plants will also be close to a grid connection thereby avoiding costly and unsightly long distance transmission lines. Biomass may have to be hauled long distances over narrow roads and wind turbines (and their grid connections) suffer from public reaction over landscape impact.

- ATT is a qualifying technology for ROCs and normally some 65% of the power output is derived from biomass in the waste. Using waste as the source of biomass will reduce the production of methane from landfill and leave forests to continue to act as carbon sinks, habitats for wildlife and provide resources for industry.
- Small scale ATT plants can be sited close to users of heat. This is often not possible with large plants (whether of biomass or of waste). Planning permission is also more easily obtained for small plants as the environmental impacts are not nearly as great as for large combustion plants. As the number of windfarm proposals increase, it will become more difficult to consent them as the cumulative landscape impact mounts.

What's the problem?

- Private investors are ready and willing to invest in new ATT plants but need to see a secure long term contract for a proportion of the waste.
- This can be supplied by local authorities seeking to procure a sound route for residual biodegradable and non-recyclable MSW that would otherwise go to landfill. But local authorities are constrained by Executive policy that requires them to think big even when they do not want to. This means that the local authority has to follow the PFI/PPP procedures. Furthermore, though Councils are ready to enter into negotiations now they are constrained by the need to wait for their business cases to be submitted to the Scottish Executive in 2006 before implementation of the Area Waste Plan. These business cases are more likely to be based on opinions than on sound economic analysis.
- The high costs of entering the PFI/PPP process and the wide specification of services required exclude SME's and small scale ATT solutions. The lower overheads, flexibility, innovation, ability to cater for niche markets, better service and increased competition that these companies offer is therefore being lost.
- Large contractors that can afford the costs of PFI/PPP entry are invariably those that have landfill interests, propose the production of a refuse derived fuel (RDF) that costs energy to produce or offer large scale thermal treatment that cannot adapt to emerging waste strategy and has difficulty finding a market for heat.
- There are also difficulties in securing planning permission after preferred status has been conferred because the opportunity to engage with local communities before the submission of planning applications is constrained by the secret nature of PFI/PPP negotiations. This is bad planning practice and leads to public antagonism. Small scale ATT proposals can be discussed openly with the public and varied if necessary. This "bottom up" approach leads to greater public acceptance.
- Because renewable energy and waste management are directed from two different Executive departments, and by two different ministers, the opportunity for small scale energy from waste plants to contribute to both sets of policies is not being fully grasped.

What's the solution?

- The Executive must rid itself of the notion that large scale waste treatment infrastructure is the only way it can meet “the challenge” and acknowledge that small scale ATT can offer better local solutions to a local problem and still give value for money.
- At the same time the Executive must allow local authorities to enter contracts for small scale waste treatment plants that do not require them to go through the PPP procurement process. Prompt action by the Executive to empower Councils to proceed with negotiations for establishing EfW plants based on ATT would contribute quickly towards renewable energy output and meet the challenging target of waste diversion.
- The Executive should set up, without delay, an inter-departmental team to advise both ministers on how they can take advantage of the opportunities that small scale ATT present in meeting both their respective targets.