

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 is the world's first hybrid furnace for container glass packaging and has reduced CO₂ emissions by over 60% per bottle produced.¹

NextGen  Furnace

Project aim

To decarbonise container glass production with breakthrough hybrid melting technology.

To reduce CO₂ emissions from the furnace by replacing gas combustion with 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
CO₂ 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.²
-  For amber glass production the furnace operates with an average of 60% electrical heating, resulting in a 64% reduction in CO₂ emissions per bottle.¹

Current status:

-  Approximately 35,000 tonnes³ of CO₂ have been saved in the first year of production.
-  Tests are ongoing to understand the furnace behaviour & stability at 60% electrical heating and above.
-  The furnace has been showcased at multiple glass conferences, and presented to the glass community, with numerous furnace tours since production began.

¹ LCA calculation: January to June 2024.

² CO₂ emissions reductions for green and flint glass production are still to be verified.

³ 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.²



Scan the code to see the NextGen Furnace in action

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