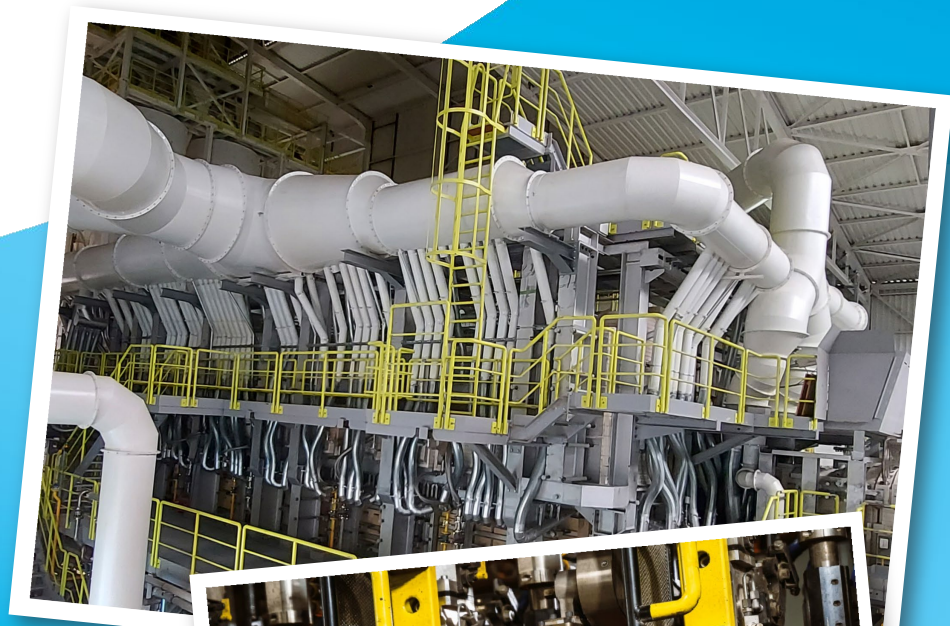


# Ardagh Glass Packaging's NextGen Furnace

The NextGen Furnace is a groundbreaking, hybrid furnace, built at the Ardagh Glass Packaging (AGP) facility in Obernkirchen, Germany. It began commercial glass bottle production in October 2023 and has since been gradually ramping up the proportion of electrical heating to a target of 80%, to significantly reduce CO<sub>2</sub> emissions. It is the world's first hybrid furnace for container glass packaging.

NextGen  Furnace



## Project aim

To decarbonise container glass production with breakthrough hybrid melting technology.

To reduce CO<sub>2</sub> emissions from the furnace by replacing gas combustion with up to 80% electrical heating using renewable electricity from solar installations in Germany.

## Awards

- Edie Net Zero – Manufacturer of the Year award
- Packaging Europe Sustainability Awards – Climate award
- DENA German Energy Agency – Think Big! award

Approximately  
35,000 tonnes  
of CO<sub>2</sub> saved in  
the first year

## Benefits



The furnace can achieve commercial-scale production of up to 350 tonnes per day.



Unlike other electric melting furnaces, the NextGen Furnace uses the same high levels of recycled cullet as conventional furnaces.



The furnace currently produces amber glass. In 2025, it will be developed to include green and flint colours, based on commercial demand, offering customers even more versatile, high-quality, lower-carbon glass packaging options.<sup>1</sup>



For amber glass production the furnace operates with an average of 60% electrical heating, resulting in a 64% reduction in CO<sub>2</sub> emissions per bottle.<sup>2</sup>

## Current status



Approximately 35,000 tonnes<sup>3</sup> of CO<sub>2</sub> have been saved in the first year of production.



Tests are ongoing to explore the operational window of furnace behaviour & stability in the regions of the 60% electrical heating level and above.



The furnace has been showcased at multiple glass conferences, and presented to the glass community, with numerous furnace tours since production began.

<sup>1</sup> CO<sub>2</sub> emissions reductions for green and flint glass production are still to be verified.

<sup>2</sup> LCA calculation: January to June 2024.

<sup>3</sup> Scope 1 and 2 emissions.

## Challenges

To roll out the technology to other AGP facilities, there is an urgent need for electrical grid connection with the appropriate infrastructure and regulatory support, in each location.

## Opportunities

Brand owners can take advantage of lower-carbon amber, green and flint-coloured glass packaging, enjoying the beauty of this high-quality material in a more sustainable way.<sup>1</sup>



Scan the code to see the NextGen Furnace in action

Supported by funding from BMWK and the European Union

