



David Reilly, Carbon Trust

**Sustainable Energy
Investment Forum, Dublin**

September 2017



An economy fit for the planet



About the Carbon Trust

Our mission is to accelerate the move to a sustainable, low carbon economy

- We work with governments, multilateral organisations, businesses and the public sector
- We design and manage projects that overcome technical, financial and behavioural barriers
- We recognise clients through assurance and certification of positive outcomes
- We support the development and implementation of low carbon technologies and sustainable business models

About the Carbon Trust

- Over 15 years' experience
- Our team includes engineers, scientists, policy experts, economists, and entrepreneurs from a wide range of sectors

180 Employees

30 Nationalities



We deliver impact across sectors

We have worked with:

- 65% of FTSE 100 Companies
- 3,000 public sector bodies
- 75,000 small businesses

And undertaken:

- 35,000 on-site carbon surveys
- 50,000 advice line calls per year

To deliver:



60mt CO₂
Emissions Saved



£1.6bn spend on
energy efficient
equipment



£5.5bn energy
waste avoided

Energy Efficiency Loans - UK

- Since 2002, we have disbursed ~£170m of interest free loans to SMEs, across the UK
- Backed up by over ~12,000 Energy Savings Assessments
- Supplemented by the following activities at varying stages:
 - Remote Advice and guidance provided by: Telephone, Website, Publications, Events & workshops
 - Subsidised energy surveys and implementation support
 - Strategic energy consulting support
 - Allocated account manager



Since its national launch in 2002, the scheme has had significant impact in Wales

~650

Loans to SME's in Wales

~£20m

Capital loaned for energy efficiency



~£34m

Value of projects to suppliers

~£9m

Per annum in energy costs

Key features of the loan scheme

- The interest free loan scheme aims to encourage businesses to invest in energy efficient equipment and renewable technologies
- £3,000 to £200,000 in Wales
- Loan offer is based on the CO₂ savings a project can deliver; £1,000 for every 1.5t CO₂ saved
- Repayment period reflects the energy payback, up to a maximum of 48 months
- Savings are sense checked by our engineers to provide assurance they may be achieved
- Interest Free – Unsecured – No Set Up Fees

Eligibility criteria

- To be considered for a loan, a business must:
 - Be a privately funded small to medium enterprise (SME) in Wales
 - Operate in a sector permissible under EU State Aid regulations:
 - Exclusions include primary agriculture (e.g. farming, dairy, wine-making, horticulture), fisheries, transport, coal, export
 - Not have exceeded the de minimis state aid threshold of €200k over previous 3 years
 - Have been trading for the minimum trading period and have a good credit rating:
 - 12 months for limited companies
 - 36 months for unincorporated

Projects we finance

- Any project that generates on-site fossil fuel energy savings will be considered (new builds not eligible)
- Projects may be co-joined (e.g. heating and lighting projects)
- Renewables projects are also eligible
- Equipment does not need to be listed on the Energy Technology List of the UK's ECA scheme

Examples of qualifying projects

Building Technologies

Air Conditioning
Building Insulation
Heating
Heating Controls
Heat Recovery
Lighting
Pipe Insulation
Solar Thermal Systems

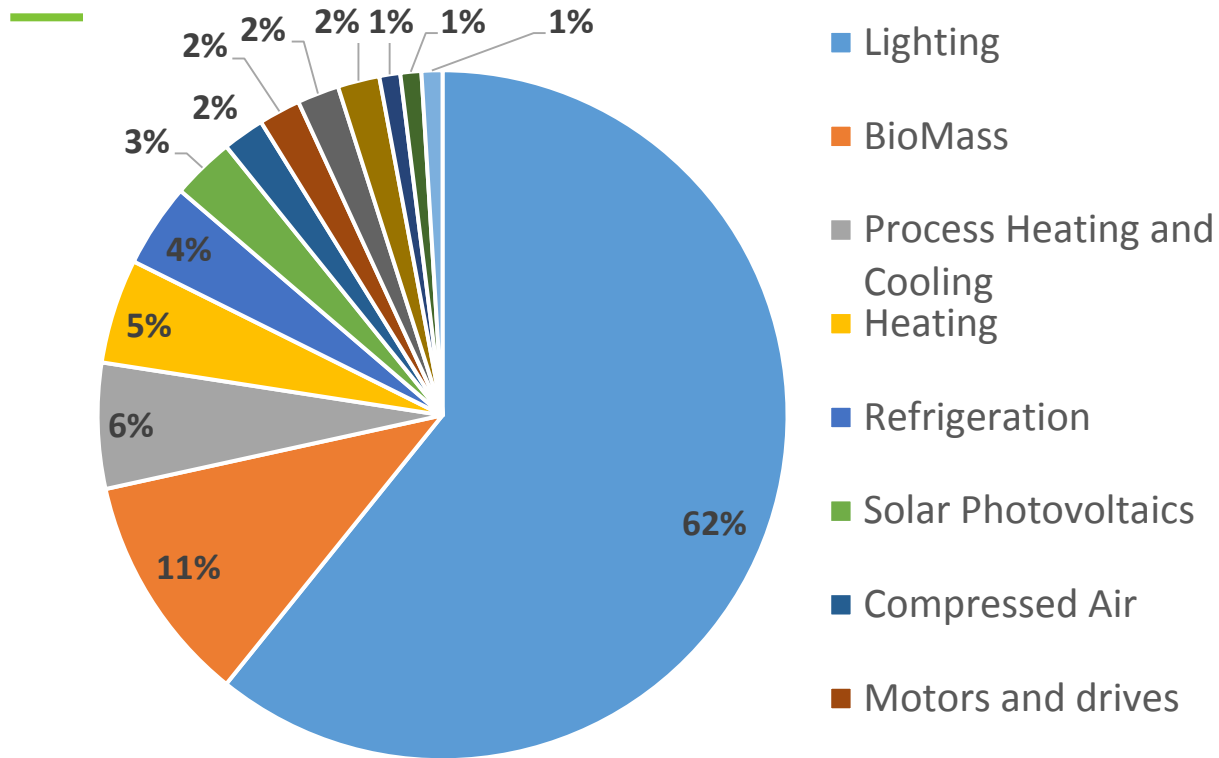
Industrial Process Technologies

Compressed Air
Fittings
Materials Handling
Equipment
Motors
Process Heating
Process Controls
Refrigeration
Variable Speed Drives

Renewables

Biogas
Biomass
Heat Pumps
Solar PV
Solar Thermals
Wind Turbines
Hydro electricity

Loans by technology



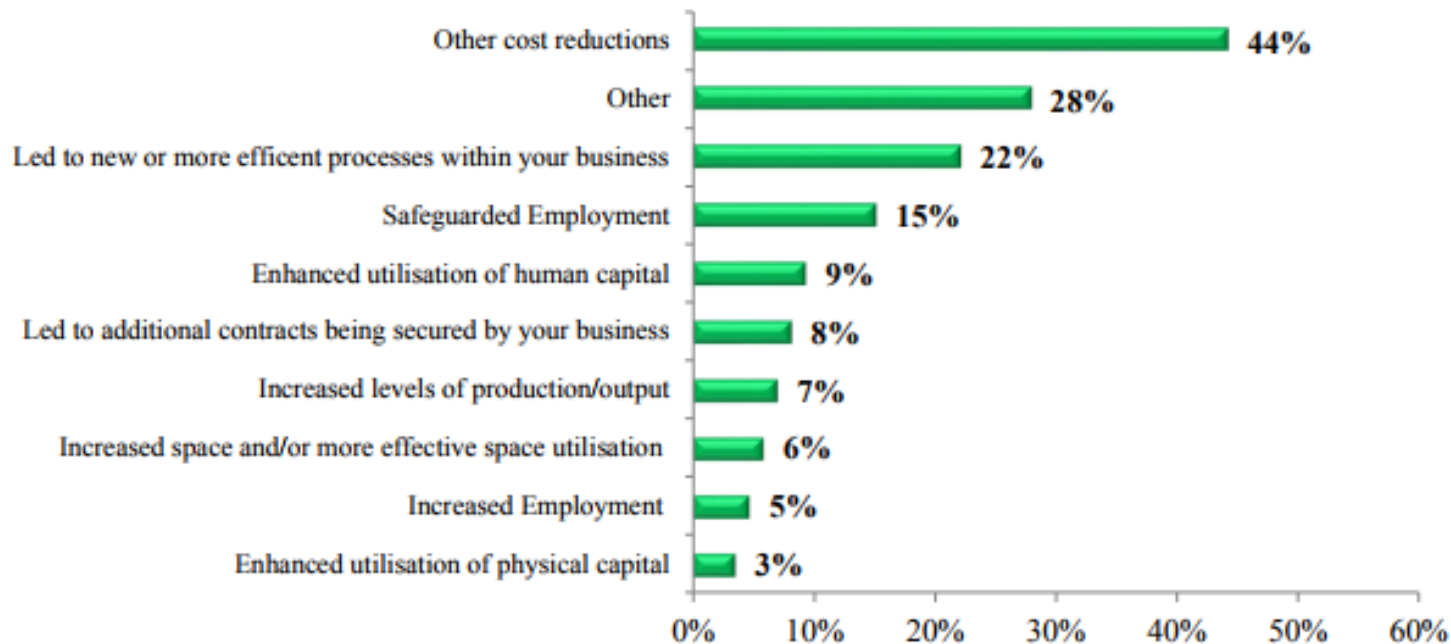
Scheme Benefits – from users

- “In the absence of the loan fund it would have been difficult for our business to secure the appropriate finance”
- “We could have secured a bank loan, but that would have prolonged the project by a year”
- “We would have implemented the project to a smaller scale. Our business would not have been able to finance the project to the scale that we did without the loan fund”
- “The loan fund support encouraged our company to look at more ways that we could become more efficient with energy in the future”

Scale of project, simple process, accelerated implementation

Scheme Benefits – from users

Figure 5.1: Did the receipt of Loan Fund support lead to any other benefits or unexpected impacts/benefits for you or your business?



Key Learnings

- Its not as easy as its seems:
 - SME's can be a notoriously difficult sector to engage on energy efficiency
 - Energy is not relevant to “core business”
 - Perceived risk of new technologies
 - Often a lack of sustained senior level commitment
 - Measures may be NPV positive but paybacks of over 2 – 3 years may fail to meet company investment criteria

Key Learnings

- 0% loans scheme on its own will struggle to have significant impact:
 - All barriers need to be tackled simultaneously to be effective – provision of finance alone is not enough (Awareness/Training, Opportunity Identification, Implementation Support)
 - Up-skilling and quality control of local supplier and consultant base is key. In particular, suppliers are essential to driving the scheme and reducing marketing / transaction costs
 - Programme needs to be long enough to see projects through to implementation (~4-5 years minimum)
 - Awareness raising and marketing activity is crucial to achieve uptake

Key Learnings

- Process needs to be simple & easily understood:
 - Application process needs to be simple, quick and supported - we try to turn around offers in less than 2 weeks
 - Website, communication and application process (speed and simplicity, along with a quick pre-approval and turnaround time are key)
 - Robust energy saving assessment by CT engineers and credit check required

Key Learnings

- Needs good governance & management structure, and robust system in place to disburse and recover loans, including:
 - Technical support for Energy Saving Assessments – essential for confidence in the scheme that actual cost savings are in line with upfront estimates
 - Credit control and loan recovery processes
 - Authorised and regulated by the Financial Conduct Authority

Our experience in other markets

The opportunity

- Significant savings with short pay-backs available in all markets we have worked in
- Particular local circumstances can present additional opportunities or increased motivations, e.g:
 - Regeneration projects
 - Security of supply concerns

The challenges

- All of the challenges seen in the UK market appear to exist in other markets, often exacerbated by local circumstances, e.g:
 - Low energy costs
 - Low quality of suppliers
 - Lack or inadequacy of regulation, e.g. feed-in framework not working properly



Whilst reasonable steps have been taken to ensure that the information contained within this publication is correct, the authors, the Carbon Trust, its agents, contractors and sub-contractors give no warranty and make no representation as to its accuracy and accept no liability for any errors or omissions. All trademarks, service marks and logos in this publication, and copyright in it, are the property of the Carbon Trust (or its licensors). Nothing in this publication shall be construed as granting any licence or right to use or reproduce any of the trademarks, services marks, logos, copyright or any proprietary information in any way without the Carbon Trust's prior written permission. The Carbon Trust enforces infringements of its intellectual property rights to the full extent permitted by law.

The Carbon Trust is a company limited by guarantee and registered in England and Wales under company number 4190230 with its registered office at 4th Floor Dorset House, Stamford Street, London SE1 9NT.

Published in the UK: 2017.

© The Carbon Trust 2017. All rights reserved.