

Avoided Emissions Methodology Summary

Batch Integral Quench Avoided Emissions

Our assessed avoided emissions demonstrate progress against our commitment to deliver low carbon processing services that enable the achievement of our customers' emission reduction goals.

Our assessment is underpinned by our heat treatment services using Batch Integral Quench ('batch IQ'), also known as 'sealed quench', furnaces, with services from batch IQ representing approximately 25% of Group revenue. Heat treatment is typically an energy intensive step in component manufacturing, and our investment in efficiency and innovation enables customers to tackle this crucial element of their product lifecycle.

Offered as part of our atmospheric processing services, batch IQ, when operated by Bodycote, provides our customers with a more efficient heat treatment processing per kilogram of parts treated compared to typical in-house treatment using the same technology. These efficiency gains are primarily driven by our ability to merge batches for processing which optimises the utilisation of our furnaces, alongside our operational efficiency improvements. Our batch IQ furnaces enable a wide range of heat treatment services, including gas carburizing, carbonitriding, neutral hardening, annealing and normalizing. They also support ferritic nitrocarburizing (FNC) and marquenching for enhanced surface properties and minimized distortion.

Avoided Emissions Results

Total Emissions Avoided:

In 2025 we avoided 15,632 tCO₂e through our batch IQ sales.

Our target is to enable our batch IQ atmospheric processing customers to avoid 125,000 tCO₂e by 2030 on a cumulative basis. Since 2023 we have progressed

48% of the way to achieving this target, avoiding a total 48,747tCO₂e.

To date, our results have not been verified by a third-party; however, the calculation model that underpins our annual calculation methodology has been independently reviewed by an external partner (SLR Consulting) and is validated as being aligned to the World Business Council for Sustainable Development (WBCSD) Guidance on Avoided Emissions ([Guidance on Avoided Emissions v2.0: Drive Innovations and Scale Solutions Toward Net Zero | WBCSD](#)).

Calculation Approach and Methodology

We assess avoided emissions in line with the World Business Council for Sustainable Development's (WBCSD) Guidance on Avoided Emissions, using a year-on-year timeframe.

We define the assessed solution as batch IQ heat treatment of customer parts at Bodycote facilities for customers that have batch IQ capabilities in-house only.

The reference scenario is defined as customer in-house treatment using batch IQ furnaces applicable to customers who already have batch IQ capability. The assessment excludes customers with no in-house heat treatment capability.

To calculate avoided emissions, we assess the energy inputs required at each stage of the heat treatment process for both the solution and reference scenario. For this, we use a range of input data including the type of furnace, volume of parts processed, treatment times, furnace type, location, type of processing gas and types of energy used.

We apply efficiency assumptions to the total energy inputs required at stage of this process for the solution (i.e., Bodycote scenario) to reflect efficiencies gained through batch merging and operational energy efficiency improvements.

The relevant activity- and location-specific emission factor is applied to calculate emissions of the solution and reference scenario and avoided emissions are then assessed through calculating the difference between these two cases.

Calculation Boundary:

The boundary for the calculation covers the use phase of the solution only. The use phase covers several processes involved in atmospheric treatment using batch IQ furnaces, requiring fuels, electricity, process gases and consumables as the key inputs and sources of emissions.

Therefore, GHG emissions that occur throughout other phases of the (e.g., transportation of parts to / from facilities and the embodied carbon of the batch IQ furnaces) have been excluded as they have been deemed immaterial to the assessment.

Assumptions and Limitations:

Energy consumption requirements per kilogram of parts treated and efficiency assumptions are derived from in-house testing of the inputs and performance from Bodycote's own operations.

We apply additional assumptions on total utilisation of the available furnace capacity and time in the year that furnaces are utilised for production across the solution and reference scenarios.

Future Assessments

Over time, we intend to expand our focus to include additional processes in our avoided emissions assessment. This will further guide our customers towards carbon reduction and demonstrate the full extent of our impact.

Notes

1. We comply with the WBCSD's three eligibility gates:

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- i. We have set near-term science-based targets to reduce our Scope 1 & 2 emissions by 46.2% by 2030 from a 2019 base year
 - ii. Our batch IQ heat treatment services align with the Intergovernmental Panel on Climate Change (IPCC) mitigation options for energy efficiency;
 - iii. Batch IQ has a direct and significant decarbonising effect.
2. We currently estimate that we receive approximately 25% of our total revenue from batch IQ.
3. We have not identified any negative side-effects or trade-offs in our batch IQ service offering.
4. We have worked to identify uncertainties in the calculation methodology and aim to reduce this over time through enhancing our data tracking systems. These primarily arise from the relationship between sales data and volumes treated which we apply to estimate total volumes of parts treated and the limited global representative of the test data which was used to derive the assessment parameters.

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