

# LEED certification

## LEED buildings are high-performance buildings.

In 2000, the U.S. Green Building Council, a coalition of leaders across the building industry, introduced the Leadership in Energy and Environmental Design (LEED) program as a standard for rating new construction projects. The program has grown to include certification for existing buildings.

The goal of the LEED program is to promote buildings that are energy efficient, environmentally responsible, profitable and healthy places to live and work.



LEED was created to:

- Define “green buildings” by establishing a common standard of measurement
- Promote integrated, whole-building design practices
- Recognize environmental leadership in the building industry
- Stimulate green competition
- Raise consumer awareness of green building benefits
- Transform the building market

LEED provides the complete framework for assessing building performance and meeting sustainability goals. A point system for the following categories is used to determine attainment of certification:

- Energy usage and atmosphere
- Indoor air quality
- Sustainable sites
- Materials and resources
- Water efficiency
- Design and process innovation

The higher standards established for LEED certification not only reduce operating costs, but offer tax incentives, rebates and other economic benefits. LEED standards are currently available or under development for:

- **New commercial construction and major renovation projects.** Includes a comprehensive checklist of construction and renovation project criteria in categories such as sustainable sites, water efficiency, energy usage and atmosphere, materials and resources, indoor environmental quality, and innovations and design process.

- **Existing building operations.** Includes a set of performance standards for the sustainable operation of existing buildings. The criteria cover building operation and system upgrades in existing facilities where the majority of the interior or exterior surfaces remain unchanged.
- **Commercial interior projects.** This LEED rating system applies to tenant improvement projects including the selection of sustainable tenant space, efficiency of water usage, energy performance optimization, resource utilization for interior building systems and furnishings, and indoor environmental quality.
- **Core and shell projects.** A program for new building owners, designers, builders and developers who address sustainable design for new and shell construction including building structure, envelope, and central HVAC systems.

For more information, go to the U.S. Green Building Council's Web site at [www.usgbc.org](http://www.usgbc.org).

## Natural gas – a high performer

Natural gas systems can be a substantive reason for obtaining LEED certification. Applications powered by natural gas that can be included in the LEED certification rating include:

**High efficiency boilers.** Boilers use natural gas to supply heat by using low-pressure steam or hot water. A system of pipes circulates heat through the building. High efficiency boilers can feature pulse combustion, high turn down burners, economizers, vent dampers, reset or cut-out controls and other energy saving features.

**High efficiency furnaces.** Furnaces circulate air across a heat exchanger with a blower or fan, and distribute heated air throughout the building using a series of ducts. Energy efficient furnaces feature a secondary heat exchanger, electronic ignition, sealed combustion and pulse combustion.

**High efficiency water heaters.** High efficiency water heaters can take care of all the hot water needs for your facility. Efficiency features include devices to prevent sediment from collecting on heat transfer surfaces, improving heating efficiency and reducing hot water recovery time; low-input pilot burners to minimize standby losses; and improved flue design to capture additional heat from the combustion gases. Additional benefits include improved performance, longer life, extended warranties and safer operation.

**Energy recovery systems.** Energy recovery systems can help reclaim exhaust air from building systems, lowering energy use and operating costs. Improved indoor air quality and more even, comfortable heating throughout the facility are additional benefits.

**High efficiency foodservice equipment.** High efficiency natural gas foodservice equipment increases production over standard equipment and cuts costs for your foodservice operation.



*Schools are just one of the many kinds of facilities that can benefit from LEED certification.*

**Desiccant displacement systems.** These systems bring in fresh air to be pumped downward by a diffuser. Rising warmer air uses occupants as chimneys, following their bodies upward and out. Air is humidified in winter, dehumidified in summer. The conditioned air is noticeably fresher, cleaner, humidity-controlled and healthier.

### LEED in Minnesota

One of CenterPoint Energy's customers, Elk River Area School District #728, built the first LEED-certified building in Minnesota and has received national attention for its Westwood Elementary School project in Zimmerman. Some of the features that earned Westwood LEED points are:

- Passive heating and cooling specifically designed for this climate
- Ventilation and heat recovery systems that reduce energy consumption by 35 percent over standard systems
- One-hundred daylighting and indirect fixtures for lighting power consumption
- Right-sized chiller
- Occupancy sensors that conserve on lighting and ventilation
- Highly efficient window glass
- Special flooring that is long-lasting and easier to maintain
- Durable, 30-year roofing
- Low maintenance paint
- Energy efficient landscaping
- Water reduction measures

The following efficient natural gas systems were included in the Westwood Elementary LEED-certified project:

- High efficiency boilers
- High efficiency water heaters
- Energy recovery system

- High efficiency foodservice equipment
- Desiccant displacement system

After Westwood's first years of operation, the energy performance of the school is outstanding. Dr. Ron Bratlie, director of special projects for the district, expects 30 percent less in operating costs over a school built to code, or \$50,000 to \$60,000 in annual energy savings. Bratlie and his team worked closely with CenterPoint Energy throughout their project and received substantial rebates on the high efficiency natural gas equipment they installed, significantly lowering start-up costs.

## How we can help

CenterPoint Energy can help support you in your LEED certification process with the following programs:

### Engineering Assistance

Designing and installing mechanical systems for potential LEED certification takes the right expertise. To encourage participation in the certification process, which can yield energy efficiency and environmental benefits, CenterPoint Energy will reimburse commercial and industrial customers for up to \$5,000 of engineering fees assessed by consulting engineers for the design and installation of energy-efficient equipment that qualifies for LEED certification.

To help fund the initial assessment, you may qualify for an advance of up to \$2,500 in engineering financial assistance (not to exceed 50 percent of anticipated fees) to offset the cost of the engineering fees associated with LEED certification. You may be eligible for up to an additional \$2,500 if you become LEED certified.

To qualify for Engineering Assistance:

- A LEED-certified, registered professional engineer must prepare the plans.
- Customers must get pre-approval from CenterPoint Energy for their Engineering Assistance Application.
- Customers must provide technical documentation to CenterPoint Energy.

### Rebates

CenterPoint Energy offers rebates for the following energy-efficient natural gas equipment:

- Heating systems, including boilers
- Water heaters
- Energy recovery systems
- Energy-efficient process equipment
- Foodservice equipment

If you are interested in LEED certification for your facility, please contact your key account manager or call 612-321-4330 (1-800-234-5800 ext. 4330) for help with the process.

Facilities with potential for LEED certification include:

- Schools
- Office buildings
- Hospitals
- Colleges/universities
- Government buildings
- Museums
- Biomedical and other research facilities
- Laboratories
- And many more



*A wide range of CenterPoint Energy rebates are available for high-efficiency equipment.*