



GreenBusiness

James Hogan
Programme Manager

What is the Green Business programme?



- *NWPP programme which provide FREE advice to business (Part of the BeGreen.ie family)*
 - *On site REAs Resource Efficiency Assessments (€25K)*
 - *Indirect support through our website resources and tools*
- *Green Business is managed by CTC , based at Cork IT*

CLEAN
TECHNOLOGY
CENTRE



So how does an REA work?



GREEN BUSINESS PHASE II
JUNE 2011 - JUNE 2014

€6 Million

Potential cost savings identified



Energy

€4.2 Million



Water

€660K



Waste

€1.2 Million



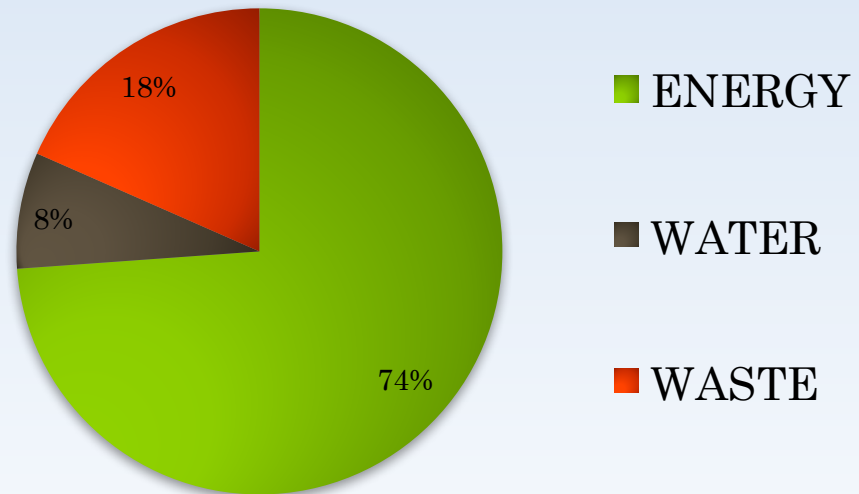
€37,000

Savings identified per company visited



June 2011- June 2014

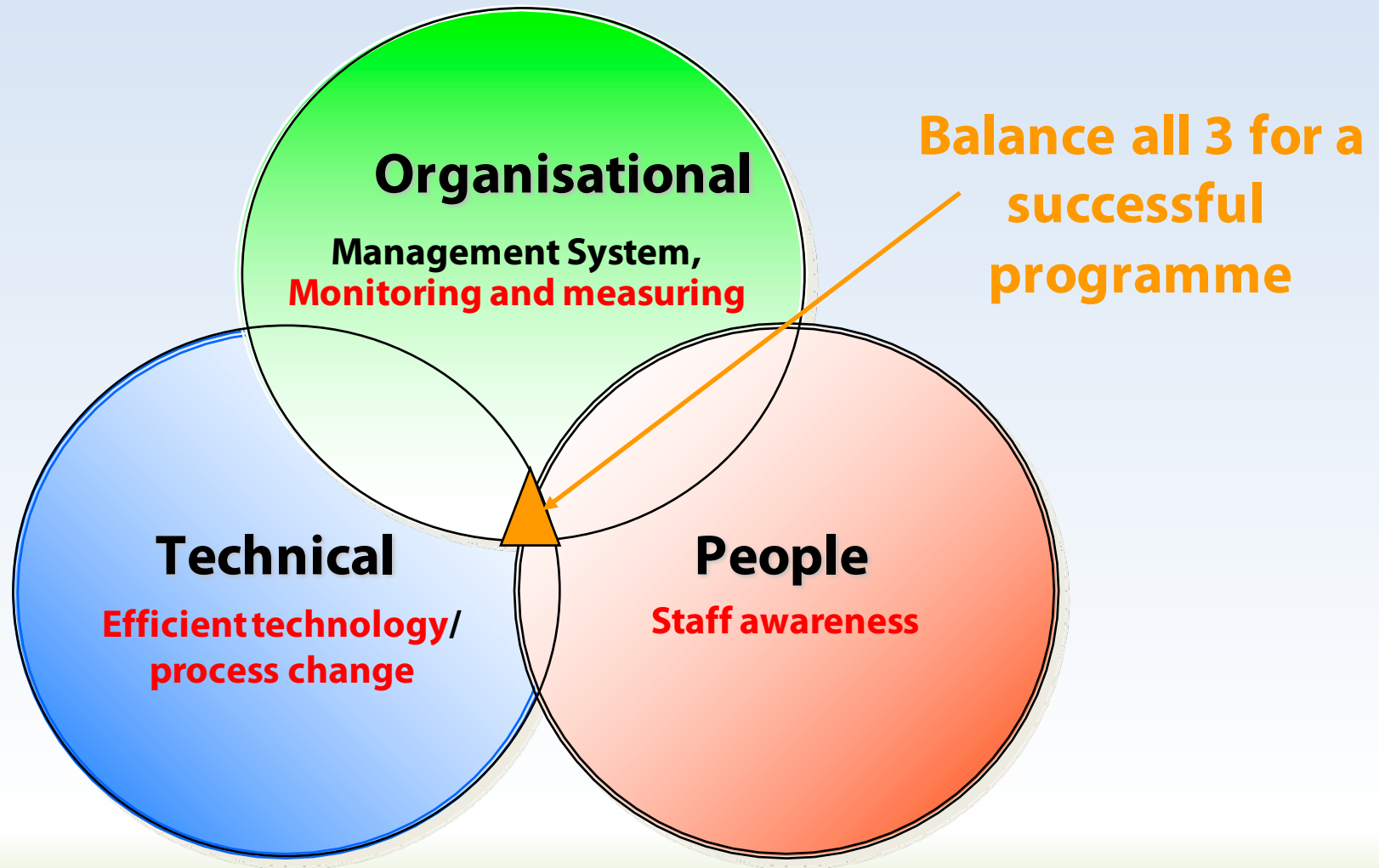
2014



Green Makes Good Business Sense

- Reduced utility costs, material costs
- Compliance with governmental and supplier standards
- Enhances your brand/ reputation/
market opportunities

Resource Efficiency- Key elements



Resource Efficiency

- Management, Monitoring and Measuring

Are you managing your utility costs? and consumption??



Or Managing in the Dark



COST PER KWH -ENERGY 2016 AVERAGE PRICES

	Electric -ity	Natural Gas	LPG	OIL	Wood Pellet	
Cents per kWhr	?	?	?	?	?	

COST PER KWH -ENERGY 2016 AVERAGE PRICES

	Electric -ity	Natural Gas	LPG	OIL	Wood Pellet	
Cents per kWhr	14.0	4.0	6.0	6.0	6.0	

Fuel switch/greater efficiency

Office block

- Installed new gas boiler 92% efficient compared to old oil boiler at 70%
- Natural gas 50% price of oil
- Fuel cost reduced by 68%
- **Payback period = 1 year**

2012 Estimated fuel Cost	Cost
Oil	€38,000
Potential Annual fuel savings	€25,800
Project Cost	€23,300
Payback	< 1 Year

GHP hotels

Energy cost/ sleeper

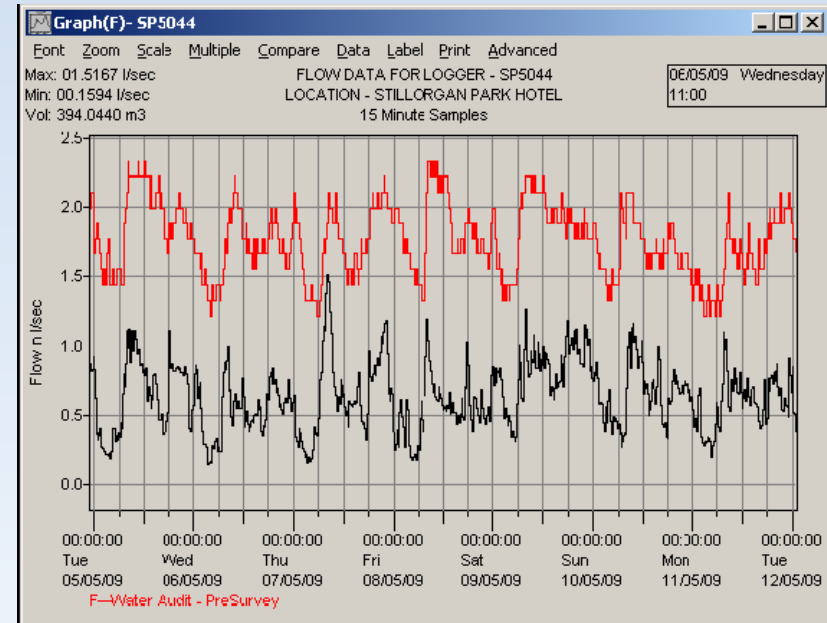


Average
€4.8

Benchmark water consumption/ fix leaks

Stillorgan Park Hotel

- Benchmark indicated consumption double the GHP benchmark
- Leak detection company showed that that the property had 25 leaks: small and big.



- **Pre-Survey** 152.5 m³/day
€ 130,250 p.a.
- **Post-Survey** 76.6 m³/day
€ 65,424 p.a

- **€Annual Savings €
64,826 p.a**
- **Survey cost €8,000**
- **Payback period of 7
weeks**

Eliminate penalties on Electricity Bills

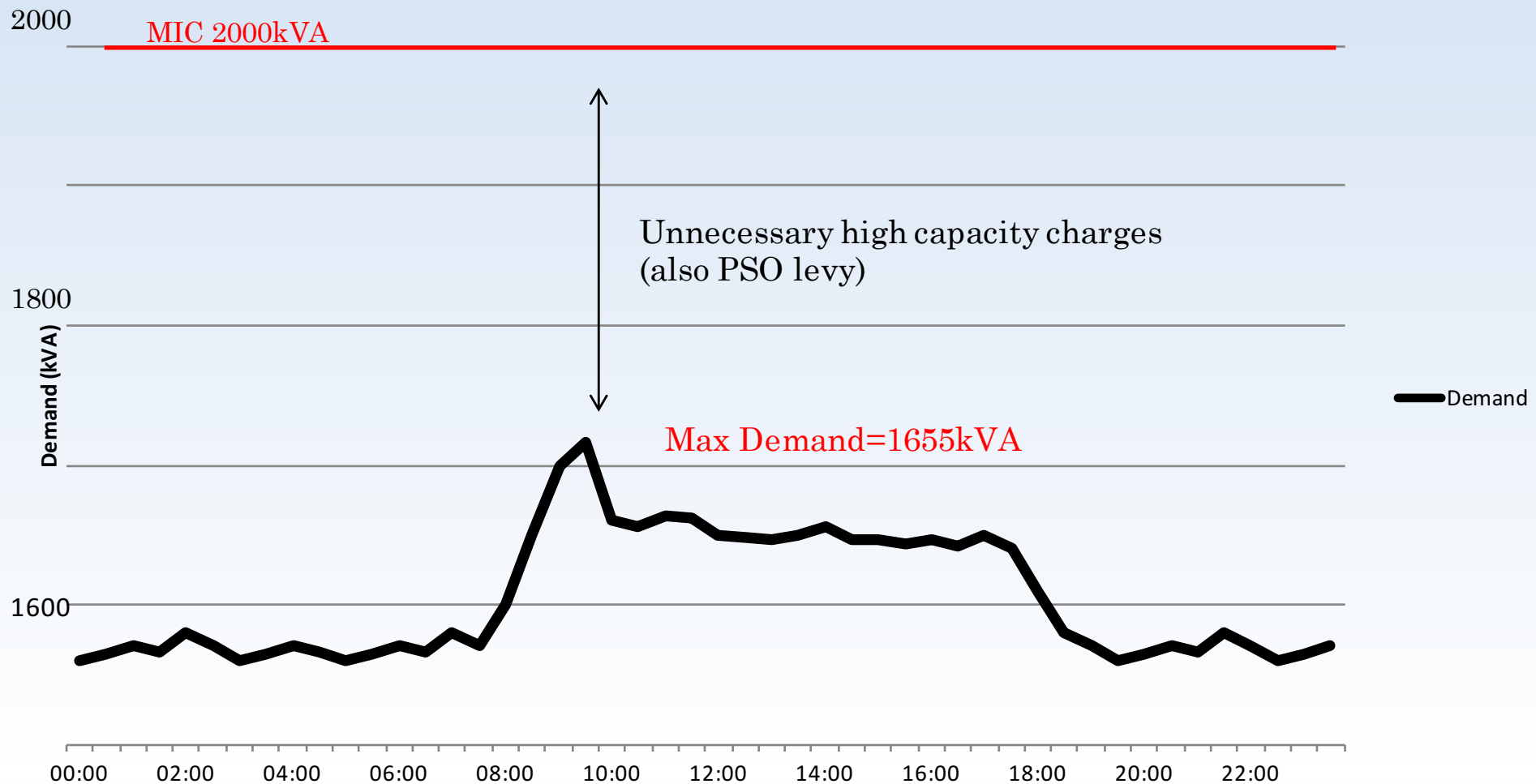
C & F Automotive, Mullingar

- Reduce Maximum Import Capacity (MIC) from 2000 kVa to 1800 kVa = €10 K/ annum
- €10K by reviewing bills



Maximum Import Capacity

Electrical Demand Profile



Resource Efficiency

- Technical Solutions
 - More efficient equipment
 - Better control of equipment
 - System changes

LIGHTING



- A heater and a light
 1. 80-90% of energy going to waste!
 2. 10 % energy to heat

Financial institutions and big business are sold on climate action

- Energy Efficiency Obligation Scheme EEOS

A kWhr electricity saved ~ 5 cent/ kWhr

Energy Efficiency Obligation Scheme

- Engage with energy suppliers and equipment suppliers and avail of funds for EEOS
- Some suppliers give “Cash for Kilowatts”

Slieve Russel Hotel

Supplier provided LEDs
in the hotel’s lobby for
for free

-in return for the reduced kWhrs



Re-lamping Paybacks

Lamp Type	Lamp	Duration	Consumption kWhr	AUC	Annual Cost
Halogen	50 W	8760	438	€0.11	€48.18
LED	8 W	8760	70	€0.11	€7.70
Annual Savings			368 kWhr		€40.48
Primary savings			920 kWhr		

Value of electricity savings under EEOS@ 5 cent/ kWhr= €18.4/lamp

Biggest savings associated with Electricity Reduction =€40.48/ lamp

That's €8,100/ annum for 200 lamps, at NO COST !

La Trattoria, Midleton

- **Heat Recovery**

- Hot water and space heating costs €9,000 p.a. on oil
- Installed heat extraction unit
- Installation cost €6,000
- New oil bill: €3,000 per annum



€6,000
COST SAVINGS P.A.

1 YEAR
PAYBACK







Meat Processor – Optimising cleaning

- Using 175 m³ water in cleaning shift , at 65°C cleaning shift
- Measurement of a typical individual hose: 26 litres/min
- By **reducing flow** to 20 litres/min
- **Potential savings of €42,000 per year**





Urinals

- **Unmanaged Urinals are designed leaks !**
- Typically 15 litres cistern flushes every 20 minutes regardless of whether bathroom is occupied or not
- That's 45 litres/ hour/ 365 days= 394 m³ (€800/ annum)
- **Control with:**
 - Motion sensors
 - Push Buttons
 - Turn off at night and weekends

Revolution Bar- Waterford

- Urinals consuming 1,051 tonnes water per year.
- PIR system reduced this by 60% saving €1,544 /p.a
- Cost €350
- Payback= 3 months





This waterless urinal
saves up to **100,000 litres**
of water each year

www.mcdonalds.ie



i'm lovin' it

Resource Efficiency

- People (Staff Awareness/ change is systems)

Kitchen taps

- Kitchen porters should know...
 - Hot water is expensive (4 to 10 times cost of water)
 - A kitchen tap (hot) run unnecessarily for 5 minutes / hour over a 16 hour day will cost you about €6,000 / annum



Staff Awareness

Contract Caterer - Cork

- Operating 2 Bain Maries (9KWhr) for 16 hrs each day
- Reviewed need for this practise
- Trained staff to turn off and use for 8 hrs/ day



Savings

- €2,000 / annum

Catering company simmers €150,000 off
clients catering bill

Sodexo Catering- Cork Site

- 1.2 million Paper Cups sent to landfill each year costing €150,000
- Free Mugs provided to staff (cost €6/ mug)
- Staff responsible for washing own cups
- Reduced purchase costs by €150,000**
- Investment €20,000**
- Payback period of 7 weeks**



New On-Line Questionnaire

Intro

Energy

Water

Waste

Management
System



SME Efficiency And Cost Reduction Questionnaire

Welcome to the Green Business Questionnaire.

The aim of this questionnaire is to carry out a quick overview of the level of Resource Efficiency in your company. This will allow us to provide quick and useful feedback on what you can do to make your business more efficient and reduce costs.

Completing the questionnaire should take no more than 15 minutes, as it consists of multiple-choice questions. Please choose the answer that best reflects activity in your business and this will allow Green Business to give you appropriate recommendations. Every question comes with an explanation to help you give the best answer.

Once you have submitted all your answers we will email you with our analysis. You will receive a Resource Efficiency Score (RE Score) for your business and a Green Business report.

You will be then prompted to submit some key information on your business's utility consumption and spend so that we can provide you with Resource Consumption Benchmarks for your business.

[Get your Score!](#)

Energy

Have you identified the equipment in your business which uses the majority of the energy consumed?

Have you identified the equipment in your business which is using the majority of energy consumed by sub-metering or calculating usage based on energy ratings and operational times.

- Yes Somewhat No

Do you know that your energy costs could be reduced by changing the energy type used in your business (oil, gas, electricity, wood etc)?

When you work out the cost of energy used in your business in terms of € per kWhr, you will see that electricity is more than twice the cost of oil and liquid gas per unit of energy consumed. Natural gas is approximately half the cost of oil.

- Yes Somewhat No

Have you taken steps to to reduce the carbon footprint of your business?

The carbon footprint of your business is related to the total amount of greenhouse gases produced from the burning of fossil fuel such as gas, oil and diesel used in transportation.

- Yes Somewhat No

Waste Actions

Measure and monitor food waste produced and take measures to minimise

Make sure there is a separate, clearly labelled bin for food waste. Collecting food waste separately is a legal requirement, but allows you to see what food wastes you are producing. Sometimes the quantities can be surprising, especially when you consider what food waste is costing your business.

“Every tonne of food waste produced can cost a business up to €3,000 when you consider the value of raw materials, energy and wasted labour, as well as disposal costs.”

Train staff on the waste segregation and waste minimisation requirements of your business

Provide staff with training on what waste management procedures are required in your workplace. Use posters or signage to promote awareness on best practice measures. Seek suggestions from staff for improved waste management measures through suggestion schemes, and reward for suggestions adopted.



TOP TIP

Does your business generate large amounts of waste cardboard or plastic?

If so it may be possible to generate revenue large amounts of either material.

Resource Efficiency (RE) Rating for

Ferrycarrig Hotel

May 2016

49%
(RE) Rating

Your RE rating is based on individual ratings
which you achieved in the following areas...



Energy
33%



Water
33%



Waste
78%



Management
56%



Resource Efficiency & Cost Saving Recommendations

ENERGY ACTIONS	RESPONSIBILITY	COMPLETION DATE
ENERGY		
Identify main energy users		
Review the energy types used in your business and change to a more cost effective energy and / or energy supplier		
Review the energy types used in your business and change to a more CO2 Neutral		
Calculate how much you can save by changing your lighting to LED and make the change.		
Monitor and measure your energy usage and establish a benchmark.		
Set fridges and freezers to operate at optimum temperatures.		
Train staff to turn off energy using equipment when not in use.		
WATER ACTIONS		
Measure and record the water consumption		
Undertake the "Overnight Leak Test" and identify potential water leaks.		

Results

Energy

kWhr per M2/annum	200.00
kWhr per employee/annum	12,820.51
kWhr per Cover	6.67

Water

Litres per employee/annum	320,512.82
Litres per Cover	166.67

Waste

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Thank You

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Thank You

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This mornings line -up

- **9.40 – Green Business Update**
James Hogan, Green Business Programme Manager
- **10.00 – Promoting Resource Efficiency & The Circular Economy**
Margaret Murphy, Resource Efficiency Officer, SRWMO
- **10.10 – ISO 14001 – EMS – What is it and how and can it benefit my business?**
Shane Curran, Sure Leaf
- **10.30 – Energy Efficient technologies for SMEs**
Paul Kenny, Tipperary Energy Agency
- **10.30 – Q&A**

After Coffee

- **11.20 – Reducing the Carbon Footprint of your Business**
Calor Gas
- **11.35 – Smile Resource Exchange Update**
Katherine Corkery, SMILE Resource Exchange
- **11.55 – Smarter Living for Business**
Paul Courtney, Kingspan ESB
- **12.10 – Overcoming challenges & creating benefits for your business**
Mark McConnell, ECOS, Environmental Consultants
- **12.30 – Compostables**
John Lynch, Recycling Consultant, Down to Earth Material
- **12.50 – Q&A**