



Earning a solid return on investment

With a cash incentive of \$8,787 from Energy Trust and an estimated 21 percent reduction in energy costs, Rivermark Community Credit Union's new branch is earning big returns. Energy Trust's Small Commercial Efficiency pilot enabled the credit union to implement numerous energy-efficiency strategies for a minimal upfront investment and maximum long-term energy savings. This emphasis on local and sustainable building practices furthers its mission of improving the well-being of its members, employees and the local community.



Learn more about energy efficiency solutions for your new construction or major renovation project. Visit www.energytrust.org or call **1.866.368.7878**.



There is no doubt that this building will perform in a superior manner. We will take what we learned to the other branches we own, and be a more efficient company and better community leader as a result.

George Kyler,
facilities manager
Rivermark Credit Union



PROJECT TEAM

- Architect of record—Baysinger Partners
- Mechanical engineer—ATP Engineering, Inc.
- General contractor—LMC Construction
- Electrical contractor—Stoner Electric
- HVAC contractor—Jacobs Heating & Air Conditioning

ESTIMATED ENERGY SAVINGS

- 33,279 kWh of electricity
- 21 percent reduction in electricity use, compared to a standard building of the same size

UTILITIES

Portland General Electric



SMALL BUILDING, BIG SAVINGS

RIVERMARK COMMUNITY CREDIT UNION EARNS A SOLID RETURN BY INVESTING IN ENERGY EFFICIENCY



With a proven path of solutions we could include efficient and green features, and be recognized and incentivized for them, without blowing our budget out of the water.

George Kyler,
facilities manager
Rivermark Credit Union



When Rivermark began planning its new 8,787 square foot branch on Portland's Southeast Hawthorne Boulevard, energy-efficient and sustainable design strategies were a top priority. These strategies would keep energy costs as low as possible for the member-owned cooperative and align with its ethic to do what is best for its members, employees and the local community. However, the credit union needed cost-effective solutions suitable to a smaller property. Energy Trust of Oregon's Small Commercial Efficiency pilot provided the perfect solution.

Launched in 2009, this pilot is designed specifically for commercial building projects up to 70,000 square

feet. It provides financial assistance for implementing a package of energy-efficiency improvements that can reduce energy use up to 30 percent beyond Oregon energy code. Completing this package also fulfills the energy requirements for Earth Advantage® Commercial, a new third-party green building certification.

By enrolling in Energy Trust's pilot, Rivermark was able to access proven design and implementation strategies for energy efficiency and sustainability. As a result, its new branch uses 21 percent less energy than a typical building of the same size, and boasts an Earth Advantage Commercial Silver certification.



AN ALTERNATIVE GREEN RATING SYSTEM

Earth Advantage Commercial provides an affordable, holistic green certification option that is tailored to small commercial projects. The program reduces the costs of certification through a systematic approach to energy savings, carbon reduction and water savings. Buildings may earn a Silver, Gold or Platinum certification, depending on their performance in five key areas: energy, water, health, land and materials.

Energy Trust’s Small Commercial Efficiency pilot has been designed to satisfy Earth Advantage’s energy requirements and provides additional incentives to projects that achieve certification.

An affordable option

Rivermark was already familiar with Energy Trust, having installed energy-efficient improvements such as lighting and lighting fixtures in renovations of its Beaverton home office and Newberg branch. These improvements delivered long-term energy savings for the credit union and earned cash incentives from Energy Trust. This experience stimulated interest among the credit union managers to pursue an even higher level of sustainability at the Hawthorne location.

With input from the design team, Rivermark set the following goals for its new branch:

- Reduce operating costs
- Conserve water and energy
- Improve air quality
- Attain cost-effective green building certification

In order to achieve these goals, Rivermark first had to address the issue of potential cost constraints.

“We knew we wanted to do energy-efficient strategies, but energy modeling can be cost-prohibitive,” said George Kyler, facilities manager, Rivermark Community Credit Union.

It’s common practice to use energy modeling and analysis throughout the design process to optimize energy performance and reduce carbon emissions in commercial buildings, but these services can be costly for smaller projects. To streamline this process and lower costs, Energy Trust built the pilot’s requirements around *Core Performance Guide – Oregon Edition*, a step-by-step guide to efficiency solutions for lighting, heating and cooling, controls and other equipment. Each energy solution in the guide has been screened for cost-effectiveness and maximum impact, so Rivermark knew it was making a good investment. In addition, Energy Trust worked with the credit union’s team to incorporate solutions into design and construction documents, eliminating the need for energy modeling and simplifying the documentation process.

The right solutions

The project team pinpointed the building envelope, the heating and cooling system and lighting as the primary energy-saving opportunities.

Building Envelope

To control energy consumption and ensure superior indoor air quality, the team emphasized a high-performance building envelope. The envelope includes a continuous air barrier to restrict infiltration of outdoor air, significant expanses of exposed brick, which enable thermal massing to keep the building warmer on cool days and cooler on warm days, and high-performance Solarban 80 window glazing.

Heating, Cooling and Ventilation

Water-source heat pumps were too costly to install, and the small lot couldn’t accommodate a ground-source heat pump system. The team decided on four packaged rooftop air-to-air heat pumps equipped with an economizer. A night flush system also saves on cooling costs with an automatic pre-occupancy purge every morning.

Lighting

The team equipped the building with ample energy-efficient lighting, which exceeds Oregon energy code for lighting by 35 percent. Automated lighting controls are also installed in low-use areas, such as restrooms, storage areas and conference rooms.

Additional energy saving opportunities

The building is solar-ready with an installed conduit and a southern section of the roof available for solar panels. All computer monitors, copiers and break room kitchen appliances are ENERGY STAR® rated. The building operations manager was trained on the mechanical and electrical systems to ensure that all equipment is maintained as specified. When the building was completed, the owner hired a contractor to collect trend-log data from the heating and cooling system and then used this information to make additional improvements to the system.

In addition to the energy-efficiency improvements, Rivermark owes its Silver-level certification to a range of sustainable features, including:

- A 1,458-square foot green roof designed to reduce storm water runoff
- On-site storm water filtration system
- Extensive use of recycled construction materials
- Emphasis on purchasing materials made within a 270-mile radius of the building
- High-efficiency faucets and fixtures, which reduce indoor water use by 45 percent