

**Joint response to the planning application by Veolia for an Energy Recovery Facility (ERF) for Commercial and Industrial Waste
from Energy Alton and Alton Climate Action and Network**

Introduction

Energy Alton is a volunteer run community interest company (CIC) dedicated to giving impartial and practical advice to homeowners about saving energy in Alton and the surrounding villages. Established in 2011, Energy Alton holds regular public evening films and talks and offers free home energy surveys and thermal images, it organises home energy events and workshops and provides information and advice via its website and telephone. Members of Energy Alton have visited both the ERF at Chineham and the recycling facility near Alton, both run by Veolia.

The group comments on national and local policy and programmes relating energy and the environment and collaborates closely with Alton Town Council, East Hampshire District Council and other community groups. Energy Alton is affiliated to Alton Climate Action & Network, which brings together people from Alton and the surrounding villages to tackle the climate crisis, by reducing CO₂ from energy, waste, transport and food, and campaigning and lobbying for change in local and national policies. It communicates locally via the local press, radio and the newsletter is received by 800 individuals and groups.

Our focus in this planning application is on:

- The rationale and justification for this investment in this location in light of the national waste strategy and key developments during the life of the facility.
- The claims regarding energy production in particular renewable energy in the context of the drive to reduce carbon emissions.
- The impact on transport infrastructure and emissions
- Overall carbon emissions
- Socio-economic benefits

Executive Summary

E1 Energy Alton supports the incineration of waste in principle as a means of generating renewable energy from waste which cannot be recycled and should no longer be landfilled. From a climate perspective Energy Alton is passionate about the global need to reduce waste, to recycle and reuse more and develop an integrated circular economy that is sustainable.

E2 However, Energy Alton **objects** to this particular planning application for an ERF because the proposed ERF is not appropriately located.

- It will not be near the main sources of commercial and industrial waste in the county so transport links have to be much longer and emissions higher than if situated adjacent to the main populations and commercial activity in the county.
- Contrary to Government policy the incinerator will not use the heat generated to produce district heating for the benefit of the community due to the cost of piping to the centre of population and a failure to find developers to partner with.
- The benefit of electricity generated is overstated because grid losses will reduce the useable energy when transmitted away from the Alton area.

E3 More fundamentally Energy Alton **objects** to the application because of the evidence that additional local incineration capacity is not needed if recycling rates are increased to 60% or more.

- There is enough existing capacity together with incinerators already planned and approved by 2030 for the residual waste demand.
- This argument is put forward by the same specialist waste consultancy that Veolia uses to support its expansion plans.
- Building this very large incinerator with an economic life of 40 years will weaken and reduce local and national efforts to recycle more. This will lead to more CO2 emissions at a time when we are aiming to decarbonize the economy by 2050.

E4 Should the fundamental objections based on need and location nevertheless be ignored and an incinerator is approved at this location:

- It should be smaller and made flexible to be viable as future demand falls.
- Reuse of the heat energy for the benefit of the local community must be a planning condition
- Waste transported must be by rail and clean energy vehicles only
- Other renewable energy generation methods should be designed into the site including solar PV, ground and air source heat pumps.
- There should be a tangible and valued benefit for the community in addition to limited additional employment.

1. IS THERE A NEED FOR THE NEW ERF INCINERATOR?

NB We have sought to offer reliable statistics in what follows, but cannot guarantee their accuracy. Data for Commercial and Industrial waste is scarce and of poor quality.

1.1 Introduction and Policy context

The planning application is for an incinerator for commercial and industrial waste, not for household waste. The commercial and industrial sector generates about 18% of UK waste, households generate 12% and construction, demolition and excavation 62% (Source: Govt. UK Statistics on Waste 2020).

The application will be assessed against national planning policy and the policies set out in the 'Hampshire Minerals and Waste Plan 2013' referred to as HMWP below.

<https://documents.hants.gov.uk/mineralsandwaste/HampshireMineralsWastePlanADOPTED.pdf>

We agree with the generally accepted view that "residual waste" should be incinerated and not go to landfill, because the UK has virtually run out of landfill sites (there is enough capacity for no more than 6 years in the UK); and export for disposal is not UK policy. For this reason, Energy Alton does not oppose ERF incinerators in principle.

The specific question posed by the Veolia application is whether Hampshire needs a new incinerator in this location. This requires an assessment of difficult questions concerning the definition of residual waste and its inter-relationship with recycling targets. Can waste reduction and recycling be increased sufficiently to reduce reliance on landfill without more incineration?

1.1.1 National policy

National policy promotes re-use and waste minimisation, and measures to reduce dependence on landfill, a ban on export of waste for disposal (though not for energy recovery), and an increase of both recycling and energy recovery (incineration). *Across all types of waste*, recycling accounted for 48% in 2016, with landfill at 24% as the second most used waste treatment in 2016 (source: UK Statistics on Waste 2020). The government will wish to reduce landfill to under 5% because few sites are left. Nationally, recycling rates have not improved for many years.

The Environment Bill 2020, currently before Parliament, includes powers to ensure producers take total responsibility for the waste they create, introducing a consistent approach to recycling (including a wider range of plastic products than currently collected in Hampshire), and introducing bottle deposit return schemes. Powers to introduce new charges to "minimise the use and impacts of single-use plastics" and food waste collection can be expected to increase recycling rates over time for both domestic and commercial and industrial waste.

www.gov.uk/government/publications/environment-bill-2020/10-march-2020-waste-and-resource-efficiency-factsheet-part-3

The Environment Act will ensure councils operate weekly separate food waste collections, preventing food waste from going to landfill or being incinerated. According to an analysis by WRAP in the West Midlands ("West Midlands Commercial and Industrial Waste –

Opportunities for Recycling and Recovery”), food was proportionately the most significant Commercial and Industrial waste stream being landfilled rather than recycled.

1.1.2 Hampshire County Council policy

In Hampshire

- Existing ERF facilities are operating at capacity
- Too much waste is still being sent to landfill (as is the case nationally)
- Recycling rates – especially in the commercial and industrial sector - are low

The HMWP in 2013 set a household waste recycling target of 60% for 2020. The HMWP Monitoring Report for 2020 states that the Hampshire household waste recycling rate is 41% and the overall recycling rate is 25%, **meaning that the commercial and industrial waste and construction recycling rates are very low indeed.**

Hampshire County Council is currently reconsidering its waste strategy in response to the Environment Bill. “Decision Report 2 July 2020, Executive Member for Economy, Transport and Environment” reports on work undertaken to date to support identifying the most suitable recycling collection and processing system for Hampshire in line with the requirements of the Environment Bill 2020, including weekly food waste collection. The Decision Report suggests that with new systems, recycling rates **could be expected to increase by approximately 15%** particularly from the introduction of food waste collection, which would make a significant impact in the Commercial and Industrial waste sector as well as Household Waste.

1.2 Commercial and Industrial Residual Waste

The Veolia Planning Statement states (paras 3.2.1, 4.2.2) that most of the waste incinerated would be secured through contracts with waste management companies, with most of the waste being from Commercial and Industrial Sources, with some from Construction and Demolition. The waste would be residual because it would have been pre-treated through segregation or pre-processing. This residual waste is not suitable for recycling and is either incinerated or goes to landfill (no longer an option). Some of it is called “Refuse Derived Fuel” (RDF), which has been shredded and/or metals extracted.

Veolia explains, “Residual waste is more fully defined in Defra’s ‘Energy from Waste: A guide to the debate’ (which forms one of the suite of documents sitting under the national waste strategy). This states (at paragraph 18): “Residual waste is mixed waste that cannot be usefully reused or recycled. It may contain materials that could theoretically be recycled, if they were perfectly separated and clean, but these materials are currently too contaminated for recycling to be economically or practically feasible. It may also be that there is currently no market for the material or it is uneconomic to take to market. An alternative way of describing residual waste is ‘mixed waste which at that point in time would otherwise go to landfill’”.

Our understanding is that the future estimates of the amount of genuine residual waste to be processed are very sensitive to the recycling rates achieved. Already Hampshire CC plans to improve recycling rates, as does the UK Government.

In the Planning statement (1.2.4) Veolia quotes from a report by Tolvik Consulting in 2018 that there will be a shortfall of capacity of 4.66Mt in London and SE by 2025. This is a central justification for the business case for the incinerator. However, the same consultancy published a review late in 2017 on the UK Residual Waste 2030 Market Review. This charted the residual waste capacity available against varying levels of waste recycling. Their

assessment is that if a high level of recycling is achieved there will be spare ERF capacity and if the 'Circular Economy' target for recycling is achieved then the current ERF capacity together with already scheduled additional capacity will be sufficient.

In Tolvik Consulting's scenario table (see Appendix 1) the combined target of 60%: 55% household and 65% Commercial and Industrial is feasible if Hampshire County Council's assessment that household recycling rates increase by 15% and if a range of national provisions in the Environment Bill bear down on producer waste as discussed above.

If, as seems likely from the summary above, recycling rates increase substantially and producer-generated waste is cut back, then the need for the incinerator is not proven, even given the essential need to divert waste from landfill.

1.3 Considerations of capacity and flexibility

Veolia states in the Planning statement (1.2.8) that the MRF site in Alton will become redundant and is therefore is 'free' to be used as an ERF. This is not surprising in that Veolia is the second largest operator of incinerators in the [UK]. Veolia also states that the proposal will be 'flexible to changing market and economic conditions.

We disagree. Building an incinerator three times the size of the Chineham plant will be a huge investment for decades to come. To be economically viable it will have to operate at near capacity for the expected design life of 40 years. If as we expect recycling rates increase, waste will need to be brought in from further away to achieve the 330000 tonnes per annum. But more importantly the capacity will act as a brake on collective determination to improve recycling rates.

If HCC is truly committed to a bold waste strategy built around the circular economy that reduces waste and increases recycling it will reject this planning application. Should it consider that there is still a need for additional capacity for residual waste treatment it should first look at the option of increasing capacity on existing sites and only then consider a smaller facility than the one proposed.

1.4 Potential impact of taxation on incineration

The economics of the proposal could well be affected by future Governmentt policy. The National Resource and Waste Strategy introduce in December 2018 states that taxing incineration may be necessary if the intended plan to increase recycling is not delivered. This could radically alter the business case for the plant and at the same time increase the amount spent on waste disposal by Hampshire residents and businesses.

<https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>

2. IS THIS SITE AN APPROPRIATE LOCATION FOR AN ERF?

2.1 Distance from waste sources

The Hampshire Minerals and Waste Strategy (2013) states on page 96: 'All waste development should be located near to the sources of waste, or markets for its use.'

Commercial and industrial waste in Hampshire is produced largely on the south coast, 30 miles away, not in rural east and north Hampshire. The plan is for 216 HGV movements per

day seven days a week including Saturday and Sunday. Most of the traffic will be during weekdays 7am to 7pm with potentially one HGV movement every three minutes during that period. This continuous level of traffic movements will not just affect Alton but all routes through rural NE Hampshire.

2.2 Energy Generation

2.2.1 Heat

The Veolia planning statement says that the plant will be able to produce 6.5Mwth of heat or 3.9Mwth (with losses). This could deliver heat in the form of steam or hot water to homes and businesses via a district heating piped system. This accords with Government policy.

The ERF would in theory be capable of exporting heat (as steam or hot water) to local heat users. This is clearly in line with national policy.

Our Waste, Our Resources, a Strategy for England. Defra 2018 states that action will include:

3.2.1 Driving greater efficiency of Energy from Waste (EfW) plants by encouraging use of the heat. England has around 40 EfW plants. Eight operate in Combined Heat and Power (CHP) mode, delivering greater efficiency than solely generating electricity.

...

As part of the review of the Waste Management Plan for England¹⁰⁶ in 2019, Defra will work with the Ministry of Housing, Communities and Local Government (MHCLG) to ensure that the Waste Management Plan for England and the National Planning Policy for Waste and its supporting planning practice guidance reflects the policies set out in this Strategy. This will consider how to ensure, where appropriate, future plants are situated near potential heat customers.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf

However, Veolia states in the Planning Application Heat Plan Appendix 1.2 that there is no economic business case to use the heat. This is because there is no potential user of the heat to join a heat network and because of the rural location the cost of installing the piped network is too high. Instead the plant will be designed for 'potential' heat production sometime in the future.

So, the application fails to meet national aspirations and furthermore fails to bring the economic benefits of low- cost energy to the Alton population.

2.2.2 Electricity

The plant will produce 33Mw of electricity and export 30Mw to the grid. This equates to 247,500MWh per annum. This is vastly more than the power needed in Alton. The fact is that sending electricity long distances results in grid losses of between 8-15% of the amount generated. Therefore, a proportion of energy produced will be wasted by siting the plant in this rural location.

In conclusion, for the reasons summarized in this section 2 a future ERF will be in the wrong place due to high transport costs and emissions, due to the major lost opportunity to use the heat generated and due to the waste of energy caused by grid losses when the electricity is exported.

3. CO2 EMISSIONS

3.1 Real CO2 emissions

Veolia's headline in the Carbon Assessment (EIA Vol 3 Appendix 4.3) is that there is a net reduction of CO₂e per annum compared to emissions from landfill of 65109 tonnes. This is a valid claim if the only alternative is landfill. But it is not. The real alternative is reduction and recycling of waste as we argue above. The real figure to consider is total emissions - in this case 166,885 tonnes per annum.

We also question the calculation of emissions that are offset. That is the emissions saved from not having to generate the electricity in another way in a power station. Veolia uses the displacement factor 0.349 appropriate for natural gas giving a grid offset figure of 86.378 tonnes of CO₂e. but with the energy mix for the UK changing to include more solar and wind we think that the displacement factor used overstates the CO₂ offset.

3.2 Transport

The total emissions in moving waste and chemicals to site is 2403tCO₂ per annum based on a one -way average of 48 miles per HGV delivery. We consider that emissions both ways should be accounted for in which case total emissions will be higher.

The planning application fails to explain where waste will delivered from but the arguments used to demonstrate a demand in the SE is a good indication that waste will be arriving from Surrey and other parts of the London conurbation. We have already highlighted government and Hampshire policy to increase recycling and reduce waste. Clearly the more this is successful the greater the distance that waste will have to be transported to supply the 330,000 tonnes each and every year. This could include waste from overseas. This scenario is not contemplated in the application and therefore the disbenefits relating to transport pollution, congestion and other emissions are understated.

It is UK Government strategy to decarbonise transport during the next few decades. We consider it negligent for Veolia not to propose rail freighting of waste to the site, especially since there is a disused railway siding adjacent to the current Veolia site that could be used.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/878642/decarbonising-transport-setting-the-challenge.pdf

Or the proposals must include specific plans for a phased move to possibly hydrogen fuelled HGVs as recommended by the Committee on Climate Change.

<https://www.theccc.org.uk/wp-content/uploads/2019/05/CCC-Zero-Emission-HGV-Infrastructure-Requirements-Ricardo-Energy-Environment.pdf>

We are also concerned about the impact on villages such as Selbourne, Four Marks and East Worldham in terms of pollution from diesel lorries, damage to the road infrastructure and threats to safety caused by these proposals. If the facility is approved all waste transport to the site should be banned from other than trunk routes.

3.3 Clean energy offset

All new buildings should be designed to generate and use renewable energy. Whilst the main output of the ERF will be energy from biomass this does not preclude other possibilities. Solar PV should be incorporated into the south elevation of all buildings and ground source and wind energy be fully considered.

4. SOCIO ECONOMIC AND SOCIAL BENEFITS

Apart from an apparent economic benefit to the area of 40-45 additional jobs there is no proposal in the application to give some of the rewards that would no doubt accrue to Veolia to the local community if this application is approved. It should be a condition of approval that Veolia makes a significant community contribution to offset the disbenefits associated with this ERF. The contribution should support the highest priorities identified by the local population. This might include radically improving the low carbon transport infrastructure including cycling, walking and public transport.

Energy Alton

Alton Climate Action and Network

August 2020

Appendix 1

Extract from Tolvik Consulting Report: UK Residual Waste 2030 Market Review 2017

https://www.tolvik.com/wp-content/uploads/2017/11/UK_Residual_Waste_Capacity_Gap_Analysis.pdf

- ◆ In the absence of long term waste policy, particularly in England, the Tonnage Model has then been used to develop five scenarios. These range from a No Change scenario (in which recycling rates, as currently measured, do not rise) to a High Recycling scenario which assumes a 65% recycling rate for Household Waste and a 78% recycling rate for municipal-like C&I Waste.

Scenario	2030 UK Recycling Rate			2030 Residual Waste (Mt)
	Household Waste	Municipal C&I Waste	Combined	
No Change	44%	61%	52%	29.5
50% Household	50%	63%	57%	26.8
55% Household	55%	65%	60%	24.5
CE Target	60%	70%	65%	21.0
High Recycling	65%	78%	71%	17.3

Figure E1: UK 2030 Residual Waste Projections

- ◆ Using the analysis in the reports, the review then considers the capacity for the treatment of Residual Waste in 2030. It estimates capacity in the UK which is currently operational or in construction to total 16.6Mt - being 14.5Mt of dedicated EfW capacity, 1.3Mt of cement kiln/IED biomass capacity and 0.8Mt representing the net impact of Mechanical Biological Treatment.
- ◆ On this basis, it is projected that in 2030 in the No Change scenario there will be a "gap" in Residual Waste treatment capacity of **13.0Mt**, whilst in the High Recycling scenario, by 2030 Residual Waste treatment capacity is projected to be 16.6Mt - just **0.7Mt** short of the tonnage of Residual Waste. In this scenario, the construction of Additional EfW capacity in the UK would therefore result in over-capacity. In the 55% Household scenario the projected "gap" is **8.0Mt**.

Continued on next page

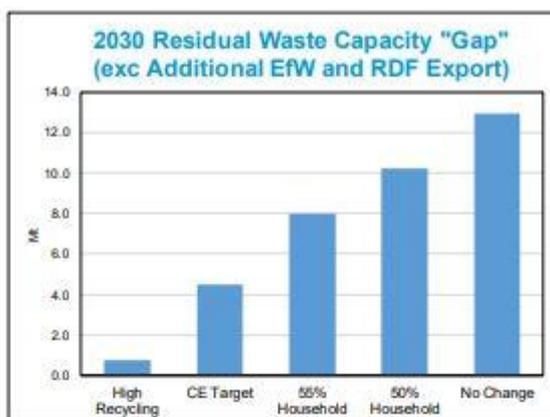


Figure E2: Projected UK 2030 Residual Waste Gap – excluding Additional EfW and RDF exports

- Five of the reports identify that, on the balance of probabilities, c.2.0Mtpa of Additional dedicated EfW capacity will also be constructed in the UK before 2022. When this is combined with a projected 2.5Mtpa of RDF exports in 2030 (the median figure from the estimates included in the reports), in the 55% Household scenario the 2030 capacity "gap" reduces to **3.5Mt**. In the High Recycling scenario the analysis suggests an overcapacity of **3.8Mt** whilst in the No Change scenario the "gap" would be as high as **8.4Mt**.

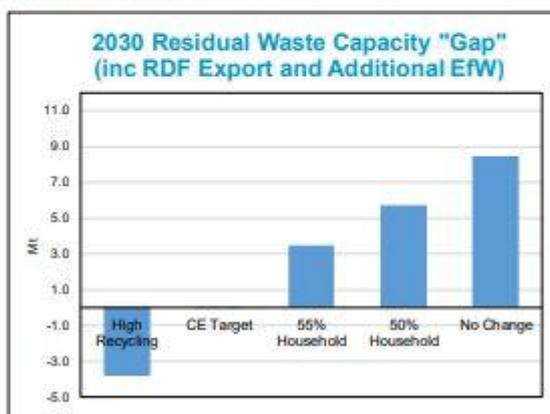


Figure E3: Projected UK 2030 Residual Waste Gap – including Additional EfW and RDF exports

- The modelling suggests that, notwithstanding the role landfill has to play in the future management of those wastes for which there is no alternative treatment, it will have a key role to play in providing the "balancing" capacity in the Residual Waste market through to 2030. For example, in the 55% Household scenario it is estimated that 69Mt of Residual Waste would need to be landfilled between 2018 and 2030.
- The review demonstrates the specific sensitivity of market projections to recycling assumptions. The current policy uncertainty, particularly for England, consequently increases the risk of a mismatch between Residual Waste tonnages and available treatment/disposal capacity. Such policy uncertainty may also serve to discourage capital investment into the sector, whether for infrastructure in support of recycling or for the treatment of Residual Waste.
- There are also a number of areas which were "out of scope" but which have the potential to impact on the findings of this review and which would benefit from further analysis/discussion.