



LIFE BEVERAGE - BEVERAGE - Brewing Energy saving pilot for an innoVative, Efficient, and enviRonmental beverAGE process

LIFE15 CCM/BE/000090



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Project description:

Background

The brewing process is very energy-intensive and requires significant amounts of water, compressed air, lighting and refrigeration. The standard process for brewing a beer or a malt-based beverage is unsustainable in terms of water consumption and thus causes problems in terms of water scarcity. The most energy-intensive part of the brewing process is boiling, which consumes up to 20% of the total heat required and generating high levels of greenhouse gases. There is a clear need for a more cost-effective and sustainable process that meets the goals of the EU Strategy on adaptation to climate change by lowering use of resources such as water, and of climate change mitigation policy by contributing to the transition towards a low emission and climate-resilient economy.

Objectives

The LIFE BEVERAGE project aims to reduce the emission of greenhouse gases caused by beverage production through a new process that will be piloted at breweries in Belgium and the UK. The new system is based on the principle of stripping unwanted components from a liquid by sparging an inert gas. This simulates the effect of boiling without the heating requirements. When applied to breweries in which no energy-reducing measures have been installed in the boiling step, the technology will enable a reduction of the average evaporation

rate from 7.5% to zero, improving water and energy efficiency and offering potential climate advantages compared to current best practice. If the project is successful the technology could be applied to other breweries, thus enabling this sector to contribute to the EU's shift towards a resource-efficient, low-carbon and climate-resilient economy.

Therefore, LIFE BEVERAGE is a concrete example of a LIFE Climate Change Mitigation action contributing to the development and implementation of European Union climate-related policy and legislation, in particular with regard to energy consumption and greenhouse gas emissions from intensive industrial production.

Expected results: The project expects to achieve the following results:

- CO2 emissions: carbon footprint reduction of the brewing process by at least 460g of CO2 equivalent per hectolitre (8.6% reduction), which, for the pilot plants, gives a saving of 3 930 tonnes of CO2 equivalent on an annual basis;
- Energy efficiency: an overall saving of at least 19.4 GWh, which represents an average reduction of 12.1% of the plants' energy usage;
- Water consumption: because less water is evaporated during the boiling step, less water needs to be added during later steps in the process, leading to an effective saving of 1% of water in the production process; and
- Replicability: roll-out of the technology in another five plants, with a combined total production of 411.5 million hectolitres of beer per year, so that AB-InBev can study the feasibility of its implementation in all applicable plants worldwide (66 plants are already eligible for the technology).

Results

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Environmental issues addressed:

Themes

Climate change Mitigation - Energy efficiency

Climate change Mitigation - GHG reduction in EU ETS sectors

Keywords

energy efficiency, emission reduction

Target EU Legislation

- Industry and Product Policy
- Directive 2010/75 - Industrial emissions (integrated pollution prevention and control) (24.11.201 ...
- Climate Change & Energy efficiency
- COM(2011)112 - "A Roadmap for moving to a competitive low carbon economy in 2050" (08.03.2011)
- Directive 2012/27 - Energy efficiency (25.10.2012)

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Anheuser-Busch InBev nv/sa
Type of organisation	International enterprise
Description	Anheuser-Busch InBev is a publicly-traded company based in Leuven, Belgium. It is the leading global brewer and one of the world's top five consumer products companies. As the world's largest brewer, AB Inbev has an important role to play in addressing serious environmental changes such as water scarcity, resource depletion and climate change.
Partners	AB InBev UK Limited, United Kingdom

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Administrative data:

Project reference	LIFE15 CCM/BE/000090
Duration	01-JUL-2016 to 30-JUN -2018
Total budget	1,558,510.00 €
EU contribution	863,105.00 €
Project location	Région Wallonne(België - Belgique) South West (UK)(United Kingdom)

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Read more:

Brochure	Title: "Brewing Energy saving pilot for an innoVative, Efficient, and enviRonmental beverAGE process" (3.07 MB) Editor: AB InBev No of pages: 8
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