Briefing from the United Kingdom Without Incineration Network (UKWIN)

Incineration Overcapacity

Incineration overcapacity comes with both commercial risks for investors and societal risks to recycling and climate ambitions. This briefing explores the case that England should follow Wales and Scotland in saying no to new waste incineration capacity in order to make space for recycling and to support decarbonisation and job creation.

Municipal household and business (C&I) waste		
	2001	**2022**
Incinerators (UK)	11	70*
Incineration capacity (Headline UK Capacity)	2.6 million tonnes	21.7 million tonnes*
Incineration rate (Council-Collected Waste in England)	8% (2001/02)	48% (2021/22)
** Existing and under construction*		

Rationale for the Welsh and Scottish moratoriums on new incineration capacity

In March 2021 the Welsh Government announced a moratorium on all energy from waste (EfW) incinerators with a capacity of 10MW or more (i.e. all but the smallest incinerators), describing the move as a key element of "taking action to make the circular economy a reality in Wales".[i]

The Welsh Government explained how: "As repair, re-use and recycling continue to expand, we want to ensure the capacity we have for generating energy from waste is in line with the capacity needed during our transition to a circular economy, with the long-term solution being to move away from incineration".[ii]

In May 2022 the Chair of the Independent Review of Incineration in Scotland recommended a ban on new incineration capacity in Scotland due to the "risk of long-term overcapacity". The Report explained how: "...given the risks that incineration poses to human health and the environment, and the risk of lock-in, Scotland should not construct more capacity than it needs and only some of the currently planned capacity should be built".[iii]

In June 2022 the Scottish Government announced their acceptance of the Review's recommendations, describing the moratorium on new incineration capacity in Scotland as "an action taken to encourage a circular economy, in which materials were kept in use as long as possible and precious natural resources were not wasted".[iv]

UK Government concerns over overcapacity

In February 2021 the Secretary of State for BEIS agreed that an incinerator proposed for Kent should be refused permission, in part because the incinerator "would divert a significant proportion of waste from recycling rather than landfill".[v]

In July 2022 Defra explained: "The Government's view is that Energy from Waste (EfW) should not compete with greater waste prevention, re-use, or recycling. Proposed new plants must not result in an over-capacity of EfW waste treatment provision at a local or national level".[vi]

This Defra statement is in line with the Government's September 2021 Draft National Policy Statement for Renewable Energy (EN-3) which includes a reference to the need to ensure that any proposed incinerator "must not result in over-capacity of EfW waste treatment at a national or local level".[vii] The Climate Change Committee (CCC) referred to this proposal as a "promising policy development".[viii]

Climate Change Committee (CCC) concerns over overcapacity

The CCC's June 2022 Progress Report to Parliament warned that "action is required to avoid an over-reliance or over-capacity of incineration". In their report the CCC described as a "promising policy development" that the UK Government's "draft National Planning Statement for renewables sets out new requirements for future Energy from Waste plants so that they demonstrate alignment with the waste hierarchy and do not result in EfW over-capacity at a national or local level".[viii]

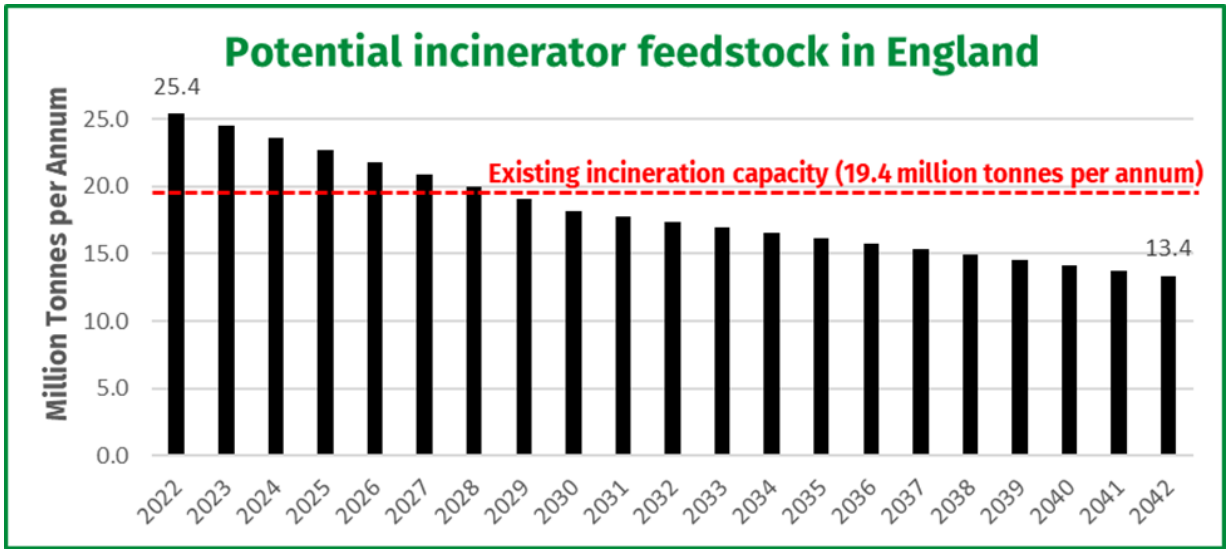
The CCC listed "significant growth in the use of Energy from Waste / incineration" as a "major risk" that requires mitigation on the basis that "The use of Energy from Waste / incineration is now more prevalent than recycling in England, and has driven an increase in waste emissions in the years before the COVID-19 Pandemic. Continued, unchecked growth could undermine the sector's contribution to UK emissions targets and efforts".[viii]

The CCC advised that "In line with the requirements set out in the draft National Planning Statement for Renewables, new EfW should not be built unless they can demonstrate compatibility with waste treatment capacity needs and the waste hierarchy…Defra should urgently complete and publish an up-to-date assessment of residual waste treatment capacity needs for the UK out to 2050, consistent with committed and proposed targets…"[viii]

UK Government proposals to halve residual waste

In March 2022 the UK Government proposed that one of the environmental targets to be set under the Environment Act was a target for "halving the waste that ends up at landfill or incineration by 2042" relative to a 2019 base year.[ix]

Justifying this target, the Government stated that "Tackling residual waste reduces the environmental impacts of treatment, including air, soil, and water pollution…It is more sustainable to prevent waste completely and, where waste is unavoidable, to recycle it…The proposed target can drive both waste minimisation and recycling of unavoidable waste…" and that a reduction in residual waste treatment "…will lead to an increase in the reuse, repair and remanufacture…and move England's waste system to a more circular economy".[x]



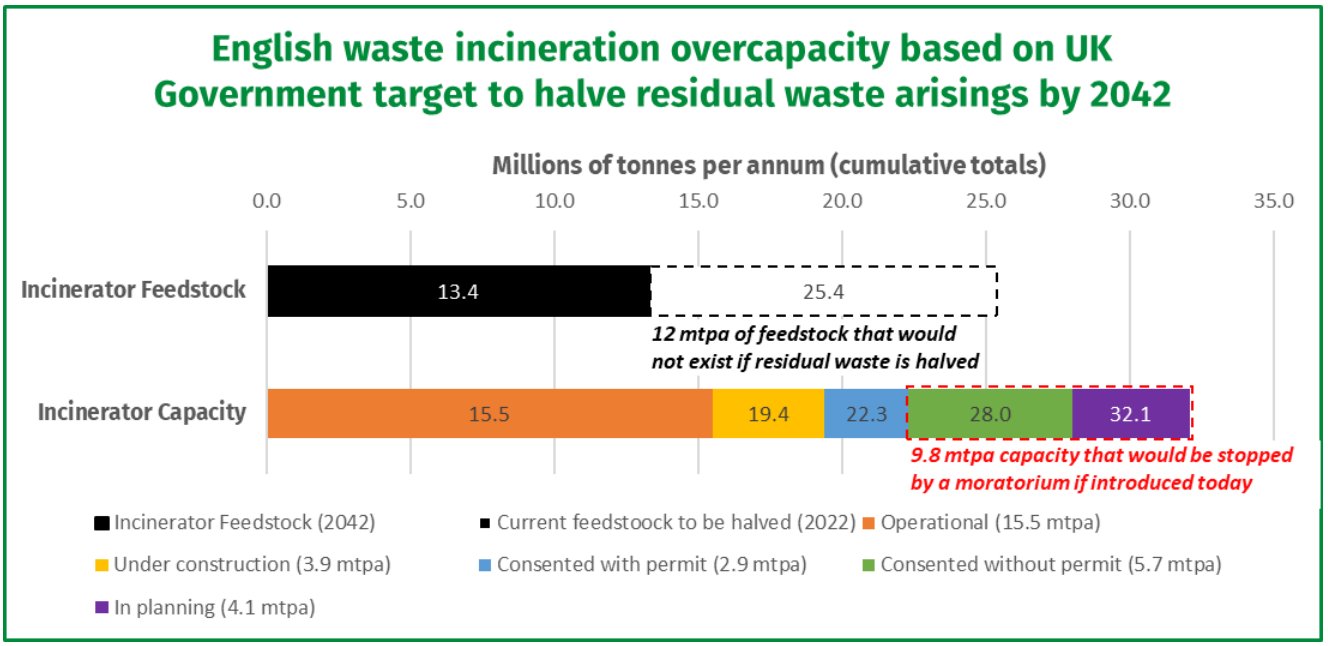
As shown above, potential English incinerator feedstock (around 45% from households and 55% from other sources such as C&I waste from businesses) would fall from around 25.4Mt (million tonnes) in 2022 to only around 13.4Mt by 2042. As we currently have around 19.4Mt of capacity operational and under construction, even if no new incinerators enter construction, England could soon see incineration capacity exceed domestic supply.[xi]

UKWIN's assessment of English incineration overcapacity

The chart below shows English incinerator feedstock falling from the current level of around 25.4Mt to 13.4Mt by 2042 in line with Government targets. There is currently 15.5Mt of operational incineration capacity in England, and this is set to increase to 19.4Mt once incinerators that are currently under construction become operational. This combination of increased capacity and reduced feedstock would result in around 6 million tonnes of incineration overcapacity in England by 2042 (i.e. 19.4Mt capacity minus 13.4Mt feedstock).[xi]

English incineration overcapacity would be even worse if incinerators that have been granted both planning permission and an environmental permit were to be built. An immediate moratorium that brought an end to the issuance of environmental permits would cap English incineration overcapacity at around 9 million tonnes (i.e. 22.3Mt capacity minus 13.4Mt feedstock).

As can be seen from the chart below, without such a moratorium, incineration capacity in England could grow to more than 30 million tonnes at a time when feedstock is expected to fall to around 13 million tonnes.[xi]



Why not just leave it to the market?

According to Defra "a substantial quantity of material appears to be going into the residual waste stream, where it could have at least been recycled or dealt with higher up the waste hierarchy". Defra estimates 55% of England's residual waste feedstock is readily recyclable, with 76% readily or potentially recyclable, and much of the rest substitutable.[xii]

The consultancy Tolvik is regularly asked to assess the future balance between residual waste supply and incineration capacity. According to their Director, those proposing incineration projects are increasingly abandoning their 'common sense' and asking for unreasonable assumptions to be made in due diligence reports to justify new capacity.[xiii]

Defra has long recognised how a number of waste market failures favour incineration over less environmentally-damaging options.[xiv] Without a moratorium we can expect companies to continue to build new incinerators, even if this comes at the expense of recycling and waste minimisation,[xv] and, with incinerators costing hundreds of millions of pounds to build, operators will not voluntarily close them.

References

[i] Welsh Government Press Release: 'Wales takes action on Circular Economy with...a moratorium on large-scale waste energy' (24th March 2021) available at https://gov.wales/wales-takes-action-circular-economy-funding-upcoming-reforms-plastic-and-moratorium-large-scale

[ii] 'Beyond recycling: Our plan to make the circular economy in Wales a reality' (2nd March 2021) available at https://gov.wales/beyond-recycling-0

[iii] 'Stop, Sort, Burn, Bury? - Independent Review of the Role of Incineration in the Waste Hierarchy in Scotland' (10th May 2022) available at https://www.gov.scot/publications/stop-sort-burn-bury-independent-review-role-incineration-waste-hierarchy-scotland/documents/

[iv] 'Moratorium on waste-to-energy incinerators' (20th June 2022), available at https://www.bbc.co.uk/news/uk-scotland-scotland-politics-61825698

[v] Secretary of State Decision Letter for the Wheelabrator Kemsley North (19th February 2021) available at https://infrastructure.planninginspectorate.gov.uk/projects/south-east/wheelabrator-kemsley-generating-station-k3-and-wheelabrator-kemsley-north-wkn-waste-to-energy-facility/

[vi] Defra answer to Parliamentary question (11th July 2022) available at https://questions-statements.parliament.uk/written-questions/detail/2022-06-30/28465

[vii] 'Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)' (September 2021) available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015236/en-3-draft-for-consultation.pdf

[viii] 'Progress in reducing Emissions: 2022 Report to Parliament' (June 2022) available at https://www.theccc.org.uk/publication/2022-progress-report-to-parliament/

[ix] 'Delivering on the Environment Act: new targets announced and ambitious plans for nature recovery' (16th March 2022) available at https://www.gov.uk/government/news/delivering-on-the-environment-act-new-targets-announced-and-ambitious-plans-for-nature-recovery

[x] 'Consultation on environmental targets' available at https://consult.defra.gov.uk/natural-environment-policy/consultation-on-environmental-targets/

[xi] Estimates of falling waste are based on Defra's estimates of municipal (which includes C&I) waste arisings set out in the Evidence Annex of the Government's Resources and Waste Strategy and Defra's estimates of reduction in residual waste from the Environment Targets consultation. See UKWIN's Incineration Overcapacity Methodology technical paper available at https://ukwin.org.uk/files/pdf/Incineration-Overcapacity-Methdology.pdf

[xii] 'Resources and waste strategy for England: monitoring and evaluation' (6th August 2020) available at https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england-monitoring-and-evaluation

[xiii] 'Understanding the risk of EfW overcapacity' (19th August 2020) available at https://www.letsrecycle.com/news/understanding-risk-efw-overcapacity/

[xiv] 'The economics of waste and waste policy' (14th June 2011) available at https://www.gov.uk/government/publications/the-economics-of-waste-and-waste-policy

[xv] 'Examples of incineration harming recycling' (July 2019) available at https://ukwin.org.uk/files/pdf/UKWIN-Examples-of-incineration-harming-recycling-July-2019.pdf