BEIS Industrial Energy Efficiency Accelerator (IEEA)

Opportunities for UK Industry
Agenda

IEEA Programme Overview

Target Technologies

Eligibility Criteria

Competition Process, Timeline and Applications

Next Steps
Programme Team

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PLEASE SEND ENQUIRIES TO IEEA@CARBONTRUST.COM
IEEA Objectives and Information

Key Objectives:
1. Strengthen the global competitiveness of UK industry while simultaneously delivering decarbonisation targets
2. Deploy industrial EE technology demonstration projects by working with project partners to mitigate risks
3. Commercialise innovative industrial EE technologies (and processes) through incubation support
4. Unlock large scale private sector investment in EE technologies

Key Information:
- Programme value: £9.2 million
- Timeline: 4 Years (2017-21)
- Technology / sector neutral
- Success metric: Total UK impact (energy and carbon savings)

Funder: Department for Business, Energy & Industrial Strategy
IEEA – What is it?

• **Overview:** A competition which will identify and accelerate deployment of new energy efficient technologies (and processes) to UK industry

• **Key focus:** Innovations with large cross-sector energy and carbon reduction impact, either from novel technologies or known technologies in new sectors

• **Target sectors:** All industrial and manufacturing sectors (UK demonstration sites only) – both primary and pilot production lines

• **Applicants:** The programme is open to private sector companies and universities; public sector bodies are not eligible.

• **Funding:** Funding will be awarded on a competitive basis, with awards of £1m+ for 10-15 projects (40-60% capital support of eligible costs)
## IEEA – Why is it needed?

Innovation is valued for UK industry competitiveness but barriers exist:

<table>
<thead>
<tr>
<th>Market Risk</th>
<th>First mover risk &amp; advantage</th>
</tr>
</thead>
</table>
| Operational Risk | Management focus is often on best practice instead of innovation  
                     Innovations are often deployed only in new build plants due to concerns around product risk |
| Capital Constraints | Raising funding for innovation deployment can be a challenge, particularly for first movers  
                          Growth / operational projects tend to be prioritised over energy savings opportunities |
| Knowledge & Deployment | Lack of awareness can result in viable technologies in one sector not being deployed in another  
                                       Small companies may have viable technologies but are unable to find demonstration sites |
IEEA – Phases

Phase 1 2017 →
• £2.7 million funding awarded to 7 successful projects
• Stimulated interest for projects to apply for Phase 2
• Demonstrator projects currently being developed and deployed

Phase 2 2019 →
• Application window open 1st Feb – 30th April
• Projects expected to start July/August 2019
• Completion by March 2021 at the latest
## Why take part?

<table>
<thead>
<tr>
<th>Industrial Company</th>
<th>Technology Developer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Awareness</strong> of promising technologies</td>
<td>1. Understand <em>industry needs</em></td>
</tr>
<tr>
<td>2. Understand <em>innovator needs</em></td>
<td>2. <strong>Capital</strong> contribution</td>
</tr>
<tr>
<td>3. <strong>Capital</strong> contribution</td>
<td>3. Receive <em>incubation support</em> for commercialisation</td>
</tr>
<tr>
<td>4. <strong>Project support</strong> for a demonstration</td>
<td>4. Access <em>investor</em> networks</td>
</tr>
<tr>
<td>5. <strong>Reduce energy use</strong>, costs &amp; emissions</td>
<td>5. Benefit from <em>positive press</em></td>
</tr>
<tr>
<td>6. Enhance <em>competitiveness</em></td>
<td>6. Increased <em>market confidence</em></td>
</tr>
<tr>
<td>7. Gain <strong>first mover</strong> advantage</td>
<td>7. Potentially secure <em>new IP</em></td>
</tr>
<tr>
<td>8. <strong>Reputational</strong> benefits</td>
<td></td>
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</table>

### Project Support

<table>
<thead>
<tr>
<th></th>
<th>Project Support</th>
<th>Incubation Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Company</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Technology Developer</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Incubation support is also available

The technology developers in successful project applicants will have access to the Carbon Trust’s bespoke incubation offering:

1. Assess incubation needs and develop plan
   - Assess project incubation needs
   - Prioritise and develop a bespoke incubation plan to address key adoption, commercialisation and deployment gaps

2. Deliver incubation support
   - Prioritised support across 8 core areas:
     - Market
     - Sales & business development
     - Strategy & business planning
     - Technology & intellectual property
     - Product
     - Supply chain and operations
     - Team
     - Funding

3. Prepare for scale
   - Support for up to 6 months after the project:
     - Skills strengthening
     - Business model refining
     - Marketing literature
     - Awareness raising
     - Building sales pipeline
     - Assess to financing
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Technologies which are TRL 9 in other geographies, or other sectors, may also be considered for support.
Use energy efficiently

Alternative materials & energy sources

Core manufacturing process

Material processing / handling

Utilities

Reduce the need for energy

Use energy efficiently

Alternative sources / methods

Scope examples

Themes

Application

Outcomes

Relevance

Sector-wide

Cross sectoral
IEEA – What is it **Not**?

<table>
<thead>
<tr>
<th>Buildings related technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-grid electricity generation technologies</td>
</tr>
<tr>
<td>On-site renewables</td>
</tr>
<tr>
<td>Carbon Capture &amp; Storage (CCS)</td>
</tr>
<tr>
<td>Local authority projects (but note that local authorities can propose a UK site for technology implementation)</td>
</tr>
</tbody>
</table>

Recently added to programme scope: water and waste sectors; data centres; process intelligence / smart optimisation systems; pilot production lines
## Phase 1 projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Lead/Industrial Partners</th>
</tr>
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<tbody>
<tr>
<td>Low carbon multi-component cements for UK concrete applications</td>
<td>Mineral Products Association (MPA), Hanson Cement, Forterra Building Products, BRE.</td>
</tr>
<tr>
<td>Development and trialing of Exergyn Drive™ for low-grade waste heat recovery</td>
<td>Exergyn, global engine manufacturer.</td>
</tr>
<tr>
<td>PRISMA Energy Storage (Peak Reduction by Integrated Storage and Management of Air)</td>
<td>Innovatium, Aggregate Industries, Birmingham University.</td>
</tr>
<tr>
<td>Replacing hot water cleaning with electrolysed cold water</td>
<td>Ozo Innovations</td>
</tr>
<tr>
<td>Development and demonstration of an automatic steam boiler blowdown system</td>
<td>Spirax Sarco UK</td>
</tr>
<tr>
<td>Energy efficient leachate treatment</td>
<td>LAT Water, Viridor Waste Management.</td>
</tr>
<tr>
<td>Novel de-watering solutions within corrugated case medium (CCM) manufacture</td>
<td>Innovatia, DS Smith.</td>
</tr>
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</table>
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- Next Steps
Eligibility

### Tier 1 Requisites

- **Private/Academic Sectors:** The IEEA competition is open to the private sector and universities
- **Secured match funding:** All companies and partners must have match funding, this can be in the form of capital and/or in-kind contributions
- **Secured UK demonstration site:** The project consortium must have a demonstration site secured; technology companies who do not have a demonstration site may advertise for a partner through the IEEA website
- **Novel Technology or Application:** Application of a novel technology or a commercial technology in a novel and high impact application (between TRL 5-8)
- **Industrial Focus:** The project must demonstrate benefit to the manufacturing sector
- **Sign up to BEIS T&C’s:** Projects will be required to sign up to BEIS terms and conditions (the contracting party)
- **Comply with state aid rules**

### Tier 2 Project Impact

**Successful projects must clearly demonstrate:**

- Strong energy and CO2 savings potential
- A scalable industrial application
- Commercial potential
- Ability to deliver against project plan
- Value for money
## How much co-funding can you receive?

<table>
<thead>
<tr>
<th><strong>Programme Size</strong></th>
<th>Approximately £5m still available</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of projects</strong></td>
<td>10-15 projects are anticipated</td>
</tr>
<tr>
<td><strong>Project Co-funding Available</strong></td>
<td>Typical BEIS co-funding up to £1m contribution to eligible costs (potentially more for exceptional high impact projects)</td>
</tr>
<tr>
<td><strong>Funding Intensity</strong></td>
<td>Target funding intensities will typically be 40%-60% to maximise value for money</td>
</tr>
<tr>
<td><strong>Funding Intensity Cap</strong></td>
<td>Intensity capped by state aid limits i.e. combined public support cannot exceed these.</td>
</tr>
</tbody>
</table>

*Further information on funding intensities and eligible costs on website and in guidance notes*
Small, Medium and Large Enterprises

To be recognized as an SME, a business must comply with the staff thresholds and the thresholds for either the balance-sheet total or the turnover.

<table>
<thead>
<tr>
<th>Category</th>
<th>Employees</th>
<th>Annual turnover / balance sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro Enterprise*</td>
<td>&lt; 10 persons</td>
<td>&lt; €2m (approx. £1.4m)</td>
</tr>
<tr>
<td>Small Enterprise*</td>
<td>&lt; 50 persons</td>
<td>&lt; €10m (approx. £7m)</td>
</tr>
<tr>
<td>Medium Enterprise*</td>
<td>&lt; 250 persons</td>
<td>&lt; €50m OR balance sheet &lt; €43m</td>
</tr>
<tr>
<td>Large Enterprise</td>
<td>&gt; 250 persons</td>
<td>&gt; €50m OR balance sheet &gt; €43m</td>
</tr>
</tbody>
</table>

### What are Eligible Costs?

<table>
<thead>
<tr>
<th>Eligible Costs Definition</th>
<th>Not Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Personnel Costs</td>
<td>• Profit</td>
</tr>
<tr>
<td>• Instrument, equipment</td>
<td>• Bonuses</td>
</tr>
<tr>
<td>• Services</td>
<td>• Interest payments of any kind</td>
</tr>
<tr>
<td>• Additional overheads</td>
<td>• Dividend payments</td>
</tr>
<tr>
<td>• Other operating expenses</td>
<td>• Loss of salaries or consultancy</td>
</tr>
<tr>
<td></td>
<td>income</td>
</tr>
<tr>
<td></td>
<td>• General costs</td>
</tr>
<tr>
<td></td>
<td>• Recoverable VAT</td>
</tr>
</tbody>
</table>
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Documentation & Guidance

Available at www.carbontrust.com/IEEA from mid-January 2019

Application Form includes:

- Description of Technology / Process
- Technical credibility
- Project Plan & Risk Register
- Work Packages and Milestones
- Impact
- Project Team
- Commercialisation Potential
- Outputs
- Proposed Method

Get in touch with us with questions!
IEEA Application Process (deadline April 30th, 2019)

To note:

- Initial ideas to be submitted via our website: www.carbontrust.com/ieea
- Initial screening recommendation provided to inform whether idea is within programme scope
- Application support offered by the Carbon Trust and Jacobs whilst drafting applications
Partnership support

If you do not already have a partner, the programme will support the formation of appropriate partnerships, including:

• Supporting the technology developer in ensuring the proposed project meets the scope of the programme, and how to articulate this with the potential industrial partner
• Assisting via meeting / calls communicating the purpose, value and benefit of the programme to a potential industrial partner
• Facilitating the partnership in finalising the demonstrator project application
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Next steps: get in touch with ideas!

Think about:
• Projects
• Partnerships
• The application process
• Funding

Do you already have a technology to demonstrate and a site?
• We are keen to fund some demonstrations to commence as soon as possible
• Get in touch with the IEEA team to discuss your application
• Verify you are eligible – submit your initial idea
• Submit application as soon as possible
• If declined, receive feedback and re-submit if eligible
• If positive, move on to project demonstration as soon as possible

PLEASE SEND ANY ENQUIRIES TO IEEA@CARBONTRUST.COM
Other Programmes of Relevance

- Industrial Heat Recovery Programme – commercialised only
- Industrial Fuel Switching Programme – hydrogen, electrification, etc.
- Carbon Capture, Utilisation and Storage (CCUS) Programme Energy Entrepreneurs Fund (EEF)
- Low Carbon Heating Technology Innovation Fund
- Thermal Efficiency Innovation Fund – buildings only
- Smart Systems and Heat Programme (Energy Systems Catapult)

Further information:
https://www.gov.uk/guidance/funding-for-low-carbon-industry
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