Diageo - Leadership in Energy Efficiency

Referencing EED case studies - Project Phoenix (€168m) & Guava (£26m)

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Diageo Global Beer Division
Outcome

• How Diageo is working to achieve **World Class Leadership** in its approach to Design and Management of Energy through its capital investments.

• Overview the **approach taken** and highlight the **benefits we have gained** from applying EED on two flagship Investment projects.

• Share how **we are securing now the future benefits**, as part of Diageo's Global **Engineering Excellence** Program.
Leadership through Energy Efficient Design (EED)

Context – Who we are

Global company founded in 1997
Global Brands - No 1 Stout, Gin, Whiskey, Vodka, and Cream Liquor.
Sold in more than 180 markets
Employs over 25,000 people worldwide.
Diageo has grown significantly since 2007 and have made great progress.

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<thead>
<tr>
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<th>Since 2007</th>
<th>Units</th>
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<tbody>
<tr>
<td>Water Efficiency</td>
<td>21% Improvement</td>
<td>L water / L packaged</td>
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<tr>
<td>Greenhouse Gases</td>
<td>30% reduction</td>
<td>Tonnes</td>
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<tr>
<td>Waste to Landfill</td>
<td>82% reduction</td>
<td>Tonnes</td>
</tr>
<tr>
<td>Effluent</td>
<td>15% increase</td>
<td>Tonnes BOD</td>
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Group environmental data is reported externally as part of Diageo annual reporting and key metrics are independently assured by KPMG. The St. James’s Gate Brewery will play a critical role in ensuring the Diageo European Beer Network achieves these targets.
Our Leadership Journey - moving up the value chain from Energy Management To Investment In Energy Design
Putting the appropriate **Organization in place** which is focused on Energy Design.
Leadership through Energy Efficient Design (EED)

**The Approach Taken**

Following a **simple, robust and consistent process** - see SEAI website for details on the methodology

**Benefits**

- It minimises Energy usage in the Operational phase.
- It addresses Operational phase energy management during the Design phase e.g. Metering Plans.
- It reduces Capital cost in both Utilities and Processes due to reductions in plant requirements.
- It can be readily integrated into existing projects, it runs in parallel without impacting the schedule.

**Baseline Energy Consumption Report**

All improvements will be marked versus this data in order to get a true reflection of savings made.

**Register of Opportunities**

A list of quantified and prioritised Energy Saving Ideas for inclusion in the project.

**Implementation Validation and Verification.**

**Meter Mapping**

Addresses Operational Phase Energy Mgt.
Energy Benefits

Guava also on track to DELIVER SUBSTANTIAL ENERGY SAVINGS IN GHANA

Received Benefits

Energy reduction replication
Energy and Financial Benefits

Substantial Savings
Substantial savings in upfront capital investment versus retrofit.

Benefiting Operation Competitiveness
Sustained revenue savings benefiting operation competitiveness.

Received Benefits

Energy reduction benefits examples

Overall EED on track to achieve
Annual Steam Saving of 25%
from 85 – 63.6 MJ/Hl.

Overall EED on track to achieve
Annual Elec Saving of 15%
from 32.3 – 27 MJ/Hl.

Overall EED on track to achieve
Annual Water Saving of 22%
from 4.13 – 3.24 Hl/Hl.
Reputational Achievements

1st to Achieve LEED & Breeam Accreditation
On track to be first industrial process facility to achieve both LEED and BREEAM Accreditation.
People Engagement – Internal and External

Internal - Site operations

Ensures and Integrated Energy Approach
Gets great buy in as Design for Energy Management (Dfem) ensures an integrated energy approach.

Maximised Value from Capital Invested

Step Changes
Step changes environmental and revenue cost performance for the site

External - Approved Suppliers help roll out of EED

Suppliers can Differentiate
Provides new way for suppliers to differentiate and add value

Suppliers CSR Agenda
Supports their own CSR agenda
Knowledge Share - Internal and External

**Internal**

**Engineering Website**
Engineering website provides Global knowledge sharing platform on EED including tools and techniques e.g. register of opportunities for ci

**Case Studies**
Case studies developed and shared

**Breaking News**
Newsletters and “Breaking News” comms

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**External**

**Sharing Best Practice**
Diageo supports knowledge sharing through a range of activities including demonstrating leadership at events like:-
- Eufores EU presidency (15th June ‘13)
- Irelands Energy Show (12th March ‘13)
- Future of Food UK (18th June ‘14)
Future Benefits

What we are doing to secure EED advantages

EED is now integral to delivering capital investment across our global beer division

Six “Must Do’s” of Engineering Excellence

1. We have adopted the EED Organisational Model
2. Established project and capital investment EED Performance KPIS
3. Extending our Approved Suppliers model to assess their approach to EED
4. EED incorporated into our Contractual Terms and Conditions
5. Worked with NSAI, SEAI and industry to make EED an Irish Standard and in future a European standard.
Thank you

For opportunity to share our journey to delivering **World Class Leadership and performance** in relation to **Energy Design and Management**.

[Images of industrial buildings and facilities]

[Logo: Energy Efficient Design, 100% Green, BEST 2013, DIAGEO Engineering Excellence]