



GridBeyond®



United Cast Bar:

Pioneering new energy frontiers
for the metals industry



GridBeyond®



Key project details

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Industry

Metal Casting

Activity

Foundry for continuous cast iron bar

Project Type

- Dynamic Firm Frequency Response (DFFR)
- Peak avoidance - Triads & DUoS
- Energy Optimisation
- 500kW battery installation

Project Facts

- 45,000 tonne capacity foundry
- 1.9 Megawatts declared to National Grid
- Reduced energy consumption, optimised operating efficiency and high financial reward gained

Customer Goal

Accomplish the environmental commitments made by UCB

UCB (UK) Benefits

Unlocked Revenue Stream

delivered from National Grid via GridBeyond

Reduced Carbon Footprint

Optimised impact of the company's operations whilst contributing to the decarbonisation of the grid

Future Proofed Flexibility

Flexibility to switch seamlessly to higher revenue schemes as they become available

Business Intelligence

Energy monitoring & reporting

Fully Financed Installation

Installation with no cash outlay, including no upfront cost

No Risk To Operations

Guaranteed Triad Avoidance

Enhanced site resilience



United Cast Bar has the largest portfolio of cast iron bar available worldwide

High Reward Opportunity



United Cast Bar (UCB) partnered with GridBeyond to deliver a best-in-class energy solution, that enabled them to optimise their power usage onsite at its manufacturing plant in Chesterfield.

United Cast Bar (UK), part of the United Cast Bar Group, is one of the world's leading and most successful manufacturers of continuously cast-iron bar. Committed to environmental responsibility and sustainable manufacturing processes, UCB needed a partner that understood its mandate for a low-carbon future, and could deliver a future-proof project whilst boosting business profitability.

Just over 3 years ago, UCB were looking for a trusted and experienced technology partner to intelligently manage and optimise their energy demand. In using GridBeyond's energy intelligence and control platform, UCB lead the metals industry and were able to generate revenue from National Grid programmes, avoid peak charges, monitor and analyse energy consumption patterns whilst reducing their carbon footprint and optimising their equipment performance.

World-class technology balances the frequency of the electricity grid by controlling the demand of large energy consumers, enabling the integration of more intermittent renewables onto the electricity system.



"It's good to know we're in safe hands. GridBeyond's technology, engineering experience and expertise has meant we have been able to earn large sums, generate significant savings, and meet our commitment to the environment without any impact on operations."

James Brand, Managing Director (Foundries), United Cast Bar

Optimised Solution



Fast forward to 2017, and UCB were looking to take their energy resilience to the next level with an on-site commercial battery.

Again, UCB needed to maintain their reputation as the vanguard in energy within metal manufacturing, which is why they turned to GridBeyond for guidance on a suitable provider. GridBeyond introduced their partner ESB Smart Energy Services, who invested in and managed the installation and implementation of a 500 kW battery storage solution located at UCB Chesterfield.

The battery fit perfectly into the portfolio of assets controlled by GridBeyond's grid balancing platform, enabling United Cast Bar to participate in National Grid's Dynamic Frequency Response programme and enhance their peak avoidance.

Thanks to GridBeyond's world-first hybrid battery & demand network, the platform combines the energy flexibility in the battery with the flexibility in UCB's on-site equipment and machinery to provide an increased amount of energy demand availability. By combining control of large demand assets with the control of the highly flexible battery assets, GridBeyond's hybrid platform allows UCB to maximise the value for their participation, essentially increasing their revenues.



How does it work?



We connect the metal industry's assets

Exhaust fans, induction furnaces, sand mixers, dust extractors, compressors and more...

Suitable assets



Exhaust Fan



Induction Furnace



Sand Mixer



Dust Extractor



Compressors

Connected to our system



Balancing the grid



Via our platform



Delivering:



Recurring Revenue



Savings



Sustainability



GridBeyond®

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