

# **UK Green Investment Bank plc**

Accelerating the UK's transition to a greener economy  
STEP UP Webinar

October 2014

**1**

**Introduction to GIB**

**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



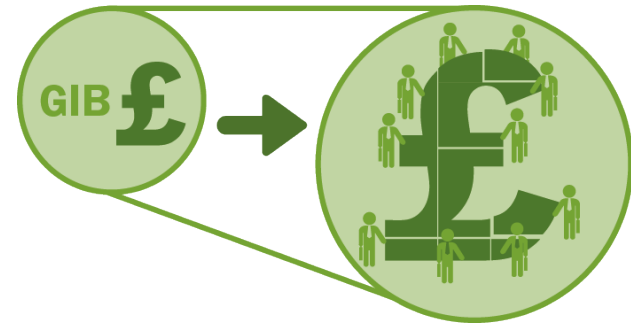
**Independent Board**

Chaired by Lord Smith

**Our vision:** green and profitable



**Our task:** crowding-in capital



**Our markets:**



Waste &  
Bioenergy

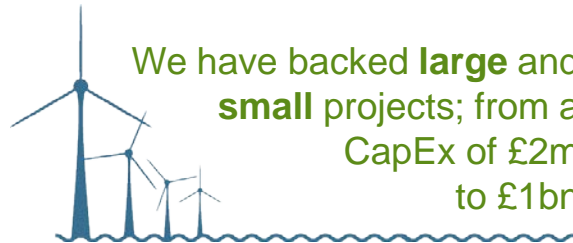


Energy Efficiency

We have committed **£1.4bn** of capital to **33 projects**, mobilising a total of **£4.9bn**




We have invested in **every** part of the UK, in all of our sectors and using all our financial products



We have backed **large** and **small** projects; from a CapEx of £2m to £1bn




We have set up **5 funds**, with **£250m**, to back small projects



We have backed 6 local authority, 3 commercial and 4 anaerobic digestion waste projects




We've invested £623m in 5 offshore wind projects, including construction equity



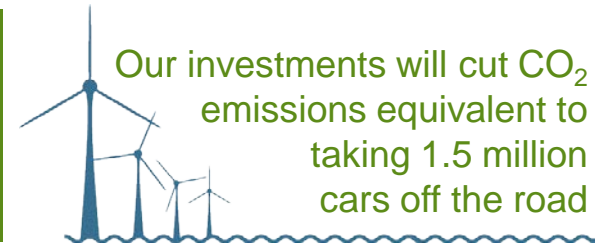
We are building a market in energy efficiency, including streetlight conversion and 4 NHS projects



Our investments will save 1.3 million tonnes of waste from landfill



Our investments will produce enough renewable electricity to meet energy needs of 2.9 million homes



Our investments will cut CO<sub>2</sub> emissions equivalent to taking 1.5 million cars off the road

# Green Investment Bank

OVER 70 OTHERS HAVE INVESTED WITH US

**DONG**  
energy

**Stobart**

**Marubeni**

**RBS**  
The Royal Bank of Scotland

**GREENCOAT**  
UK WIND

**equitix**

**RWE**

**SOCIETE**  
GENERALE

**HSBC**

**Balfour Beatty**

**Shanks**  
Making more from waste

**NORD/LB**

**UniCredit Bank**

**LLOYDS**  
BANKING  
GROUP

**Investec**

**ING BANK**

**ICBC**

**Bank of Tokyo-Mitsubishi UFJ**

**MIZUHO**

**SMBC**

**Goldman Sachs**

**BARCLAYS**

**JPMorgan**

**Deutsche Bank**

**CRÉDIT AGRICOLE**  
CORPORATE & INVESTMENT BANK

**BBVA**

**BayernLB**

**CIBC**

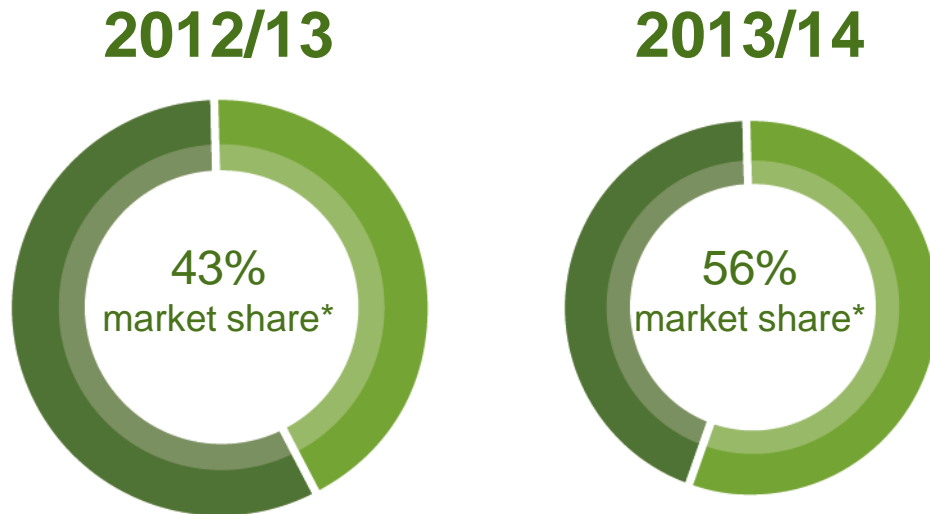
**Santander**

**KFW**

**SIEMENS**

**ITOCHU**

We have quickly become the most active investor in our markets:



\* Including Offshore Wind, Waste and BioEnergy (but not Energy Efficiency)

But, we can only invest in 35-40% of the UK's green economy:



We are financing new infrastructure that is being built right **across the UK**



Creating 2,000 new UK **jobs**



Supporting **SMEs** – We've committed £250m to back smaller projects



Our sector and technical expertise means that our participation is seen to **de-risk** projects



Lowering the cost of capital in our sectors, including by attracting **longer term investors**



**2**

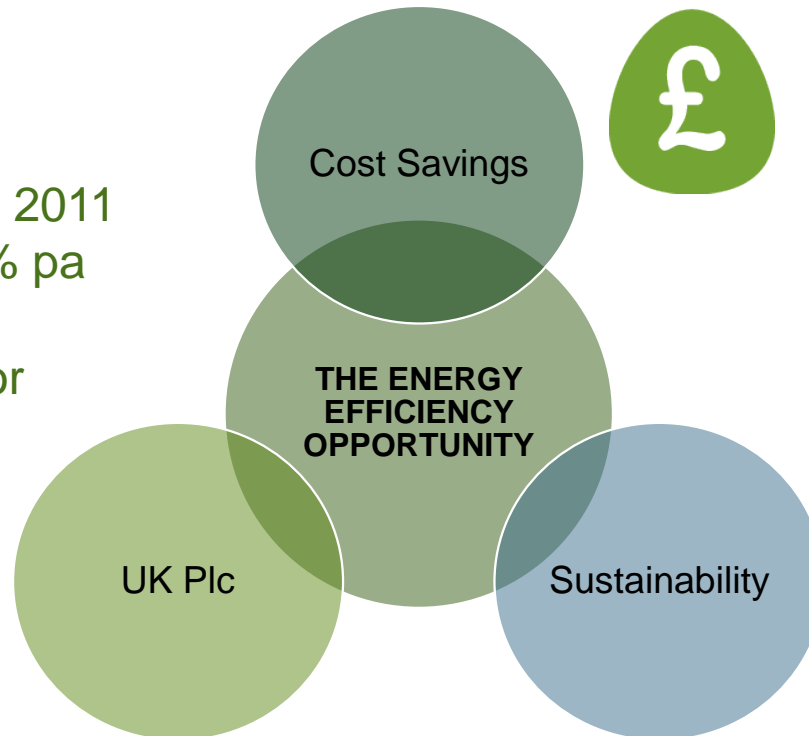
**Energy efficiency**

UK businesses can reduce their energy bills by 15%, or **£1.6bn per annum**



**£17.6bn UK sales** in 2011  
– forecast to grow 5% pa

Currently accounts for **136,000 UK jobs**;  
potential to create **>300,000 new jobs**



Socially cost-effective investments can save 196TWh in 2020, **equivalent to 22 power stations**



Key barriers to energy efficiency deployment and ways to overcome them

Barriers	Potential Solutions
Lack of leadership	<ul style="list-style-type: none"> <li>• Raise the importance of energy efficiency through senior management and stakeholders</li> <li>• Obtain senior management sponsor for an ‘energy efficiency champion’</li> </ul>
Poor information and awareness	<ul style="list-style-type: none"> <li>• Use industry sector knowledge and examples to focus on large impact opportunities to demonstrate financial savings and ability to replicate</li> <li>• Deliver ‘early wins’</li> </ul>
Cost and risks	<ul style="list-style-type: none"> <li>• Develop multi-year deployment plan</li> <li>• Work with best-in-class service and technology providers (eg ESCOs)</li> <li>• Focus on technology improvements with broad potential</li> </ul>
Skills shortage	<ul style="list-style-type: none"> <li>• Leverage wider corporate experience</li> <li>• Contract ESCOs</li> </ul>
Understanding & accessing finance	<ul style="list-style-type: none"> <li>• Develop multi-year funding plan and savings schedule to get CFO buy-in</li> <li>• Leverage ESCO-, vendor- and third party financing</li> </ul>

GIB is able to provide capital to clients across both public and private sectors...

**Public Sector**

- Local authorities
- Health sector
- Central government



**Private Sector**

- Large industrial energy consumers
- Multi-site commercial opportunities



...supported by strong relationships with ESCOs and other third party financiers

**ESCOs**



- ESCOs
- Utilities

**Financiers**



- Banks
- Fund managers
- Lease financiers

GIB focuses on seven energy efficiency technology clusters

	BUILDING RETROFIT	ONSITE GENERATION		INDUSTRIAL PROCESSES	INFRASTRUCTURE		
		Renewable Heat	CHP		Efficient Transport	Smart Grid	Outdoor Lighting
EXAMPLES	<ul style="list-style-type: none"> <li>– BMS/ Voltage optimisation</li> <li>– HVACs</li> <li>– Wall Insulation</li> <li>– Replacement glazing</li> <li>– Boiler/Chiller Upgrade</li> <li>– Indoor &amp; other lighting</li> </ul>	<ul style="list-style-type: none"> <li>– Ground Source Heat Pumps</li> <li>– Air Source Heat Pumps</li> <li>– Biomass boilers</li> </ul>	<ul style="list-style-type: none"> <li>– CHP</li> <li>– Mini-CHP</li> </ul>	<ul style="list-style-type: none"> <li>– Furnace insulation &amp; upgrade</li> <li>– Process control/opt.</li> <li>– Reactor upgrade</li> <li>– Variable Speed Drives</li> <li>– Motors</li> <li>– Pumps</li> <li>– Waste heat recovery</li> <li>– Power mgt syst.</li> </ul>	<ul style="list-style-type: none"> <li>– Transport infrastructure</li> <li>– Hybrid/ Electric vehicles</li> <li>– Charging infrastructure</li> <li>– Rolling stock</li> </ul>	<ul style="list-style-type: none"> <li>– Comms networks</li> <li>– Smart meters</li> <li>– Data management</li> <li>– Grid storage</li> <li>– District Heating</li> </ul>	<ul style="list-style-type: none"> <li>– Street Lighting</li> <li>– Other Outdoor Lighting</li> <li>– Lighting Controls</li> </ul>
EXAMPLE CUSTOMERS	<ul style="list-style-type: none"> <li>– Municipalities</li> <li>– Hospitals</li> <li>– Hotels</li> <li>– Universities</li> <li>– Offices</li> </ul>	<ul style="list-style-type: none"> <li>– Municipalities</li> <li>– Hospitals</li> <li>– Retailers</li> <li>– Supermarkets</li> <li>– Universities</li> <li>– Leisure</li> </ul>	<ul style="list-style-type: none"> <li>– Hospitals</li> <li>– Hotels</li> <li>– Universities</li> <li>– Offices</li> </ul>	<ul style="list-style-type: none"> <li>– Chemicals</li> <li>– Food &amp; Beverage</li> <li>– Mineral Products</li> <li>– Paper &amp; Publishing</li> </ul>	<ul style="list-style-type: none"> <li>– Municipalities</li> <li>– Retailers</li> <li>– Logistics</li> <li>– Transport service providers</li> </ul>	<ul style="list-style-type: none"> <li>– Utilities</li> <li>– Telecoms</li> <li>– Meter Asset Providers</li> <li>– Communication Hub Asset Providers</li> </ul>	<ul style="list-style-type: none"> <li>– Hospitals</li> <li>– Municipalities</li> <li>– Retailers</li> <li>– Airports &amp; Stations</li> <li>– Car parks</li> </ul>

GIB can finance a wide array of green projects with flexible capital

**On company's balance sheet**

**Debt**

**Equity**

- GIB can **invest for much longer** than other banks
- Ability to sculpt return profile so that **savings pay for the investment**
- GIB can engage early in a project to develop the opportunity and **leverage know-how and contacts**

**Off company's balance sheet**

**Debt**

**Equity**

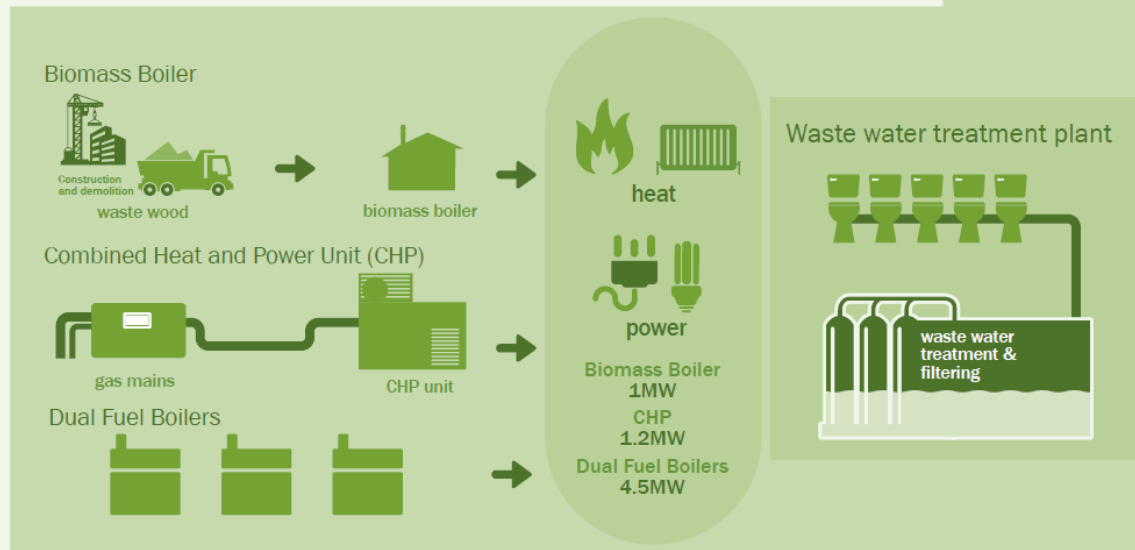
- Financing with potential for GIB to take equity or debt or a hybrid, with **low or no equity from host**
- **Flexibility for company** to have operational involvement or be at arms length
- GIB brings **green and finance credentials** and government backing with long-term perspective

**3**

**Case studies**

## Nottinghamshire NHS Trust: Rampton Hospital energy efficiency project

The first project to benefit from the GIB-SGEF partnership is at Rampton Hospital, Nottinghamshire Healthcare NHS Trust. The £5m investment will finance the installation of a combined heat and power unit, a biomass boiler, dual fuel boilers and an effluent treatment plant. The project will be constructed and operated by energy services company Cofely.



**88,000** tonnes of CO<sub>2</sub>e avoided

That's the same as:



**2,500** cars off the road for project lifetime



**£1.7m** savings for the hospital

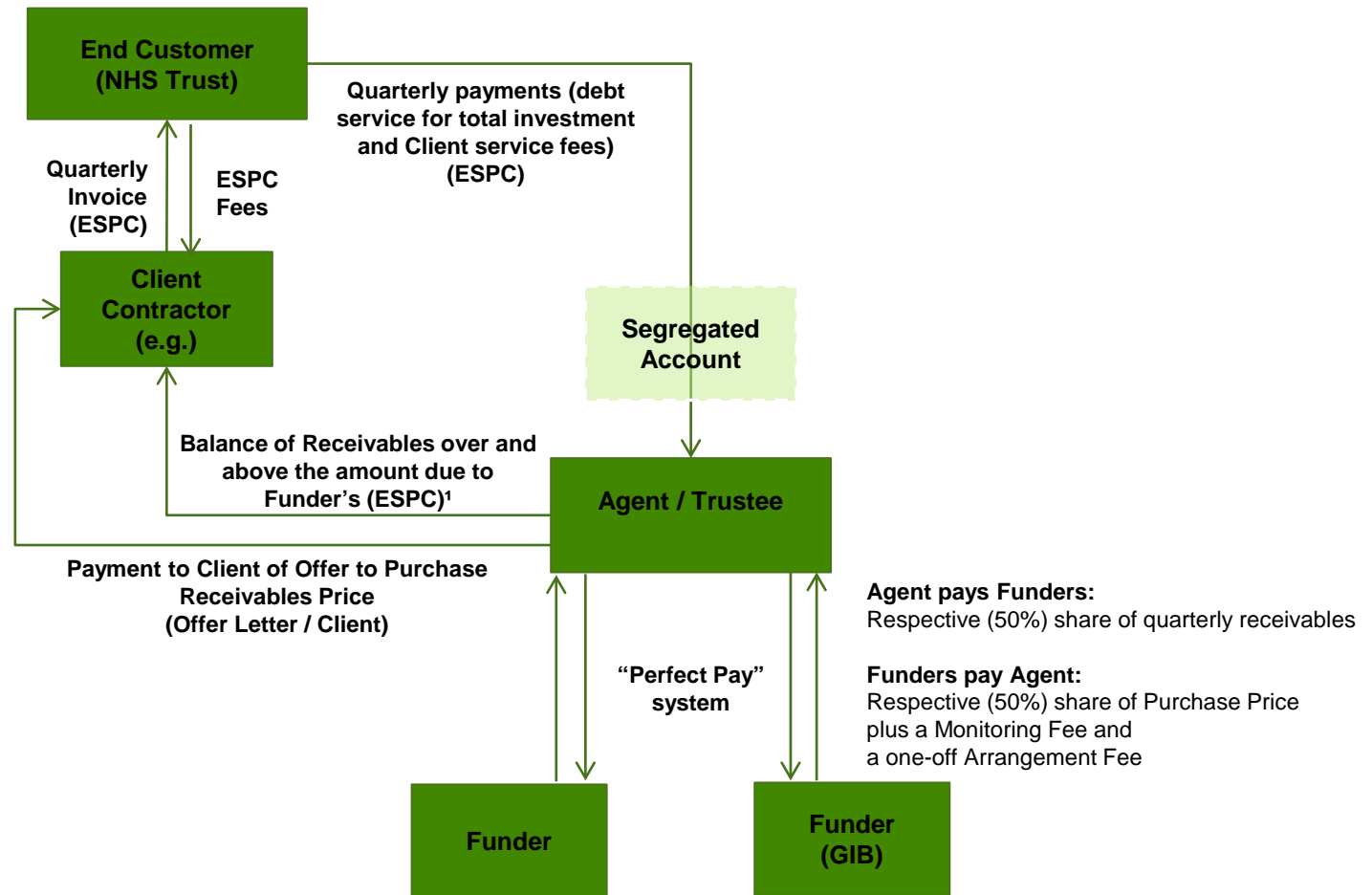


waste water quality improved

[www.greeninvestmentbank.com](http://www.greeninvestmentbank.com)



**Funds Flow  
Overview**



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



**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.



**£300m**



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

**£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.



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

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

**330,000** cars off the UK's roads.





### Summary

GIB have developed a Green Loan product to finance and accelerate Local Authority LED streetlighting projects. Moving to LED lighting delivers a number of benefits:

- **Significant energy savings**
- **Significantly reduce CO2 emissions:** LEDs will make a material contribution (potentially c.30%) to reducing Authorities 2020 emission targets
- **Long 20-25 year LED life expectancy**
- **Smart lighting: Potential for reduced maintenance costs:**
- **All capex costs can be subsumed in a funding package**

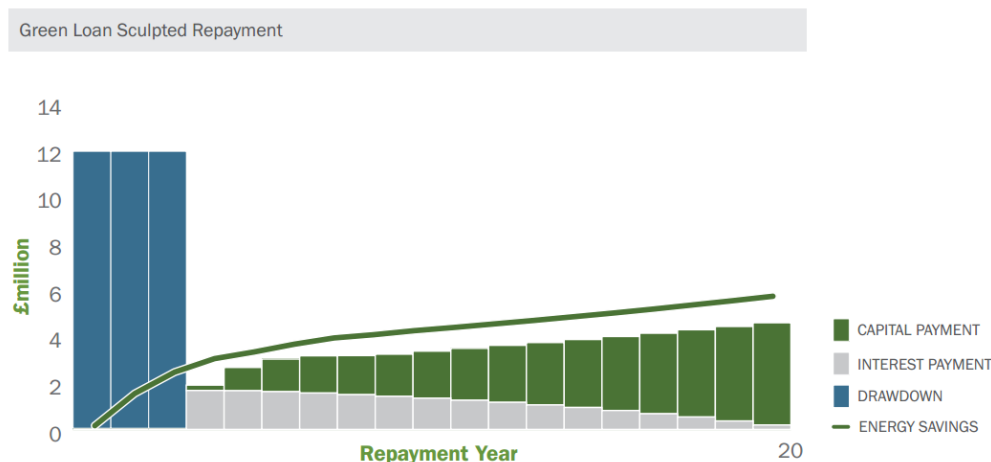
GIB recognised need for flexible and simple Energy Efficiency financing product

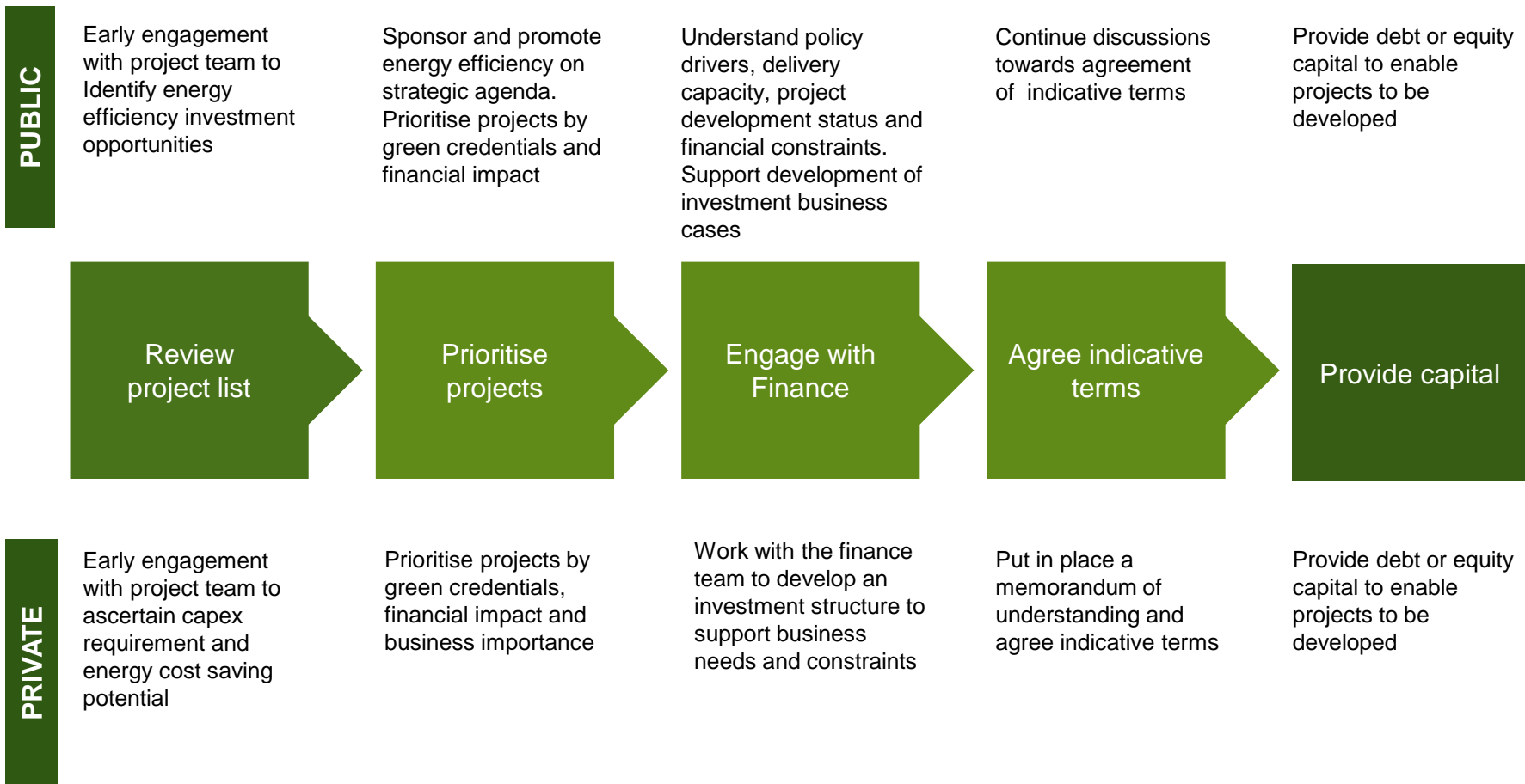
GIB is developing standardised due diligence, processes and documentation

Green Loan developed as direct lending to Local Authorities as an alternative to PWLB

## Key benefits of GIB Green Loan product for Local Authorities:

- Assistance in business case development including up to £0.5m Starter Loan to fund costs
- Green Loan funding covers LEDs, CMS, column renewal and other project costs
- Fixed rate funding with interest paid only on amounts drawn
- Interest roll-up in installation generates immediate energy efficiency savings
- Repayment profile can be sculpted to forecast energy efficiency savings (see below):
- Potential to blend with other sources of finance
- Certainty of programme funding or the Authority
- Confidence for new EE 'spend to save' programme
- GIB technical, legal and financial due diligence and on-going green monitoring
- Compatible with funding variations to PFI projects without the need to alter existing funding in the PFI SPV





## Sizable & flexible capital

- £3.8 billion of UK Government funding to be committed to green projects by March 2016
- Can invest across the capital structure
- Can invest for longer than most banks

## Knowledgeable team

- Strong finance, industry and political network
- Wide and deep contact base across public and private sector
- Understand stakeholder needs

## Ability to move quickly

- Independent investment committee
- Focused mandate allows for efficient investment process
- Supportive senior management

## Early engagement

- Partner with companies and get involved in projects at an early stage
- Work through difficult situations to achieve GIB's strategic goal of investing in green projects

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