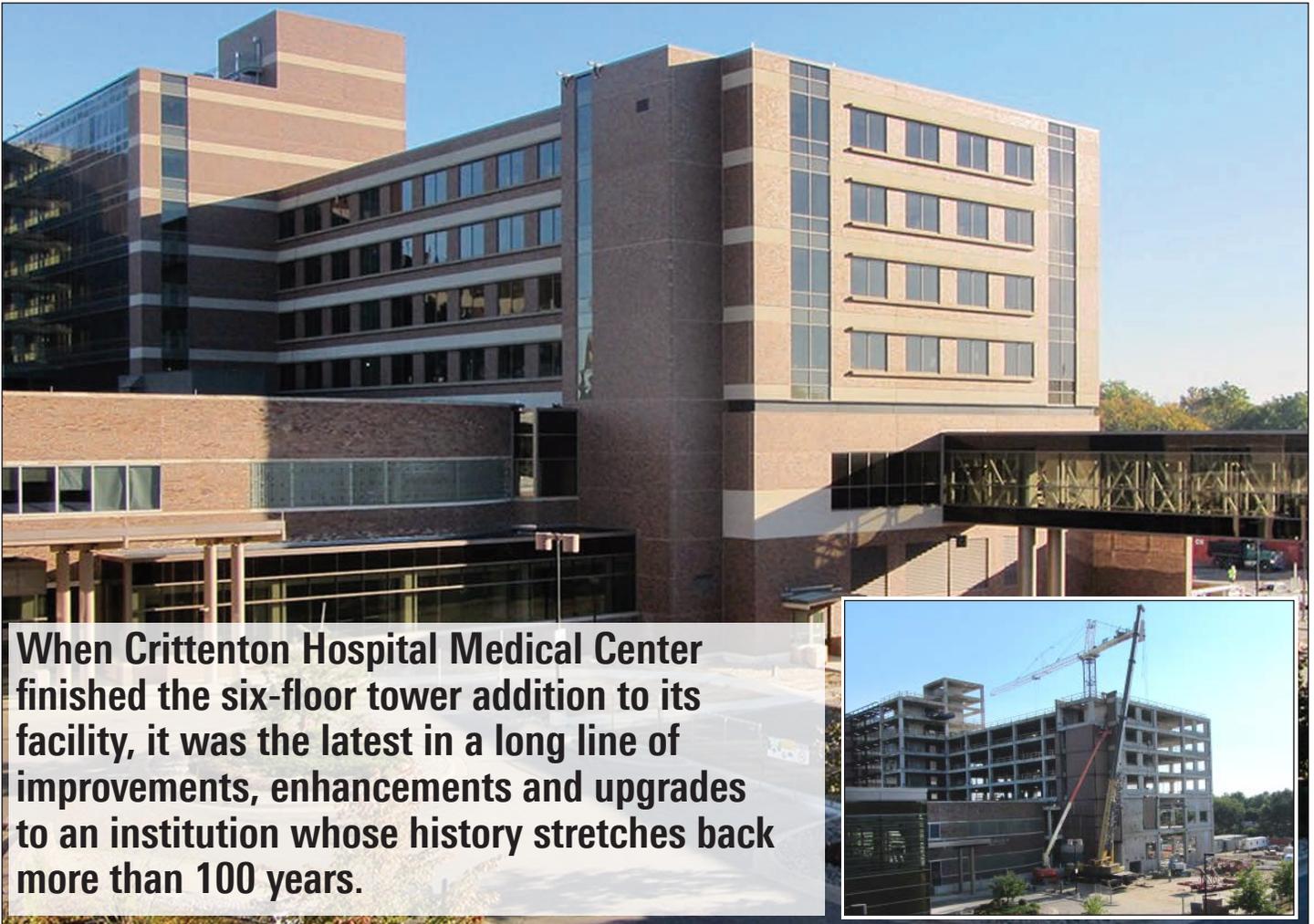




## Case Study: **Crittenton Hospital**



**When Crittenton Hospital Medical Center finished the six-floor tower addition to its facility, it was the latest in a long line of improvements, enhancements and upgrades to an institution whose history stretches back more than 100 years.**

Founded near the turn of the last century, the original Florence Crittenton Mission in Detroit was part of a nationwide healthcare movement for women and children.

It was launched in 1895 by Charles Crittenton, a businessman and philanthropist, who named the movement after his daughter.

By 1967, the hospital opened its new facility on donated farmland in Rochester — and since then, has continued to expand its footprint and its service to the community.

In 2010, that expansion took the form of the design of a six-story south tower addition to the complex, with the first floor housing support services and receiving; the second floor home to registration, the pharmacy and the residency program; and the rest of the floors used for patient services and private rooms.

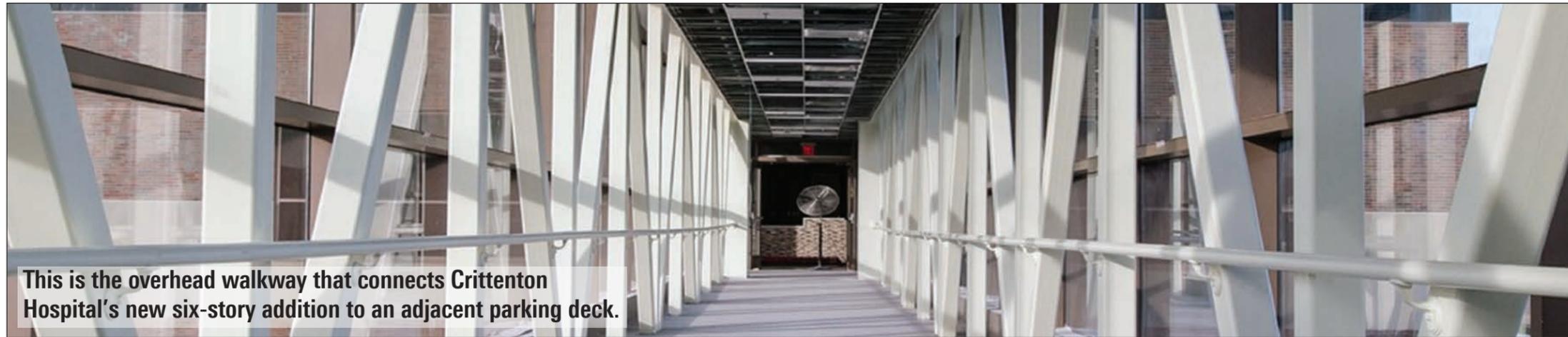
**The six-story addition to Crittenton's Rochester facility added new rooms and other operations.**

Also included was a bridge connector to the existing parking deck. The entire project was completed in 2014.

To help offset the costs of some of the energy technologies installed in the \$65 million, 155,000-square-foot project, Crittenton officials worked with DTE Energy's Energy Efficiency Program for Business to obtain more than \$150,000 in incentives.

Using the Program's New Construction incentives, Crittenton also was able to have a portion of its energy modeling and construction costs reimbursed.

The incentives covered energy-efficient lighting and air handling installations throughout the new addition.



This is the overhead walkway that connects Crittenton Hospital's new six-story addition to an adjacent parking deck.

## Crittenton's energy modeling estimated savings well above ASHRAE standards

DTE Energy's New Construction and Major Renovation program awards incentives for projects that follow either of two approaches (see box at right) to demonstrate energy efficiencies.

Crittenton officials decided to pursue the more comprehensive and integrated Whole Building modeling approach. And because Crittenton's modeling and design resulted in a very high level of efficiency, the energy savings qualified for the top incentive rate.

The technologies themselves involved energy-efficient lighting (high performance T8s, high output T5s, CFLs and LEDs) and heating and cooling systems. The HVAC system included energy-efficient air cooled chillers and air handlers for the primary cooling.

It also utilized "very efficient and well-designed"



The new Crittenton tower has 87 private patient rooms and houses the facility's pharmacy.

### Crittenton Incentive Program Summary

PROJECT	INCENTIVE	SAVINGS-electric*	SAVINGS-gas*
Whole Building Approach	\$150,000	1,120,475 kWh	10,534 Mcf
Energy Modeling Assistance	\$1,500		
<b>Total</b>	<b>\$151,500</b>		

\*First-year estimated savings; more than 30% better than ASHRAE standards

variable refrigerant flow units and the installation of a high-efficiency boiler — all of which were part of a high-efficiency building envelope design.

Kirk Pesta is a mechanical engineer and principal with Harley Ellis Devereaux, which provided architecture and engineering design services for the project.

According to Pesta, mechanical system options were identified and vetted using energy modeling software that received a separate incentive under the DTE program.

From the results of that modeling, he said, his company then selected the appropriate

mechanical systems "based on reliability, energy efficiency and cost."

It was during the project design phase that Harley Ellis Devereaux pursued rebates through DTE's program.

For the consulting firm, the key to a major construction project using DTE's program is to "team up with engineers that understand the program and are willing to use energy modeling to consider multiple system options," Pesta said.

In addition to the obvious erection of a six-story tower — complete with its own heating plant — the project also included some renovation work where the new building (and systems) connects to the existing hospital.

Because Harley Ellis Devereaux used energy modeling to compare and contrast various options for the project, additional systems were explored for possible future installation, such as chilled beams and displacement ventilation.

For now, however, the new addition is delivering exactly what was planned, Pesta said: "A better patient experience, by having private patient rooms with large windows for natural light and views."



## What sets new construction projects apart from the rest?

### 2015 Program offers LEED certified option

There are three types of project incentives offered through DTE's Energy Efficiency Program for Business: Prescriptive, Custom and New Construction/Major Renovation.

That third type of project can mean the building of new facilities, performing major renovations to existing facilities, changing the use of a facility (from manufacturing to warehousing, for example) or adding load to a facility.

If a project meets one of those criteria, the next step is determining which of two options is appropriate for calculating the rebates a customer can earn: the **Systems Approach** or the **LEED Whole Building Approach**.

One key to that determination is whether an energy model can be used to calculate savings: if it can, the LEED Whole Building Approach is the way to go; if not, the System Approach is appropriate.

Incentives offered through the LEED Whole Building Approach are based on energy savings validated by LEED.

A separate application is available for LEED Certification Assistance.

The Systems Approach, on the other hand, offers pre-determined incentives for specific energy efficiency equipment, such as lighting power density improvements, sensors and controls for daylighting, HVAC, process electric equipment, water heating and food service and refrigeration.

The 2015 New Construction/Major Renovation Application and 2015 LEED Certification Assistance Application can be downloaded at: [dteenergy.com/savenow](http://dteenergy.com/savenow).



# ENERGY EFFICIENCY PROGRAM FOR BUSINESS

## About the Program

Through DTE's **Energy Efficiency Program for Business**, companies like yours — big and small, manufacturing and service, sole proprietorships and corporations — can apply for cash incentives to help offset the cost of energy-saving equipment and technologies.

The **Energy Efficiency Program for Business** offers a comprehensive set of incentives for both electric and natural gas users, helping you invest in energy efficient technologies, saving you energy and money — today and into the future.

Our online Catalog provides specifications about each incentive offered, and our online Application provides step-by-step instructions on how to apply for those incentives.

The incentives fall into three categories:

### Prescriptive Incentives

**Prescriptive Incentives** provide customers with predetermined incentive rebates for the installation of specific energy-efficient equipment — including, but not limited to: lighting, controls, HVAC, refrigeration and food service equipment. Incentives are provided for qualified improvements and equipment commonly installed in a retrofit or equipment replacement situation. Prescriptive incentives are paid based on quantity, size and efficiency of the equipment.

### Custom Incentives

When customers cannot find a prescriptive measure that fits their projects, they can apply for **Custom Incentives**. This program provides cash rebates for measures installed in qualified projects that are less common or more complex than prescriptive measures. Custom incentives are paid based on the first year of energy savings (kWh and/or Mcf).

### New Construction and Major Renovation Incentives

If a customer is building a new facility, changing the usage of space or adding load, **New Construction and Major Renovation Incentives** are available to assist them with off-setting the cost of energy-efficient upgrades, allowing them to save on operating costs long term. There are three categories of new construction incentives:

- **Systems Approach** incentives are predetermined to optimize the energy efficiency of individual systems.
- **LEED Whole Building Approach** incentives are based on energy savings validated by LEED.
- **LEED Design Review Assistance** is a flat rate incentive designed to encourage LEED certification.

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## Contact Us

We are available to help you understand the incentive requirements and available resources for this and other energy-efficiency projects. Call to check your eligibility and learn how to make DTE's **Energy Efficiency Program for Business** work for you.

email: [saveenergy@dteenergy.com](mailto:saveenergy@dteenergy.com)

phone: **866.796.0512** (press option 3)

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NOTE: Programs based on availability of funding and may end at any time.