

Caribbean Hotel Energy Efficiency and Renewable Energy Programme

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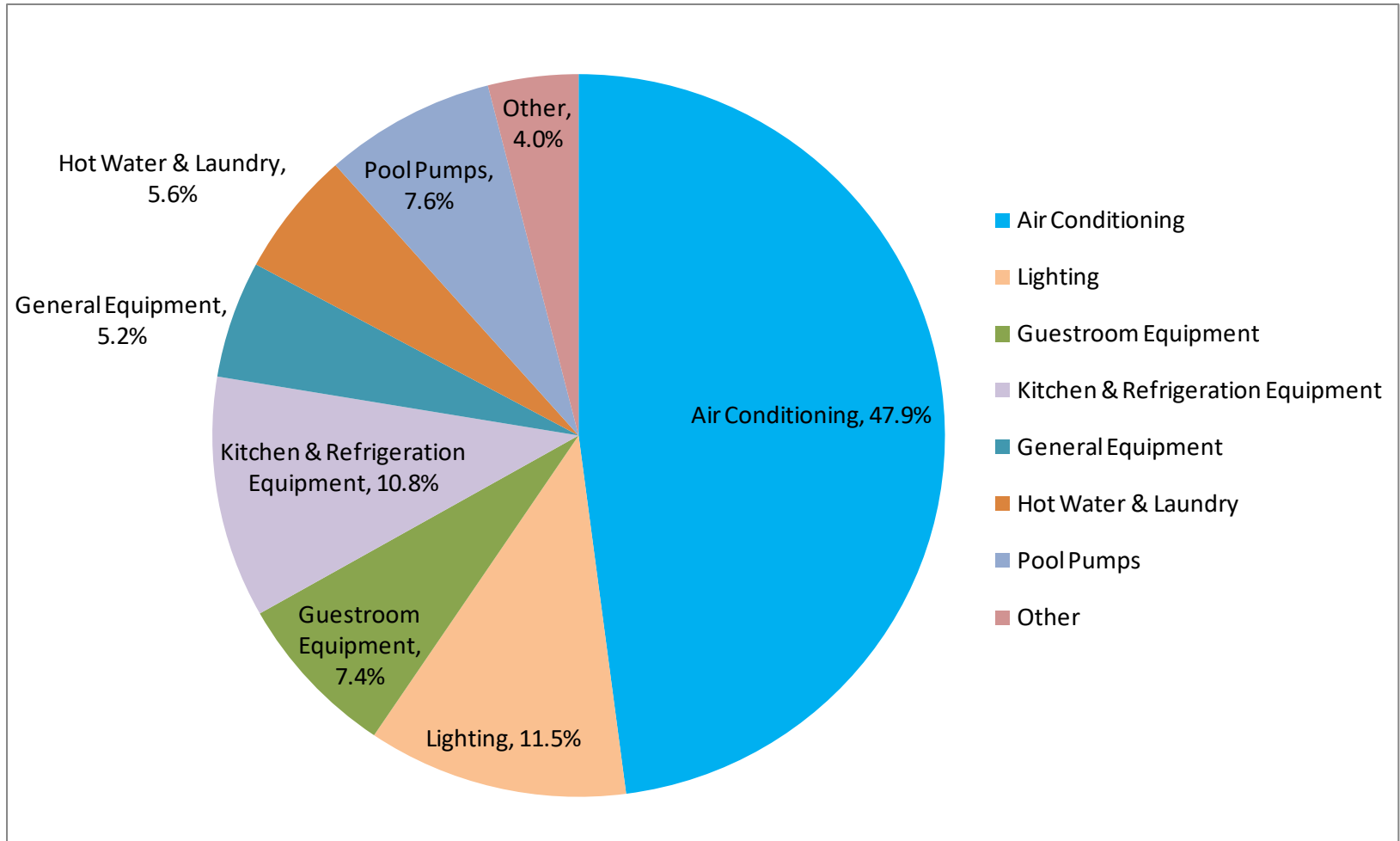
Objective of CHENACT

Caribbean Hotel Energy Efficiency and Renewable Energy Action

To improve the competitiveness of small and medium sized hotels (<400 rooms) in the Caribbean Region through improved use of energy with the emphasis on Energy Efficiency, Renewable Energy and Micro-Generation

The beneficiaries are CHTA member hotels

Electricity consumption in Caribbean Hotels by End use



Potential savings of 30-50% in Energy and up to 50% in water. Energy accounts for up to 60% of the operational costs in some hotels.

Energy Usage Profile

	JAMAICA	BAHAMAS	BARBADOS
RANGE	11-244 KW/GN	16-237 KW/GN	11.3- 103 KW/GN
AVERAGE	50.56	81.56	32.19
# HOTELS > 100KW/GN	3	5	1

Why the Differences?

Barbados/Eastern Caribbean

- Clientele- UK/Europe /other Caribbean
- Building Design-Open
- Temperature – fairly constant
- Use of SWH/Natural Gas
- Water costs less
- Barbados Hotels have implemented many of the recommendations

Bahamas/Jamaica/Northern Caribbean

- Clientele - North American
- Building design - Enclosed
- Temperature – Variable – gets cold!!
- Electricity
- Bahamas- Electricity surcharge!
- Water in parts of Jamaica and Bahamas is expensive and scarce

Energy Saving opportunities in a 40 room hotel

ESO	Energy Management Opportunity	Initial Cost (US\$)	Annual Cost Savings (US\$)	Payback (years)	Annual Electrical Energy Savings (kWh)	Annual CO ₂ Savings (Tons/year)
1	Water Heater running unnecessarily	-	24,609	-	76,352	61
2	Underutilized Refrigerator	-	10,873	-	33,736	27
3	Pumps running unnecessarily	-	7,306	-	22,669	18
4	Lights turned on unnecessarily	-	3,582	-	11,114	9
5	Separating light switches in mini mart	2	1,800	-	5,585	4
6	Metal Halide retrofit with CFL	75	4,180	0.02	11,827	9
7	Heat Recovery from Refrigeration	6,475	54,074	0.12	167,770	134
8	Halogen Floodlights retrofit to CFL's	1,204	5,669	0.21	16,018	13
9	T12 replacement with LED tubes	505	2,296	0.22	6,787	5
10	Tungsten filament lamps retrofit to CFL's	658	2,812	0.23	7,959	6
TOTAL		8,919	117,202	0.08	359,816	286