

CASE STUDY

New Belgium Brewery Bottling Packaging Hall Sustainable Design Fort Collins, Colorado

Making buildings work. **Better.**



**New Belgium won the 2007 Bronze Hard Hat Award for
"Outstanding Sustainable Design Project."*

Owner:

New Belgium Brewing
Co.

Contact:

Ms. Jen Allen

Phone:

(970) 221-0524

Architect:

Ware Malcomb

Contractor:

Swinerton Contractors

Schedule:

May 2007

Budget:

\$20 million construction

Built on its existing campus, New Belgium Brewery's 55,000 SF Bottling and Packaging Hall is an example of the company's continued commitment to the environment and sustainable living. The facility includes a just-in-time loading dock, trucking office and lounge, employee offices and locker rooms with showers, a break room, visitor observation balcony, and mechanical and electrical support areas. The site development included an employee parking lot, 10 truck docks, open space and employee recreation areas. Beer is transported from the existing building to the Packaging Hall via an elevated pipe bridge.

The roof of the new building includes a high-reflectance TPO roof system, and the roof's structural load was designed to support a future photovoltaic array. The local public utility provided consulting throughout the project and assisted with a grant to support the brewery's goal of applying integrated design on the project.

A baseline energy model using packaged rooftop units determined the relative efficiency of the selected HVAC system. A direct/indirect evaporative cooling system with a multi-stage gas furnace was selected. The loading dock parking area is snowmelted by a manually controlled system to avoid excessive energy waste with idling the slab temperatures and air is delivered using displacement ventilation. Low-emitting materials were used. Skylights and light tubes were installed to provide daylighting and reduce electrical lighting loads. Operable windows were strategically placed at the perimeter of the office area for comfort and better line-of-site views. Additionally, the landscaping uses xeriscape principles and native vegetation.



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Engineering Excellence Since 1976!

Company Overview

EMC is dedicated to creating sustainable facilities by optimizing performance through energy modeling and analysis, building automation systems application, advanced mechanical and electrical design, construction management, and building commissioning to achieve lower energy costs, improved comfort, and increased productivity.

Experience

Since 1976, EMC has been a leader in delivering high performance building solutions. As a multidiscipline firm, we have strong credentials in mechanical, electrical, and control systems retrofit and modernization and energy engineering and commissioning.

Where do EMC's experts work?

You'll find us in schools, colleges, hospitals, government facilities, healthcare, and all types of private sector structures from supermarkets to office towers. In fact, EMC's engineers and technicians go wherever new facilities are under construction or existing structures or systems are operating at less than peak performance.



Whether you need a retrofit or a modernization or a new high performance building, you can rely on EMC to bring engineering excellence to your project.

Imagine reducing operating costs, improving comfort, increasing productivity, and getting your building's problems fixed quickly. EMC's services are the key!

Making buildings work. **Better.**



Services

BUILDING COMMISSIONING/RETRO-COMMISSIONING

The commissioning process for new buildings and major renovations, provides facility owners with assurance the facility is functioning to meet their project requirements. Commissioning is the only process that assures a quality outcome. Whether you manage a new or existing facility, it's really difficult to know unless an independent commissioning expert has evaluated your systems. EMC's retro-commissioning services provide low cost, high return operating improvements that reduce operating costs. Think of it as a building "tune-up".

SUSTAINABLE DESIGN

More organizations are considering Green building systems and renovations. But to go Green--affordably--you need integrated sustainable design. EMC provides energy simulation modeling, daylighting, and high performance systems concepts to meet LEED requirements. We're ready to advise and coordinate and show you how to make the wise choices that deliver real environmental and economic benefit.

ENERGY ENGINEERING

Energy and how it's used affects quality-of-life and the global environment. Our core business is creating energy systems that optimize energy use. Our energy-engineering services ensure that you meet today's needs while planning for tomorrow's growth. This includes audits, assessments and implementation of energy improvement projects.

FACILITY DESIGN

Integrated systems design is crucial to facility renovation and modernization, particularly in high performance facilities. EMC understands how to take cutting edge mechanical, electrical, and building automation system technology and integrate it into real world solutions. And we can do it while your facilities stay in operation.

DESIGN/BUILD

Identifying your facility's energy issues is just half the battle. You then need a retrofit strategy that maintains the building environment and minimizes system downtime through every phases of construction. EMC is skilled at engineer-led, design/build projects, including efforts funded through Energy Savings Performance Contracting.

TRAINING

Today's building systems are complex. But EMC believes any operations and maintenance team is up to the challenge--if properly trained. We offer an extensive program of live and videotaped training classes and seminars, onsite and hands-on.

WATER RESOURCES MANAGEMENT

EMC staff can assist you in securing a cost-effective, long term water supply; reduce your water demand, and decrease your operational costs. We offer expert services to water suppliers, major water users and industries, and to local/ regional governments.

OFFICE LOCATIONS

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