

CenterPoint Energy

Energy Efficiency Programs Bulletin

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Navigating the Measurement & Verification Process

Measurement & Verification (M&V) compares energy consumption and demand before and after project implementation to determine the actual savings produced by the measures installed. This allows program staff to determine a reasonable approximation of the projects' resulting savings (and reward customers with corresponding financial incentives).

When To Use Full or Simplified M&V

When a project is submitted to the Program, a method of documenting the energy savings must be identified. If the specific measure is not covered by one of the program's standard deemed savings measures, or if a more detailed savings analysis is preferred over deemed savings, the project must have either simplified or full M&V completed to earn incentive dollars.

Important M&V Steps

1. Submit an M&V plan to the Program for approval before beginning the project
 - The plan should detail the methodology intended for calculating savings (e.g. IPMVP, options A, B, C, or D)
2. Submit an M&V report after sufficient post-installation monitoring has taken place and final savings estimates can be determined.
 - A professional engineer must certify final savings calculations

The program participant or an appointed representative is responsible for producing the M&V plan and report. Sample M&V plans and templates are available to assist in the process, however, neither CenterPoint Energy nor the program implementer can complete these two required documents.

Where To Find More Information

- Efficiency Valuation Organization: <http://www.evo-world.org/>
- Deemed Savings forms are available from your program representative
- A sample M&V plan is included in the Program Manual

SCORESM and CitySmart[®] are no-cost programs offered by CenterPoint Energy to school and government customers to improve energy efficiency and reduce operating costs. Based on your individual needs, the program will provide customized assistance, such as:

- **Energy Performance Benchmarking:** learn where and how your buildings are wasting energy.
- **Energy Master Planning Workshops:** learn energy management best practices that staff can employ to maximize long-term savings.
- **Financing Assistance:** learn about the many options available to finance energy efficiency projects that involve little to no up-front cost.
- **Technical Assistance** to help identify and evaluate energy-efficiency opportunities.
- **Communications Support** to help publicize your leadership and accomplishments in energy efficiency.
- **Incentives:** earn varying cash incentives for lighting, HVAC, roofing and other projects that reduce peak electric demand.

SCORE Lite is a similar no-cost energy efficiency program for schools that allows participants to earn higher financial incentives if they elect not to participate in the non-cash incentives that SCORE provides.

For more information, please contact Cheryl Bowman, CenterPoint Energy Program Manager, at (713) 207-5631 or cheryl.bowman@CenterPointEnergy.com.

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PARTNER SUCCESS

The following partners were awarded for energy efficiency savings:

Texas Army National Guard

\$18,027

Clear Creek ISD

\$2,794

Spring ISD

\$7,186

Awty International School

\$10,371

Congratulations, Partners!

Cool Way To Save

By the numbers: Partner since 2010 | 217,143 kWh | \$22,718 incentive

With new HVAC and lighting equipment at Concordia Lutheran High School, staff expect to save \$50,000 annually on energy expenses. That's good news for Head of School Joel Bode because the student body is growing at a rapid pace and the school is looking to expand.

This year, the high school had the largest freshman class and highest enrollment in its history, and the numbers are expected to grow in the 2012-2013 school year.

Bode says the energy savings "will enable us to get another teacher."

“The SCORE Program allows Concordia Lutheran to save money, earn rebates and conserve electricity.”

- Joel Bode
Head of Concordia Lutheran

As the high school considers adding new facilities to accommodate its growing student body, school officials plan to build efficiently, including using occupancy sensors to automatically turn lights on and off.

Choosing the Right Light Fixture: T5 versus T8

When it comes to installing a fluorescent lighting system for a school or an office, should you use T5s or T8s? There are several factors to consider:

COST

The table illustrates that both fixture types have a similar lumen output, but T5s use more energy.

Fixture Type	Total Watts	Mean Lumen Output	Ballast Factor	Fixture Efficacy (MLPW)
2-Lamp HP T8	48	4,543	.77	94.6
2-Lamp 28W T5	63	4,682	.95	74.3

EFFECTS OF AMBIENT TEMPERATURE ON LIGHT OUTPUT

Temperature affects the light output of fluorescent lamps. T5 and T5 high output (T5HO) lamps are designed to produce maximum light output at 35°C (95°F) and can take advantage of the heat that builds up in compact enclosed fixtures. The light output of T8 lamps is optimal at a temperature of 25°C (77°F) and in open luminaries, ventilation may produce a more optimal temperature for T8 performance.

Students "LEED" School Design Efforts

Sustainability is an important part of the curriculum at The Awty International School in Houston. The SCORE partner is nearing completion of a LEED (Leadership in Energy and Environmental Design) certified building that will house new classrooms, an art room, administrative offices and a cafeteria. Students have also started a recycling and composting program.

This year, secondary-level students were challenged to inspect the school's current practices and make recommendations for improving sustainability. The students were given six months to research and write a proposal. The prize would be the opportunity to see their project through to fruition, with full funding from a ConocoPhillips & TOTAL, Inc. grant.



The teams submitted proposals for sustainable hand drying options in the restrooms, solar installations, plastic recycling and improved insulation. SCORE Program staff were on hand to help judge the students' submissions. The PhaseChange Team took home first place and the buildings surrounding the student quad will get new insulation. During the judging, staff agreed that the other submissions would also be partially funded because all of the students submitted well thought out, sustainable projects.



The winning team proposed installing new insulation in several buildings.