

ENERGY OUTREACH COLORADO NONPROFIT ENERGY EFFICIENCY PROJECT (NEEP)

White Paper by Jennifer Gremmert, Deputy Director
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HISTORY

In 2004, Energy Outreach Colorado (EOC) and Xcel Energy began discussions about the gap that existed for nonprofit facilities that provide services to low-income individuals and families that had been adversely affected by rising energy costs. Many local nonprofit organizations had been facing the difficult decision of cutting services, charging a fee for services or raising fees for services in order to help offset their facilities high energy bills. Although EOC was eager to help, the situation posed a challenge in that the issue did not factor into EOC's current scope of work and the organization did not have the independent funding stream to develop a new program. Likewise, under Xcel Energy's guidelines, these nonprofits were considered small commercial customers and could not be targeted or provided a different rate. State weatherization and energy assistance programs were also unable to meet many of these nonprofit facilities needs due to regulatory requirements that efficiency upgrades must benefit a resident paying a utility bill directly.

In November 2005, the Denver Foundation joined the discussion with EOC and Xcel Energy. The Denver Foundation was concerned about rising energy costs and wanted to see how they could help. They decided to contribute funding and resources toward this cause to help reduce the gap presented by these nonprofit organizations, and to reach out to other members of the Colorado Association of Funders. This collaboration helped secure a self-sustaining funding stream to develop this initiative and EOC launched the program in March 2006.

When the City of Denver renegotiated its franchise fee with Xcel Energy in November 2006 another opportunity for funding for NEEP presented itself. Since 2007, the City of Denver and the Denver Office of Strategic Partnerships has been working with EOC to improve the energy efficiency of nonprofit facilities and more than 40 nonprofits have benefitted from that partnership.

By targeting dollars toward energy efficiency upgrades in nonprofit organizations, the burden of energy costs can be reduced which results in more dollars going into direct services. Organizations that shelter people, such as day shelters, safe houses and residential treatment centers, have a 'high load factor' which means they use energy every day, all day and at night. Therefore, they cannot easily change their energy-use patterns and are most in need of energy improvements, such as insulation, higher efficiency appliances and lighting.

With energy costs on the rise, improving the energy efficiency of nonprofit facilities will reduce energy consumption, thus reducing energy bills and the carbon footprint of such organizations. The goal in reducing an organization's energy use is to allow them to reduce operating costs and to continue to provide vital community services.

PROGRAM

These are the four components that each qualifying nonprofit in the NEEP program receives:

1. An energy audit to assess what measures can be taken to save the organization energy.
2. An investment of energy efficiency improvements such as new lighting, increased insulation, Energy Star appliances, controls for boiler systems, etc.
3. As a follow-up to the efficiency upgrades, EOC supports NEEP recipients in developing energy conservation plans at each of the facilities.
4. Utility bills are also collected and analyzed to assess the facility's energy consumption and reduction as a result of the NEEP initiative.

ENERGY AUDITS

The first step in NEEP is to schedule an energy audit by an energy "expert" or consultant to identify the most cost effective changes that can be made to the existing building to save energy. An energy audit consists of a walk through of the entire building(s); an assessment of existing insulation in walls, attics, ceiling cavities, crawlspaces and basements; an inspection of the existing heating source (i.e., furnace or boiler), water heater and cooling source (if applicable); and an assessment of the existing lighting and appliances. The auditor may run a blower door test to assess air leakages throughout the building and he/she may look at past energy bills to determine trends in energy consumption. Once an audit is completed, energy conservation measures are identified and evaluated through an optimization tool that determines which measures are the most cost effective.

ENERGY EFFICIENCY IMPROVEMENTS

EOC has developed five steps for installing energy efficiency measures: 1) creating a client file; 2) collecting bids for each weatherization measure; 3) selecting measures; 4) safety checks; 5) installing the measures. Measure can include things like:

- Labor Costs
- Installation of upgrades
- Capital Expenses (examples of likely expenses)
- Energy Efficient Windows
- High Efficiency Appliances
- High Efficiency Furnaces
- High Efficiency Boilers
- High Efficiency Water Heaters
- High Efficiency Air Conditioning Units or Evaporative Coolers
- High Efficiency Refrigerators
- High Efficiency Freezers
- High Efficiency Gas Clothes Dryers and Washing Machines
- Lighting Retrofits
- Compact Fluorescent Light Bulbs
- Ballasts
- Insulation and Associated Materials (Vapor Barriers)

Air Sealing
Programmable Thermostats
High Efficiency Showerheads, Low-flow Toilets, and Faucet Aerators

ENERGY CONSERVATION EDUCATION

Currently, EOC is working with all NEEP recipients to develop an energy conservation education plan that is most appropriate for their target audience and specific to what is funded by NEEP. This is very important to ensure that all energy savings targets are met. This includes an initial meeting with staff to recognize the target audience for conservation education, reviewing the measures installed and identifying appropriate behavior changes to maximize the savings benefits and selecting appropriate presentations for the target audience. EOC provides Energy Conservation presentations for up to twelve months after the measures are installed to assist the organization in adopting significant behavior changes around energy usage. Workshops specifically designed to support facility managers are also being developed.

EVALUATION

For each NEEP project completed, EOC reviews utility bill data and tracks gas and electric consumption to determine energy savings. This piece is critical to ensure efficient use of funds and maximization of energy savings. EOC collects utility bills from NEEP recipients for up to one year after implementation and compares it to utility bills collected prior to work being completed to track actual savings as seen by the facility. In the past year EOC utilized an intern to assess energy savings for select NEEP projects. Recently, EOC has acquired Energy CAP software to help us improve our process for reviewing utility bills. This is an excellent tool to demonstrate to clients how energy efficiency improvements coupled with conservation/behavior changes are really saving therms, kWh and money on their utility bills. Energy CAP is a powerful, best-in-class energy and utility bill tracking system that also produces a wide variety of energy management and utilities accounting reports, graphs, rankings, and benchmarks – 200 standard reports. In addition to utility bill analysis, EOC will administer a survey to NEEP recipient organizations to assess their experience with NEEP. We are also hopeful that we can partner with the Dept. of Environmental Health (DEH) within the City of Denver to assist us with the assessment of the utility bill savings and reduction in greenhouse gas emissions.

PROCESS FOR APPLICATION

To apply for NEEP agencies can go to: <http://energyoutreachcolorado.org/need>

If you are a non-profit organization located in the City and County of Denver or a non-profit whose utility provider is Xcel Energy for either gas or electric service and you are

- Committed to reducing energy consumption at their facility
- Willing to implement new behaviors and policies regarding energy consumption through the adoption of an energy education plan
- Willing to participate in utility bill analysis program that requires providing EOC with two years of previous utility data and up to one year of post utility data

you may qualify to participate in NEEP. The current criteria for selection are listed below.

FUNDING CRITERIA

Currently, EOC is accepting applications for non-profits located in the City and County of Denver or non-profits whose utility provider is Xcel Energy for either gas or electric service and who meet the following criteria:

- Must be a 501c3 non-profit organization (churches with strong outreach programs will be considered on case by case basis).
- Must own building (long term leases will be considered on case by case basis, no government owned facilities).
- Mission must be related to serving low-income populations.
- Organization must be responsible for paying utility bills for facility and have two previous years of utility data available.
- Priority will be given to facilities with the high energy demands that shelter people, such as 24-hour and day shelters, safe houses and residential treatment centers that typically serve men, women and children on the brink of homelessness, individuals that are coming out of domestic violence situations, and individuals with mental illness or special needs.

SPECIFIC PROCESS ONCE APPLICATION IS COMPLETED

1. APPLICATION:

All complete applications received by the quarterly deadlines of Feb 1, May 1, Aug 1 and Nov 1 will be reviewed by a committee.

You will be notified of a decision within six weeks of these dates.

2. ENERGY AUDIT

Once your application has been approved, an initial walk-through of your building will be scheduled with a third party contractor followed by an energy audit. The results of this energy audit will be made available to you. Being approved for an audit does not guarantee that efficiency improvements will be made, but every effort will be made to find appropriate funding to reduce your organization's energy consumption.

The process of scheduling an auditor and drafting an audit report may take up to 2-3 months.

3. EFFICIENCY IMPROVEMENTS

Once the audit report is available, the NEEP Team, consisting of the EOC program manager, the auditor, the contractor and the education coordinator, will schedule a meeting with the appropriate staff at your facility to discuss the findings. EOC will use the findings of the energy audit to determine which energy improvement recommendations would be most cost effective and appropriate for

your facility. A third party contractor will be identified to provide cost estimates and to implement the changes. EOC will work to identify appropriate funding sources to implement the recommended changes. Once funding has been determined, approved improvements will begin at your facility.

The process of estimating costs for proposed changes and identifying appropriate funding sources may take an additional (1-2) months.

4. ENERGY EDUCATION PLAN

In order to maximize the energy savings from the energy efficiency improvements, EOC will work with your organization to identify and implement new behaviors and policies that will help significantly reduce energy consumption at your facility. The development of an education plan will begin once the audit is complete. EOC will provide an education coordinator to meet with the appropriate staff at your facility to develop this plan.

5. UTILITY ANALYSIS

Once the work is completed and the education plan is in place, EOC will collect your utility bills and do an analysis to determine how much energy and how much money your facility is saving as a result of your participation in this program. Your facility will be provided with a workshop on how to read your utility bill and quarterly graphs depicting your energy usage and savings.

The utility analysis and support for your education plan will continue for up to two years after work has been completed.

For questions, please contact

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Case Study for Energy Outreach Colorado's Nonprofit Energy Efficiency Program (NEEP) Joy House

Summary

Joy House, which is a program of the Providence Network, is a transformational housing program that provides professional counseling services, food, shelter and childcare for battered and abused women and children. As a result of funding from Xcel Energy's Demand-Side Management Program and Energy Outreach Colorado's (EOC) Nonprofit Energy Efficiency Program (NEEP) an energy audit was conducted of Joy House's 14 unit apartment building where all of its services are delivered. It was determined that significant energy savings could be achieved by conducting a lighting retrofit, installing attic insulation, E-star refrigerators and replacing their inefficient air conditioning units.

Background

EOC is the only independent, non-profit organization in the state that raises money to help limited income Coloradans afford home energy. Since 1989, EOC has distributed more than \$115 million to fund energy bill payment assistance and energy efficiency upgrades for affordable housing.

NEEP's goal is to improve the energy efficiency of nonprofit organizations' facilities. By targeting dollars toward energy efficiency upgrades in nonprofit organizations, the burden of energy costs can be reduced and more dollars allocated toward direct client services. Some recent NEEP projects include nonprofit administrative offices, transitional housing units where clients do not pay an energy bill, homeless day shelters and housing units that serve a specific vulnerable population.

Business Situation

Volatile energy costs have had a particularly adverse effect on nonprofit facilities that provide services to low-income individuals and families. Many of these organizations faced the difficult decision of cutting services, charging a fee for services or raising fees for services to help offset increasing operating costs. By improving the energy efficiency of their buildings, Providence Network improved one their most valuable assets, Joy House, reduced operating expenses and it results in a safer, healthier place for struggling women and children to live until they can get their lives back together.

Solution

Without the support of Xcel Energy and EOC, Joy House would not have been able to afford the installation of energy efficiency measures by certified professionals. They would have continued to experience cold rooms in winter and suffered without air conditioning in the summer. EOC will also provide education for the staff and clients on the work that was completed in their units and will perform an evaluation to ensure that energy saving targets are being met. The resulting equipment replacement, increased insulation and lighting upgrades will dramatically improve the energy efficiency of their building and reduce energy costs at a critical time when contributions are harder and harder to come by.

"I am happy to share feedback on the experience Providence Network had with your NEEP program because it was a great one! Not only was your group easy to work with, but the customer service was excellent. We are extremely appreciative of your help. As a non-profit organization, every dollar counts. The money we saved on these capital improvements directly impacts the services we are able to provide homeless women and children. In addition, the educational component has changed the culture of our community because these families have learned the value of energy efficiency and are taking it seriously.

Results/Benefits

EOC estimates that the \$73,000 investment will generate the following results:
A reduction of 40,000 Kwh, 5 KW, 103 Dth (dekatherms) of natural gas and \$5,500 in annual savings!

NEEP Projects Completed Since Inception

Projects Completed in Denver

Association for Senior Citizens	Mile High Montessori <i>Admin Building</i>	St. Francis Center
Cleo Parker Robinson Dance		The Conflict Center
Denver Children's Advocacy Center	Open Door Ministries <i>1520 Marion, 1530 Marion, 1540 Marion, 1544 Marion, 1550 Marion</i>	The Delores Project
Denver Rescue Mission <i>The Crossing, Ministry Outreach Center</i>	Providence Network <i>Joy House</i>	The Empowerment Program <i>Women In Transition</i>
Denver Urban Ministries	Savio House	Third Way Center
Habitat for Humanity Metro Denver	Senior Support Services	Urban Peak
Karis Community (Shalom)	Shaka Foundation <i>Shaka's Place for Youth</i>	Urban Servant Corps <i>5&9 House</i>
Mercy Housing <i>Franconia Apts, Grace Apts</i>	Sobriety House, Inc. <i>1406 Gaylord, The Phoenix Concept, 107 Acoma St, 121 1st Ave, 121 Acoma St, 1368 Elizabeth St</i>	Warren Village <i>1300 Gilpin St 1323 Gilpin St</i>
Mi Casa Resource Center		Women's Bean Project
Mile High Ministries <i>Joshua Station</i>		YouthBiz, Inc.

Projects Completed Outside of Denver

Archdiocesan Housing Inc. <i>Machebeuf Apts, Villas de Santa Lucia</i>	Interfaith Community Services
Family Tree <i>Brookview Apts, Gemini House, House of Hope, Women in Crisis</i>	Jeffco Action Center <i>Homeless Shelter</i> La Puente <i>Food Bank</i>
Gateway Battered Women's Services	SafeHouse Denver
Greeley Transitional Housing	Volunteers of America <i>Family Motel</i>