SUMMARY OF BBC INVESTIGATION INTO CURRENT IMPLICATIONS OF INCINERATION IN UK

Burning household rubbish in giant incinerators to make electricity is now the dirtiest way the UK generates power, BBC analysis has found (BBC News website 15.09.24).

1. Current Trends in UK Waste Disposal

Nearly half of the rubbish produced in UK homes, including increasing amounts of plastic, is now being incinerated. Scientists warn it is a "disaster for the climate" - and some are calling for a ban on new incinerators.

2. Dirty Power: Greenhouse Gases

The waste they are burning is increasingly made up of plastic, according to local government data. Because plastic is produced from fossil fuels, it is the dirtiest type of waste to burn.

According to the government's own statistics, burning plastic produces 175 times more carbon dioxide (CO_2) than burying it in landfill.

In the past few years, more plastic has been going to incinerators and less food waste - which councils are now sending to anaerobic digesters or to be composted. However, the government's own calculations continue to assume that we send the same mix of rubbish as we did back in 2017 - potentially underestimating the scale of the issue.

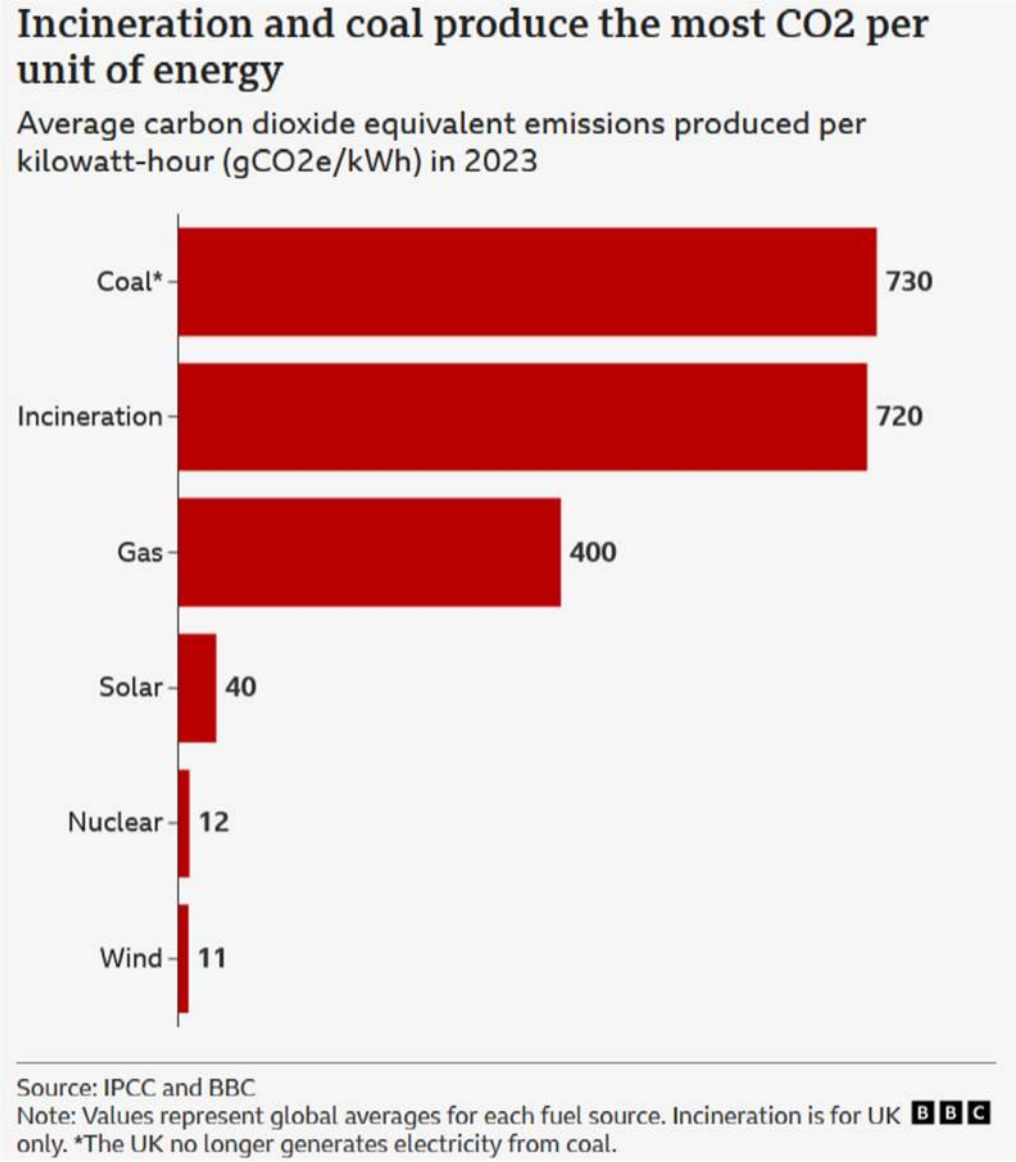
Pollution Levels of the Last Five Years

The BBC has produced a five-year analysis using data from across the country on actual pollution levels recorded by operators at their incinerators, and found that energy-from-waste plants are now producing the same amount of greenhouse gases per unit of electricity as if they were burning coal for the generation of electricity.

The government closed its last coal powered plan in September 2024 as part of it effort to achieve its target of ensuring electricity generation produces no carbon emissions by 2030. This now leaves waste incineration as the dirtiest way the UK produces power.

According to the BBC analysis, energy produced from waste is five times more polluting than the average UK unit of electricity.

Production of CO_2 by different energy sources (See Appendix for BBC's research methodology)



To see how these figures are arrived at by the BBC, see Appendix.

These statistics give the lie to the claims by the waste disposal industry that energy-from-waste is a green alternative to landfill.

3. The Future of Incineration Plants

About 3.1% of the UK's energy currently comes from waste incinerators . However, the government's independent advisory group, the UK Climate Change Committee, fears that the use of incinerators in the UK will continue to grow. There are currently dozens of new plants going through the planning process and, as they make up an increasing part of emissions from electricity generation, they will probably get more polluting.

The committee has recommended that no more plants be built without efforts to capture all their carbon emissions.

In April, a temporary ban on permits for new incinerators was introduced in England by the previous Conservative government, while it reviewed the role of burning waste but, when the ban lapsed in May, it was not continued.

It appears that the current government has yet to decide its position on the issue.

4. The Taxpayer Cost of Incineration

Councils 'locked in' to burning waste

Local authorities have more than £30bn worth of contracts involving incinerators, some lasting more than 20 years

The challenge is that even if local authorities wanted to move away from the use of energy-from-waste plants they are often unable to due to restrictive, long-term contracts.

The BBC made Freedom of Information requests to every UK local authority responsible for disposing of waste, which revealed that they have at least £30bn-worth of contracts with waste operators involving incinerators, some lasting more than 20 years.

These arrangements have been criticised by the House of Commons public accounts committee for locking councils into financially burdensome arrangements.

Dr Colin Church, who led an independent review of incineration for the Scottish government which resulted in the ban, said:

"'Lock-in' is a real issue, the energy-from-waste sector swears blind it's not, but it is."

In 2019, Derbyshire County Council and Derby City Council terminated their contract with waste company RRS because an incinerator it had built for them did not pass initial tests, with residents complaining about the smell and noise.

However, although the plant had never been used, the councils were ordered to pay £93.5m in compensation to RRS's administrators for terminating the contract early.

"Deliver or Pay" Contracts

The BBC also found that dozens of councils had clauses in their contracts which demand a minimum amount of waste to be sent to incinerators for burning - known in the industry as 'deliver or pay'.

In 2010, Stoke-on-Trent Council was left facing a £329,000 claim from Hanford Waste Services for not sending enough waste to be incinerated. The council declined to say if it paid the claim but told us the clause has since been removed from its contracts with the operator.

But the Local Government Association (LGA) - representing local authorities in England and Wales - expressed concerns to the BBC that these contracts have left councils unable to explore the use of more environmentally-friendly solutions, such as recycling, for fear of a fine for breach of contract.

Joe Harris, vice chair of the LGA and leader of Cotswold District Council, said:

> "If we can adapt those contracts which allows us to reduce the amount of waste going to incineration and if we can boost recycling we want to do that, but we can't have councils facing financial penalties."

5. Recycling

For the past 10 years recycling rates have failed to increase, remaining stuck at about 41% in England. This is despite a previous commitment by the previous Conservative government for 65% of the UK's household waste to be recycled by 2035. Wales is the only nation to have hit the 65% target.

A Defra spokesperson told the BBC:

> "We are committed to cutting waste and moving to a circular economy so that we re-use, reduce and recycle more resources and help meet our emissions targets."

6. The Views of Academics and Environmentalists

Dr Ian Williams, professor of applied environmental science at the University of Southampton has suggested that the increasing contribution of incineration for electricity generation is an

> "insane situation… [and]… the current practice of the burning of waste for energy and building more and more incinerators for this purpose is at odds with our desire to reduce greenhouse gas emissions….Increasing its use is disastrous for our climate."

Prof Keith Bell, a member of the UK Climate Change Committee, after reviewing the BBC's findings:

> "If the current government is serious about clean power by 2030 then... we cannot allow ourselves to be locked into just burning waste."

And, quoted on *The Nightmare Next Door*, screened on BBC iPlayer on 15th October, 2024, Prof Bell says:

> "We've managed to reduce the amount of material that's going to landfill. If that has led to things being incinerated instead of being recycled – as sometimes incineration is implied being the kind of 'easy option' – that's definitely not the right outcome. We do have concerns about the building of new energy for waste plants. This can't be seen as just a way of getting out of jail for free and dealing with the whole kind of management of waste. "

Lord Deben, the Conservative environment minister who introduced the landfill tax in 1996, told the BBC:

> "We've got too many [incinerators], and we shouldn't have any more… they begin to distort our ability to recycle."

7. Conclusion

If one accepts the BBC findings on CO_2 emissions from waste incineration, then BCP's planning committee must be advised that the proposed Canford ERF (sited next to a SSSI) is simply not compatible with its declaration, in July 2019, of a Climate Emergency and must refuse the application.

Appendix

How BBC researchers calculated the emissions

In order to calculate the emissions produced per unit of energy from England's incinerators, the BBC needed to obtain the emissions produced and the power output from these sites.

Each incinerator in the UK produces annual monitoring reports, external, which record key statistics associated with the plant including its total emissions. But in a few cases the emissions were not recorded in the annual monitoring report and so the figures recorded in the government's pollution inventory report, external were used.

The IPCC, the UN climate science body, recommends that "biogenic" emissions - which come from burning organic matter like food - are not included in calculations because they are recorded under the emissions for the land and forestry sector. So we had to remove these biogenic emissions from the total by working out what share of the waste being burned was organic. Some operators recorded this, but in the cases where they did not the government guidelines, external advise applying a factor based on the share of household waste that was recorded as biogenic during a 2017 survey by the environmental NGO WRAP.

This gave the BBC the total fossil emissions - meaning those associated with burning the "fossil" waste (or non-organic waste) at the site, including plastic. Then we calculated a carbon intensity figure - the carbon emissions per unit of energy generated - for every site, by dividing the total fossil emissions by the energy generated.

Methodological support was provided by Francesco Pomponi, professor of sustainability science at Edinburgh Napier University; Massimiliano Materazzi, associate professor of chemical engineering at University College London; and Dr Jim Hart, sustainability consultant.