

# Energy Efficient Design

The most energy efficient stout brewery in the world

## A Heritage of Sustainable Investment

Established in 1759 by Arthur Guinness, St James's Gate Dublin has been at the heart of the world's brewing industry for over 250 years.

Brewhouse No.4, using an Energy Efficient Design (EED) methodology and backed by €169 million capital investment, is one of the world's most technologically advanced and environmentally sustainable breweries.

## Organised for Efficiency

Brewing is an energy intensive activity. Efficiencies identified and implemented at the design stage will save energy and operating costs for the total lifetime of the Brewery.

The EED process optimised capital investment by engaging all stakeholders including operators and suppliers at an early design stage. This process runs in parallel to a typical project lifecycle and does not impact on the project schedule.

## Brewhouse No.4 is on target for annual reductions of

- 25% Steam, equivalent to heating 3,500 homes
- 17% Electricity, equivalent to powering 2,300 homes
- 12% CO<sub>2</sub>



## Engineering for Sustainability

EED is now part of Diageo's Engineering Excellence six pillars and is integral to delivering capital investment in global beer production. Diageo's Kaasi brewery in Ghana is projecting energy savings of 30%. The EED process will continuously improve as it is applied to new projects.

## Energy Performance, Managed by Design

From grain to glass, Diageo has set challenging environmental targets with key performance metrics for energy, water, carbon, waste and packaging.

Facilitated by the EED expert, current thinking, processes and operations were challenged and analysed in a structured and systematic way, leading to a range of financial, energy and environmental innovations and insights being developed by the project team.

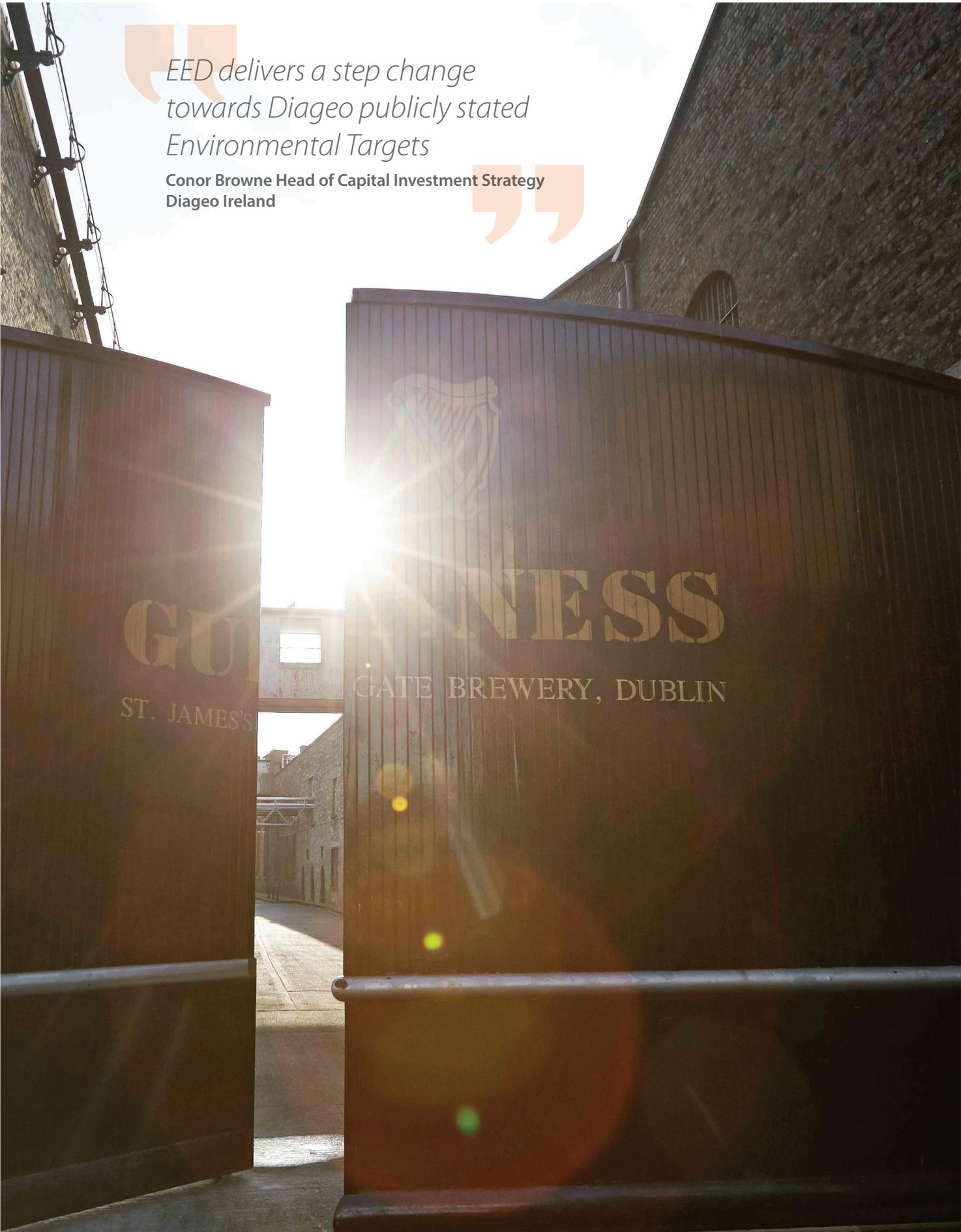
## EED Benefits

- Reduced energy demand in the main brewing process
- Recovery of energy from one process for use in another
- Reduced baseline demand of all utilities
- Reduced vapour loss to the atmosphere
- Energy knowledge harnessed for future investments
- Maximum value from capital investment
- LEED & Breeam accreditation

## More Information

Energy Efficient Design is best implemented in accordance with I.S. 399, the new Irish Management System Standard. For support and advice on its implementation, contact SEAI on +353 1 808 2100 or [www.seai.ie](http://www.seai.ie)





*EED delivers a step change  
towards Diageo publicly stated  
Environmental Targets*

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Ireland's EU Structural Funds  
Programmes 2007 - 2013

Co-funded by the Irish Government  
and the European Union



The Sustainable Energy Authority of Ireland is partly financed  
by Ireland's EU Structural Funds Programme co-funded by the  
Irish Government and the European Union.