



**SUSTAINABLE
HOSPITALITY
2020**
PROMOTING A SUSTAINABLE FUTURE

- managing the **future**
of hospitality, **today**

Challenges

- Rising energy prices – oil currently \$125 per barrel
- Increased reporting and standards
2012 Hotel Carbon Measurement Standards.
2015 Industry wide requirement for hotels and tour operators.
- Increasing client demands for information and action.

Solutions

- Measurement of resource use
- Management and reduction of energy costs
- Reporting and disclosure to clients
- Reduce waste and increase operating profit

= Evolution



Evolution Advantages

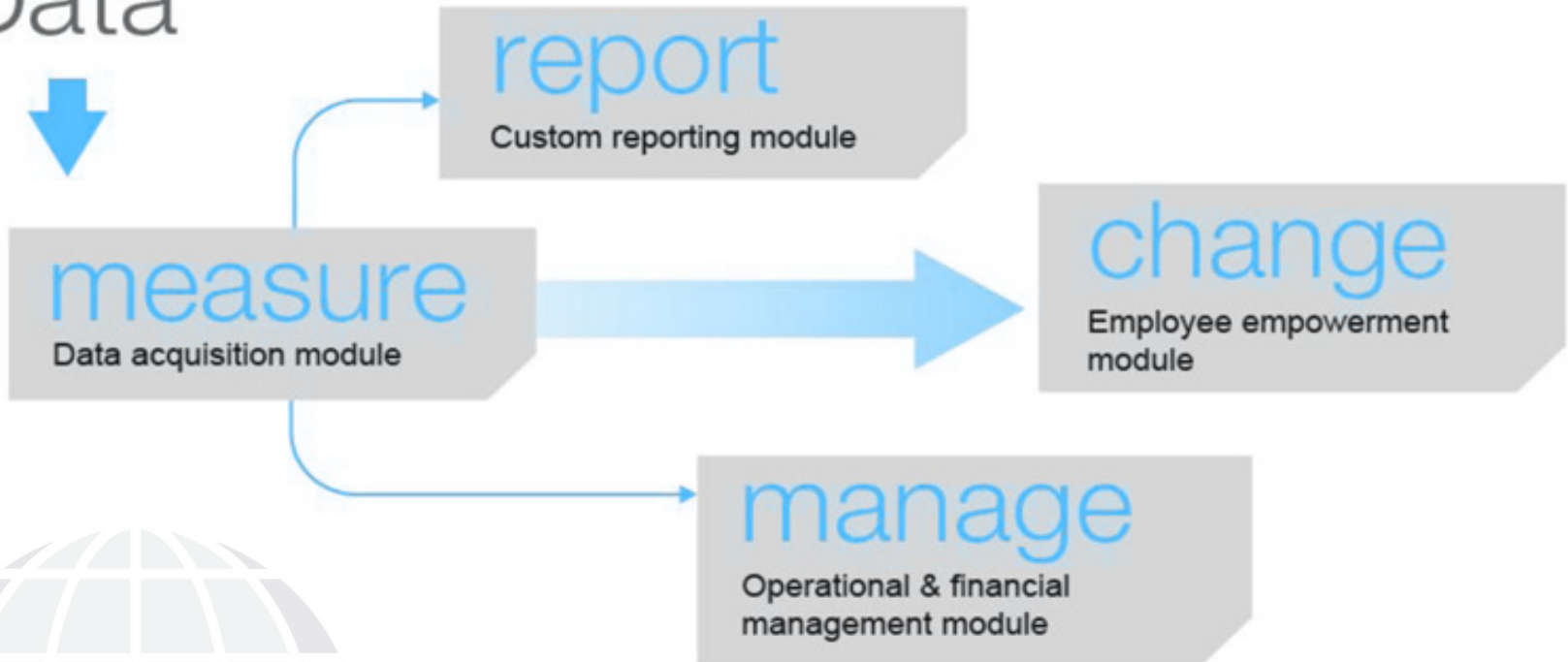
- Only system that is easy to use by non technical personnel
- The system has been created with inputs from the hotel sector
- Inexpensive and delivering excellent value
- Places hotels and not external agencies in control of data and disclosure.

Evolution Benefits

- Hotels can manage energy, water, cost and emissions from the desktop.
- Provides a robust audit trail.
- Flexible report formats with parameters chosen by hotelier.
- Retain and gain corporate client business
- Employee engagement and retention.

Data management and aggregation infrastructure to collect and report environmental and financial metrics

Data



extracting knowledge from data



Reporting Scope



report – analyse – track




STANDARD REPORT



OVERVIEW	ENERGY	GHG	REFRIGERANTS	WASTE
All sites 2010 YTD	1,589 TJ 2010 YTD	96 '000 mt 2010 YTD	357 kg 2010 YTD	9,908 mt 2010 YTD

Environmental Impacts

GHG Emissions




25% Scope 1 (Direct) | 75% Scope 2 (Purchased)

Performance Index (units)	NOV 2008	NOV 2010
Energy (TJ)	1,312	1,346
Direct Energy	398	472
Purchased Energy	914	874
Greenhouse Gases ('000 mt CO ₂ e)	143	133
Scope 1 (Direct)	64	59
Scope 2 (Purchased)	98	74
Ozone Depleting Substances (Kg R-11 e)	324	395
Process Water Use (Million Gallon)	784	777
Direct withdrawal	534	520
Purchased	252	257
Waste Generation (Metric tonne)	14,728	15,898
Hazardous waste	6,439	6,869
Non hazardous waste	10,289	9,029

Expense

Total Expenses Breakdown



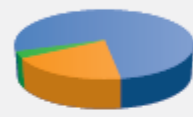
84% Energy | 12% Process Water Use | 3% Waste Generation | 1% Ozone Depleting Substances

Performance Index (units)	NOV 2008	NOV 2010
Energy ('000 \$)	27,877	27,897
Direct Energy	8,652	8,186
Purchased Energy	19,225	19,711
Greenhouse Gases ('000 \$)	0	0
Scope 1 (Direct)	0	0
Scope 2 (Purchased)	0	0
Ozone Depleting Substances ('000 \$)	394	432
Process Water Use ('000 \$)	5,524	5,476
Direct withdrawal	0	0
Purchased	4,678	5,109
Waste Generation ('000 \$)	1,404	1,319
Hazardous waste	627	510
Non hazardous waste	779	809
Total Expense ('000 \$)	35,203	35,124

OVERVIEW	ENERGY	GHG	REFRIGERANTS	WASTE	WATER
All sites 2010 YTD	1,589 TJ 2010 YTD	96 '000 mt 2010 YTD	357 kg 2010 YTD	9,908 mt 2010 YTD	675 '000 m ³ 2010 YTD

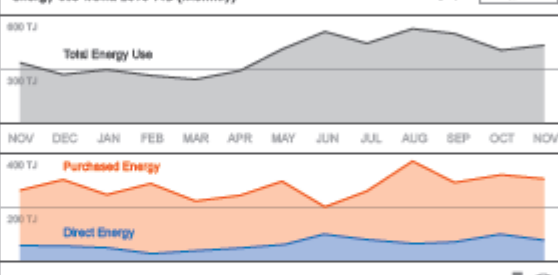
Energy Use Graphs

Operation Energy Use Breakdown




75% Building Operation | 21% Vehicles | 4% Electricity Generation

Energy Use Trend 2010 YTD (Monthly)



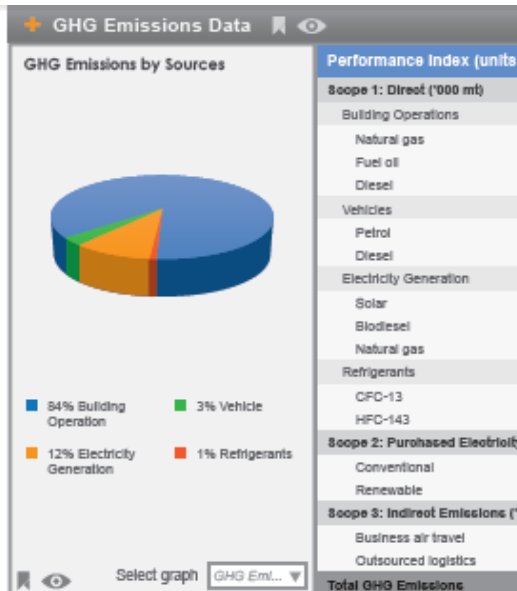
Energy Use Data

Direct vs. Purchased Energy



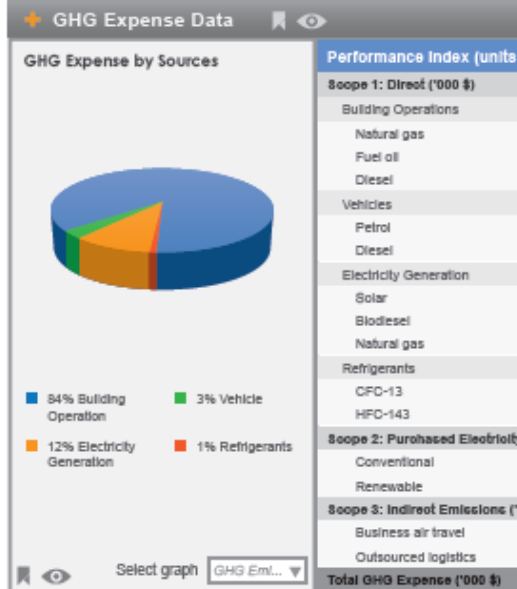
44% Direct Energy | 78% Purchased Energy

Energy Type (units)	NOV 2009	NOV 2010	2009	2010 YTD
Direct Energy (TJ)	1,494	1,484	1,540	1,001
Building Operations	1,029	1,190	1,032	723
Natural gas	61	56	81.2	423
Fuel oil	0	0	132	103
Diesel	2	2	23	25
Vehicles	317	286	235	206
Petrol	17	34	57	45
Diesel	300	252	209	141
Electricity Generation	23	44	40	38
Solar	0	0	7	5
Bio diesel	0	0	20	15
Natural gas	23	44	13	30
Purchased Energy (TJ)	5,027	5,198	4,845	4,524
Grid Electricity	5,025	5,122	4,163	4,198
Renewable	2	76	322	327
Total Energy Use (TJ)	7,221	6,682	6,385	5,525



Performance Index (units)

Scope 1: Direct ('000 mt)	NOV 2009	NOV 2010	2009	2010 YTD
Building Operations				
Natural gas				
Fuel oil				
Diesel				
Vehicles				
Petrol				
Diesel				
Electricity Generation				
Solar				
Biodiesel				
Natural gas				
Refrigerants				
CFC-13				
HFC-143				
Scope 2: Purchased Electricity				
Conventional				
Renewable				
Scope 3: Indirect Emissions ('000 mt)				
Business air travel				
Outsourced logistics				
Total GHG Emissions				



Performance Index (units)

Scope 1: Direct ('000 \$)	NOV 2009	NOV 2010	2009	2010 YTD
Building Operations				
Natural gas				
Fuel oil				
Diesel				
Vehicles				
Petrol				
Diesel				
Electricity Generation				
Solar				
Biodiesel				
Natural gas				
Refrigerants				
CFC-13				
HFC-143				
Scope 2: Purchased Electricity ('000 \$)				
Conventional				
Renewable				
Scope 3: Indirect Emissions ('000 \$)				
Business air travel				
Outsourced logistics				
Total GHG Expense ('000 \$)				

Environmental Impacts

GHG Emissions



25% Scope 1 (Direct) | 75% Scope 2 (Purchased)

Select graph: Direct vs...

Performance Index (units)

	NOV 2009	NOV 2010	2009	2010 YTD
Energy (TJ)	1,312	1,346	1,448	1,598
Direct Energy	398	472	461	595
Purchased Energy	914	874	987	1,003
Greenhouse Gases ('000 mt CO₂-e)	163	133	123	96
Scope 1 (Direct)	64	59	30	24
Scope 2 (Purchased)	98	74	92	72
Ozone Depleting Substances (Kg R-11 e)	326	395	4,254	3,191
Process Water Use (Million Gallon)	786	777	878	675
Direct withdrawl	534	520	578	501
Purchased	252	257	300	174
Waste Generation (Metric tonne)	16,728	15,898	10,789	9,908
Hazardous waste	6,439	6,869	2,558	2,362
Non hazardous waste	10,289	9,029	8,231	7,546

Expense

Total Expenses Breakdown



84% Energy | 12% Process Water Use | 3% Waste Generation | 1% Ozone Depleting Substances

Select graph: Direct vs...

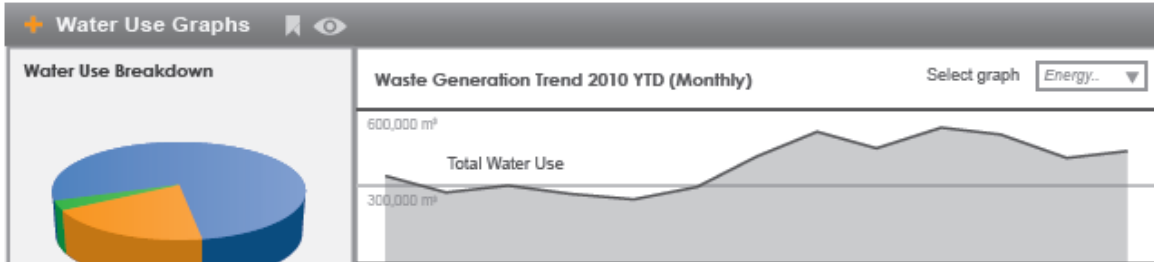
Performance Index (units)

	NOV 2009	NOV 2010	2009	2010 YTD
Energy ('000 \$)	27,877	27,897	28,155	31,072
Direct Energy	8,652	8,186	8,963	11,569
Purchased Energy	19,225	19,711	19,191	19,502
Greenhouse Gases ('000 \$)	0	0	0	0
Scope 1 (Direct)	0	0	0	0
Scope 2 (Purchased)	0	0	0	0
Ozone Depleting Substances ('000 \$)	396	432	477	357
Process Water Use ('000 \$)	5,524	5,476	5,569	4,289
Direct withdrawl	0	0	0	0
Purchased	4,678	5,109	5,234	4,432
Waste Generation ('000 \$)	1,406	1,319	1,266	1,201
Hazardous waste	627	510	538	453
Non hazardous waste	779	809	628	748
Total Expense ('000 \$)	35,203	35,124	35,467	36,929




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Water Use Data

Water Use Detailed Breakdown




- 84% Direct Withdrawal - Process
- 0% Purchase - Process
- 3% Reused Water
- 1% Other

Water Type (units)	NOV 2009	NOV 2010	2009	2010 YTD
Direct Withdrawal ('000 m³)	514	467	5,464	4,203
Process	52	47	550	423
River	13	22	140	108
Well	14	13	152	117
Lake	24	22	257	198
Non-contact cooling	462	420	4,914	3,780
Sea	242	220	2,574	1,980
River	220	200	2,340	1,800

Water Expense

Water Expense Breakdown



- 100% Direct Withdrawal
- 0% Reused Water
- 0% Purchase

Water Type (units)	NOV 2009	NOV 2010	2009	2010 YTD
Direct Withdrawal ('000 \$)	0	0	0	0
Process	0	0	0	0
River	0	0	0	0
Well	0	0	0	0
Lake	0	0	0	0
Non-contact cooling	0	0	0	0
Sea	0	0	0	0
River	0	0	0	0
Purchase ('000 \$)	524	476	5,569	4,284
Process	524	476	5,569	4,284
Municipal drinking water	524	476	5,569	4,284
Reused water ('000 \$)	0	0	0	0
Total Water Use ('000 \$)	545	495	5,792	4,455

Your GHG Impact

Your company's CO₂ emissions year to date are

1024.34 *metric tonnes*

What are Greenhouse Gases?

Greenhouse gases (GHGs) are the gases in the atmosphere that trap the heat from sunshine and keep the earth warm.

However, human activities have greatly increased the amount of GHGs in the atmosphere. Having too many GHGs causes the earth to heat up and leads to extreme weather events. This is known as Global Warming.

What is that equivalent to?



250 passenger cars
travelling 12,000 miles per year



2,291 passenger journeys
one-way from London to New York



250 NYC households
annual electricity demand



93 beef cows
fed and raised



558 hectares
of tropical forest
annual CO₂ absorption

PERFORMANCE COMPARISON

Print/export current report
print word excel pdf

Data Scope Location ▶ All countries Time ▶ 2010

Performance Indicator Selection


Category: Direct Energy Category use: All use
 Category type: Fossil Fuel Gaseous LPG (Liquified..

Selected indicator: LPG (Liquified Petroleum Gas) Natural Gas

Add Indicator

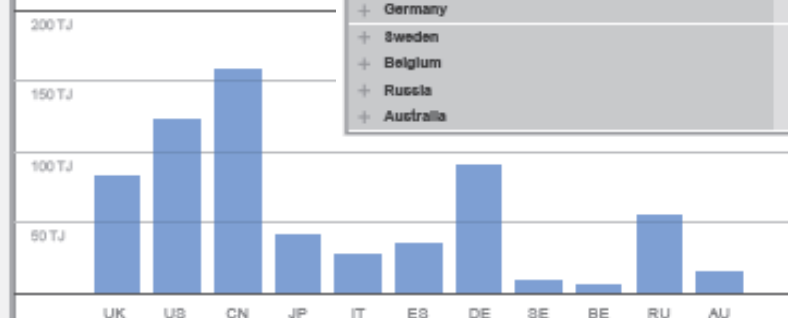
Graphic Comparison

Energy Use Breakdown 2010 (Country)



12% UK	19% US	29% CN
6% JP	4% IT	6% ES
13% DE	2% SE	1% BE
9% RU	4% AU	

Energy Use 2010 Comparison




Country	Energy Use (TJ)
UK	~90
US	~130
CN	~170
JP	~60
IT	~40
ES	~50
DE	~100
SE	~20
BE	~10
RU	~70
AU	~30

Data Comparison

Location	Absolute Level (TJ)	% of total use	Use/Employee (TJ/emp.)	Cost (mil \$)	% of total cost	Average price '10 (\$/TJ)
United Kingdom	87	13%	0.896	7.4	8%	85
London HQ	50	7%	0.823	4.4	5%	88
Manchester	37	5%	0.910	3.0	3%	81
United States	128	19%	0.709	13.8	15%	107
China	161	24%	1.809	18.6	20%	115
Japan	40	4%	0.789	5.5	4%	137
Italy	32	5%	0.728	5.4	4%	148
Spain	39	4%	0.445	7.9	8%	202
Germany	93	14%	0.811	13.3	14%	98
Sweden	12	2%	0.976	2.3	2%	191
Belgium	5	1%	0.398	2.9	3%	79
Russia	61	9%	0.561	10.8	12%	177
Australia	20	3%	0.688	5.9	4%	295

GHG Emissions Data

GHG Emissions by Sources



- 84% Building Operation
- 12% Electricity Generation
- 3% Vehicle
- 1% Refrigerants


Performance Index (units)

- Scope 1: Direct ('000 mt)
- Building Operations
 - Natural gas
 - Fuel oil
 - Diesel
- Vehicles
 - Petrol
 - Diesel
- Electricity Generation
 - Solar
 - Biodiesel
 - Natural gas
- Refrigerants
 - CFD-13
 - HFC-143
- Scope 2: Purchased Electricity
 - Conventional
 - Renewable
- Scope 3: Indirect Emissions ('000 mt)
- Business air travel
- Outsourced logistics

Total GHG Emissions

GHG Expense Data

GHG Expense by Sources



- 84% Energy
- 12% Process Water Use
- 3% Waste Generation
- 1% Ozone Depleting Substances


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Total GHG Expense ('000 \$)

Environmental Impacts

GHG Emissions



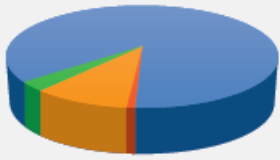
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	NOV 2009	NOV 2010	2009	2010 YTD
Electricity Generation				
Solar	0	0	0	0
Biodiesel	0	0	0	0.01
Natural gas	0	0	0.02	0.01
Refrigerants	0.33	0.23	14	17
CFD-13	0.29	0.20	6	8
HFC-143	0.04	0.03	8	9
Scope 2: Purchased Electricity ('000 \$)	404	380	5,093	4,723
Conventional	404	380	5,093	4,723
Renewable	0	0	0	0
Scope 3: Indirect Emissions ('000 \$)	0	0	0	0
Business air travel	0	0	0	0
Outsourced logistics	0	0	0	0
Total GHG Expense ('000 \$)	525	481	6,933	5,399



Annual Cost

- Green Seal \$3500
- Green Globe \$2500
- LEED \$2500
- *IH&RA Evolution* \$750



- Evolution hoteliers are showcased to over 1000 registered leading event planners organizing over 10,000 events annually, through the Sustainable Event Measurement Tool.
- Use of the system can generate over \$19000 in resource savings in the first year.
- Instant monitoring of value of new equipment and procedures.



Strategy

- Evolution allows the IH&RA, its member associations and individual hotels to lead the global approach to sustainable and profitable hospitality.
- This enables IH&RA to build on its objectives and current work in advocacy, sustainability and leadership and solutions for its global membership.





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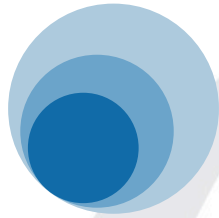
PROPOSAL

- IHRA to introduce to ALL Member Hotel Associations to commit to EVOLUTION program.
- Respective Associations will receive Evolution package and will have intensive communications with IHRA prior starting date, which we expect to be 1st November 2012.



PROPOSAL

- Hospitality Energy Solutions to lead technical training of the project.
- Hospitality Energy Solutions to create web page for each Association which will be incorporated in main IHRA 2020 portal.
- IHRA to sign contract with respective Associations as part of their commitment to the project.



eVOLUTION

The Sustainability Management Platform



ihra

INTERNATIONAL HOTEL
& RESTAURANT ASSOCIATION



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