

# Wasting Opportunities: Veolia's case for placing waste management at the heart of the UK energy infrastructure policy mix



## Executive Summary

Our key points as set out below are:

1. Minor infrastructure such as waste and water are just as critical as the big picture infrastructure, but waste in particular has a key part to play in plugging the gap of UK energy generation needs;
2. Indirectly, the circular economy helps this debate by saving carbon;
3. Because of this it is as important that the generation of this type of infrastructure can fall into the same category of infrastructure projects that have objective assessment to prevent lengthy delays in delivery.

## Foreword

*Infrastructure is fundamental to an efficient and successful economy. We welcome the creation of a National Infrastructure Commission which can take an independent long term view of the country's needs. Indeed its creation has been necessitated because much of the UK's infrastructure has not been renewed or enhanced as it should have been in recent years.*

*In 2014, the World Economic Forum ranked the UK 27th for the overall quality of its infrastructure in its report on global competitiveness, down a further 3 places since 2012. Despite being the world's sixth largest economy, the UK's infrastructure ranks well below that of some much smaller economies.*

*If the UK fails to address the state of its infrastructure, especially in relation to energy, then this will have a significant impact on the economy and the quality of life of our population. Further to this, investor confidence will continue to be undermined by political indecision and policy risk – we can already see this happening.*

*As the Commission moves forward and considers its terms of reference it will address the “bigger picture” in terms of the UK's priorities – but that should not exclude smaller but yet essential infrastructure, such as waste and water, from being considered as part of this bigger picture. We believe that means thinking beyond planes, trains and automobiles, and large scale power generation. Future planning must include how this country manages its most untapped resource – the waste we create but cannot recycle. We will only truly balance the UK's energy needs by using all the resources at our disposal, and using what we dispose of should be a part of that solution.*

*The UK lacks a clear strategic policy framework in this area, underlined by the fact this country still sends a third of its waste to landfill. Veolia wants to help move the UK away from a “take, make, dispose” model, and build a circular economy where we reuse or recycle everything we can, and harness the energy from what we cannot. For there will always be some waste materials that cannot be economically reused or recycled – this is the element we must start using more effectively as energy.*

*A circular economy is not about ‘nice to have’ green policies, it is about the vital management of the UK's resources. To do that we must:*

- Identify and address capacity gaps in the UK, based on facts*
- Ensure the planning process is open and objective*
- Look beyond municipal waste to include other waste streams; and*
- Address negative perceptions of waste management by engaging with the public.*

*The new targets set by the EU require the UK to recycle 65% of its municipal waste and 75% of its packaging waste, as well as reducing landfilling to a maximum of 10% of all waste by 2030. We are currently a long way off those figures, and only a radical approach will see the UK hit those targets. Why not meet our energy needs while we do it?*

*Energy from waste can effectively solve three problems in one go: an effective treatment option for non-recyclable waste materials, helping to meet the nation's energy demand and providing heat to local communities, whilst also reducing carbon emissions compared to landfill.*

## **Identifying and addressing capacity gaps**

All too often infrastructure projects have been subject to the short-term pressures of our electoral cycle rather than making decisions that will deliver a favourable solution in the long term. Infrastructure decisions are also largely focussed on the big ‘set piece’ projects, such as high-speed rail or nuclear power. But infrastructure should also be about effectively considering the ‘small’ together rather than simply thinking about ‘big’ projects.

The UK's infrastructure strategy should be underpinned by an independent evidence-based assessment of our infrastructure needs, and the new Commission will hopefully make a very positive contribution to ensuring we take a longer term view.

### ***Lack of evidence in the waste sector and why the UK still doesn't have sufficient waste capacity***

There are conflicting positions on infrastructure capacity being taken in reports such as Defra's 'Forecasting 2020 Waste Arisings and Treatment Capacity', The Green Investment Bank's 'The UK residual waste market', Eunomia's 'Residual Waste Infrastructure Review' and Imperial College's 'Waste Infrastructure Requirements for England'. There is a clear need for an independent evidence-based assessment of the UK's waste infrastructure needs over a 25-30 year horizon. Then the UK would have a clearer picture of how this could fit into the potential energy mix and be part of the solution. Given the EU targets, this review must be conducted with urgency.

### ***Local versus national perspective***

It is a fact that different parts of the country have different requirements when it comes to both waste management and energy. Different waste streams will require different approaches to treatment; much as the energy mix differs across the country. As an example, rural areas with large gardens will produce more 'green waste' and will have a greater need for composting infrastructure than densely housed urban areas.

To add up the capacity of each facility across the country and compare it to the total national waste arisings is to miss the point and hides the fact that some parts of the country will not have sufficient infrastructure to treat their waste effectively. It is therefore important that infrastructure planning takes into consideration these differences, and feeds them into a holistic view of how the country meets its energy gap. Energy from waste is a vital part of the local energy capacity matrix.

Generation under 50MW is under local authority control and given energy from waste facilities normally fall within that category they are often only considered at a very local level, which is not necessarily a bad thing for the communities concerned. However, is the country missing an opportunity? A more strategic approach to looking at these facilities collectively across the UK would not only benefit local communities through more recycling and recovery, but also ensure the wider national benefits of waste infrastructure to energy strategy (including energy security and renewable energy generation) are accounted for in decision making.

### ***Utilising a valuable source of local energy***

Our current export of Refuse Derived Fuel (RDF) illustrates the wasted opportunities in energy from waste. In 2014, England and Wales exported 2.37 million tonnes of RDF to Europe, which is sufficient to fuel a 250MW power station. The amount of RDF being exported has sharply increased since 2010, when the UK was exporting next to no RDF, and highlights the lack of capacity in the UK to meet the current demand and turn this valuable product into usable domestic energy. The UK lags far behind a number of other European countries in its current energy from waste capacity.

In exporting RDF, essentially the country is exporting a useful fuel at a cost (not only do we lose the money and the energy value by exporting RDF, but importing other fuels such as coal from far away costs huge sums of money) and is unnecessarily adding to its carbon footprint. Therefore, utilising energy from waste can help address two key problems of reducing expensive imports of energy and increasing renewable energy generation in the UK.

A significant proportion of our waste in the UK still ends up in landfill, which represents another missed opportunity. There is significant uncertainty in the future forecast for municipal solid waste and commercial and industrial (C&I) waste arisings and recycling rates, however even if Defra's

optimistic forecasts are achieved there will still be some 7.5 million tonnes of biodegradable municipal waste being landfilled in 2020. This alone is sufficient to fuel a 750MW power station, yet the capacity is not being built in the UK to cover this amount of waste.

It is currently anticipated that the UK will fall short of meeting the EU target of sourcing 15% of energy from renewable sources by 2020 without further action. As such the UK needs to be far more ambitious in its strive for sustainable, low carbon, renewable energy from the everyday products we throw away in this country. Energy from waste has the potential to make a significant contribution to achieving the EU renewable energy target.

In summary:

1. Energy recovery, whether it be from waste, biomass or other, is a key contributor to power generation;
2. It's a key contributor to fulfilling the renewable obligation;
3. Most importantly, it's a key contributor, particularly through heat networks etc, on energy sustainability and reliability.

## **Ensuring the planning process is open and objective**

Infrastructure planning decision making can be a significant blocker to the timely delivery of key infrastructure projects which are considered to be of economic and social importance. Thanks to an uncertain and evolving planning regime and policy framework, coupled with national political interference in local decision making, the UK's infrastructure requirements still remain acute and financially challenging.

It is important that such planning decisions are not mired in lengthy political disputes. Delays over planning decisions (see our Battlefield case study) and a changing regulatory environment (such as we've seen for ROCs and RHI etc.) send a negative message to investors. The result is often a stop-start approach to investment and a stagnation of development, which is in nobody's best interests.

We welcome the National Infrastructure Commission's ethos, which will bring more transparency and make the planning process less costly, both in terms of finance and time. Moreover, the work of the Commission would ensure energy infrastructure projects are subject to the same level of scrutiny and decisions would be made on a consistent and objective basis, allowing for long term investment in infrastructure projects that are in the national interest and without political interference.

### ***A stable regulatory environment for resource management***

Meeting the country's energy needs - by fully utilising waste as a resource - has suffered from a lack of clear direction and strategy from Whitehall. Today there are split responsibilities across the Department for the Environment, Food and Rural Affairs (Defra), the Department of Energy and Climate Change (DECC), and planning with the Department for Communities and Local Government (DCLG).

This is further exacerbated by differences in regulation within the UK between nations; it is clear that as debates around future devolution take place, the issue of waste resource management needs to be fully considered as part of energy policy. A more joined up approach to the infrastructural management of waste and its use as energy would create a more coherent national strategy. In essence a structured and secure framework would encourage investment in this area.

## Looking beyond municipal waste to include other waste streams

When the nation talks about waste infrastructure, people are predominantly thinking about municipal waste – i.e. the bins outside our homes. However, municipal waste only makes up a fifth of the country's total waste arisings. The reality is that commercial properties, of almost all shapes and sizes, produce more waste than homes.

The drivers for the disposal of C&I waste are different from municipal waste. Cost is the key variable in how C&I waste is disposed of. The outcome is that commercial contracts tend to be much shorter than municipal waste contracts, which are typically for 10 years or longer. This makes it difficult when planning for energy from waste infrastructure since there is no long-term guarantee that there will be sufficient inputs for the facility to be efficient or financially viable. As a result, the C&I waste volumes tend to be managed via many smaller regional and local operators, which can hinder a wider strategic view of the nation's needs.

The challenge is therefore to attract infrastructure investment to a resource stream that, unlike the municipal waste market, does not have the benefit of long-term contracts that can underpin investment.

## Addressing negative perceptions and engaging with the public

One of the most significant challenges that affects the waste sector, and the use of non-recyclable waste as energy, which indeed influences its treatment as part of national infrastructure, is public perception. The country's waste infrastructure requirements - as part of its energy needs - should be raised in the consciousness of the public beyond the immediacy of the bin collection round.

Waste infrastructure should be seen as vital infrastructure, just as roads, hospitals and water networks are, as they are all essential services. However, waste infrastructure is almost always viewed in a negative light, when it should in fact be considered in terms of its contribution to the energy mix.

People envisage smoking stacks, passing rubbish trucks and ugly treatment plants. This is an outdated view (see our Leeds case study) of a vital industry. We live in an age where waste is still seen as a bad neighbour development and where compensation for building a waste facility in a community is often seen as a requirement. However, there are many benefits associated with these types of projects such as job creation, training, lower home heating costs (from combined heat and power (CHP)) and cost savings to local authorities through landfill tax savings. Looking at the bigger picture, waste infrastructure projects attract inward investment, divert waste from landfill and contribute to energy security.

Industry and government must therefore strive to engage further with local communities to seek ways to encourage and promote acceptance of developments that communities need but do not necessarily want in their backyard. Currently, the public still frequently distrust the decision making process. Engaging with the public at an early stage of the planning process is essential; only by adopting this approach can the public's concerns be met and addressed.

## Case studies: Both sides of the development coin

### Energy Recovery Facility - Battlefield, Shropshire



True to its name the Shropshire site is an example of a facility that has ran the gauntlet of a battlefield through the planning process.

Veolia's planning application was submitted in 2009 but was refused in September 2010 by Shropshire County Council, against the planning officer's recommendation.

An appeal was lodged to challenge the decision, leading to a public inquiry in Autumn 2011. Final approval to go ahead with the

project came on 10th January 2012, at a delay of three years and at a significant cost through the public inquiry process.

Operational since 2015, the new facility contributes significantly to reducing waste to landfill, helps to supply greater energy security for the UK and has created new jobs. Able to process about 90,000 tonnes a year of residual waste, the facility can generate enough electricity to power about 10,000 homes.

### Recycling and Energy Recovery Facility – Leeds

Veolia's facility in Leeds has however had a much more straightforward development process, having been taken from proposal to completion in 4 years.

The facility is currently in the commissioning stage and is due to be fully operational in Spring 2016.

The facility will plug 11MW straight into the local electricity grid – enough to power around 20,000 homes.



With the environment at the heart of its design, it is one of the most significant wooden structures in the country and will feature the largest "Living Wall" in the UK, attracting local wildlife including bees and butterflies.

## About Veolia

The UK leader in environmental solutions, Veolia provides a comprehensive range of waste, water and energy management services designed to build the circular economy and preserve scarce raw materials.

We're innovators committed to focussing on carbon reduction by preventing pollution, preserving natural resources, protecting biodiversity, combating climate change and raising environmental awareness.

Our new strategy is focussed on manufacturing green products and energy, helping our customers and suppliers to reduce their carbon impact by investing more than £1 billion in new infrastructure between 2012 and 2018.

We are committed to protecting the environment and improving the lives of the communities in which we operate and have been awarded a Queen's Award for Enterprise in Sustainable Development and received a Four Star rating in Business in the Community's Corporate Responsibility Index for 2014.