

Green Investment Bank & Anaerobic Digestion

ADNI
16th October 2013

Dominic Noel-Johnson

Section 1 - Introduction to GIB

Section 2 - GIB's AD Market Report

Section 3 - Next Steps

Section 1

Introduction to GIB

1

3

GIB was provided State Aid approval in October 2012

Double bottom line of making a financial return and green impact

Mission

- Accelerate the UK's transition to a green economy
- Create an enduring institution operating independently of Government

Capital

- £3.8 billion funding allocated by HM Government, for investing by April 2016
- GIB seeks to stimulate co-investment, by investing alongside institutional capital providers
 - Plans in place to raise further funding, up to and beyond 2015
- Ability to structure products across the capital structure
- From senior debt to equity
 - Invested on commercial terms (a "for profit" banks)
 - GIB does not provide grants, "soft capital", regional assistance or development capital

**Sectors
and
Products**

- 80% of GIB capital to be invested in priority sectors – no subsector limits
- Waste Recycling and Energy from Waste
 - Offshore Wind
 - Non-Domestic Energy Efficiency (and support for the Green Deal)
 - Plus up to 20% in 'non-priority' sectors, including bioenergy, wave & tidal, biofuels and carbon capture & storage

4

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HITTING THE GROUND RUNNING IN 2012/3... MOBILIZING CAPITAL

GIB's commitment in 2012/3 of £685mn has potential to catalyse circa £1.9bn of 3rd party investment

Helping the market solve the capital availability problem and sharing risk with private sector

Keeping existing capital at the table (e.g. Banks in waste sector)

Attracting new sources of capital (e.g. Aviva, Greencoat)

Sector	Deal	Date	GIB commitment (£m)	Total Transaction (GIB + 3 rd Party, £m)	GIB investment to third party funding ratio	Forecast Average Annual CO ₂ e abated (ktpa CO ₂ e) ²
Waste/ Biomass	Foresight	Jun-12	50	100	1:1 ¹	4 ³
Waste/ Biomass	Greensphere	Jul-12	30	60	1:1 ¹	15 ³
NDEE	SDCL	Sept-12	50	100	1:1 ¹	N/A
NDEE	Equitix	Oct-12	50	100	1:1 ¹	N/A
Waste/ Biomass	Drax	Dec-12	100	990	1:9	2,583
OSW	Walney	Dec-12	46	325	1:6	281
Waste/ Biomass	Wakefield	Jan-13	30	122	1:3	34
Waste/ Biomass	Gloucester	Feb-13	47	185	1:3	7
NDEE	Aviva fund	Mar-13	50	100	1:1 ¹	31
OSW	Greencoat	Mar-13	50	260	1:3 ¹	N/A
OSW	Rhyl Flats	Mar-13	57	57	1:1	58
Green Deal	Green Deal	Mar-13	125	181	1:0.5	143
			GIB Commitment c.£685m	Total Capital £2.5bn	Mobilisation Ratio 1:2.6⁴	Total Avg. CO₂e Savings p.a. 3,156ktpa (forecast)

Notes

Assumes that deals that are yet to be fully completed reach completion on current agreed terms.

1. Funds assume "match-funding", whereby a third party investor will invest at a minimum an equivalent equity ticket to GIB. The ratio would of course increase if third party debt is also introduced

2. Total CO₂e abated by the entire project (ie not just the amount attributable to GIB's investment)

3. CO₂e abated by a fund is based on the project in which the fund has so far invested as a proxy

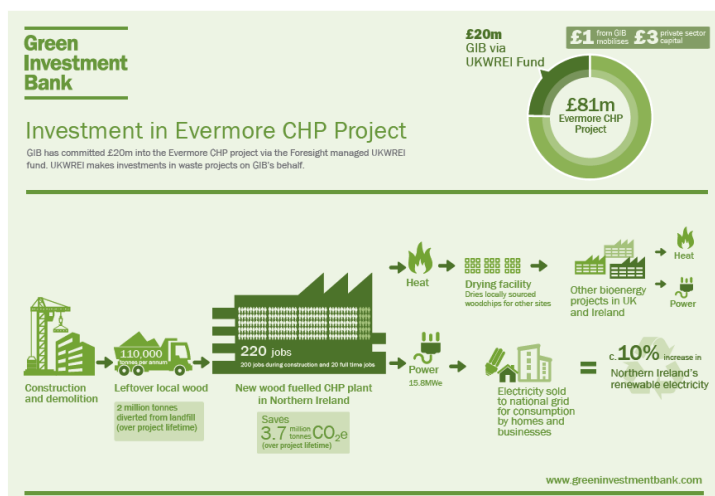
4. Weighted average ratio of GIB funding to third party investment

5

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FIRST TRANSACTION SIGNED IN NORTHERN IRELAND

GIB committed £20mn into NI's Evermore CHP project in 2013



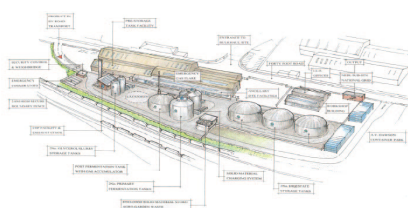
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GIB's Fund Managers have been active in the UK AD space to date

Foresight's TEG AD/IVC facility in Dagenham is projected to annually divert c. 40,000 tonnes from landfill and reduce emissions by 4,600 tonnes of CO2 equivalent



Greensphere's Earthly AD facility in Teesside is projected to annually divert 16,000 tonnes from landfill and reduce emissions by 15,000 tonnes of CO2 equivalent



7

Section 2

GIB's AD Market Report

8

The AD market needs are evolving

	<i>Then...</i>	<i>... Now</i>
Single vs. Multiple	"We are looking for debt for our first AD project"	"Our first projects are running well, we are looking for debt for the third"
Design vs. Operation	"Proven technology: there are 6,000 AD facilities in Germany"	"The key risk is not the technology – it's the operations"
Feedstock	"You get a gate fee for the waste, and then government subsidies for the power you produce"	"Getting the right feedstock is critical"
Experience Curve	"I've been working on this little project for 5 years"	"I've been operating plants for 3 years"
Capital Structure	"I need debt to make adequate equity returns"	"I would like debt to provide a more efficient capital structure"

9

GIB published its first AD market report in June 2013



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Anaerobic Digestion Market Report
2013

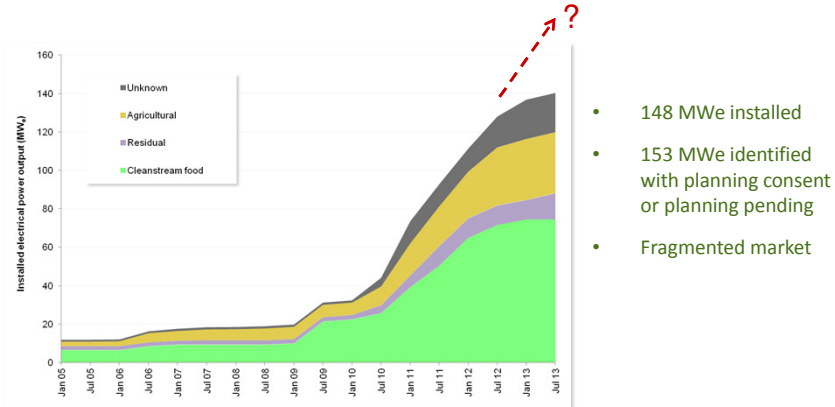
- *Scale of market*
- *Operational performance of plant*
- *Identify critical success factors*
- *Release findings of analysis*
- *Use findings to inform market and potential investors*

10

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SCALE OF THE MARKET

AD market is currently undergoing significant growth and we estimate potential capex required of £675m for identified near term projects

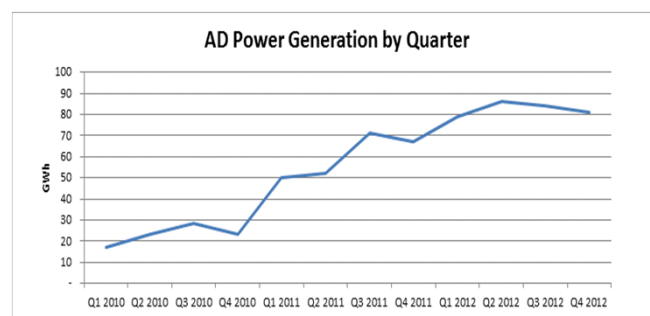


11

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MARKET GREW ~40% IN 2012

313 GWh generated in 2012 – up 38% on 2011



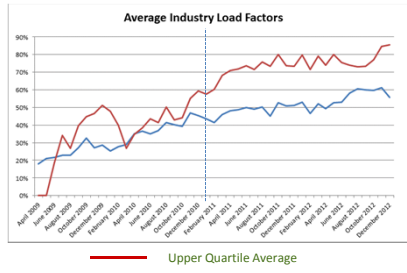
- c. 10% of the 3-5 TWh potential identified by Government in "AD Strategy and Action Plan"
- Identified 76 accredited facilities, several with significantly misreported installed capacity

12

AVERAGE LOAD FACTORS – SIGNIFICANT VARIABILITY

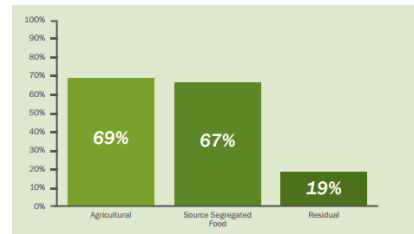
*Steady improvement for sector as a whole over time (48% in 2011 vs 55% in 2012)
...however industry load factors remain low*

Average Load Factors over Time



- Upper Quartile facilities = 77%

Average Load Factors by Feedstock

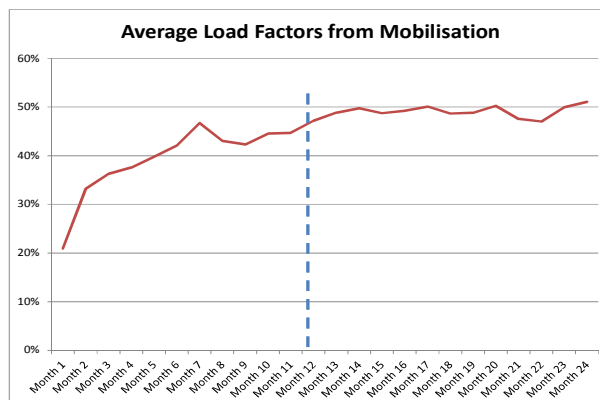


- Significant divergence between average load factors of the different waste streams

13

RAMP-UP REQUIRED TO REACH STEADY STATE

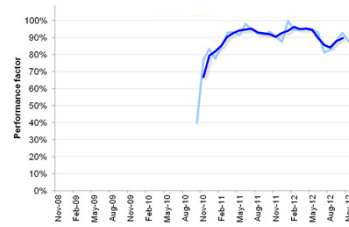
12 months operation on average before steady state achieved



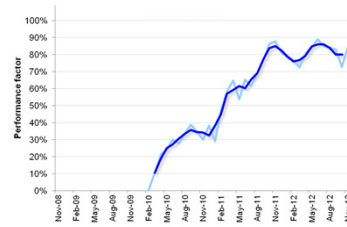
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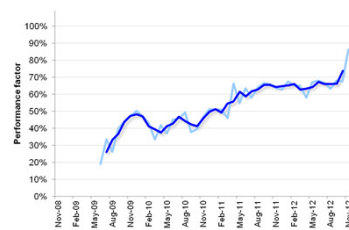
RAMP-UP PROFILES



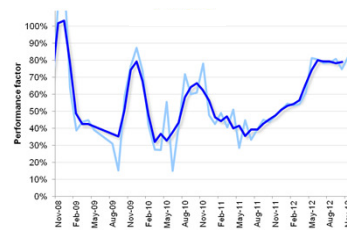
Star



Rapid Developer



Slow Developer



Erratic

15

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CRITICAL SUCCESS FACTORS

Critical Success Factors are predominantly market/operational rather than technology driven

Feedstock Selectivity

- Feedstock selectivity; including the ability to ensure both a continuous supply of suitable feedstock throughout the year and to ensure optimal biology at all times

Operational Personnel

- Operational personnel who are able to dedicate sufficient time to the operation of the facility

Active Management

- A culture of seeking to make a series of small changes to actively improve operational performance


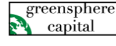
Access to Digestate Disposal

- Deep understanding of, and access to, local markets for digestate

16

New operators with small AD (<1MW) project – more akin to equity risk profile

Proven, quality AD operators with larger scale projects – more akin to debt risk profile

	Key Takeaways	Risk Type	GIB Potential Partner
New AD Operators	<ul style="list-style-type: none"> GIB analysis suggests that the typical risk profile of an AD facility is such that the initial project funding, unless backed by robust alternative (i.e. not just project security) or delivered by an experienced UK operator with a track record of delivery, is likely to be better suited to equity rather than debt investment 	<ul style="list-style-type: none"> Equity 	<ul style="list-style-type: none"> GIB Fund Managers: <div>   </div>
Proven AD Operators	<ul style="list-style-type: none"> Projects with the following characteristics may be suited to debt re-financing: <ul style="list-style-type: none"> Robust feedstock contracting arrangement - particularly in the absence of a local authority 'anchor' contract; Sustainable arrangements for the processing and use of digestate; PPA or other appropriate offtake agreement in place; Steady operational performance - with a project specific metric of a quarterly backward looking average load factor achieved for a continuous specified period of months 	<ul style="list-style-type: none"> Debt 	<ul style="list-style-type: none"> GIB AD Debt Fund <div> <p>Aim to deploy c.£25m in debt financing to market with co-investor (up to £50mn)</p> </div>

17

Section 3

Next Steps

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18

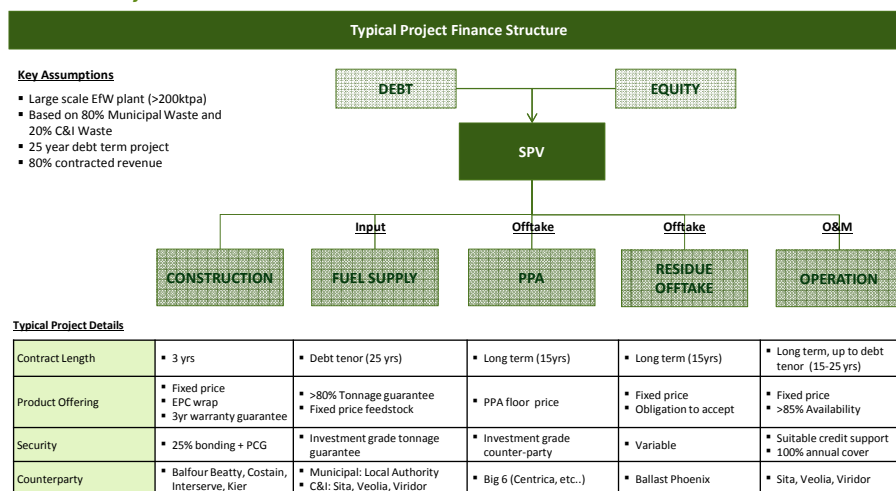
GIB sees significant benefits to providing non – recourse debt financing to AD market

Sector Benefits	Asset Class Deserving	<ul style="list-style-type: none"> AD sector is a robust and emerging asset class and is suitable for non-recourse, project finance debt – a product commonly used in more mature, larger sectors within waste and infrastructure
	Supports Growth	<ul style="list-style-type: none"> Unlike corporate debt which can rapidly limit a developer's balance sheet and is typically short term, non-recourse project finance debt provides a more substantial funding source for players with a significant pipeline
	Available to Best in Class	<ul style="list-style-type: none"> Incentivises developers to deliver well managed, operational plants
Sponsor Benefits	Reduces lenders recourse to sponsors	<ul style="list-style-type: none"> Protects Borrower's balance sheet
	Can allocate equity to larger portfolio of projects	<ul style="list-style-type: none"> Allows sponsor to distribute limited capital to a wider group of projects
	'Shared Interest' concept	<ul style="list-style-type: none"> Borrower and sponsors are equally incentivised to make the project successful

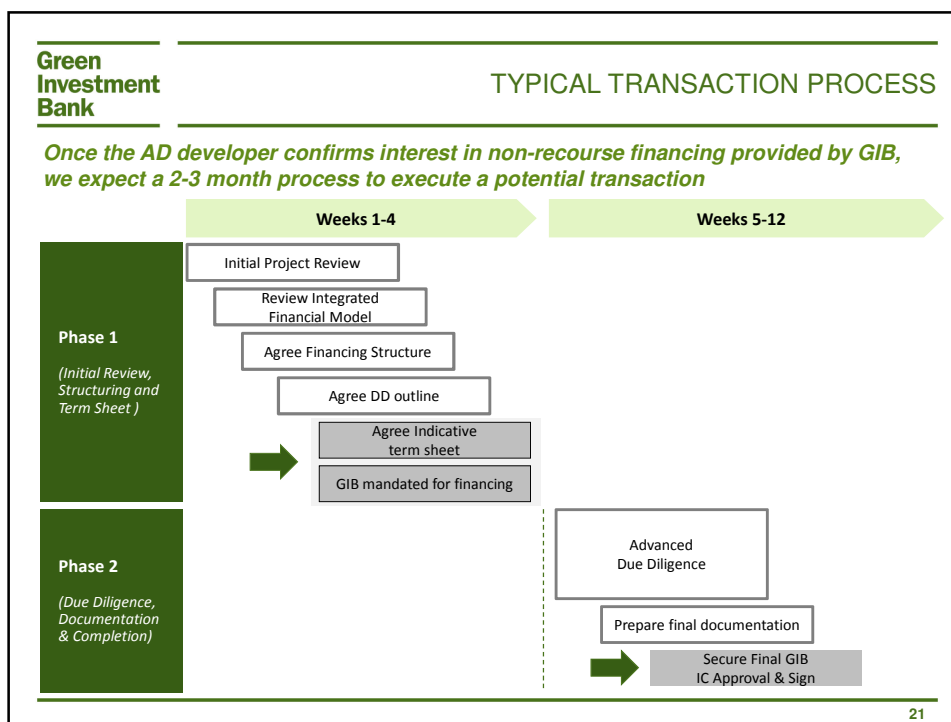
Note - GIB is willing to discuss alternative financing structures to a non recourse project financing should it be considered more appropriate to the borrowers

19

The structure below shows a plain vanilla non-recourse project finance lending facility typical to the waste industry



20



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IF INTERESTED PLEASE FEEL FREE TO GET IN CONTACT

GIB Contact Details

Partha Vasudev
partha.vasudev@greeninvestmentbank.com
 +44 (0) 330 123 3087

Dominic Noel-Johnson
dominic.noel-johnson@greeninvestmentbank.com
 +44 (0) 330 123 3754

Edinburgh
 Exchange Place 2
 5 Semple Street
 EH3 8BL
 T +44 (0)131 306 0175

London
 13th Floor
 21-24 Millbank
 SW1P 4QP
 T +44 (0)330 123 3070

FM's Contact Details

Foresight – Philip Kent
PKent@foresightgroup.eu
 +44 (0) 1732 471800

Greensphere - Vince Julier
Vince@greenspherecapital.com
 +44 (0) 20 8282 6014

22

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Questions?