

Developing a Cleaner Production Programme for the Irish Hotel Industry

“Greening Irish Hotels”



Greening Irish Hotels

- **Irish Hospitality Institute – Sponsors**

Implemented by;

- **Maurice Bergin**
 - *Hospitality Solutions Consulting*
- **James Hogan**
 - *Clean Technology Centre, CIT*

Why ?

- **Industry had started some work**
- **No Benchmark Data**
- **No Best Practice Guides**
- **Felt that the Hospitality Sector could reach many consumers**
- **Perceived Opportunities for reductions in consumption in Water & Energy**

Who will use the Information ?

- **Hotels directly**
- **Similar Businesses**
 - **Restaurants/Caterers**
 - **Pubs**
 - **Hospitality sector in general**
- **EPA/SEI**
- **Academics – course development**

What was “The Greening Irish Hotels” Program? – 2005 - 2006

- **To encourage up to 100 Irish Hotels to start implementing Environmental Management practices & procedures**
- **To identify Best Practice in environmental management in Irish Hotels**
- **Research & Development Program to benchmark environmental performance of Irish Hotels**
- **To identify barriers to success**

Greening Irish Hotels Specific Targets

- **Benchmark 20 Core Hotels**
- **Collect Data from 100 Hotels**
- **Reduce landfill waste by 870 Tonnes**
- **Reduce CO₂ by 3,000 tonnes**
- **Reduce water consumption by 50,000 m³**

Program Drivers

- **Rising Costs**
- **Security of Supply**
- **Disappearing Landfills**
- **Increased Pollution**
- **Decline of Rural Tourism**

- **Greatest Driver was Cost**

Funding & Support

- **Primary source was funding from the NDP through the EPA's CGPP**
- **This was match funded by hotel participants and sponsors and suppliers**
- **Support from SEI (Energy MAP)**

CGPP Members

- 40 Core Hotels
- 16 Non Core Hotels

- Spread throughout the Country

- From Rosslare to Sligo to Derrynane to Dublin and in between

Programme Methodology

- Environmental Review of 40 hotels
 - Questionnaire
 - Benchmarking templates
 - On site walk through
- Environmental Review Report to core hotels and follow up action plan
- 4 Regional Environmental Workshops
- Networking within workshops & participants
- Best Practice Research
- Benchmarking – data management
- Website- Best Practice guides

Environmental Benchmarking

- New Benchmark Standards for Irish Hotels

- Adopted International Benchmarks initially
 - Energy – kWh/m²/pa
 - Water – Litres/Sleepernight
 - Waste – kg/Sleepernight (Landfill)

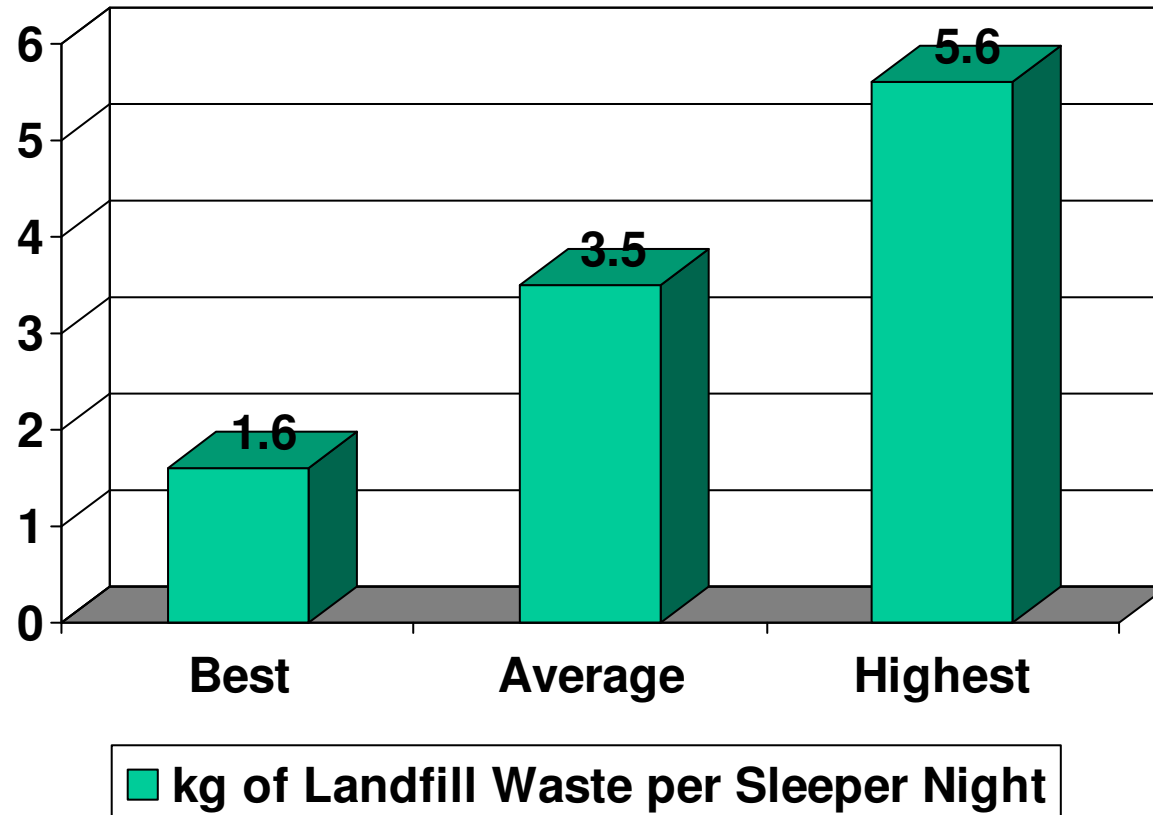
Waste

Drivers

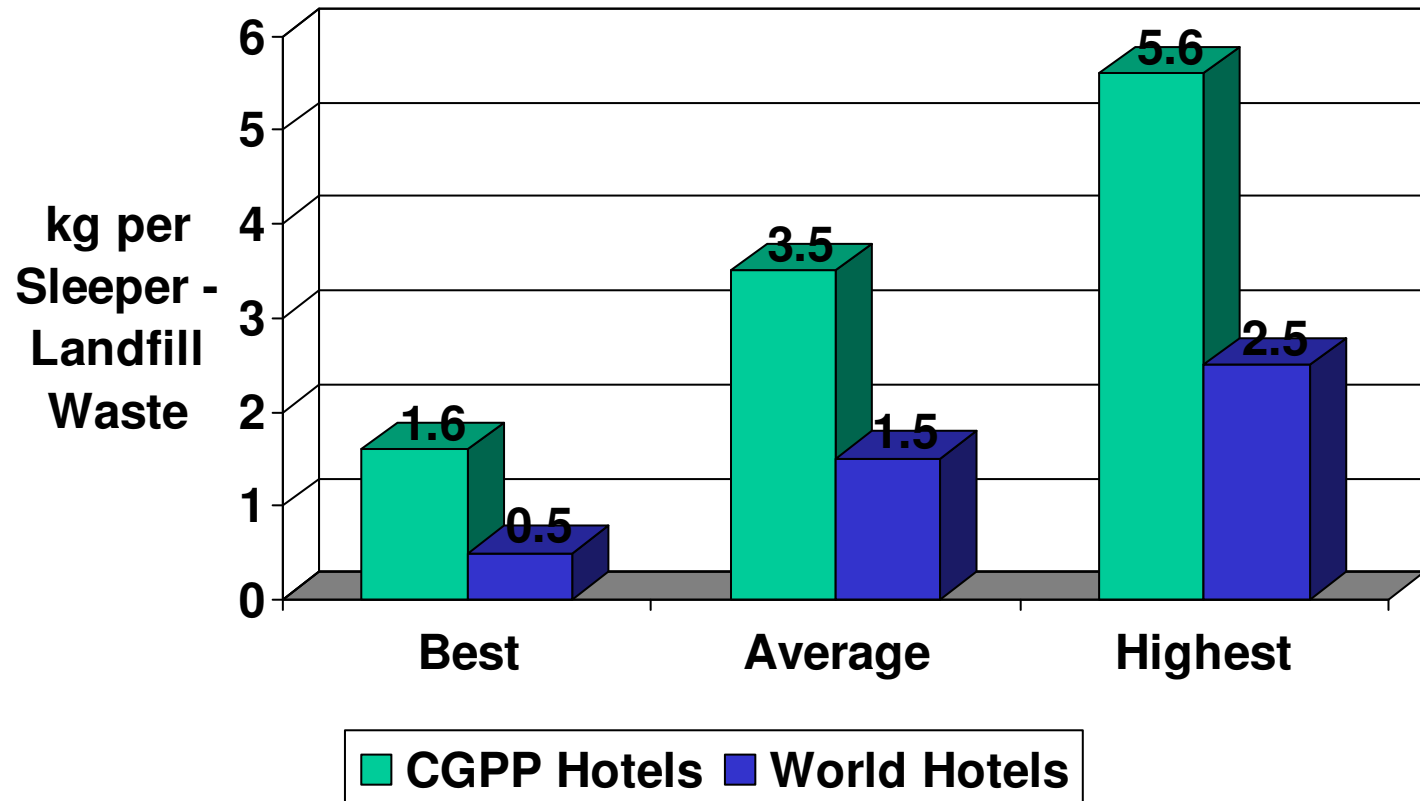
- **Costs suddenly rose from 2000**
- **Legislation Changes**
- **IHF Waste Management Strategy**
- **IHI Lecture Series**
- **Repak & Packaging Waste**
- **Fly tipping Scandals**
- **Large Press Coverage/Awareness**
- **Industry Moved to reduce waste costs**

So.....how did we do

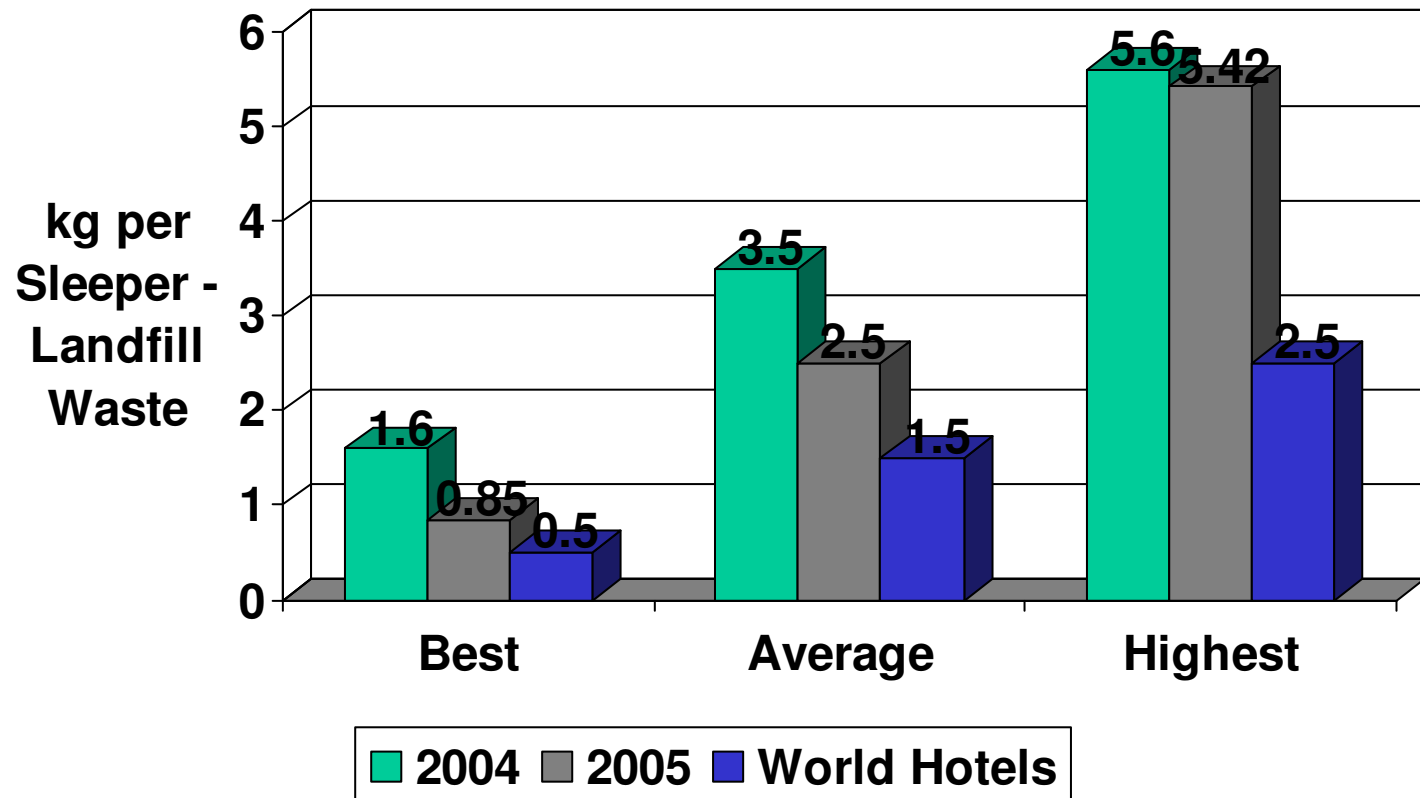
Waste - Benchmark Data –2004



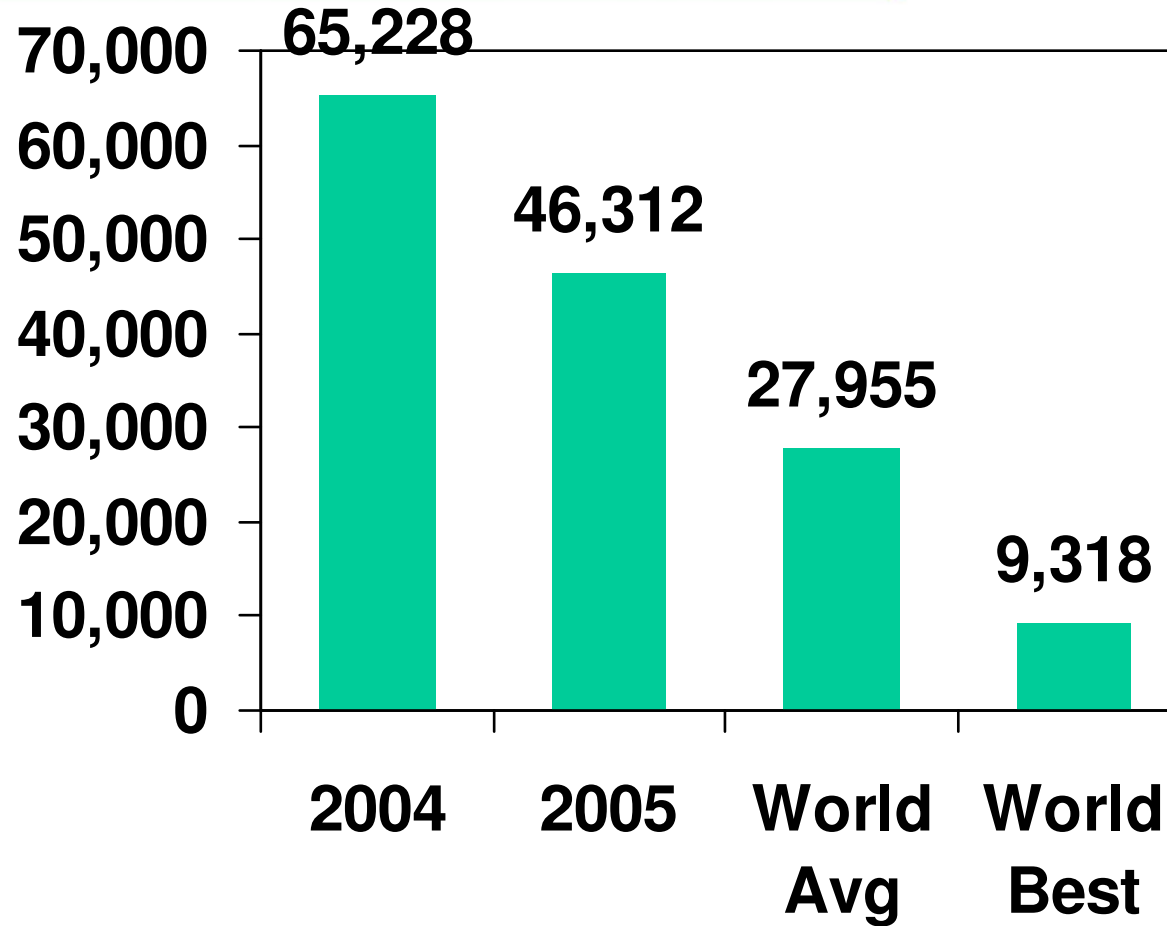
Waste - Benchmark Data –2004 – Ireland & World



Waste - Benchmark Data – 2004/2005 – Ireland & World

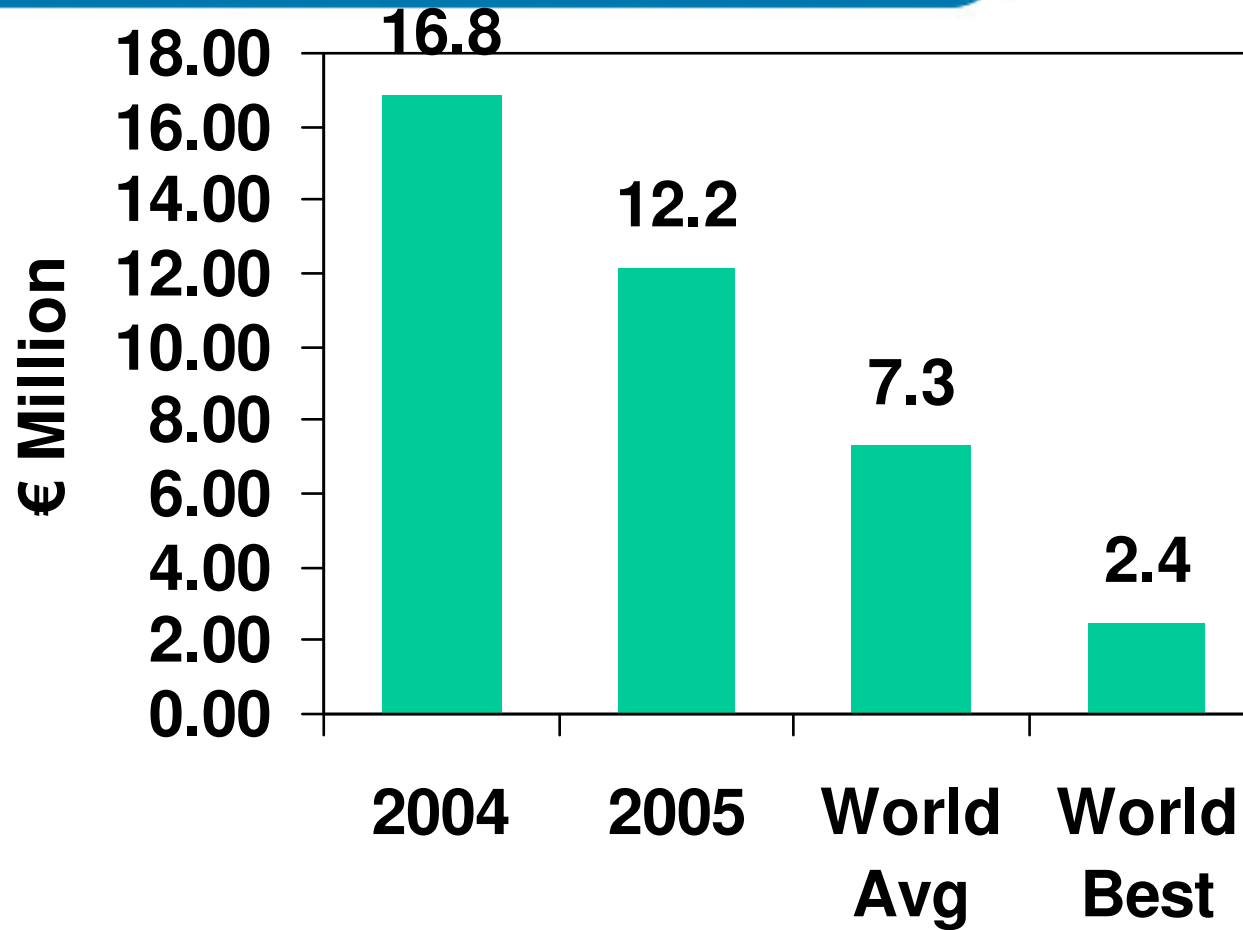


Waste – All Hotels



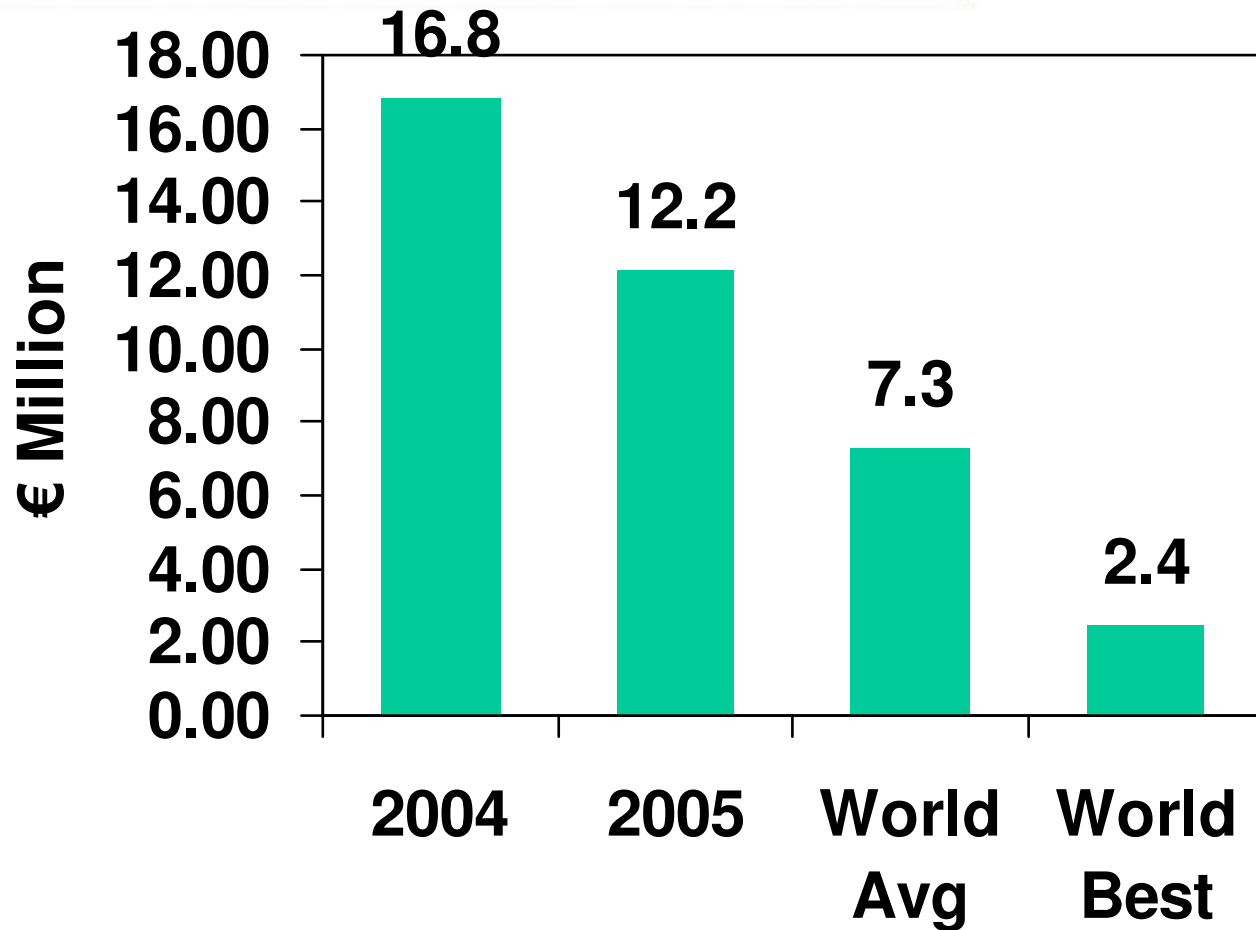
■ Tonnes to Landfill

Waste – All Hotels €



■ Potential Cost Reductions

Waste – All Hotels



Potential Cost Reductions

Environmental Benchmarking

■ Water

■ Drivers

■ Cost Increases

- E.g.: 100% in Cork in 2005
- 1 Hotel has Annual Bill of €100,000
- Metering taking place around country will pull in all on fixed charges

Water

■ Irish Hotels Water Consumption

■ 2005

- 10,156,700 cubic metres

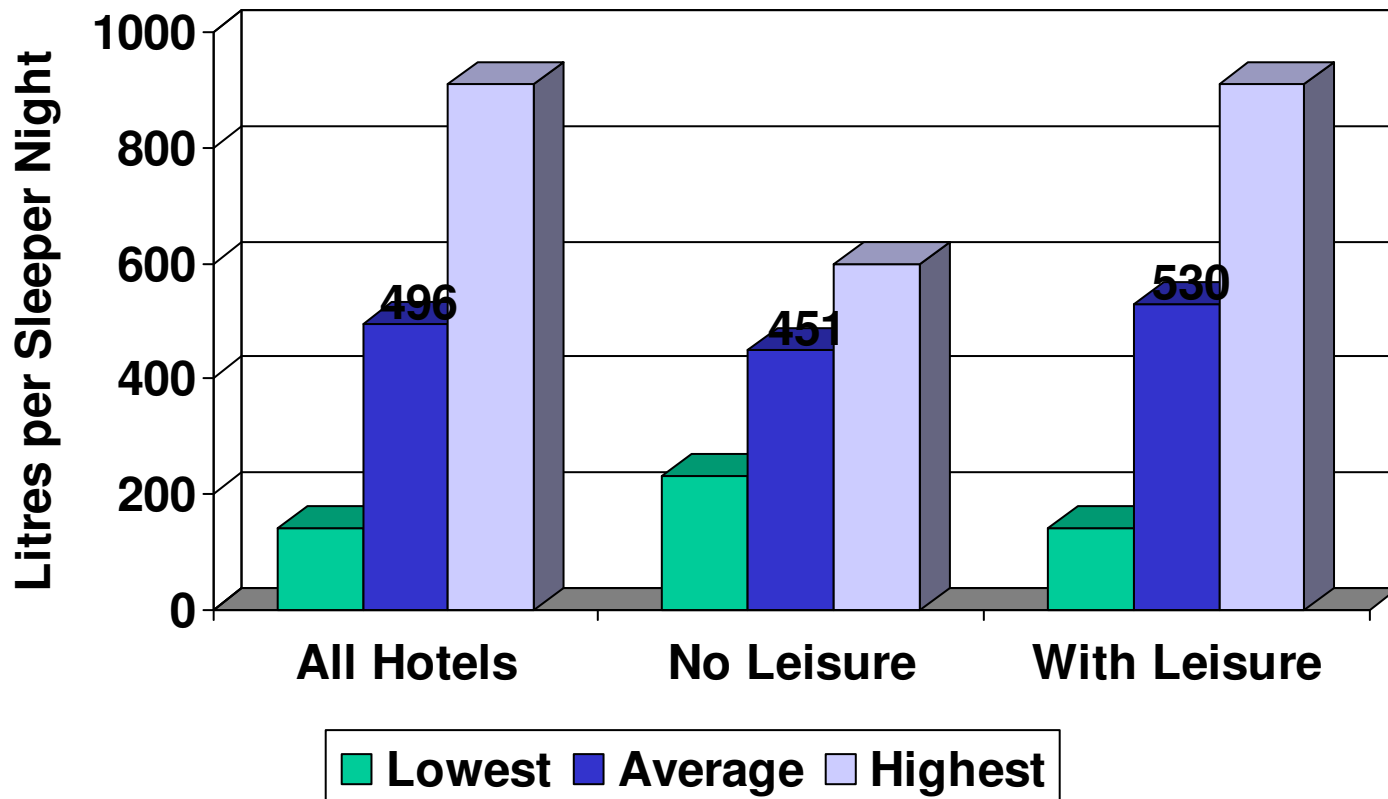
Or

- 10,156,720,000 Litres

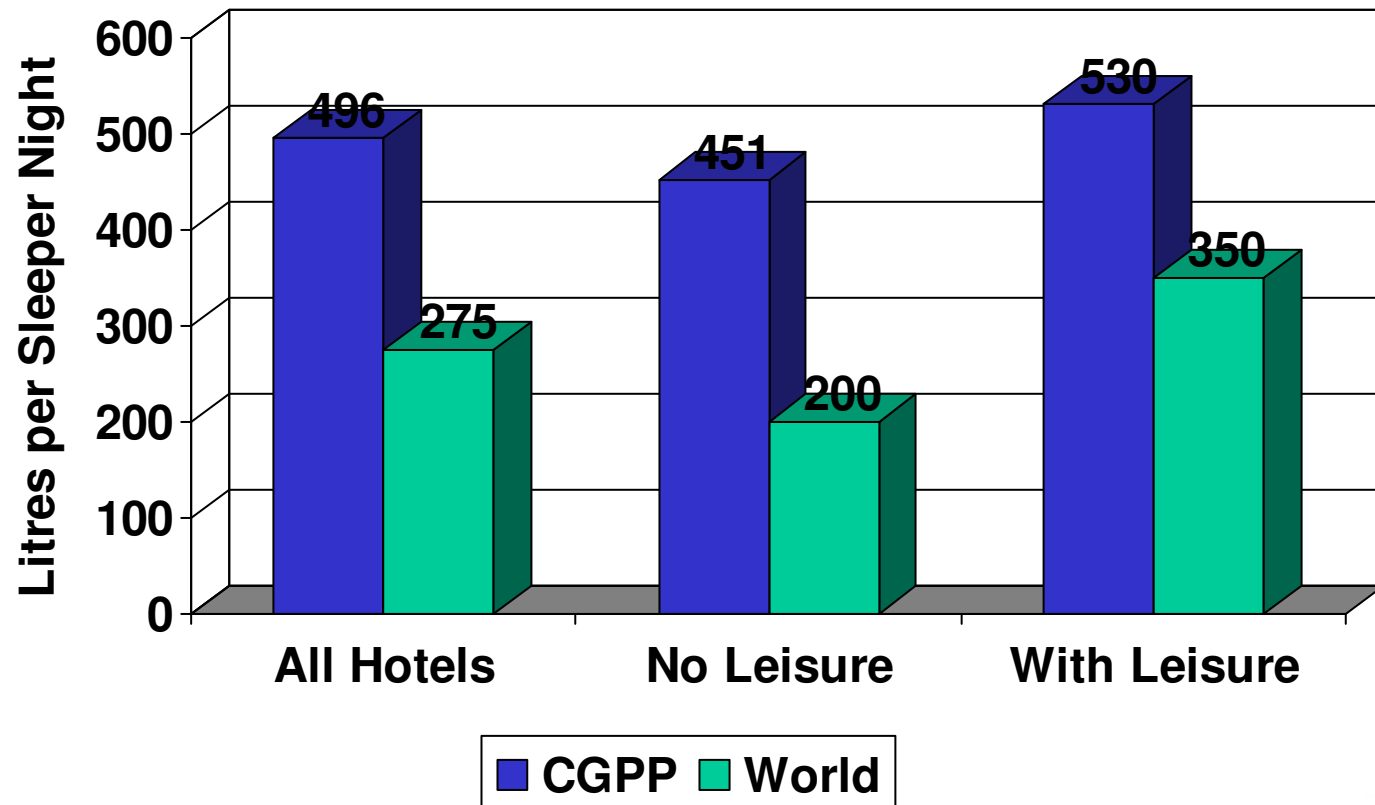
Or

- Fill your hotel with water

Water – CGPP 2004



Water – CGPP 2004



Water - CGPP

2005

- No real change
- Activity change can impact on figures
- Poor validity of Data

Water - CGPP

Potential

- **Achieve World Standard**
- **Reduce Consumption by 45%**
- **Save 4,570,524 Cubic Metres**
- **5,400 Cubic Metres per Hotel**
- **Green Water usage can go further**

Water - CGPP

Potential - €Euro Savings - Sector

- Current cost @ €1.18 per m³

= Water Cost Reduction of €5,400,000

- If cost rises to €2.00 per m³

= Water Cost Reduction of €9,000,000

(German Costs are c.€8 per m³....4 times)

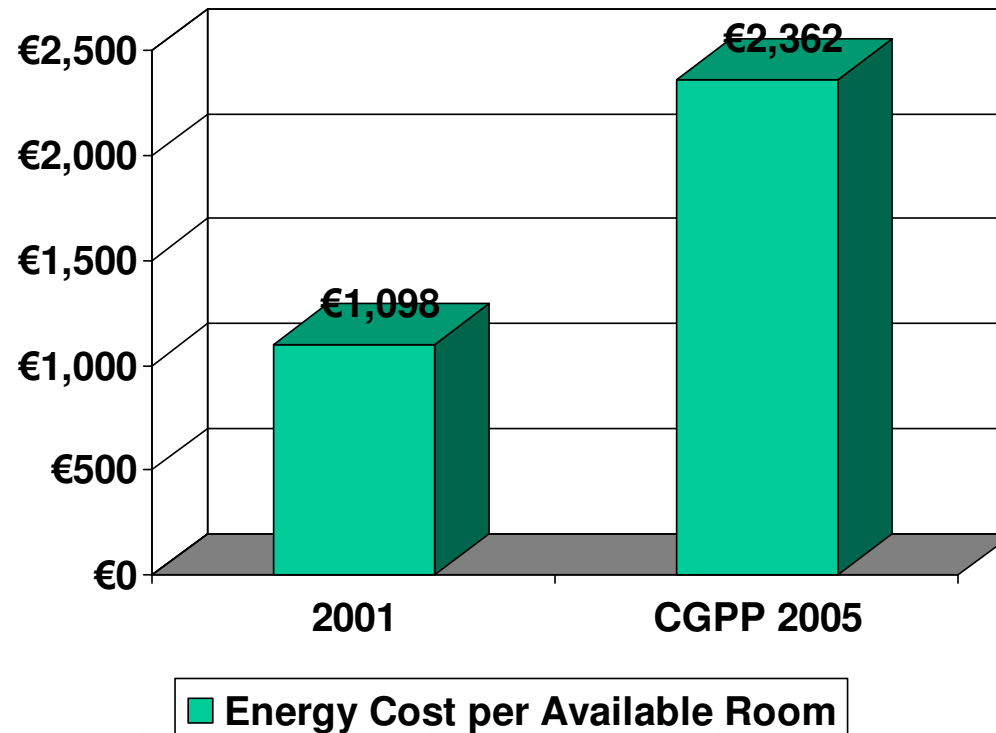
Energy

■ Drivers

- Rising Costs
- Kyoto
- Efficiency Legislation

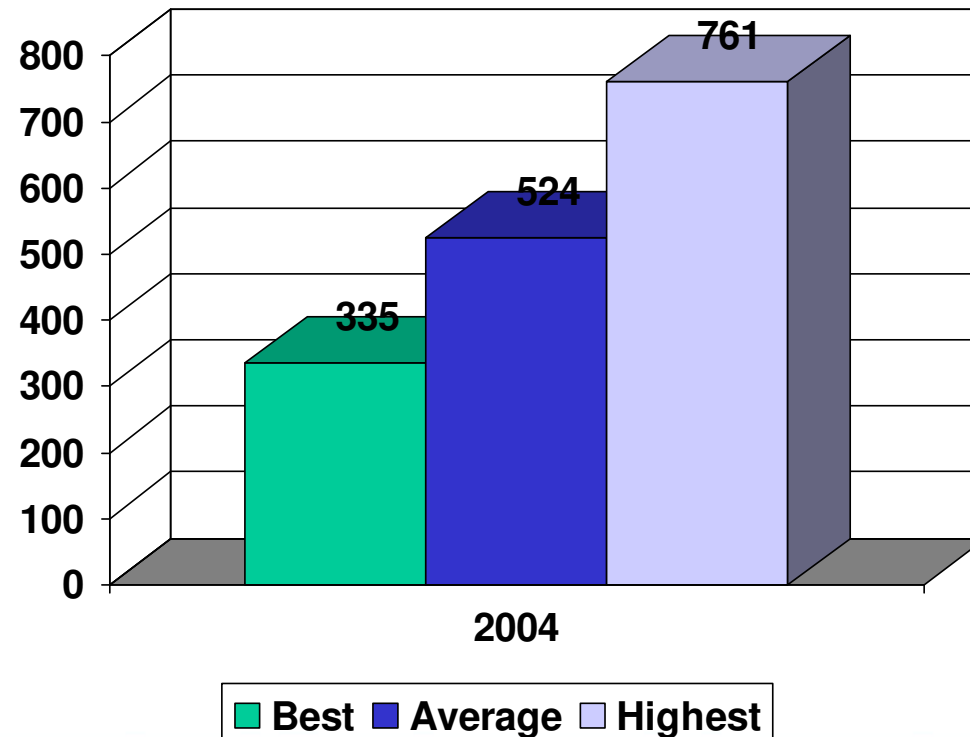
Energy

■ HBC/CGPP Cost Benchmarks



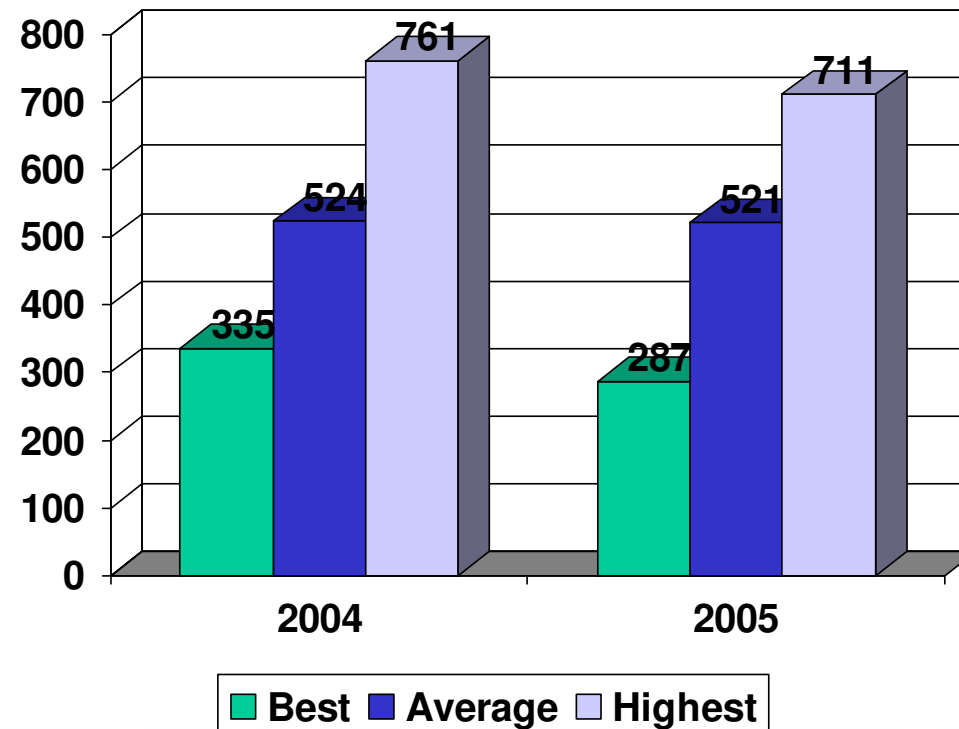
Energy – CGPP Hotels

- Energy - kWh per Square Meter (m²) per annum

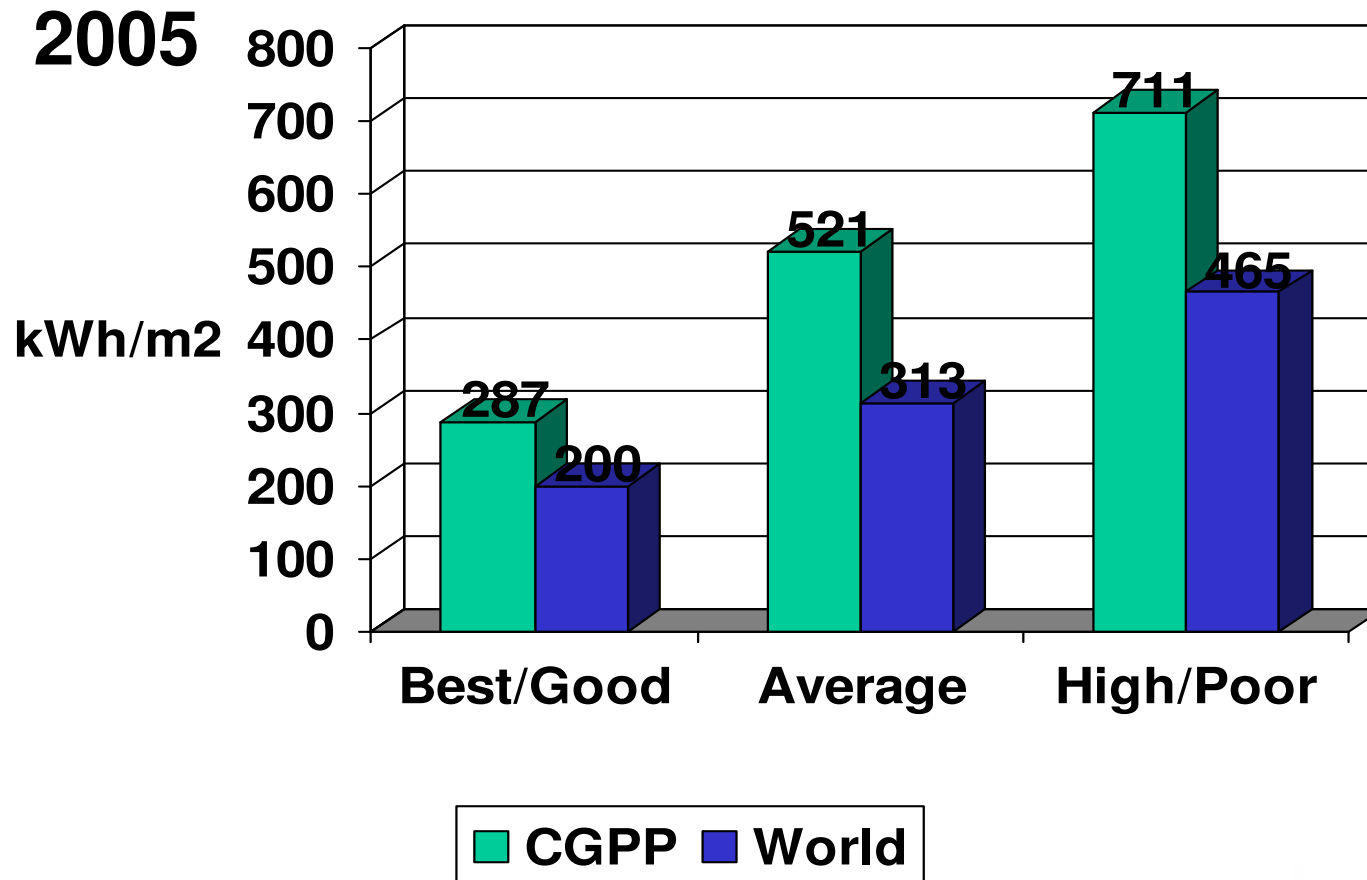


Energy – CGPP Hotels

■ Energy - kWh per Square Meter (m²)



Energy – Ireland/World

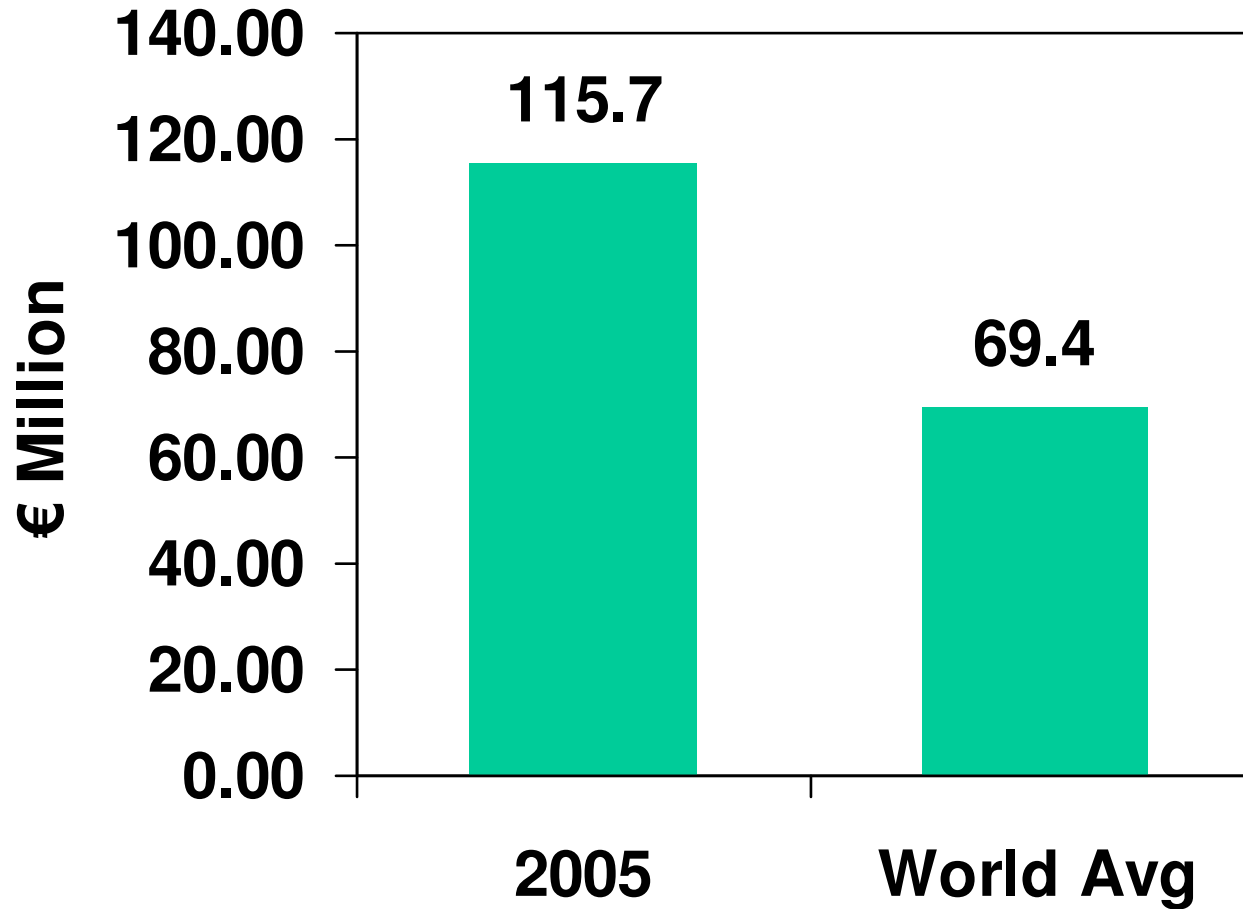


Energy

■ Poor Performance ? - Why

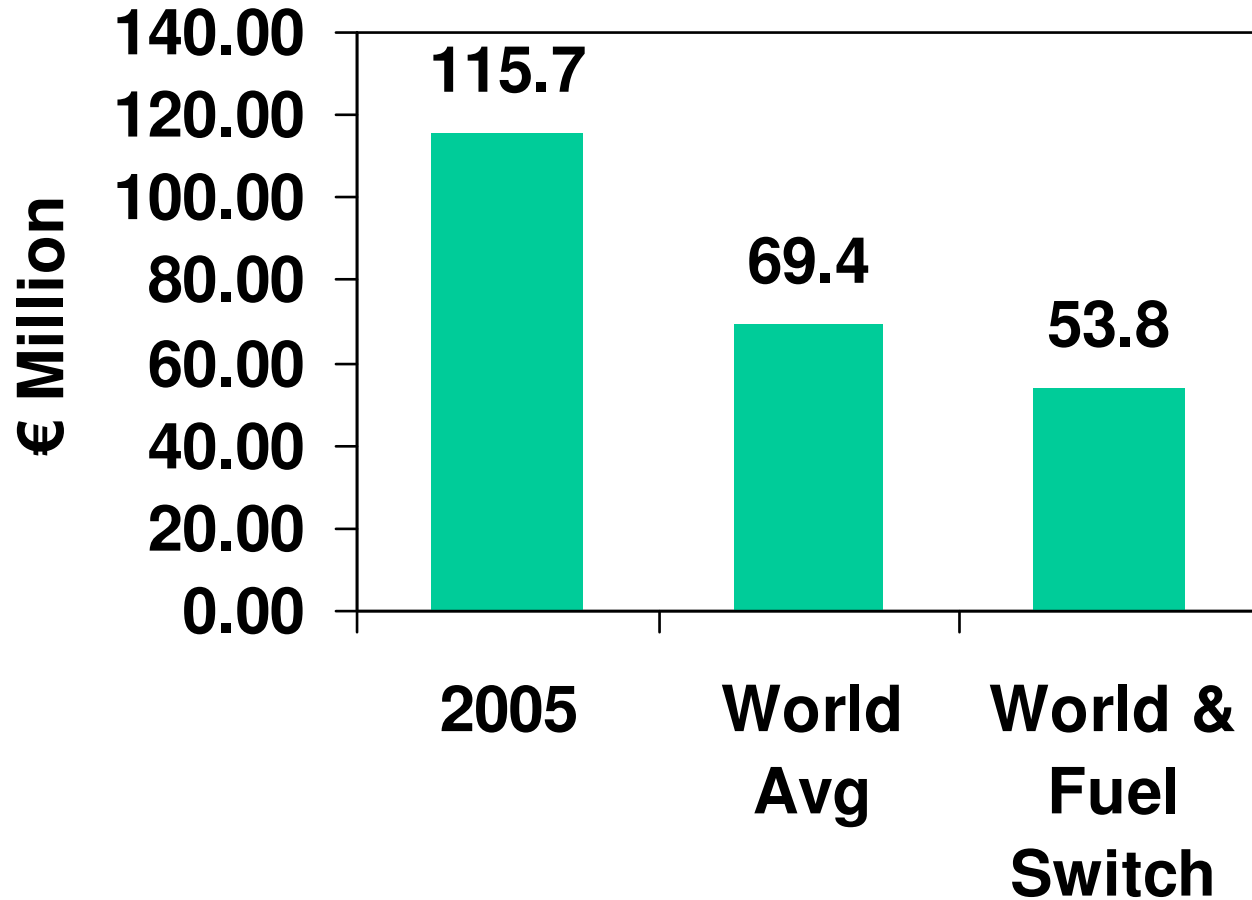
- Difficult to compare properties
- Activities different – food/leisure
- Lead time slower than for Waste or Water
- Less understanding of issues

Energy Potential



■ Potential Cost Reductions

Energy Potential



■ Potential Cost Reductions

Carbon Impact

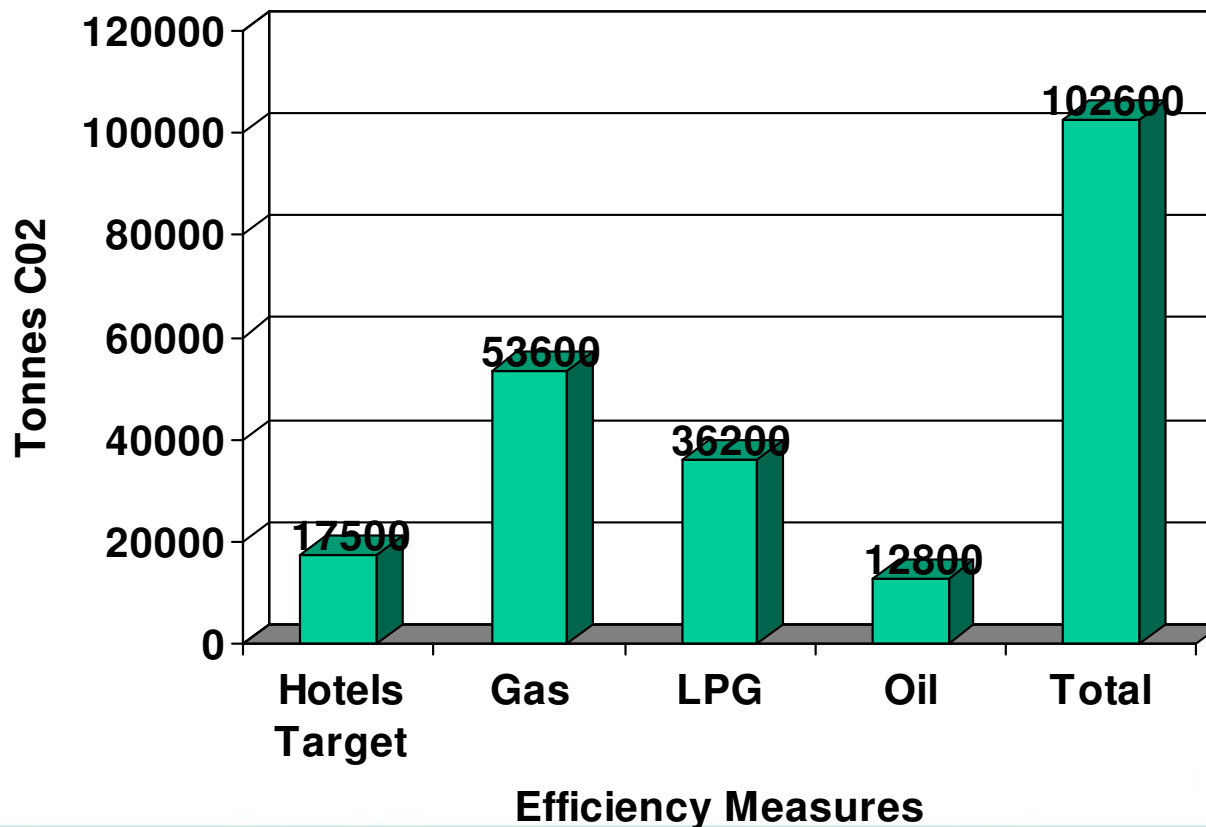
- Hotel Sector Opportunities
- Kyoto Impact/Requirements

Kyoto & CO2

- **National Climate Change Strategy 2012**
- Commercial & Services Target is a reduction of:
175,000 Tonnes of CO2
- Hotels represent c. 10% of this sector
- Hotel Sector Target is therefore
17,500 Tonnes of CO2

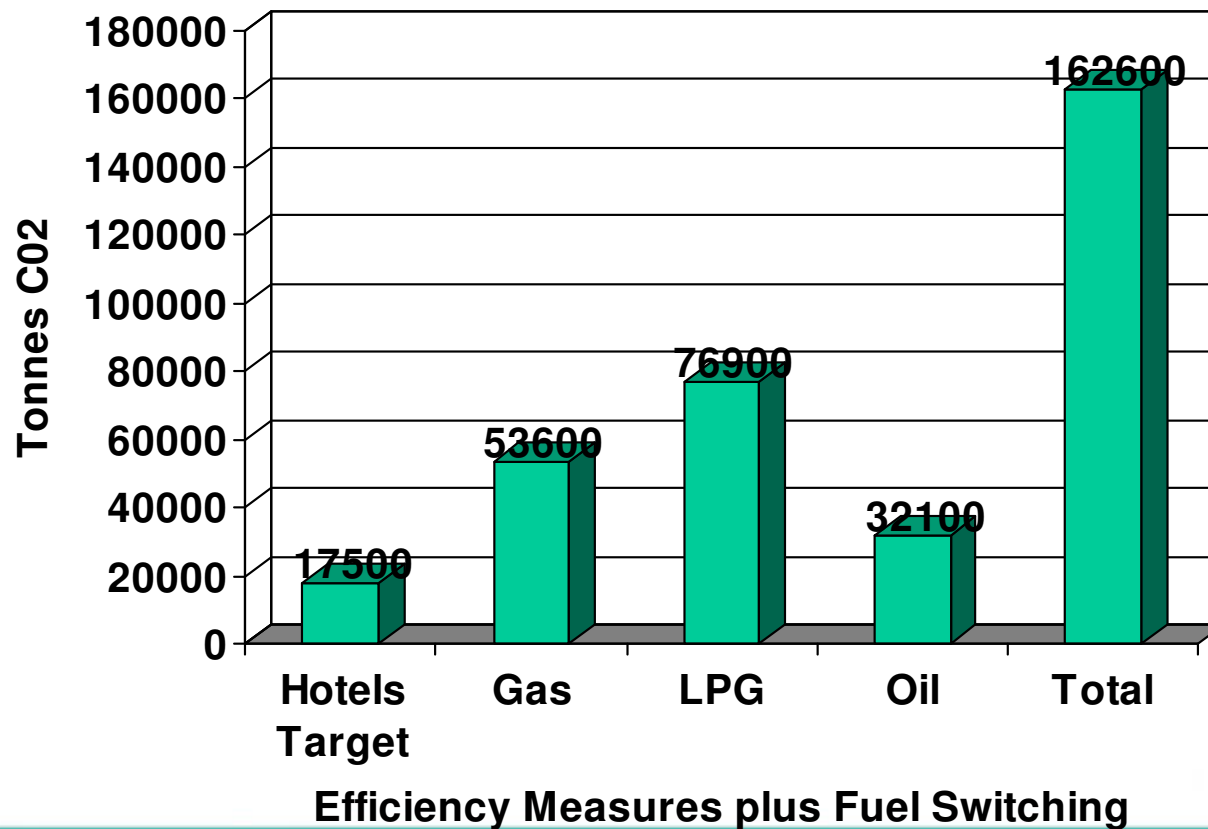
Kyoto & CO2 – Efficiency Improvements

■ Irish Hotel Sector Estimated Potential CO2 Reductions (Base 2004)



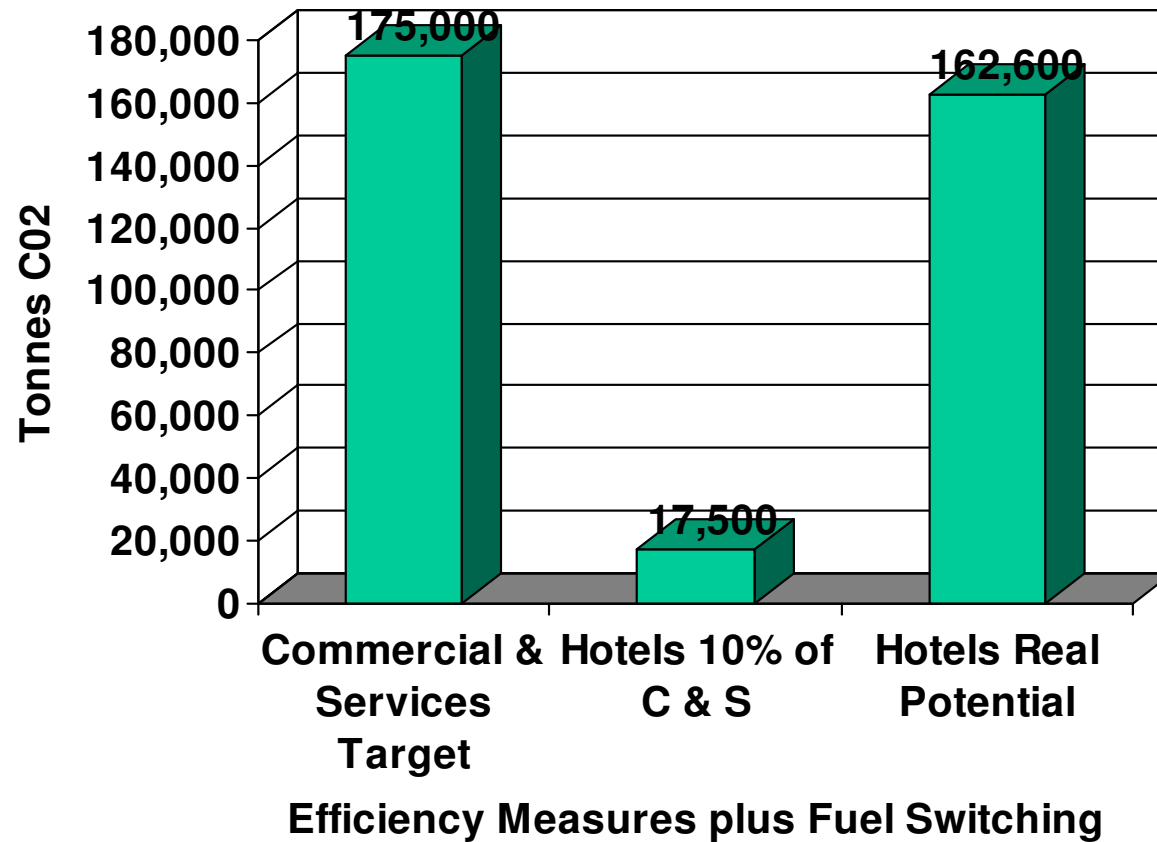
Kyoto & CO2 – Efficiency plus Fuel Switch

■ Irish Hotel Sector Estimated Potential CO2 Reductions (Base 2004)



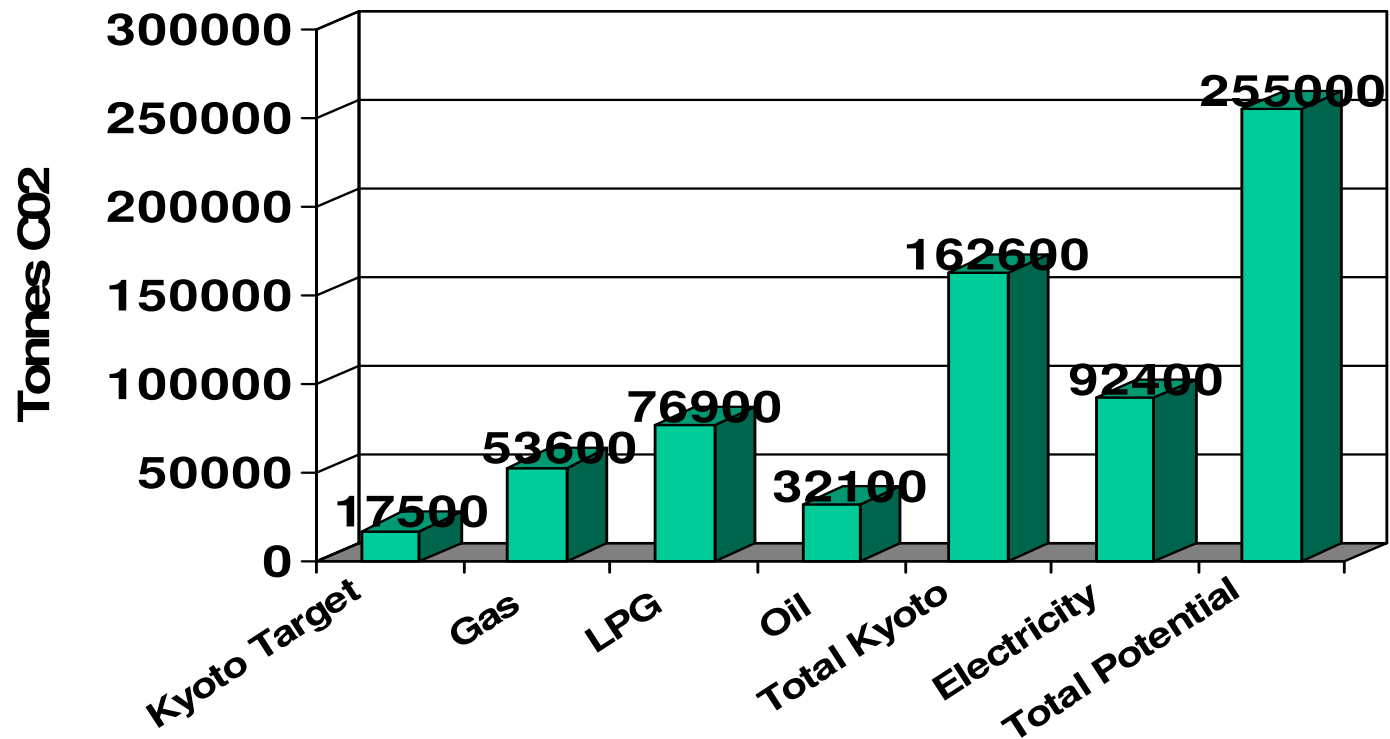
Kyoto & CO2

■ Irish Hotel Sector Estimated Potential CO2 Reductions (Base 2004)



Kyoto & CO2

■ Irish Hotel Sector Estimated Potential CO2 Reductions (Base 2004)



Efficiency Measures plus Fuel
Switching plus Electricity Efficiencies

Greening Irish Hotels Specific Targets - Results

2005 to 2006

- **Register 20 Core Hotels**
 - 40 Hotels

- **Review 80 non-core Hotels**
 - 16 Hotels

- **Reduce landfill waste by 870 Tonnes**
 - 1113+ Equivalent for 40 Core

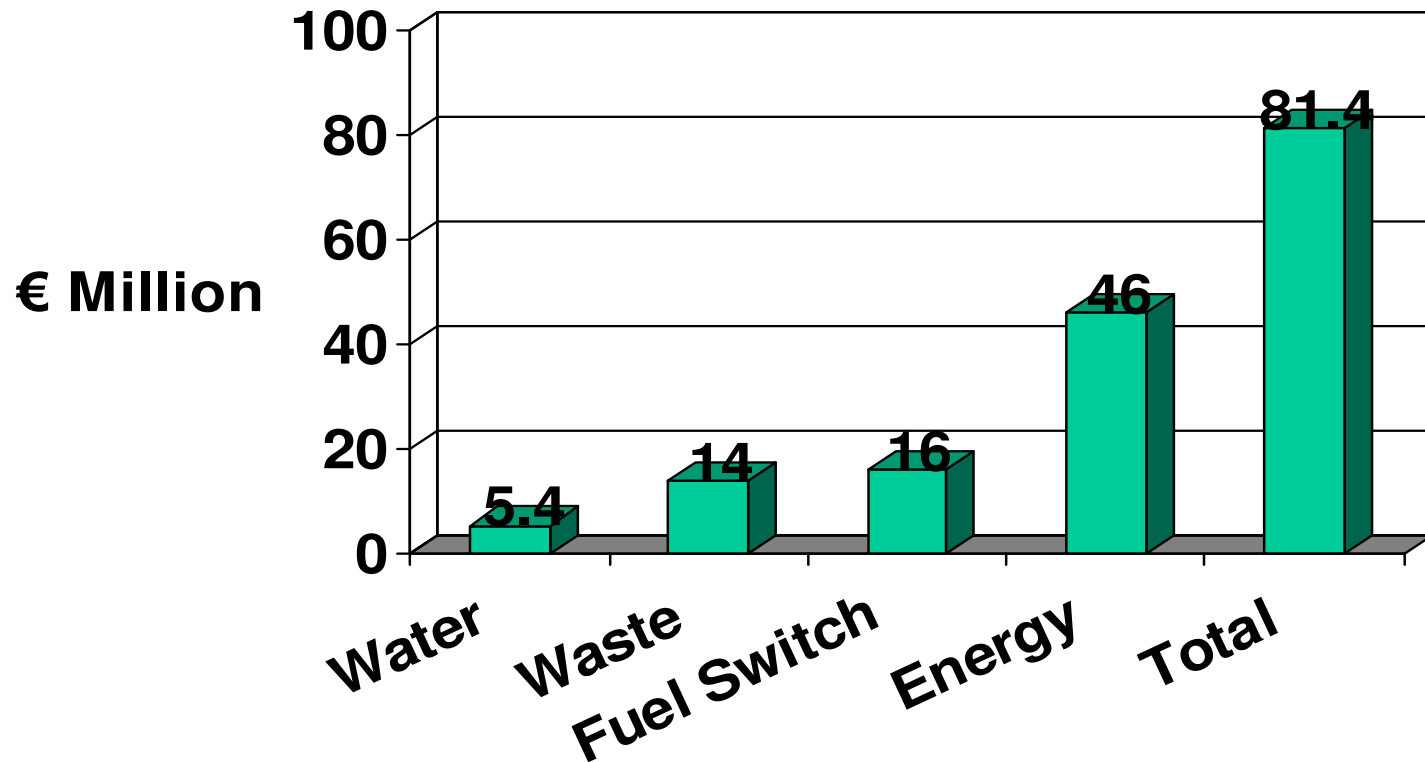
- **Reduce CO2 by 3,000 tonnes**
 - Delivered by end of 2006

- **Reduce water consumption by 50,000 m³**
 - New cost area requiring action

Reductions Summary

- If all hotels in Ireland implemented Best Practice the costs savings would be

Reductions Summary



■ Potential Annual Savings at 2004 Prices

Barriers to success

- No Senior Management commitment
- No Staff involvement
- No Plan – (EMS)
- Not enough time !
- No Understanding of Existing Plant
- Using Customers as excuse to do nothing

Barriers to success

- Poor Building Design
- Interior Design with no cost implications
- Unskilled Facility Staff
- Poor “Expert” Advice on design
- New Technology/Change
- Waiting for the existing plant to die

- But....we have started to change!!!!

Lessons learned

- Hotels need more independent environmental advice (they need more help)
- No sustained holistic approach to environmental and utility cost management in the hospitality sector (only ad hoc) - lack of voice
- Be careful what suppliers promise / charge
- Larger initial outlay will deliver reduced overheads (CFL) – whole of life costing required
- Staff and customers very interested- managers not
- Poor environmental ethos in sector

Keys to success

- Senior Management commitment,
- Willingness to invest (doing the math, Cost Benefit Analysis)
- Desire to save money
- Staff involvement; Training , Awareness , Green Teams
- Planning - EMS
- Monitoring and Review

Future

Concerns

- Increased energy costs
- Increased waste and water costs
- Buildings Directive
- Kyoto and Carbon cost

Opportunities

- Eco tourism
- Increased customer awareness
- Increased profitability

Where to next ? – January 2007

- All stakeholders need to be Involved
 - Government, EPA, SEI, Suppliers, customers, Associations.
- Continue Benchmarking
- Educate Hotel Sector
- Develop Knowledge throughout Tourism Industry
- Develop Networks
- Identify success stories and publicise

Where to next ? – January 2008

- Launch of the EPA Green Business Initiative
- Hospitality Sector Tender 2008 - 2011
- Green Fáilte Award commenced
- Delivering the message to the sector



Irish Hospitality Sector

“Today’s Environmental Research, Tomorrow’s Environmental Protection”

- Waste Prevention & Diversion
- Water Consumption Reduction
- Energy usage reduction with Carbon Emissions Reduction
- Quantifiable measurements
- Substantive educational opportunities

Thank You

