



Clean Green Energy, LLC

Rick Bearup, Information Services

- C & I Energy Auditor
- Program Developer
- Process Lighting Upgrade Projects
- Oversee DTE Your Energy SavingsSM Rebate Process

Clean Green Energy, LLC
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R.A.M.P.SM
Lighting Services



About CGE

- Energy Efficient Lighting Upgrades and Lighting Maintenance (R.A.M.P.)
- Wind Power
- Solar PV Systems
- Other Energy Related Services

Commercial, Industrial, Municipal and Government

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CGE's R.A.M.P. Program - Our Approach to Energy Efficient Lighting Projects

- **Review** – Current Situation Survey
- **Analyze** – Identify Energy Saving Opportunities
- **Modify** – Install Energy Efficient Products
- **Protect** – Maintain the System, Scheduled Service Visits, On Call Service, Scheduled Re-lamping

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DTE Your Energy SavingsSM Program

DTE's Energy Efficiency Incentive Program for Residential and Commercial Customers.

2009 – Present

Our Focus is Primarily on Business Customers

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DTE Your Energy SavingsSM Program

Case Study – Property Management Office Space - 2010

- **Prescriptive Measures**
 - Incandescent lamps and reflector bulbs to CFL
 - T12 fixtures to T8 lamps and electronic ballasts
 - Exterior HID site lighting to induction
 - Incandescent exit signs to LED exit signs
 - Occupancy sensors in select areas (restrooms, low occupancy areas)
- **Custom Measures**
 - 3 and 4 lamp F40T12 fixtures to 2 lamp T8 with Reflectors (prescriptive in 2011)
 - 150 Watt exterior HID wall mount to T5 fluorescent wall mount
 - 2x2 F40T12-U fixtures to 2-F17T8 lamps and reflector

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Case Study – Property Management Office Space - 2010

Results

- Lighting load reduced by 56%. 77 kW > 34 kW
- Lighting kWh reduced by 44%. 221,934 kWh > 123,224 kWh per year
- Annual Savings over \$13,700.00
- Project payback before rebate: 32 Months
- Project payback after rebate: 23 Months
- DTE Rebate to customer: \$9,700.00

Customer would not have moved forward on the project with out the rebate program. Resulted in additional projects for this customer.

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Case Study – Industrial facility. Initial retrofit in 2003. Additional opportunities identified in 2011.

2003 Lighting Upgrade – No Rebate Program

- **Replace existing 400 Watt HID lighting system in the plant with 8, lamp biax system using 40 Watt biax lamps. Fixtures were re-spaced to provide consistent light levels throughout the facility. This resulted in a significant reduction in the number of fixtures.**
- **Retrofit T12 fixtures in all office areas with T8 lamps and electronic ballasts**

2011 Lighting Upgrade

- **Replace existing 8, lamp biax fixtures with 6 lamp T8 high bay fluorescent fixtures with HP lamps. Increased efficiency of the new T8 fixtures allowed us to replace existing fixtures one for one.**
- **Re-lamp all office fixtures with 28 Watt energy saving T8 lamps**

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Case Study – Industrial facility. Initial retrofit in 2003. Additional opportunities identified in 2011.

Results

- Lighting load reduced by 36%. 64 kW > 40 kW
- Lighting kWh reduced by 37%. 268,753 kWh > 169,734 kWh per year
- Annual Savings over \$10,800.00
- Project payback before rebate: 45.5 Months
- Project payback after rebate: 37.4 Months
- DTE Rebate to customer: \$7,400.00

Customer initiated the project with us because of the rebate program. Improvements in energy saving technologies generated repeat business.

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DTE Your Energy SavingsSM Program

Key Features and Benefits

- Simple Application and Approval Process
- Great Customer and Contractor Support
- Responsive to Our Needs
- Incentivizes Customer Participation
- Drives Projects During Tough Economy
- Increased Customer Confidence in Outcome

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