



## Marriott Hotel-Guam USES System Performance Results – Summation T-1 (16 units)

DM II Pro Data Logger recording graphs Timed Interval Samplings Results: Averaged between 18:30 to 18:40 Aug 25, 2012

Graph Title	USES System OFF (18:30 to 18:35)	USES System ON (18:35 to 18:40)	Change/ Savings
Real Power	874,000 Watts	844,000 Watts	- 30,000 Watts
Apparent Power	960,000 Volt Amps	850,000 Volt Amps	- 110,000 Volt Amps
Current	1,190 Amps	1,040Amps	- 150 Amps
Reactive Power	390,000 VAR	85,000 VAR	- 305,000 VAR
Voltage	275Volts	281Volts	+ 6 Volts
Power Factor	.91	.99	+ 8

KWH and Demand as billed by the Utility Company is based on all above factors.

50% of Real Power Savings plus 50% of Apparent Power Savings totaled together = Total kWh typically billed

30,000 Watts / 2 = 15,000 Watts

110,000 VA / 2 = 55,000 VA

Total 70,000 = 70 kWh / 16 units = approx. 4.37 kWh per USES unit.

4.37 kWh x (18) USES units (normal number of USES units running ) = 78.66 kWh

Anticipated savings resulting from all above changes is 73 to 78 kWh reduction. = 74 as a conservative average.

If we take the 74 kWh conservative average and divide by (18) USES units then the average becomes 4.11 kWh per USES unit.

2. Actual new projected monthly savings results based on the recorded information from graphs.

Daily : 74 kWh x 24 hours x 30 days = 53,280 kWh

(1) Chiller off : (4) USES units x 4.11 kWh each x 10 hours x 30 days = 4,932 kWh

53,280 kWh

- 4,932 kWh

48,348 kWh Total 48,348 kWh x .28 = \$13,537.00/mo. x 12 = \$162,449.00/Yr. (Monthly/Annual savings T-1 only)

### All Three Services Summation

kWh reductions	
T-1	48,348 kWh
T-2	19,380 kWh
T-3	<u>30,398 kWh</u>
Total	98,126 kWh x .28 = \$27,475.28/month x 12 months = \$329,703.36 Annually

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