

Advances in Lighting for Hotels and Restaurants

Energy Management Systems



bringing new energy to indoor environments

why???



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10% increase in energy
efficiency =
\$1.35 PER ROOM NIGHT*

* (EPA) CALCULATED FOR FULL
SERVICE HOTEL



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My Assumptions:

Upgraded from T12 vs T8

Installed Occupancy Sensors

Installed CFL's

What's Next

LED Technology

EMS (Energy Management

Systems



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LED
Technology

Then:
Pre-2010

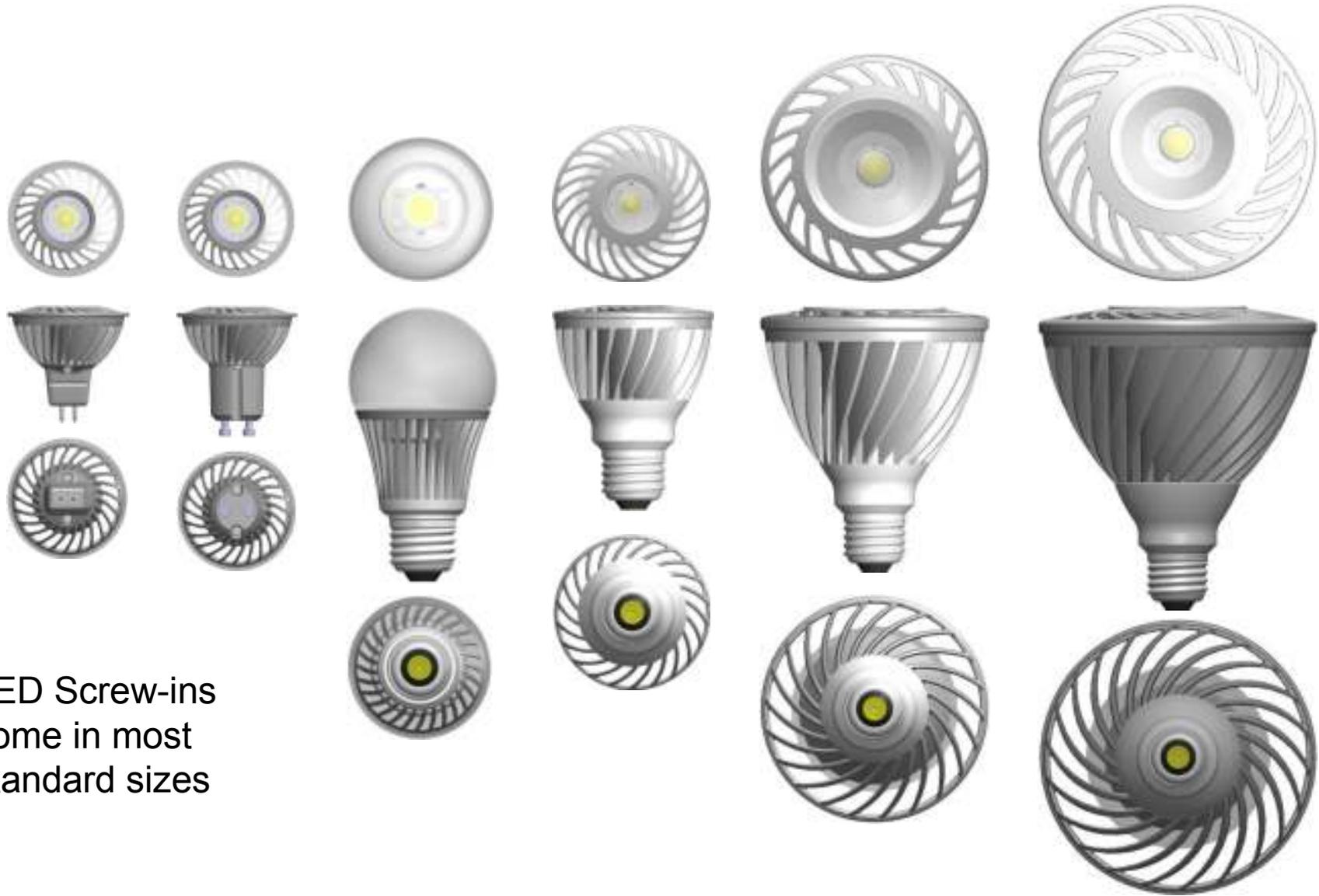
- Not enough light
- Light not white
- Short lamp life
- Lamps too expensive
- Long economic payback

Now:
2010

- Bright as conventional
- Pure white light
- Superior lamp life
- Competitive pricing
- Short payback (<2 year)



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LED Screw-ins
come in most
standard sizes



Existing
Metal Halide

22 250w Metal Halide

4 400w



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Replaced with twenty two 104w LED and four 153w LED 23,700 kWh saved annually



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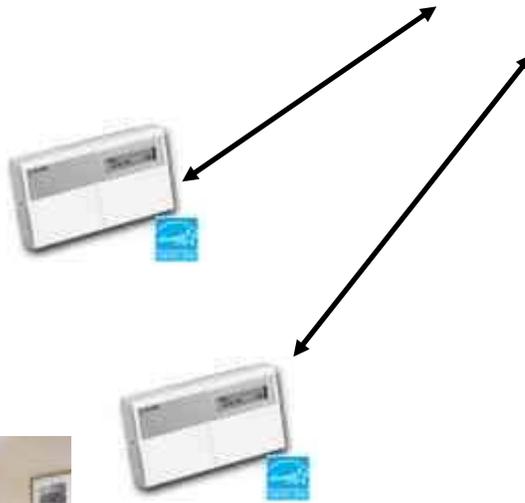
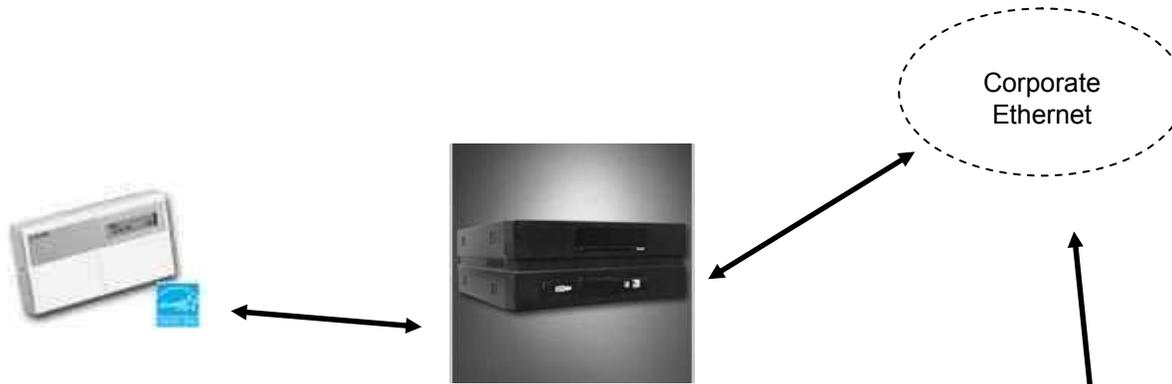
Lamp	65w	15w
Run Hrs	24/7	24/7
Lamp Life	10K HOURS	50K HOURS

Simple Savings = \$65
per bulb



Energy Management Systems

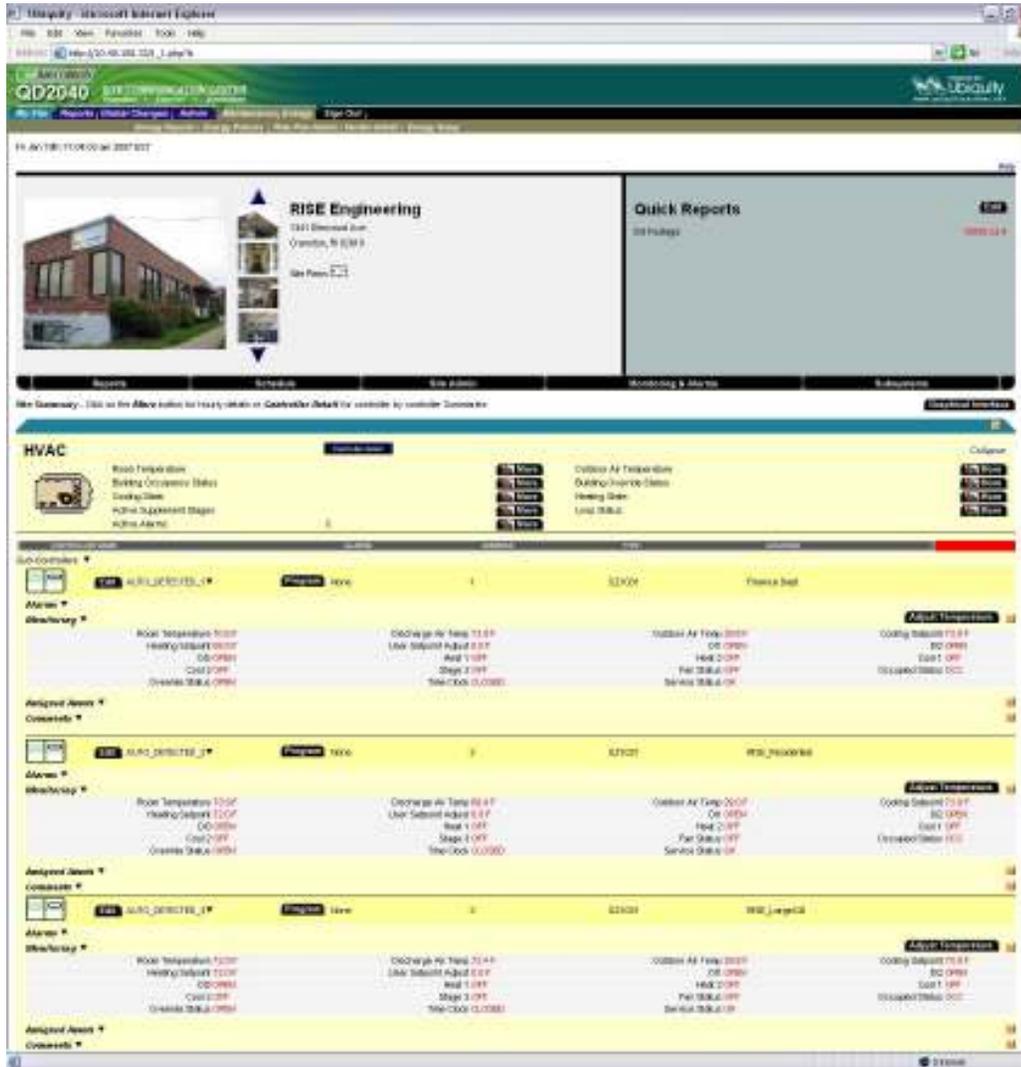




Wireless control of room temperature from one main location or smartphone



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Sample online application



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40 room hotel
 7 retail spaces
 2 offices
 Pool room
 fitness center with locker room
 Meeting space



Measure	Project Cost	Utility Incentive	Customer Net Cost	Estimate Savings	Simple Payback
Energy Management System	\$ 48,863.00	\$ 39,090.00	\$ 9,773.00	\$10,991.00	0.9



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if opportunities exist

Date		04/08/2010		Time		2:47 PM		Page No.		1	
Client: ABYZ Factory Jack Frostenbeck 97531 N. Mainstr Forest Praire, AA				Account #:		123456789		Work Order:		08081	
Location				Audit #:		07594		Auditor:		Todd Cowger	
Line Location				Phone Number:		111 010-010 Ext:		Audit Date:		04/08/2010	
Customer Report - Project Summary											
Audit Summary											
Estimated Lighting Load (Wattage)											
		Existing:		9,353		Watts					
		Proposed:		4,408		Watts					
		Savings:		6,445		Watts					
Estimated Lighting Usage (KWH)											
		Existing:		25,021		KWH					
		Proposed:		8,851		KWH					
		Savings:		17,669		KWH					
Estimated Annual Lighting Bill (KWH * \$0.147)											
		Existing:		\$3,678.06							
		Proposed:		\$1,301.16							
		Savings:		\$2,376.90							
Estimated Job Costs											
		Total:		\$9,884.50							
		Program Incentive:		\$6,779.15							
		Customer Share:		\$2,905.35							
Simple Payback (Customer Share/Bill Savings)											
		Years:		1.22							
<small>This offer may be withdrawn if it is not remedied within 30 days.</small>											

sample project, not actual report



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Another sample total project

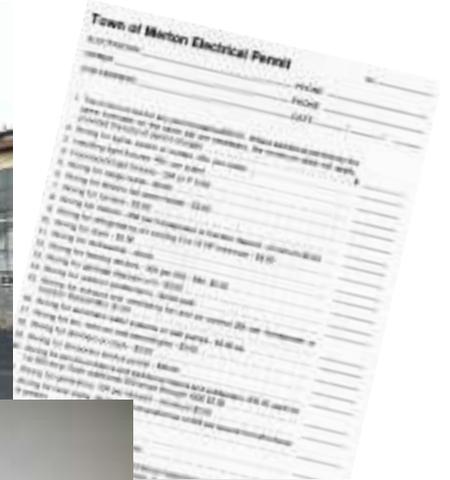
ECM List	Project Cost	Estimated Utility Incentive	Customer Cost	Yearly \$ Saved	Maintenance \$ Savings	Net Heating & Air Conditioning Savings	Payback (Years)
Lighting & Sensors* New, RL/RB, Sensors	\$1,084,633	\$250,000	\$834,633	\$271,004	\$52,663	\$13,313	2.5
Electronically Commutated Motors (ECM Motors) Walk-in coolers	\$20,427	\$9,192	\$11,235	\$7,747	\$0	\$0	1.5
Kitchen Hood Exhaust Systems Automated Hood Control	\$155,472	\$69,962	\$85,510	\$64,588	\$0	\$0	1.3
Totals**	\$1,260,532	\$329,154	\$931,378	\$343,339	\$52,663	\$13,313	2.3



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in the territories we service

- Turnkey approach
 - audit
 - proposal
 - direct line to utility incentives
 - permits
 - material ordering/delivery
 - installation
 - hazardous waste recycling



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thank you

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