



A net zero future...

There has been some progress in reducing greenhouse gas (GHG) emissions from the UK food industry, but there's a long way to go to reach a 50% reduction by 2030, as Ron Alalouff reports.

A new analysis of total greenhouse gas emissions linked to the production and consumption of food and drink in the UK shows the extent of emissions reductions achieved between 2015 and 2019, and sets out further reduction targets to 2030.

The report – UK Food System GHG from sustainability and environmental charity WRAP – comes after its Courtauld 2030 initiative, which aims for a 50% absolute reduction in GHG

emissions associated with production and consumption of food and drink in the UK against a 2015 baseline.

WRAP says a new GHG emissions model has been developed to collate emissions estimates across all stages of the UK food and drink value chain, with inputs such as electricity, fuel, refrigerants, transport and packaging. The new modelling also enhances previous estimates by including aspects such as emissions linked to tropical deforestation, refrigeration

and home deliveries, as well as updating underlying emissions factors with the latest sources.

Key findings for the period 2015-2019 are:

- Total UK emissions are estimated to be 158 MtCo²e, equivalent to 35% of UK territorial emissions. Emissions linked to the production and distribution of food that becomes waste are around 36 MtCo²e (23% of total food system emissions)



- There has been around an 8% absolute reduction in GHG emissions in the UK's food and drink system. Most of this reduction is due to decarbonisation of the UK's electricity grid (the emissions associated with consuming a unit of electricity were 45% lower in 2019, compared to 2015)
- Significant electricity consumers – such as food manufacture, hospitality and foodservice, retail and households – have seen the biggest reductions in GHG emissions
- Emissions associated with production abroad are hard to quantify but are significant (more than one third of the total) and have stayed broadly static in relative terms
- GHG emissions from agriculture have remained largely unchanged
- Transport emissions have increased moderately, by around 1 MtCo²e
- Packaging emissions remain low compared to those associated with food production. Environmental concerns over packaging – in particular, single-use plastics – are not well captured in terms of GHG emissions, as these do not reflect the impacts of marine pollution and bioaccumulation.

> Successful strategies have resulted in low and decreasing food waste-related emissions.



> Significant electricity consumers have seen the biggest drop in GHG emissions.

- Emissions from refrigerants have decreased by almost 2 MtCo²e
- Successful food waste prevention and diversion strategies are resulting in low and decreasing emissions associated with food waste management.

Pathway to 50%

For the first time, WRAP has modelled the scale of GHG emissions reductions that could come from different types of interventions, such as zero deforestation, decarbonising energy and transport, and preventing food waste. A 50% reduction in GHG emissions by 2030 is achievable, it says, and this can mainly be achieved by delivering on existing targets at the right pace.

In terms of specific industry action, this will require: a continued focus on decarbonisation of operational emissions – renewable energy, low carbon refrigerants, heat and transport are important; a better understanding of wider supply chain emissions; achieving zero deforestation commitments in supply chains; action on food waste; and influencing consumption behaviours.

While the analysis drew on more than 70 published sources, there are significant uncertainties with some of

the existing estimates, and there are areas where further work is needed, including further investigation of:

- Trade-offs and potential for unintended consequences, to better understand the implications of these and ways to minimise them
- How interventions could be best targeted to reducing the UK's overseas footprint, as well as UK territorial emissions
- Cost (eg. marginal abatement costs) and feasibility – the model developed to date does not include cost assessments or feasibility of different interventions. Building these in would help determine the most efficient, practical or cost-effective pathway to achieving reductions.

“A 50% reduction by 2030 is possible, but we need action as much as talk,” said Marcus Gover, CEO of WRAP. “And the benefits go far beyond the environment, as a more sustainable food system is crucial to feed our expanding global population against a backdrop of changing climate and less predictable weather patterns. Policymakers must pay attention to the critical role food has in helping deliver net zero.” **FMT**

UK Food System GHG (WRAP): <https://wrap.org.uk/resources/report/uk-food-system-ghg-emissions>

