

# **UK Green Investment Bank plc**

Accelerating the UK's transition to a greener economy

## **ERP Cities project - round table policy workshop**

24<sup>rd</sup> March 2015

**100%**

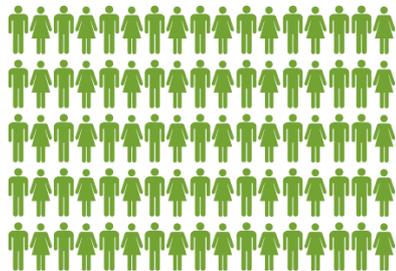
Owned by the  
UK Government

**£3.8bn**

Capital to invest  
in green projects

Mobilise  
private sector  
investment

Accelerate the  
UK's transition to  
a green economy



**70**

Specialist investors  
and technical experts



**Independent Board**

Chaired by Lord Smith

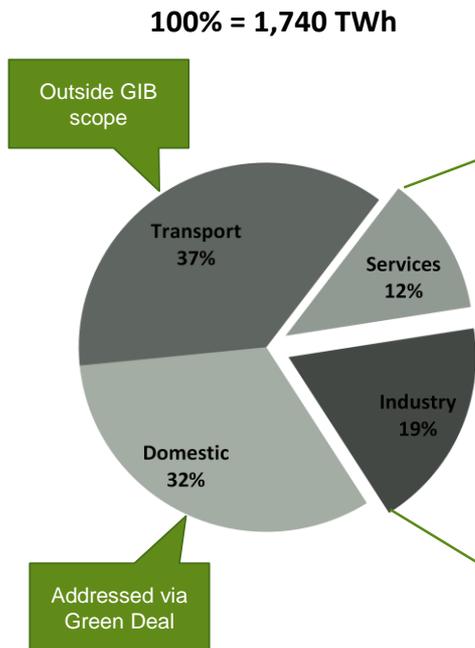
# Green Investment Bank

OVER 70 OTHERS HAVE INVESTED WITH US

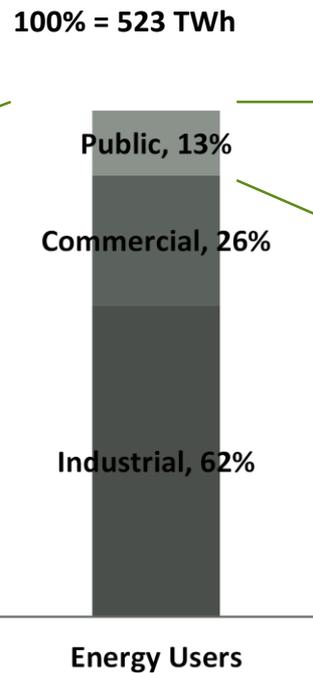


*The NHS estate consumes a quarter of all public sector energy usage*

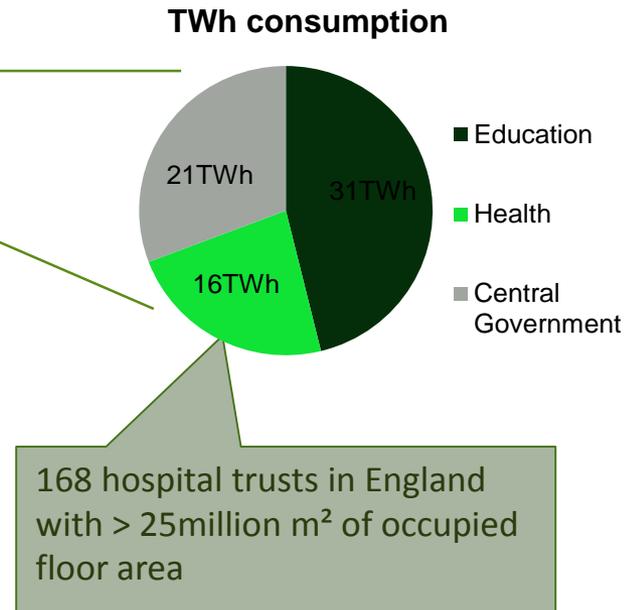
### Energy Consumption (TWh)



### Energy Users



### Public Sector Energy Usage



Green Investment Bank is a **strategic investor with green and finance credentials** and can support our public sector clients by engaging early on projects and can provide a full range of structured financing options.



<b>Project Finance</b>	<ul style="list-style-type: none"> <li>▪ Corporate or special purpose vehicle</li> <li>▪ Long term service provision with project risk transferred</li> <li>▪ Off-balance sheet</li> <li>▪ Equity and debt</li> </ul>	<i>Most applicable for large heat network/ ESCO procurement</i>
<b>Asset Finance</b>	<ul style="list-style-type: none"> <li>▪ Performance risk / residual value risk attaching to asset</li> <li>▪ Service specific to the asset (maintenance)</li> <li>▪ Level of risk transfer will determine whether classified as finance or operating lease</li> <li>▪ "Hard-deck payment" and / or deposit from the borrower</li> </ul>	<i>Could be used for renewable heat / CHP solution assets</i>
<b>Corporate Loan</b>	<ul style="list-style-type: none"> <li>▪ Term loan to private or public sector clients</li> <li>▪ On-balance sheet, against the borrower credit rating</li> <li>▪ Ability to sculpt return profile on forecast project economics</li> <li>▪ GIB Green Loan</li> </ul>	<i>Could be used for a range public sector led projects, including heat networks, waste recycling, building retrofit and streetlighting investment</i>

**Leader/CEO  
Engagement**

- Political air cover
- Political capital
- Career Enhancing!

**Climate Change action  
Plan  
(or similar)**

- Strategic plan
- Provides legitimacy to the development activity
- Provides legitimacy to the business cases

**Development capability  
pipeline of investable  
projects**

- Capability
- Capacity
- Commitment

**Scale**

- Dilution of transaction costs
- Meaningful impact
- Reduced costs

Strong Green Case for Heat Networks

Options for  
reducing heat  
emissions

- **Demand reduction / improved efficiency:** Should be done across the building stock, but only takes us so far where we rely on fossil fuel heating (DECC).
- **Biomass:** Good from carbon perspective, but query supply chain and sustainability impacts.
- **Electricity / heat pumps:** as the grid decarbonises, electric heating and heat pumps become lower carbon. But issue: 'peakiness' of heat demand versus electricity demand. Heat pumps challenged (space for GS, noise for AS) in urban environments.
- **Heat networks:** Can be more efficient than domestic heat generation, limited by carbon intensity of heat source.

Green case  
for heat  
networks

- Heat networks are an enabling technology, taking advantage of **all available sources of heat** in an area, including waste and renewable heat.
- Allowing **future transition** from gas CHP to lower carbon sources on commercial rather than domestic scale
- They could assist with **grid balancing**, by providing thermal storage, which is key with an increased role for electricity.
- Heat networks are a cost-effective option vs. gas boilers in areas of high building (and heat) density. Heat pumps and biomass are space-constrained in urban areas.



**7.4m** number of streetlights in the UK. Less than 10% are currently low energy LEDs. 

**£200m**

annual energy cost saving by switching to LED streetlighting; paying off the investment in 10 years.

**30%**

of a Local Authority's energy bill is for streetlighting. 

**100,000** number of hours of light provided by a LED. A standard streetlight only provides 15,000 hours. 

**30%** of light from a standard streetlight is wasted as it is dispersed upwards.

**50 to 80%** of energy costs could be saved by switching to low energy streetlighting. 

**£300m**

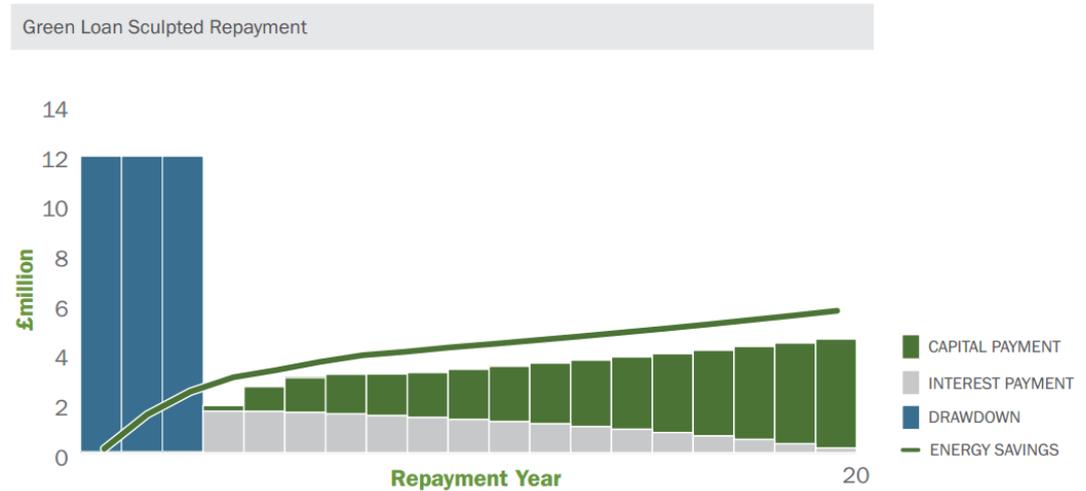


annual UK spend on energy for streetlighting; rising in line with escalating energy prices.

Saving greenhouse gas emissions (CO<sub>2</sub>) equivalent to taking

**330,000** 

cars off the UK's roads.



GIB recognised need for **flexible and simple** Energy Efficiency financing product

GIB is developing **standardised due diligence, processes and documentation**

Green Loan developed as **Spend to Save** lending to Local Authorities as an alternative to PWLB