

Campus Cafeteria Serves As Sustainable Model for Energy-Efficient Food Service

Unlike the less-than-appealing, traditional cafeteria you may have eaten at in school, the state-of-the-art Café on the U.S. Department of Energy’s National Renewable Energy Laboratory (NREL) campus, which opened in 2012, is breaking stereotypes from aesthetics to energy-efficient design.

In addition to meeting staff needs as the primary dining location to grab snacks and eat lunch on the Golden, Colorado, campus, the 12,140-square-foot building is a model for how a high-performing food service facility seamlessly integrates energy efficiency technologies, sustainable operations, and solid business practices.



The NREL Café, which is rated LEED® Platinum, is one of the newest highly-efficient buildings at the lab’s South Table Mountain campus.

Photo by Dennis Schroeder, NREL 21697

Fast Facts

Size: 12,140 sq. ft.

Occupants: Seats 240 people

Energy Use: 150 kBtu/sq.ft./year

Energy Performance: 25% more efficient than ASHRAE 90.1 2007 standards

LEED Rating: Platinum

Cost: \$6.75 million



NREL’s Café boasts energy efficiency features such as walk-in coolers and freezers that are equipped with door alarms, and LED lights connected to occupancy sensors that turn on and off automatically.

Photo by Dennis Schroeder, NREL 25957

Energy Efficiency

- The Café’s kitchen is able to reduce its need for power via the use of numerous ENERGY STAR®-rated appliances and other high-efficiency equipment.
- Walk-in coolers and freezers are equipped with door alarms, and LED lights are connected to occupancy sensors that turn on and off automatically.
- The kitchen’s ventilation system features demand-controlled exhaust hoods that vary airflow rates based on the amount of heat being emitted at any given time from the surface of the cooking appliances.
- Multiple windows in the kitchen provide daylighting, reducing the need for electric lighting and leading to lower energy consumption.
- The reliance on daylighting from large windows, accompanied by tubular skylights, help achieve uniform light distribution across the main dining area space to limit the use of electric lighting.
- Cutting-edge duct grease sensors monitor build-up and alert the operator when cleaning is necessary, maximizing the performance, efficiency, and longevity of the kitchen equipment.



Large windows and skylights throughout the main dining area reduce the need for traditional lighting and lower energy consumption.

Photo by Dennis Schroeder, NREL 23260

Minimizing Waste and Water

- In support of NREL’s lab-wide near-zero waste initiative, the Café encourages recycling and composting.
- The Café’s vendor implements its own food waste reduction program that tracks, measures, and categorizes types of food waste daily at each station. All results are submitted to NREL’s sustainability group on a quarterly basis.
- The kitchen’s dishwashers operate with half the water that a

standard ENERGY STAR model consumes while utilizing dual-rinse technology; when in operation, the unit recycles the rinse water from a previous load to pre-rinse the next load.

- Stormwater from the Café rooftop is routed into the surrounding landscape, where bioswales sift out harmful pollutants before the water is transferred into the adjacent arroyo—then held at the nearby detention pond—before being discharged off-site to Lena Gulch.



In an effort to minimize waste, the Café’s vendor implements its own food waste reduction program that tracks, measures, and categorizes types of food waste daily at each station.

Photo by Dennis Schroeder, NREL 25970

Sustainability

- Whenever possible, the food that is served is sourced locally—meaning within a 150-mile radius of the Café—lending support to Colorado farmers and produce distributors, while reducing the carbon footprint of the supply chain.
- Native and xeriscape vegetation were used to landscape around the building, helping conserve water.



The Café’s east balcony and north terrace provide additional outdoor seating.

Photo by Dennis Schroeder, NREL 21701



National Renewable Energy Laboratory

15013 Denver West Parkway
Golden, CO 80401

303-275-3000 • www.nrel.gov

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