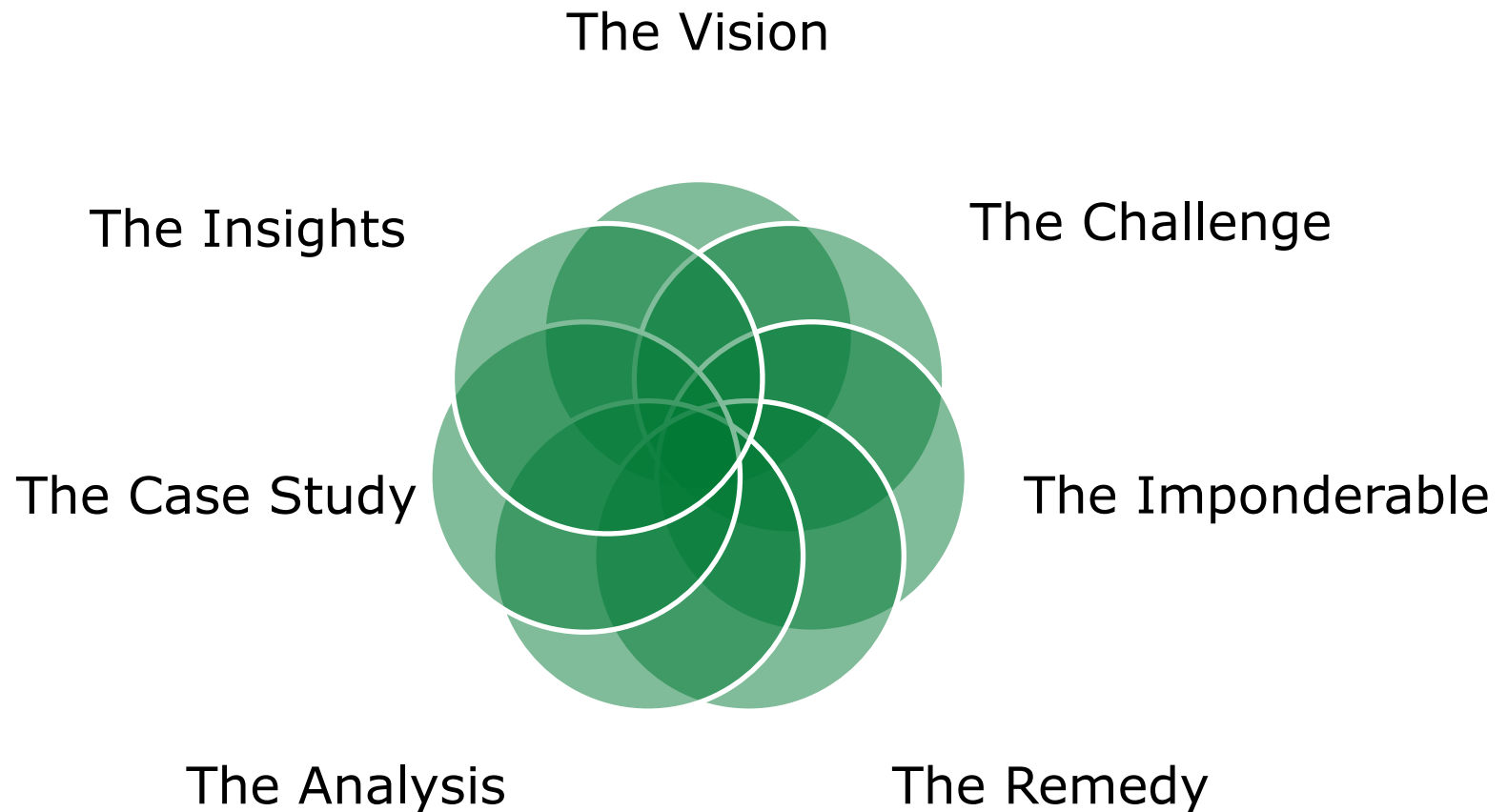


Transforming Irish Industry with Renewable Heat

IrBEA 12th National Bioenergy Conference

Bill Stanley, Chief Operations Officer,
Coillte Enterprise

Renewable Heat – The Agenda



Renewable Heat – The Vision

- A fully indigenous supply chain
- Where locally produced and processed fuel
- Supplies the energy needs of large process heat users
- Maximising efficiency from stump to steam
- Enhancing the environment
- Contributing to local communities
- Strengthening local industry

Renewable Heat – The Benefits

Enhancing the Environment

- Reduced fossil fuel use
- Reduced CO2 emissions
- Increased fuel security

Creating an Indigenous Energy Sector

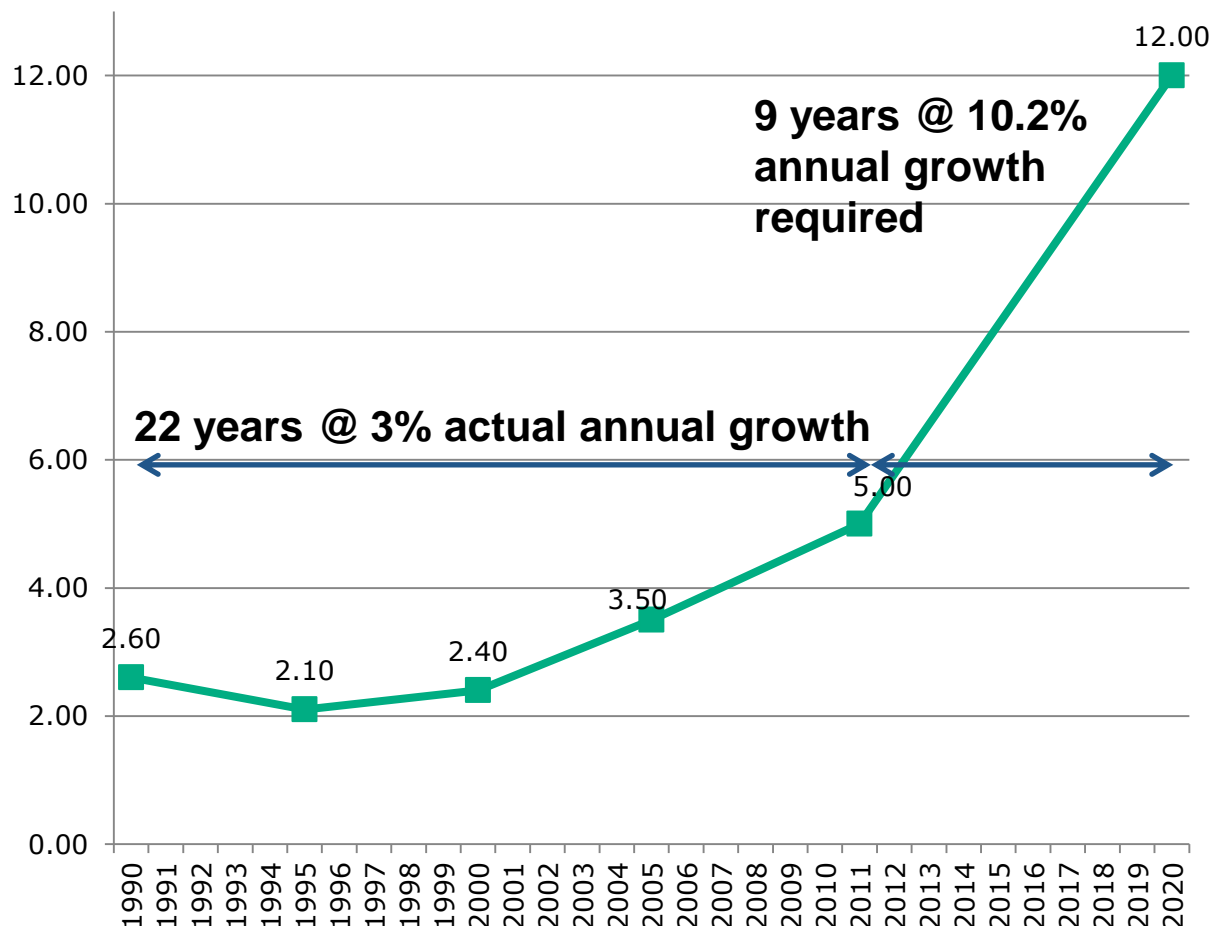
- New jobs
- New skills
- Rural based

Strengthening Irish Industry

- Reduced Costs
- Reduced price volatility
- Increased investment

Renewable Heat – The Challenge

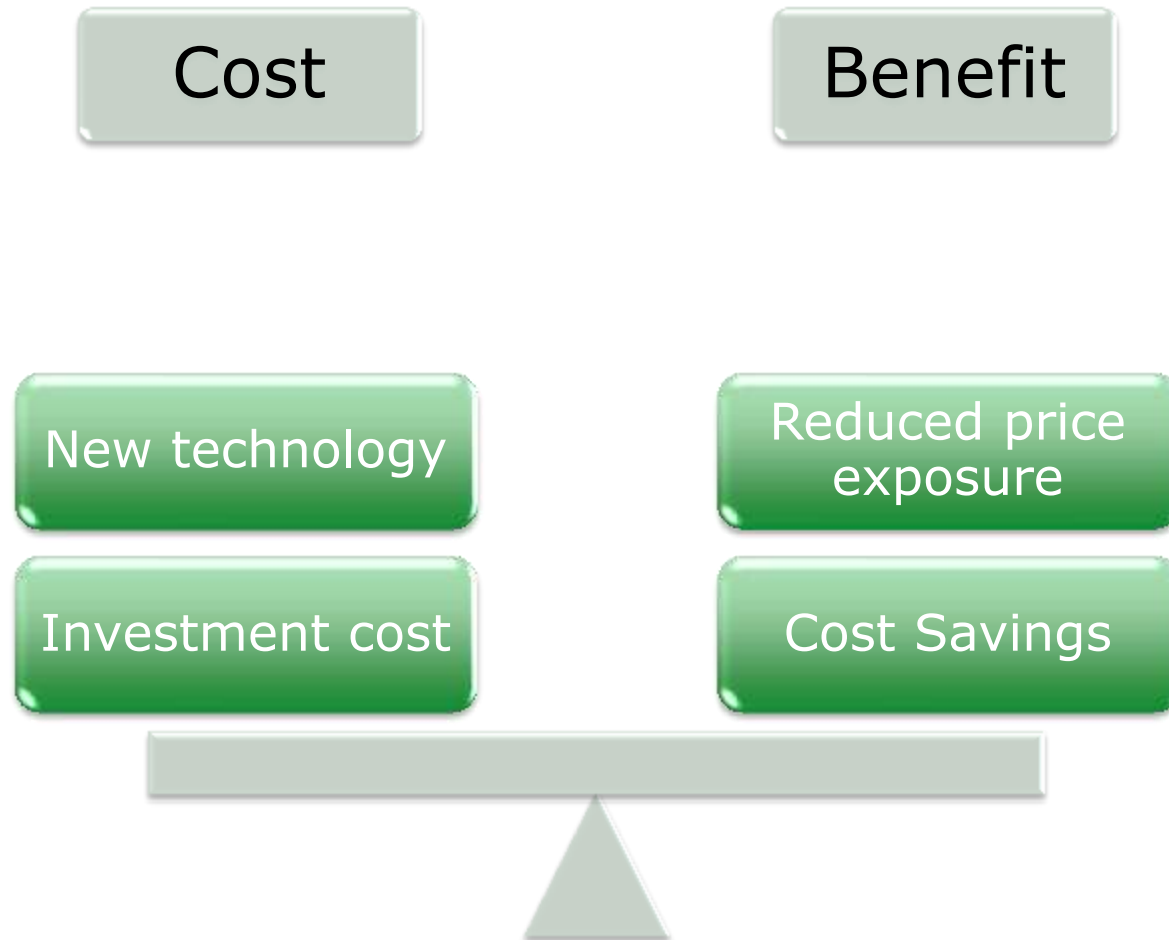
RES-H Target 2020 (%)



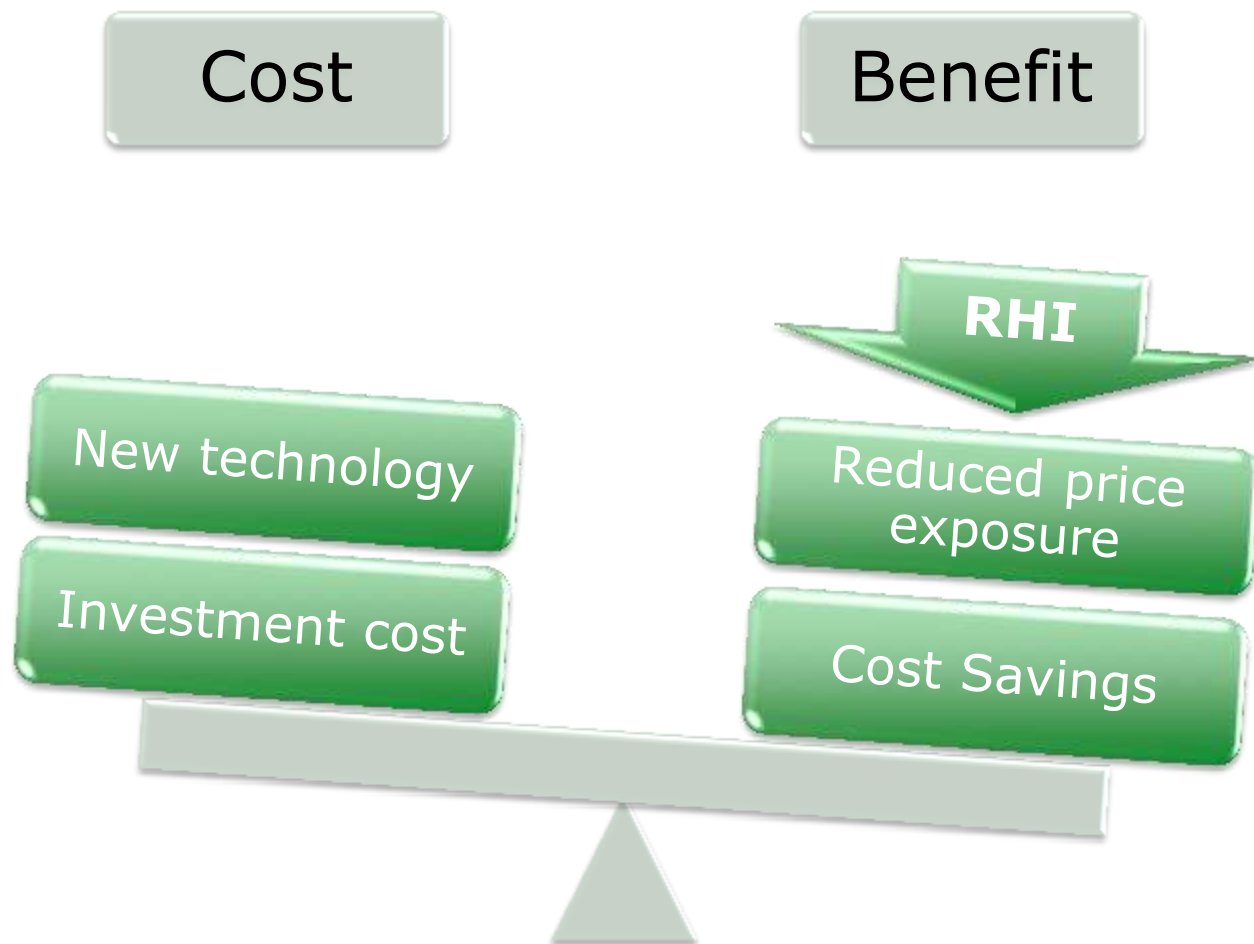
- To achieve 2020 target requires a further RES-H output 246ktoe from bioenergy
- Equivalent to 190 new 2MWth boilers, or
- 76 new 15MWth CHP units
- **i.e. 20 – 25 new industrial scale boilers installed per annum**

Why is nobody
talking about
renewable heat?

Renewable Heat – The Challenge



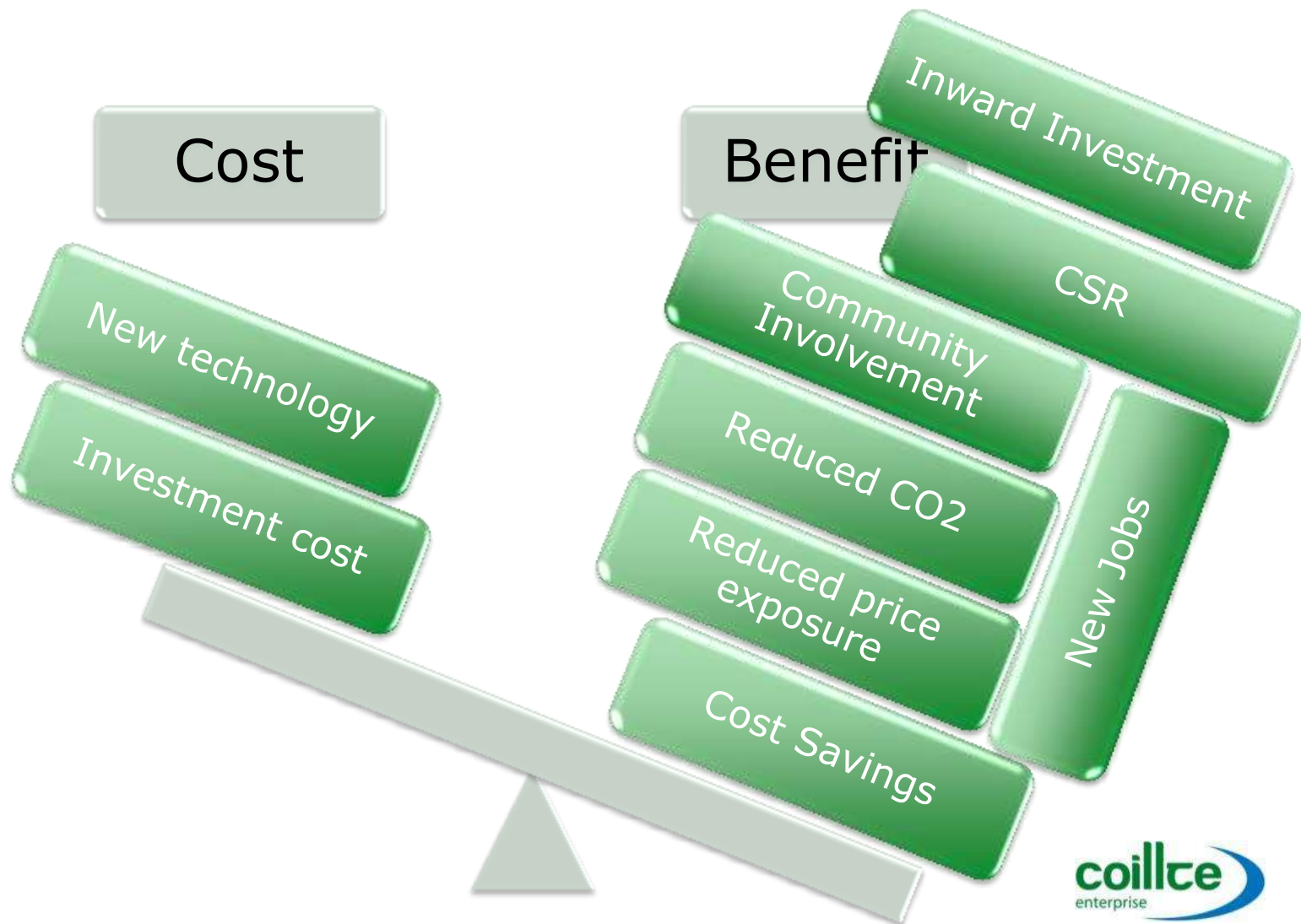
Tipping the Balance



Renewable Heat – The Remedy

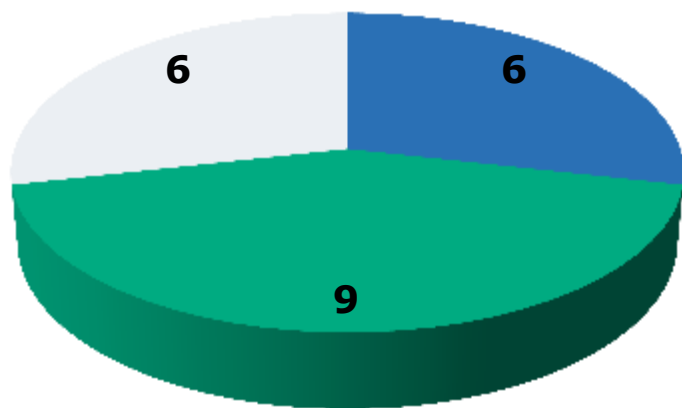
“A **modest** but **focused** renewable heat incentive would stimulate significant levels of new economic activity, generating returns that would far exceed its initial investment costs”

The Full Cost/Benefit Equation



Renewable Heat – The Analysis

- Detailed feasibility analysis on 21 solutions on 14 sites
- Solutions ranging from 0.5 to 20MWth



■ < 5 MWth ■ 6-10 MWth ■ > 10 MWth

Max Possible Impact

RES-H contribution	60 ktoe
Oil offset	49M l
CO2 offset	158k t
Biomass	325k t
Capital Investment	€56M
Energy Savings	€9M

Renewable Heat – The Analysis

Simple Payback - No RHI



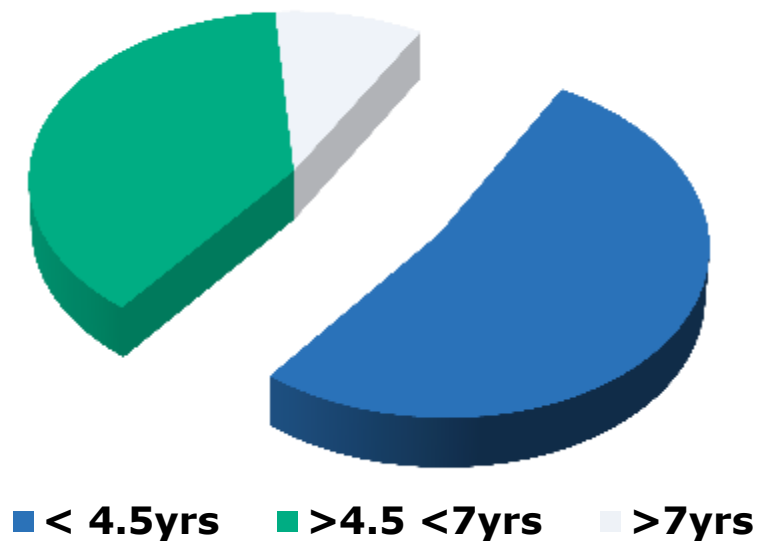
■ < 4.5yrs ■ >4.5 <7yrs ■ >7yrs

Max Possible Impact

RES-H contribution	16 ktoe
Oil offset	15.5M l
CO2 offset	50k t
Biomass	102k t
Capital Investment	€13M
OpEx Savings	€3.7M

Renewable Heat – The Analysis

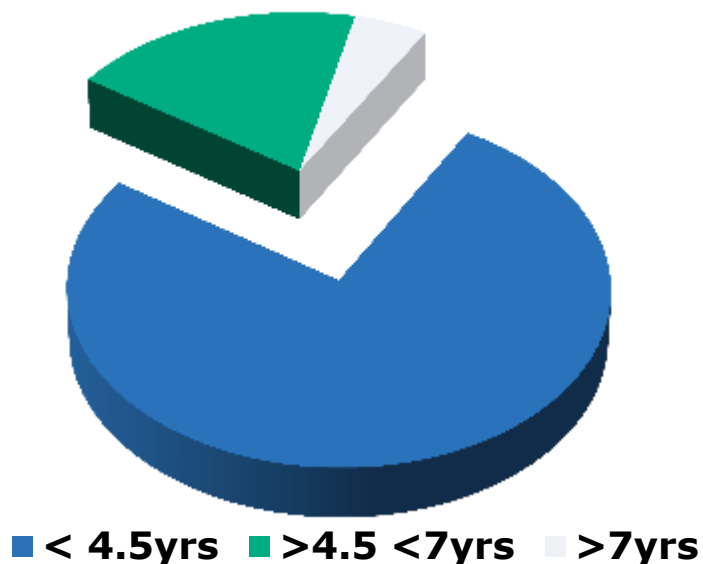
Simple Payback – RHI 0.5c/kWh



Max Possible Impact		Base
RES-H contribution	42 ktoe	16 ktoe
Oil offset	34.3M l	15.5M l
CO2 offset	111k t	50k t
Biomass	227k t	102k t
Capital Investment	€29M	€13M
OpEx Savings	€6.8M	€3.7M

Renewable Heat – The Analysis

Simple Payback - 1c/kWh



Max Possible Impact		Base
RES-H contribution	47 ktoe	16 ktoe
Oil offset	37M l	15.5M l
CO2 offset	119k t	50k t
Biomass	245k t	102k t
Capital Investment	€34M	€13M
OpEx Savings	€7.6M	€3.7M

RHI – The UK Experience



Source: Ofgem RHI Update January 2013

- RHI introduced Nov 2011
- Installations of >1MWth secure an incentive 1.0p/kWh, paid quarterly on metered output, index linked for 20 years
- Requirement to report quarterly on the sustainability of biomass feedstock
- Between October and December 426 new applications were received and 409 installations were accredited by Ofgem

Renewable Heat – The Case Study











Astellas – Key Learnings

Enhancing the Environment

- Offset 800,000 l of HFO
- Offset 2,500t CO2 emissions
- Enhanced local environment

Creating an Indigenous Energy Sector

- New supply chain
- New jobs and skills
- Rural based

Strengthening Irish Industry

- New multi million € capex investment on site
- 45% reduction in energy costs
- Eliminated fuel price volatility
- Improved local reputation
- New product lines secured
- Enhanced security of workforce

Key Insights

- The benefits of renewable heat are significantly more extensive than enhancing the environment
- The most significant of these is the role it can play in strengthening Irish industry
- In the absence of a support we will not achieve our RES-H targets or unlock those benefits
- A modest but focused renewable heat incentive will stimulate significant levels of inward investment in renewable heat
- This will stimulating new economic activity, strengthening Irish industry and ultimately generating returns that would far exceed its initial costs
- The industry is in critical need of vision and leadership

Our Purpose

Enriching lives locally, nationally and globally through innovative and sustainable management of natural resources.

Trees are just the start of it

Natural resources, responsibly managed.

