



Department for Environment, Food and Rural Affairs
Review of Waste Policies
Area 6C, Ergon House
Horseferry Road
London SW1P 2AL
Waste.Review@defra.gsi.gov.uk

7th October 2010

Dear Sir,

Defra Review of Waste Policies

Veolia Environmental Services is the UK's most substantial waste management company, delivering environmental services to more than 20 million people. Conscious of our social and environmental responsibilities, we promote the use of sustainable waste treatment methods to recover valuable raw materials to our 73,000 commercial and industrial customers, and 100 local authority partners.

Globally Veolia Environmental Services employs over 80,000 people, and serves more than 45 million people across 35 countries. It is the only worldwide provider of a full range of services for handling solid and liquid waste, providing waste management and logistics services, as well as materials recovery and recycling. Veolia Environmental Services generated revenue of €9.2 billion in 2009.

Veolia Environmental Services supports the Government's review of Waste Policies and in submitting this response have put forward for your consideration some proposals on the way the Waste Policy could be formulated for the future. The UK (including England) is facing a number of issues and we believe that Government should take this opportunity to align Waste Policy to address these. These issues concerned include:

- Reducing the national deficit;
- Energy shortage
- Materials scarcity
- Climate change

We believe that Waste Policy has a role to play in addressing all of these, but must include the following three fundamental requirements:

- (a) clarity without ambiguity and unintended consequences
- (b) long term certainty - because investment lead times are lengthy
- (c) must be enforceable and enforced

In responding to the specific questions, we have chosen to give generic responses to each of the groups of questions, rather than answer each one specifically. In considering our responses, however, we would refer you to the response submitted by the Environmental Services Association (ESA) - the waste management industry's trade association - as we fully support their response, and our intent here is to supplement and broaden from a Veolia perspective the points they make.

We have based our approach on the simple premise that waste can be defined as materials in the wrong place and/or in the wrong form. Hence, it should be treated as a resource and either reused, used as a source of secondary raw materials or used as a source of energy. We recognise that the terms "Zero Waste" and "Zero Waste to Landfill" are popular phrases and have clear imagery, but fear that they may be misleading. We would prefer Waste Policy

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

to be based on a sound, achievable principles that are clearly communicated to, and understood by the public at large.

Veolia Environmental Services welcomes the opportunity to comment on the **Defra Review of Waste Policies**, and our views are contained in the attached eight page response. We hope they are of value to the Government in formulating its new Waste Policy.

If you would like to discuss any of these matters further with a Veolia Environmental Services representative, please do not hesitate to contact me.

Yours faithfully,

Keith Riley
Managing Director,
Business Development, Technology

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

1. General Approach to Waste

Waste Policy has generally been considered in isolation of policies on other matters, and is often viewed as an end in itself. Although it has acknowledged issues such as climate change and renewable energy, these have never truly been integrated into Waste Policy, nor has the significance of Waste Policy been stated within these other policies. In times of economic austerity, with major issues on matters such as energy, trade balance, and employment on the horizon, it is suggested that Waste Policy has an important part to play, and recognition of this needs to be better understood than is the case at present.

Furthermore, Waste Policy must have:

- (a) clarity without ambiguity and unintended consequences
- (b) long term certainty - because investment lead times are lengthy
- (c) must be enforceable and enforced

Government should ensure that future Waste Policies address these fundamental points.

Waste is no more than material in the wrong place, and sometimes in the wrong form. It is therefore a "Resource", and whilst this terminology has been applied widely, there has been no consistent approach to it, and Resource Management means little to the public at large.

Accepting waste as a resource means that it can either be reused as it is, used as a source of material to perform a function (such as the manufacture of products, whether this be in the collected form or after processing), or as a source of energy (e.g. fuel). In short, waste can be an item, a material/ chemical, or a fuel. It is suggested that the Waste Policy for England be based on these basic facts. We appreciate that "**Zero Waste**" is a useful catchphrase that can alert the public towards an ideal and a good behaviour, but it can be misinterpreted and is difficult to implement. It is more important to have a clearly defined approach to waste management expressed through the Waste Policy that delivers the outcome required but is consistent with what can actually be achieved. Waste Policies in the past have tended to follow piecemeal initiatives and catchphrases, which at times can be counter productive; negating many of the positive gains that have undoubtedly been made. In particular Waste Policy should:

- Give unambiguous guidance and support to the Regulator in carrying out its enforcement role, especially in the areas of hazardous waste and waste crime;
- Move away from weight based recycling targets that do not provide any particular environmental benefits;
- Make clear the necessity to adopt energy recovery from waste, and giving it a strategic role in energy supply;
- Clearly discourage bad practices such as the application of compost-like output from mixed wastes to land, and the spreading of shredded organic wastes onto land that have not been properly treated.

2. Response to specific questions posed in the Call for Evidence

In this section we have provided our responses to the questions posed within the consultation document, where they have not been covered in the preceding sections.

2.3 General

- ***What should the nation's ambition of waste management be? What do we need to do to achieve a 'zero waste economy'?***
- ***How could the contribution waste management in England makes to the economy and our environmental and energy goals be maximised?***
- ***How can Government make the best use of the skills and knowledge of the private sector, civil society and local communities in delivering a zero waste economy?***
- ***Do local authorities have the right responsibilities for waste services? Are there further services that could be devolved to local authorities or directly to communities?***

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

- **How can illegal waste activity be minimised, including reducing levels of fly-tipping? Are sanctions for breaches of waste regulation fair and proportionate?**
- **How can we balance regulation to ensure that we protect health and the environment without unnecessarily burdening business and local authorities? What are the opportunities to reduce or remove the burdens of regulations?**

Waste is an inevitable result of human activity. “Zero Waste” is a catchphrase that it has to be admitted conveys a very clear message to people, but it must be understood that taken literally it is not a practical proposition. It must not, therefore, be allowed to mislead, nor raise false expectations. The best way of getting closer to “Zero Waste to Landfill” is by a combination of recycling and energy from waste. Zero Waste should not be allowed to stop a development that moves towards the Zero Waste ideal simply because it does not actually achieve Zero Waste.

There has been no successful economic system that has not relied on production and consumption to maintain it. Thus it is important to manufacture goods, sell them and consume them. Waste can certainly be reduced, but it is not possible to stop it unless we stop manufacture and consumption. Hence the Government must be careful not to expend too many resources on its waste reduction strategy, beyond general communication and promotion of materials and energy recovery. Instead, Waste Policy should continue to strive to achieve a shift in the productive economy, whereby much greater use is made of recovered materials and chemicals.

Climate change is a major issue. The primary purpose of waste management is the protection of human health, and the avoidance of damage to the environment. Due to this association with the environment, there has become a linkage in peoples' minds, between waste management and climate change. Without doubt Waste Policy should require waste management to be carried out in a way that minimises climate change impacts, but this should also apply to many aspects of society, not just Waste Policy.

The major contributor to climate change is the way we produce and use our energy (i.e. deriving it from fossil fuels), and then using it inefficiently. Energy is used primarily to manufacture products, to transport those products and people around, or to keep us warm. There is therefore much to be gained by producing energy from non-fossil carbon sources, and using it as efficiently as possible. However, in the UK we have another issue to consider with energy other than climate change, which is its availability (or rather lack of it in the future); this is compounded by energy security issues.

There is also a pending issue with the availability of certain materials, including rare earth metals, silver, arsenic, zinc, copper, and lithium to name just a few. Although the UK manufacturing base is now relatively speaking quite low, compared with countries such as China and India, this scarcity of raw materials is becoming a global issue. The UK must decide what action to take, so that is not disadvantaged as the cost of imports rise, and faced in the future with the problem of not being able to manufacture indigenously, due to lack of raw material availability. Effective collection and recovery of waste, especially Waste Electrical & Electronic Equipment (WEEE) should be seen as a vital step in addressing this issue.

There is a misconception over the way materials for recovery should be captured and collected. Modern technology is able to segregate mixtures of materials into segregated material mono-streams, with a high level of purity. The notion that high purity recyclates can only be achieved by source separation is now out of date. The recent trends toward collection schemes that require multiple bins (i.e. more than two) is in most cases unnecessary, expensive and ignore the impact on street clutter and social wellbeing. It is well recognised that street cleanliness has a positive effect on anti-social behaviour and crime, but is itself a perception of the beholder. Cluttering streets with bins, because residents cannot accommodate them within their houses, helps increase the perception of untidy streets, and has the unintended effect of fostering the very behaviour that society seeks to discourage. Furthermore, with the requirement to recover materials, effectiveness of capture is a more important feature than the quality of the collected stream. Consequently it is more important to make collection systems as simple, and easy to use as possible. Co-mingled collections make it easy for the waste producer to participate, thereby helping to maximise material capture. They also reduce bin clutter, reduce complexity in the design of collection vehicle,

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

and reduce costs. It is accepted that further capital investment in materials recovery (i.e. MRF's) is required.

A well-constructed Waste Policy will be able to assist in addressing all of these potential crisis areas, and we set out our proposals for a Waste Policy as follows:

1. Waste Policy should be based on the following principles:
 - a. The UK has a deficit in its economy that must be closed within a period defined by the Chancellor of the Exchequer. Consequently economic costs must be a major feature when considering what waste management practices are implemented from now on.
 - b. The UK has an energy deficiency problem which energy from waste can provide a solution to. Energy from waste should form an inherent part of the UK's generation base load.
 - c. Energy production from fossil fuels must be replaced by non-fossil sources unless carbon storage and capture becomes a commercial reality. Additional nuclear power will address the low-carbon issue, but this is some years off yet. With wind and solar being intermittent generators, energy from waste can provide an important contribution to the country's renewable energy mix.
 - d. Certain materials are scarce and must be preserved, materials capture and recovery (especially of WEEE) can make a significant contribution in addressing this issue.
 - e. Waste Policy should also minimise climate change impacts, and the joint contribution made by materials recycling and energy recovery in achieving this aim should be clearly communicated.
2. Waste management practices should be reviewed and clear guidance given to enable the Environment Agency to regulate against bad practice, which represents a risk to the environment (e.g. spreading Compost-like Outputs (CLO) on land).
3. Waste management must continue to protect human health and avoid damage to the environment. It must therefore continue to be closely regulated, and the regulations rigorously enforced. Despite H M Treasury's reluctance to hypothecate tax, a portion of revenues from landfill tax should be dedicated to preventing and fighting waste crime.
4. If waste is to be used either as an item, a material/ chemical, or a fuel, Waste Policy should lay down the map for this to happen. In this respect the "*waste hierarchy*" provides a good general guide to the preferred system by which waste should be treated, but by itself it is not completely adequate. This is because the carbon footprint emitted by treating a waste in a particular way must be taken into consideration. Carbon foot printing (or life cycle assessment) is complex task to perform, and few people have any concept as to what a tonne of CO₂ actually is. Conversely the concept of energy is one that is easily understood by most people (e.g. a kilowatt with its image of a one bar electric fire), and could be used as a good substitute for CO₂. Establishing a protocol for assessing embodied energy will be relatively easy, and will give a tool against which policies can be assessed. Using this criterion something is not worth repairing for re-use if it consumes more energy to do so than recycling its material content, or which can be yielded by extracting its energy content. Similarly, materials should not be recycled if it is more energy efficient to recover their energy.
5. The exception to the above is where the materials to be recovered are recognised as being scarce. In this case, a policy judgement is required to determine the extent to which recovery of the material is worth pursuing. Free market economics are able to determine this, but fiscal intervention may be required to target the scarce materials (in much the same way that landfill tax disincentivises landfilling).
6. With the exception of targeted scarce materials, materials that cannot be collected and recovered effectively should have their embodied energy recovered. The means by which it is recovered (i.e. the technology used) depends on the nature of the material concerned. What technology is used is an expert decision, and should be left

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

to the industry to decide. Therefore Government Waste Policy should not impose or even encourage specific technologies. Instead, the policy should drive higher level goals such as energy efficiency, and leave it to the market to decide how best to achieve these goals.

As things stand, energy scarcity should be a prime consideration of Government policy, and the Waste Policy should contribute to this; by making an unambiguous statement on the role energy from waste must play in addressing this problem. Fiscal measures should be set, to encourage energy recovery in every instant when material/ chemical recovery cannot be achieved, within the criteria set above. Subsidies on energy generation should similarly be set to encourage efficient production of non- and low-carbon fuels (which is currently not the case), based on technology criteria that can give precedent to low energy efficient methods, at the expense of those of higher efficiency. In time, the strategy suggested in this response will have the consequence of reducing landfill disposal to the 3% or 4% of total waste reported to be the case in Germany and the Netherlands.

7. It will be important to effect a change in the economy that utilises recovered materials/ chemicals, so long as it is energy efficient to do so (unless the material is scarce in which case energy efficiency should not necessarily be taken as the prime criterion). Targets given to local authorities need to be rationalised to encourage the recovery of materials that provide a net energy gain in their return to the productive economy, rather than the inconsistencies that exists where, for example, metals and aggregate that are very efficiently captured from incinerator ash, is not permitted. Serious consideration needs to be given to using the carbon footprint or energy footprint as a metric in determining what to recycle rather than weight base criteria. Academic studies show that energy footprinting can be easily applied and is better understood than carbon footprinting.
8. The Waste Policy must also be clear on the treatment of hazardous waste. To date UK Waste Policy has been ambivalent in this area, and has been tolerant of practices such as mixing and dilution. This is no longer the case in law and the country has moved forward a long way in the last 10 years, but exemptions are still being allowed by the Regulator. Firmer leadership is required by Government to give the Regulator the confidence to enforce effectively.

The potential contribution of waste management has been underestimated in economic regeneration policy. The proper management of waste has a number of features that make it an excellent activity for encouraging economic growth:

- Collection and some treatment activities are relatively “low entry” and can be undertaken by a low skill base without large capital investment;
- Some treatment activities can be complex and provide opportunity for intellectual property to be developed and exploited, even on an international basis;
- It is a sector that attracts inward investment;
- The requirement to exploit recovered materials is labour intensive, and can lead demand for employment;
- Both materials and energy recovery from waste, and their exploitation are rapidly developing sectors. They are fertile ground for innovation and technology development, and thereby a growth area for new businesses.

A major barrier to the implementation of waste management as an economic regenerator is public attitude towards it. To date there has been a lack of political leadership within Government, which has failed to support the waste management sector, and give it its rightful place in society. The industry has had to fight to get recognition for energy recovery, and there is still a general reluctance within the population to accept the development of waste processing facilities of any sort. This has lead to an undervaluation by the country at large of the role that waste management has to play in the provision of energy. This has exhibited itself through the planning system, and local councillors find it difficult to give support to such developments for fear that they will not be returned at the next election; despite there being little or no evidence that this actually proves to be the case.

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

The contribution of waste management to the economy and the environment can be maximised by adopting the following:

- a. Government must recognise that waste management is a strategic industry, and in this respect is not a partisan issue. It needs to be developed into a utility that is seen as a fundamental requirement of society, and one that helps address some of the major issues facing civilisation;
- b. Government must make its attitude to waste management clear to the public at large, and communicate where the waste industry sits in terms of its strategic importance to the country, along with the role it plays in addressing energy security, material scarcity, climate change and economic regeneration;
- c. Government must set and enforce clear policy to local authorities, requiring them to include waste management planning properly within their planning frameworks, and then placing the responsibility for its implementation at their feet. The alternative to this is to centralise waste management planning as a strategic issue within the Secretary of State's office;
- d. Government must recognise that optimal waste management follows demography, and not local political boundaries. It is also not a matter that should be devolved, as is currently the case with Scotland and Wales. There is a strong possibility that we are going to have different policies in England, to those in each of the devolved administrations. This could result in waste smuggling across the administrative borders, where the different policies result in an economic incentive to do so. Government should ensure this does not happen.
- e. Expanding on point d) above; with the exception of the PFI procurements currently underway from here on in, the largest changes to occur in waste management will be in the private sector (commercial and industrial waste), and not with municipal waste, as has been the case in the past. Most individual local authorities are not in a position to determine optimal waste planning policies, as C&I waste can travel freely across political boundaries. Confining facilities for recovery, treatment and disposal within a political boundary results in facilities being built in sub-optimal locations or (as is often the case) not being built at all. Government must recognise that waste management is an issue that spans local government boundaries, and put in place a planning process that recognises this, as it will need to do with highways, railways and other major national infrastructure.

The skills agenda should be demand led specified by the requirements of waste businesses, the industry at large and the civil society where it is involved in waste activities. Government should not be involved in "picking winners" and specifying skills provision based on any particular philosophy.

It is said that, waste management is one of the two services that council taxpayers are aware that local authorities provide. In consequence collection in particular has been something that waste collection authorities have jealously guarded, even when they have externalised the actual activity to a contractor. This has resulted in a plethora of different collection systems, which differ from authority to authority, and are often totally inconsistent with the treatment and disposal systems set up by the Waste Disposal Authority.

2.4 Waste Prevention

- ***What roles should (i) national and local government; (ii) businesses; (iii) voluntary organisations; and (iv) individuals take in order to prevent waste from arising, and to reduce the hazardousness or environmental impact of waste?***
- ***What can be done to encourage businesses to design and manufacture products which produce less waste – such as those which last longer, can be upgraded and/ or repaired, and don't have hazardous components? How might Responsibility Deals contribute to this?***
- ***Which waste streams or materials should be a priority for waste prevention?***
- ***How should waste prevention be measured?***

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

Probably the most effective means of encouraging waste prevention is through economic cost and the market itself. Waste costs money and few organisations will incur costs unnecessarily. The exception to this is the consumer, primarily because public waste management services are relatively cheap. Most consumers have no idea how much their waste disposal costs them, and consequently have no incentive to reduce the amount of waste they incur. There is an argument for increasing the cost of waste management to the consumer, and communicating clearly the cost being incurred. This increase in cost can then be offset for those who recycle through incentive schemes.

Having said that, most householders only dispose of the excess they are presented with, which is mostly packaging, and this brings in a very complex subject. Again, companies in general will only incur packaging costs, up to the point where it equates with the cost avoided through damage or wastage of the product being protected. Packaging has been significantly reduced over recent years, and can probably be said today to act efficiently to prevent what would otherwise be a much greater wastage of goods. The exception to this is vanity packaging, which is designed primarily to market a product. Government could consider penalising such packaging. However, in doing so it must also consider the negative economic impact it could have in reducing sales; especially if other countries do not reduce their packaging, and thereby gain a competitive advantage over the equivalent product produced in the UK. It is our opinion that Government intervention on waste prevention will be costly, and largely ineffective. It would be better value for money for Government to invest in the recovery and recycling of waste materials, and making these processes more efficient and effective.

Civil Society and local communities can play a major role in the implementation of the Waste Policy described above. They have the advantage over industry of being able to reach into society at a level not achievable by commercial companies. They are also motivated in different ways to business, and are often less driven by profit. Civil Society and local communities are therefore able to supplement the activities performed by business, and to carry out tasks that are not viable for business to perform. It is our opinion that Civil Society and local communities can contribute in the following ways:

- Training and skills development;
- Community education and information provision;
- Waste avoidance programmes, particularly where householder behaviour is important in optimising the way waste is presented to the collector;
- Collection and recovery of specific waste streams that are not economically viable for industry collectors to pick up, particularly for re-use, but also recycling, (e.g. furniture);
- Advice to industry on the human interfacing and operation of collection schemes etc to facilitate optimal performance.

2.5 Preparing for Reuse

- **What more do you think Government, businesses and civil society could do to increase activities that prepare waste for reuse?**
- **Which waste streams or products are priorities for reuse?**
- **What are the existing barriers to preparing more waste for reuse from both the household waste stream and the “Commercial and Industrial” and “Construction and Demolition” waste streams?**
- **Who is best placed to deliver an increase in reuse? How could civil society take a role?**

The major barrier to reuse lies in product liability and the responsibility an organisation takes on if they sell an unsafe product. As society becomes more litigious, reuse at a commercial level will become more difficult. Civil Society has a huge role to play in reuse, because it can intercept certain surplus goods, and redirect them to a second user without being governed by the legal and commercial restraints, experienced by commerce and industry. This will generally apply to waste streams such as furniture, tools and some appliances, but care must be taken to ensure that fire safety and electrical safety is maintained. WRAP has made a substantial intervention on construction and demolition waste streams, and could lead the way in the general area of reuse in the future. We believe that the forthcoming increases in landfill tax will continue the trend towards recovering such wastes, and that further intervention is unnecessary.

2.6 Recycling

- **What should the role and nature of local authority waste management collection and disposal services be?**
- **How can individuals, businesses and communities best be motivated to recycle more?**
- **How does the choice, including frequency, of collection service impact on the quantity and quality of waste fit for recycling?**
- **Should greater emphasis be placed on using recyclable/recycled materials in manufacturing and production and, if so, how should this be achieved?**

This subject has been largely dealt with in the response to section 2.3 General, but we would like to develop the point made in paragraph 6 of that response. The need for effective material capture (rather than over emphasising segregation at source), should become a more important feature of the Waste Policy than has been the case in the past. The key to maximising material capture will be by encouraging the design of products to be easily dismantled for recovery/ reuse, and by constructing them from a less varied range of materials than is currently the case. Government should also communicate more extensively the potential issue that is arising with scarcity of materials, and encourage recovery efficient design. Material scarcity has been discussed in the House of Commons, but little has been communicated to the public at large. In doing so it will then enable the Government to set the Waste Policy within a context that everyone understands.

A further point is that the UK has actually understated its recycling achievement by limiting the methods of recycling that can be counted within the Local Authority performance indicators. For example, materials (such as iron, aluminium, glass, etc.) are extracted from the ash of energy recovery plants, but these tonnages, nor that of the ash itself (which is secondary aggregate) can be counted within these figures. There is no logic for this as the carbon, energy and material benefits are no different to recyclables collected and recovered by other means. Anomalies such as these should be corrected in any future Waste Policy.

2.7 Energy Recovery

- **What are the barriers to delivering an increase in EFW capacity, including a huge increase in generation from anaerobic digestion? How might these be addressed?**
- **What role should Government industry and voluntary groups play in communicating the benefits of EFW to local communities?**
- **How can Government best support local government in the development of waste management plans that include EFW facilities?**

The detailed response of Veolia ES (UK) Plc to Defra Review of Waste Policies

- ***What steps can be taken to encourage community ownership of EFW facilities?***

This subject has also been addressed in our proposals above. As with materials scarcity, Government to date has been very reluctant to admit the potential energy gap being faced by the UK, and the subject was really only raised directly by Ofgem in its February 2010 statement. Much of the reluctance to accept energy from waste (no matter what technology is used) has come from a total lack of understanding by the community, local government and central government of where waste management lies in respect to energy policy. Strong political leadership is required that places energy from waste in context, and supports its delivery on the ground. Government should not be technology specific because this drives inefficiencies, and can waste resources and money. For example, the great emphasis which the Government has placed on Anaerobic Digestion (AD) is we believe misplaced because:

- a) It can only be used to process a fraction of the total waste stream;
- b) It encourages a technology that appears to be simple, but is actually quite complex when processing food waste.

AD is a good technology for farm-based animal slurries or waste water (sewage), but collecting food is expensive, and can be inefficient when the waste stream is highly dispersed.

Furthermore, current Government policy is also inconsistent in that the feed in tariff for AD is underpriced (when the technology risk is considered) compared with, for example, the ROC award on gasification, which is relatively overpriced and will support relatively inefficient energy recovery. We recommend strongly that Government steps back from specifying technologies, and leave their selection and development to the market.

2.8 Disposal

- ***How best to further reduce the amount of waste going to landfill?***
- ***What are the types of waste where a continuation of landfill might be acceptable?***
- ***When should we aim to be as close to zero waste to landfill as possible?***

Landfill is the only means available, at this point in time for the ultimate disposal of waste. There will always be some residual materials with which nothing can be done other than to dispose of them, and consequently there will always be some need for landfill. Landfill will also be required for sometime to come to store hazardous residues, although with increase in prices as materials become scarce, recovery of metals from hazardous residues may become economic at some point in the future. We believe that following the Waste Policy outlined in the first part of this response, it should be possible to reduce landfill disposal to less than 5% by weight of the total waste arisings.