

MVV Medworth Energy from Waste CHP Facility in Wisbech, UK:

OPPOSE

Dear Planning Inspectorate,

There is little hope that one finds when thinking about the enormosity of the climate crisis. There is a sense of a problem that is much larger than one person can solve, larger than yourself can solve, larger than you.

Sadly, it is companies such as Medworth CHP Ltd. that are responsible. Yet, refuse to acknowledge the damages their proposed projects will cause to the environment and surrounding communities. Do not allow their greenwashed promises to mislead you. Do not let the promise of aiming to generate energy through the incineration of mostly, readily recyclable waste, fool you into thinking this project is a solution to our landfill and plastic waste crisis.

1. Incinerators reduce recycling, they do not solve the landfill problem.

This plant promises to have the capacity to burn 625,600 tonnes of waste per annum, however, for councils with above-average rates of incineration, (for which an incinerator of this size further accelerate), there is a clear correlation between higher rates of incineration and lower recycling rates.

Studies indicate that most of what is currently in the 'residual' waste stream is readily recyclable, meaning a significant proportion of what is currently incinerated could have been recycled or composted. A Defra report published in August 2020 stated that: "Of total residual waste from household sources in England in 2017, an estimated 53% could be categorised as readily recyclable, 27% as potentially recyclable, 12% as potentially substitutable and only 8% as difficult to either recycle or substitute."

If incinerators limited their feedstock to genuinely residual waste, then it would free up more than half of their current capacity, undermining the rationale for building new incinerators in the UK, i.e. in Wisbech, Fenland.

Many councils around the UK are signed up to long-term waste contracts that involve incineration. These contracts usually ensure that the council takes on the primary risk of the incinerator not getting enough waste to burn, meaning councils are in effect penalised for not sending enough waste for incineration. The local council in Wisbech, and the Boroughs of Norfolk have made it abundantly clear they do not support this project. Contractual mechanisms such as 'minimum tonnage guarantees', 'put-or-pay' clauses and 'banding mechanisms' undermine the economic incentive to reduce, re-use and recycle, even where funds are available. We must begin working toward a circular economy, to actually tackle the landfill problem.

The Government has a target for England to achieve 65% recycling for municipal solid waste by 2035 and no more than 10% landfill. As some residual waste is not combustible, the Government's 65% recycling target implies that the rate of incineration should be no higher than a maximum of around 30%.

However, in 2019/2020, 45.5% of England's local authority collected waste was incinerated. The construction of this plant will directly undermine Government initiatives to achieve higher recycling rates in the UK.

UK incineration capacity (December 2020):

Status	Number of Incinerators	Headline Incineration Capacity
Fully Operational	53 facilities	16.37 million tonnes
In Late Stage Commissioning	3 facilities	0.94 million tonnes
In Construction	17 facilities	4.37 million tonnes
Total	70 facilities	21.67 million tonnes

Source for data: 2021 EfW Statistics (Tolvik, May 2022)

Incineration is already at overcapacity, there are already 70 facilities in the UK that have a capacity of burning 21.67 million tonnes of waste. If this proposed plant were to go ahead, it will directly harm the local and wider markets for recycling, reducing the marginal benefits of waste minimization and re-use schemes, causing significant environmental harm.

When the argument is made that the carbon dioxide released from incineration is better than the methane released from landfill, this is subject to time. The impacts of these gases change over time, for which must be considered when solving the 'landfill problem' is used as an incentive for waste incineration. To quote the report published by Client Earth on 8th March 2021; 'Greenhouse Gas and Air Quality Impacts of Incineration and Landfill':

"The impacts of these gases, carbon dioxide and methane on global warming vary over time. Methane is extremely potent in the first couple of decades after emission but decays or is removed from the atmosphere more quickly than carbon dioxide. This means that the timescale used in the analysis has a critical impact on conclusions: from a 20-year perspective landfill is a less favourable treatment method than from a 100-year perspective. Conversely, while EfW emits carbon dioxide instantaneously, landfill emits greenhouse gases on multi-decadal timescales. This means that impacts of landfill and incinerators are not equivalent when viewed over different timescales, which is critical when considering the urgency of climate change – these points are often omitted from analyses comparing landfill and incineration."

Finally, locking our valuable biomass materials such as everyday compostable waste, into incineration creates a serious long-term risk to UK resource security and strips those minerals from ever having the potential to be used for agricultural fertilizer. Even those who believe that incineration is a good way to treat genuinely residual waste should oppose the construction of new incinerators because building more, will not solve the landfill problem, it

will continue to exacerbate over capacity, particularly in the UK, whilst the energy produced will extremely carbon intensive.

2. Incinerators are also inefficient strategies for energy.

The argument that burning waste can be used to recover energy makes for good sales promotion for Medworth, unfortunately the reality is that if saving energy really was the goal, then more energy can be saved by society, as a whole global community, by reusing objects, handling biomass and recycling materials; than can actually be recovered by burning them.

Do not let this be lost on our local level by focusing solely on the local energy gained and ignore the long-term affects of this project. Research on the real world performance information of English incinerators found that they often performed significantly worse than was predicted at the planning and permitting stage.

This energy is not clean, the fossil carbon intensity of electricity exported from incinerators to the grid has been found to be 49% higher than predicted for the plant's studied. In 2020, the UK's 55 incinerators released a combined total of around 14 million tonnes of CO₂, around 6.4 million tonnes of which were from fossil sources such as plastic. The 6.4 million tonnes of CO₂ released by UK incinerators in 2020 resulted in an unpaid cost to society of more than £1.5 billion based on the UK Government's central abatement cost, cleaning up toxic waste created during this process.

For the £300 million price tag; this incinerator and others alike it, remains formidably expensive, but that expense is often hidden from the public view with giant public subsidies. Incinerator costs come largely from the cost of air pollution control equipment. Ironically, if this this waste were not burned in the first place, then this expensive equipment would not be necessary. Subsequently, the toxic ash collected in these devices would not need to be sent to an expensive hazardous waste landfill, nor would the air emissions be subjected to very costly monitoring.

To pay for the capital and operating costs, as well as the operators' profit margins, the community i.e., Wisbech Council would have usually had to sign put-or-pay agreements, which would trap the county in this contract for twenty-five years or more. However, with this proposed incinerator, the company is aware that had this project been submitted at a county level it would've been prevented and rejected, this is why a larger incinerator has been proposed to the Planning Inspectorate.

There is no political, nor local support for this incinerator. Leader of the Borough Council of King's Lynn and West Norfolk, Cllr Stuart Dark MBE, said: "I and other councillors have consistently stated our in-principle opposition to this scheme on the basis that there is enough capacity in the incineration supply chain and we, along with other councils, have ambitious plans regarding recycling and reducing waste, which will lower not increase use."

3. Harmful pollutants

Incineration results in high levels of greenhouse gas emissions. For every tonne of waste burned, approximately around one tonne of CO₂ is released into the atmosphere, and around half of this is fossil CO₂. Thus, meaning that the process of energy from incineration has a larger carbon intensity than the conventional use of fossil fuels, and significantly higher than what most regulations consider 'low carbon'. That means Medworth's proposed plant will generate considerably more carbon dioxide than what has been disclosed in their planning application.

Equally, to make the same amount of energy as a coal power plant, trash incinerations in 2018, released 65% more carbon dioxide (CO₂), as much carbon monoxide, three times as much nitrogen oxides (NOx), five times as much mercury, nearly six times as much lead and 27 times hydrochloric acid, (HCl).

In addition, the greenhouse gas emissions released will furthermore exacerbate the climate crisis with incinerators emitting an abundance of toxins and pollutants that will harm the local air quality in Wisbech and surrounding counties. This includes dioxins, NOx and ultrafine pollutant matter, 'forever chemicals' that do not disappear, but simply transform into higher concentrations of toxic materials.

This is because, as previously stated, Incinerators do not solve the landfill problem. Approximately 25% by weight of the incoming waste is left as ash, and to no surprise, this still has to be landfilled. Advocates of incineration often describe the ash produced as "inert." However, what they are stating is that the material is biologically stable, for which most of the organics have been burned away. The problem is, what is often implied is that it is nontoxic, which is false and results in communities being misled. The end result is that when incineration converts four tons of trash into energy, at least one ton of toxic ash is created that still goes to landfill.

Ash is a catch-22 for the incineration industry, as the incineration industry has rightfully aimed for better air pollution control devices to capture the toxic chemicals released during combustion, the resulting residues have become more problematic, more concentrated, expensive to handle, dispose of, and contain. There are two kinds of ash generated by an incinerator: the bottom ash approximately, 90% of the material, which falls through the grate system at the base of the furnace, that is extremely toxic, and the fly ash—the very fine material entrained in the flue gas and released as pollution.

This fly ash is supposed to be captured in the boilers, the heat exchangers, and the air pollution control devices. Unfortunately, the extremely small, micro-particles still escape into the atmosphere. The better the air pollution capturing devices, the higher concentration of toxic metals builds in the fly ash and is released into the local communities where incinerators are built and eventually into the wider atmosphere.

4. Incinerators Produce Very Toxic Air Emissions

The pollutants incinerators emit include toxic metals, dioxins, and dioxin-related compounds. (These compounds can interfere with sexual and mental development in humans, and the immune system.) Some of these highly persistent or permanent toxins emerge in the form of nanoparticles.

Since the 1980s the incinerator industry has invested in reducing dioxin emissions from well-designed, well-operated, and well-monitored incinerators – but that does not mean that all incinerators running today nor future plants will operate in this fashion on a routine basis. There is such an extreme difference between the theory and the practice of incineration, the difference has potential to ruin the lives and well-being of communities that host these facilities.

To be protected from toxic emissions, the public need stronger regulations, extensive scientific monitoring of each facility, and routine governmental visits in place, enforcing these procedures. Medworth proudly state about their ability to monitor for toxic chemicals through their continuous environmental monitoring (CEM) for their current facilities and how this will also take place in Wisbech. However, CEM is not possible for toxic metals (with the possible exception of mercury), and dioxin-related compounds.

To monitor these requires inserting a probe into the flue gas and collecting a sample on filters. These filters then have to be sent to a laboratory for analysis, which can take several months. There are no labs equipped in the local area with sufficient equipment to do this testing with ease or the subsequent analysis on a routine basis, nor regulations currently in place to enforce companies to monitor for nanoparticles under 2.5 microns.

Nanoparticles, (ultrafine particles), are particles of less than one micron in diameter. There are extreme and serious health concerns with nanoparticles and the human body. The main concern is that these tiny particles can easily cross cell membranes within living organisms. Thus, rendering any normal defense mechanisms that would usually prevent particle entry to tissues, unprotected. Once Nanoparticles enter the body, into the bloodstream, they can reach every cell, even crossing the blood-brain barrier. These Nanoparticles find their way into our food chain, into our ground water, and into our crops.

Of all the high-temperature combustion chemicals and materials produced, the nanoparticles from trash incineration are by far the most worrying, they are the most toxic and currently, we simply cannot understand what affect this will have on the human population, nor future generations or wildlife. Incinerators take in all the toxic elements used in the manufacturing process of products and transform them into smaller particles. To make matters worse, nanoparticle emissions are neither being regulated nor monitored in incinerators. The particle sizes regulated in incinerator emissions are generally 10 microns; in some countries this may be going down to 2.5 microns, however this is not being conducted quickly enough to protect our communities.

Companies alike Medworth show little worry when the nanoparticle concern issue is expressed, when the true cost of their facilities is exposed, there is ignorance to be found. It is already well established and known that disease rates in large cities can be related to air

particulate levels. Both morbidity/mortality, caused from respiratory problems and heart disease, increase as the level of particulates in the local air increase.

Moreover, as the particle size measured goes down, this relationship gets stronger. It is important to note that there will be an increased risk of morbidity and mortality in Fenland and the surrounding counties, due to elevated PM10 (particulate) exposure if this incinerator is built. There will also be a reduction in life expectancy for those whose health is already seriously compromised within the area.

According to Public Health England and the Local Government Association on Air Quality: A Briefing for Directors of Public Health; "There is no safe level for particulate matter (PM10, PM2.5), while NO2 is associated with adverse health effects at concentrations at and below the legal limits."

We know energy from waste incinerators are not the solution to plastic waste. There is not one positive, to be truly found, when proposing a Energy from Waste Incinerator plant in communities such as Wisbech. Especially, when the surrounding counties are already at over-capacity for incineration, and the local area is under-achieving it's own recycling initiatives. Benjamin Franklin once said,

"You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on."

I am observing you with concern, Planning Inspectorate. I wish to breathe clean air, drink clean water, and eat clean food. And one day, I would like to have children of my own, who I wish – alike I wish for you and your children, will be able to do the same. It is our basic right on this Earth that we all share. You have the power to make the future a better place for them, for us. The opportunity to say you made a difference and declined proposals for greenwashed 'solutions'. You have the ability to push for actual, environmentally friendly options that are a part of the answer. Please do not approve this waste incinerator, this is not the solution and will only push us further away from solving the climate crisis.

Thank you for your time.

Kind regards,

Reena Black