

Date/Dyddiad 21 December 2011
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Your Ref/Eich Cyf

My Ref/Cyf WM/OM/CSP/BD1/1/hmh/

Ms Abigail Phillips
Clerk to the Petitions Committee
National Assembly for Wales
Cardiff Bay
CF991NA

Dear Ms Phillips

Re: Providing Evidence to the National Assembly for Wales Petition Committee

I refer to your letter dated the 16 November 2011 concerning the petition urging the Welsh Government to review its policies in respect to residual waste partnerships and technologies.

Whilst obviously fully aware that the Vale of Glamorgan is one of the partnering authorities within the Prosiect Gwyrdd Procurement Partnership and may not be considered by the Committee to be truly impartial in responding to this specific petition's suggestions.

As the Council's Professional Waste Manager I welcome the opportunity to respond to the Petitions Committee on the questions that you have invited the Vale of Glamorgan Council to offer comments on within your letter dated the 16 November 2011.

These are, however, my own views and do not necessarily reflect the views of the Vale of Glamorgan Council and/or its more Senior Officers and Elected Members. They would also be those views I would express irrespective of any particular Welsh Residual Municipal Waste Procurement Partnership or commercial or industrial waste merchant Waste Treatment or Disposal Facility.

Having stated this, I would initially offer the following comment and observation in respect to the three questions you suggest I may wish to consider responding on:

Question 1

Given that there are many various methods and technologies within the waste management industrial which will effectively that and/or dispose of non-recycling wastes all of which have their own merits. The determination of 'best' is a difficult question to answer. This is particularly the case given the characteristics of waste its mercurial composition and complex constitution. Differing waste types could result in various methods being considered the possible best solution for disposal for that particular waste. Therefore to provide a worthwhile answer to this question the Committee must consider the exact nature of the non-recyclable waste to be disposed of together with economic cost, deliverability and effectiveness of the method.

Correspondence is welcomed in Welsh or English/Croesawir Gohebiaeth yn y Gymraeg neu yn Saesneg

John Maitland Evans, Chief Executive/Prif Weithredwr

If the Committee considers the established and proven municipal waste treatment and disposal options available there are a number that would provide best value depending on the amount of tonnage needing treatment and/or disposal, the waste competition, reliability and the costs of the treatment and/or disposal.

The following technologies are all accepted as appropriate and dependant on the above criteria and operational experience and performance, considered as viable options for the treatment and/or disposal of non-recyclable municipal wastes:

- Energy from Waste (moving Grade Plants/Fluidised Bed Technology/other Kilns);
- Advanced Thermal Treatment (Pyrolysis/Gasification/Plasma);
- Mechanic Heat Treatment (Autoclave);
- Mechanical Biological Treatment (MBT);
- Biological Treatment. (Biogas)

NB: Although it needs to be noted all these technologies will also treat and/or dispose of recyclable wastes and in many cases are also reliant on other supporting waste management treatment/disposal methods such thermal treatment or landfill.

Therefore considering the multitude of all technical, environment and financial considerations that need to be considered by those procuring any of the above methods together with the considerable work that they need to put into the evaluation and selection process in determining a best option. It is likely that the procurement process itself will ultimately determine the best method of disposing of non-recyclable municipal waste for any specific procurement. This in itself could result in a similar, but not exact, procurement by a differing single or collaborative bodies ultimately having different or the same solution as their 'best' method.

I would therefore suggest that it is matter of '*horse for courses*' and it would be a dangerous concept to believe, almost single minded, that there is a single 'best' method in all circumstances in respect to municipal waste treatment and /or disposal. It is clearly given that no solution is always the appropriate one and that for any given procurement that which the procurement's set criteria the 'Market' itself will ultimately provide the best method for that procurement.

I would express some concern to the Committee given the long delivery times for any new waste management infrastructure and the potential nightmare scenario for any local authority having carried out a possible 5 year procurement process to find that Welsh Government is now considering changing its policies to adversely impact on their market solution. I would therefore urge the National Assembly for Wales to encourage the Welsh Government to demonstrate its already stated policy position supporting thermal treatment use for up to 30 per cent residual municipal waste and not review its choice of technology for this element of municipal waste and procurement.

To do otherwise, would critically in my opinion endanger the successful completion of existing waste treatment and/or disposal procurements and leave Wales critically exposed to failing to meet its EC Landfill Directive Targets and Welsh local authorities unable to meet Welsh Government Landfill Allowance Targets through little fault of their own.

Question 2

I would consider '*incineration*' a term and technology of the past and its use in describing 'modern energy from waste thermal technologies' is now a misnomer for this technology. While there are still many environment, health, local economy issues that are associated with them, as with any waste management technology. Energy from waste plants of today are far more technically advanced and stringently regulated than the early 'mass burn' plant of the 1970 and 80's. In truth, it is now inappropriate and misleading to refer or consider them as same technology as these old and out dated plants.

As with any waste or non waste industrial manufacturing process there are environment, health, local economy issues advantages and disadvantage, whilst a foundry or major warehouse may also have some of the same environmental and transport impacts as an energy from waste plants they do not appear to be such an emotive and contradictory subject for Environmental Groups. Perhaps the Committee should consider the wider advantages and disadvantages of any large scale industrial or commercial premises to help them draw comparison.

All well designed well operated and properly regulated waste treatment facilities are likely to have little or no impacts over and above that of other industrial undertakings on the overall communities and the employees working within them. With extremely strict EU and UK legislation ensuring environmental and health effects are kept to a minimum waste plants are far more stringently regulated than some other types of industrial plants with furnaces or boilers as part of the manufacturing process.

Energy from waste or any other combustion technologies where it must comply with the Waste Incinerator Directive will only be operated where the gases produced and released into the atmosphere are thoroughly cleaned and constantly monitored. This level of regulation far exceeds other combustion processes such as coal fired power stations or other industrial combustion processes.

Energy from waste plants do have a number of 'pro and cons'. They can generate enough electricity to supply households and businesses with electricity and heat. Energy from waste plants also provides an option to Industry, commerce and communities that would otherwise have buy power from conventional power plants. Energy from waste plants can provide a valuable socio economic presence, providing high pay employment, financial income, as well as generating clean, renewable energy.

Other advantages include:

- the footprint of energy from waste requires a minimum of land compared to the dimensions of waste disposal sites such as landfill;
- the weight of the waste is reduced to 25% and its volume is reduced to almost 10% of the initial value;
- the flue gas, which is containing heavy metals and other harmful substances after the incineration process, is cleaned and emitted through the stack in environmentally friendly form the existing practice were un-recyclable waste is deposited in untreated form, underground water can be polluted and green house gases are developing which can harm the environment;
- energy from waste plants can be located close to residential areas, which are the centres of the production of waste, and this helps to reduce the volume of traffic, pollution, noise and of course the costs for the waste transportation;

- bottom ash from energy from waste can be used for environmental construction saving the use of primary aggregates lowering construction costs and reducing environmental impacts of aggregate generation;
- the incineration of waste provides two possibilities of using the produced energy:
 - o district heating can be produced with the help of hot water.
 - o electricity can be generated by means of steam turbines.

By using district heating single heating systems in nearby new development or retrofitting to existing houses existing power generation sources can be replaced helping to reduce the pollution of the environment and greenhouse gas emissions from existing coal fired power stations.

- the produced residues, ash and slag as well as the developed flue gases, are odour-free compared to the partly offensive smells caused by dumps;
- as the raw material needed for energy from waste plants within this scenario is municipal waste, is said to be kind of renewable it helps to reduce the use of fossil fuels or non – renewable resources.

Disadvantages include:

- the air pollution controls required in energy from waste plants are extremely expensive. Very often up to one half of the costs of a plant are due to air pollution control facilities. As environmental laws can change there is possible future required updates in the air pollution controls this could lead to much higher costs in the future;
- energy, produced by energy from waste plants is not likely to be practical for small communities. Therefore such plants have to be situated in areas where power connection to the National Grid or industrial power and/heat or district heating network can easily be connected to;
- the extremely high technical standards of the plants require skilled workers, which leads to the fact that rather high wages have to be paid. (*although this could also be considered an advantage in terms of green jobs and local community economic investment*)
- the residues from the flue gas cleaning can contaminate the environment if they aren't handled appropriately and therefore they must be disposed of in controlled and well operated landfill to prevent groundwater- and surface pollution;
- the acceptance of waste treatment from energy from waste plants is very poor and therefore people fight hard to avoid the construction of such plants in their neighbourhood;
- people's efforts to avoid waste production can be minimised when they know that their waste is burnt in an incineration plant.

In terms of Wales' security of energy supply, especially for industry, I believe Welsh Government should exploit the energy value of Welsh generated municipal waste before disposal. Generating both power and heat from waste is typically up to 2-3 times as efficient (over 80%) as generating only electricity (approximately 25%).

Combined Heat and Power (CHP) schemes using municipal waste will also offer more stringent emissions control at a single centralised plant than is possible at heat / power

sources for individual organisations or buildings. CHP also avoids the CO2 omissions from local boilers or coal fired power stations presently providing industry needs presently in Wales.

However, to make this resource use truly sustainable Welsh Government should provide support for the development of district heating via the planning system for new developments and substantial community regenerations by giving suitable incentives to provide district heating

While I accept that public perception and understanding of energy recovery from waste is poor. I feel that strong Welsh Government policy and leadership is needed to support it further and more publicly than it already does within its 'Towards Zero Waste' and Waste Sector Plans. Indeed, future waste strategies alongside Welsh energy reviews would be an ideal opportunity for Welsh Government to do so. As suggested above, Welsh Government policy and support for district heating may also need to be clarified and published.

Question 3

I would agree with Welsh Government that there are considerable advantages both for the local authorities and the Welsh Tax payers in local authorities working in collaboration to provide 'best value' solutions for future residual municipal waste treatment and/or disposal solutions. It is accepted that economies of scale and partnership working in procurement have resulted in major cost saving to those Tax payers. Money that can then be used in making efficiency savings or providing the day to day environmental services such as street cleansing, recycling and composting to those tax payers.

There is no direct requirement from the Welsh Government that forces local authorities to form collaborative partnerships in respect to residual or any other municipal waste and those local authorities presently carrying out residual procurement have done so in the best interests of their Council Taxpayers. Some partnerships were clearly formed by partner authorities to achieve 'best value' for their Council taxpayers. Certainly the Prosiect Gwyrdd Partnership, initially instigated informally in 2006/7 was prior to the Welsh Government's present Regional Procurement Programmes and done without direct prescription from Welsh Government or their subsequent RCAF grant support to the Prosiect Gwyrdd procurement process.

For this partnership at least, the economies of scale and the efficiency savings in carrying out a joint procurement were the driving factors and not Welsh Government policies and they would have formed this partnership irrespective of any Government direction.

Given that many Welsh local authorities are current transporting their residual waste significant distances to deposit it in the an ever decreasing number of landfill sites in Wales, it is apparent that many have not been able to find the most appropriate local solution to dispose of their existing non recyclable residual waste let alone their future non recyclable waste. Would the Committee suggest that they must irrespective of the local circumstances?

There also appears to be little, or no appetite, for the waste management industry to provide such local solutions without the guarantee of long term, high tonnage local authority contacts and given the cost to the waste industry to tender for numerous

smaller contracts it is unlikely that they would not want to seek to provide local solutions for all communities which in itself would leave many local authority areas in danger of not being able to obtain a sustainable or cost effective local solution.

There must also be concerns that the Land Use Planning Consent System will also prove problematic should there be any change by Welsh Government to a more 'localised' policy for waste treatment and/or disposal facilities. Given that the Welsh Government Technical Advice Note (Wales) 21 TAN 21 Waste promotes a regional approach to land use waste planning when considering such facilities and regional co-ordination and I would draw the Committee attention to paragraph 2.2 and 2.3 of TAN 21 which state:

2.2 To satisfy Article 5 of the Waste Framework Directive and to implement the Waste Strategy, it is necessary to consider the role of regional arrangements within Wales.

2.3 Welsh local authorities in conjunction with the National Assembly for Wales are expected to establish joint arrangements to prepare plans.

2.4 Joint arrangements will help local authorities to meet sustainable waste management commitments.

I would propose that while this material advice specifically relates to land use issues. It is still valid for joint local authority working, not only in land use terms, but also in overall sustainable waste management, best value and procurement of municipal residual waste facilities.

It would also appear to me that with many Welsh local authorities having already spent considerable sums of public money (both the local authorities and Welsh Government's) carrying out long and complex procurement exercises over the last few years that any change in Welsh Government policy at a late stage could jeopardise or leave these existing procurements under threat of challenge resulting in either partnering authorities being unable to meet their Landfill Allowances and subject to fines or intervention as failing Councils through no fault of their own, or possibly being investigated by the Audit Office Wales for mismanagement of public money.

Finally whilst not offered in direct response to the question asked in your letter, I would also make the following observations which hopefully will help the Committee in considering the petition received by them:

Whilst I would agree that it allow a more sustainable use of municipal recycling waste, that no serious consideration of any legislative ban should be considered at this time or until there is sufficient reprocessing capacity to recycling all the recyclable elements of the household and commercial waste generated in Wales. I believe that it would be foolhardy to do so as without the required infrastructure in place to ensure that all recyclable municipal waste can be recycled then the only viable disposal option would be deposited in landfill without these reprocessing facilities in place.

Before any consideration of such important and far reaching a 'Measure' careful consideration needs to be given as to whether such a proposal is enforceable. I would have doubt should such legislation be made it couldn't be policed and as such would be ineffective and worthless legislation.

I am slightly confused by the suggestion within the petition that the Wales waste survey (without clarification to any specific survey) only give a 2 option on waste disposal was flawed.

This is difficult for me to understand and would appear to be inaccurate considering the Regional Waste Plan Consultation Document; First Review '*Our Waste Our Challenge*' which consulted extensively between the 15 October 2007 to the 24 December 2007 included many possible combinations of different types of waste management facilities.

I believe that 4 main options were developed, with 19 sub-options for the management of residual waste in each of the three Welsh Regions.

These included the following:

- Option 1 – A Landfill-led strategy for residual waste;
- Option 2 – An Energy from Waste- Led strategy for residual waste;
- Option 3 - A MBT/BMT –Led strategy for residual waste;
- Option 4 – An Autoclave – Led strategy for residual waste.

Consultation on the above was widespread throughout Wales, where all stakeholders including the general public were asked to comment on the rationale for using these Technology Options and whether additional factors should be used in assessing the technology option.

I trust that these comments prove helpful to the Petitions Committee and would be happy to provide any further details that you feel necessary.

Yours sincerely

C S Parish
Operational Manager Waste Management and Cleansing
Rheolwr Gwaith Rheoli Gwastraff a Glanhau