

Best Practices in Community Energy Efficiency Programs Energy Efficiency Programs for Nonprofit Organizations

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This paper addresses small and mid-sized nonprofit organizations found in most LEA communities. It does not treat larger health-care, educational, and cultural facilities, which are considered “Large C&I” buildings by most utilities and are principal targets of energy performance contracts (EPCs).. (See the papers on “C&I Sector” and “Facilitating EPCs.”)

Nonprofit organizations that own their own buildings or have long-term leases have been a focus of utility outreach and rebate incentives from time to time over the past thirty years. Religious organizations have been a particular focus, in part due to the advocacy and organization of strong Interfaith Power and Light (IP&L) networks. State chapters of IP&L have trained volunteers to conduct building audits, harvest utility incentives, and work with trustees to find additional funding for envelope, lighting, controls, and HVAC retrofits. IP&L staff and volunteers also speak directly to worshipers about actions they can take in their own homes to cut costs and fulfill a moral obligation to address climate change. Occasionally a utility will work with regional Boys and Girls Clubs and YMCAs, providing free audits and some rebates for eligible electricity measures. The quite varied nature of NPOs—religious, cultural, educational, recreational, and social service—defies an energy efficiency program design feasible and attractive to all.

Thirty years ago several of CESI’s staff—then working for a nonprofit consulting firm—authored a program design and attracted foundation funding to offer audit and financing programs in New York, Chicago and Boston. In Ohio in 1987, the state energy office and six community foundations collaborated to offer a program which CESI helped to establish in each city. In most of the cities 20-30 agencies were served with audits and slightly more than half went forward with major measures implementation; about half of these utilized loan funds established by community foundations to pay for energy efficiency measures. United Ways were active marketers of the program in several cities.

The keys to the design and implementation of a successful NPO energy program feature the following:

- An accurate profile of the nonprofit subsectors, with a focus on agencies that own their buildings or have long-term leases;
- A careful targeting of those subsectors to be served by program, and a marketing plan for each;

- The partnering of the local utilities, NPO umbrella organizations, and funders (especially community foundations and United Ways) in the design, marketing, and implementation of the program;
- The training and deployment of volunteers associated with the NPOs, especially for education, implementation of low-cost measures, and as a constituency to move their staff and Board to implement ECMs;
- A program design which employs audits, financing incentives, and a financing program sponsored in whole or in part by local funders; that design must also distinguish small from large agencies; and
- The selection of a program management team that combines expertise in administration, technical services, financing, marketing, and quality control.

Most nonprofit agencies share characteristics of low income residential customers: they lack financial resources, information about what to do, or who to turn to for advice; they are overwhelmed by other more pressing concerns. These are barriers that must be fully considered in any program design. Each of the bulleted points above receives attention in turn.

The NPO Sector Profile

From an energy efficiency point of view, there are three ways to look at the sector: functionality, size, and ownership type. Each of these perspectives provides direction on how to best serve NPO clients.

- A. Functionality.** There are educational, religious, social services, health care, recreational, and cultural nonprofits. For marketing purposes, these distinctions are important, because organizations in each category talk to one another and serve as references. There are also energy intensity distinctions: the health care organizations use a great deal of HVAC, hot water, lighting, and plug load per square foot, often spending \$6-8 or more on an annual basis for utilities. Many, including nursing homes and hospitals, are occupied and utilized 24 hours per day. At the other extreme, religious NPOs, especially churches, are energy-light. Their major expense is typically space heating (in colder climates), although air conditioning, hot water, lighting and plug load can be major factors for churches which also serve as day care centers and community meeting spaces. Their energy intensity might be \$2 per square foot per year or less; much of their space is rarely used. Cultural organizations are very sensitive about changes to their lighting and air conditioning so as not to jeopardize paintings, performance spaces, etc. Many are also registered as historical landmarks, setting into motion another set of constraints.
- B. Size.** Within each of these categories, there are large (greater than 50,000 square feet; medium, (20-50K); and small (less than 20K) NPOs. While not a linear relationship, large NPOs tend to have capital funds, more resources (such as endowments), and more staff sophistication and expertise in approaching energy-related capital improvements. Large NPOs may be good prospects for energy

performance contracts, especially hospitals and universities. There are exceptions to this maxim—especially newer NPOS, social services agencies and museums, which may not be well capitalized—but large NPOs present a different set of challenges and opportunities for an energy program.

- C. Ownership/Long Term Leases. The best prospects for major improvements are with building owners or organizations with long term leases. Most social services organizations do not fit this description; so too smaller health care, education, and cultural organizations are generally renters, most with short (two years or less) leases. Short-term renters generally lack capital for investment but are not good candidates for loans either..

Building size is frequently the most compelling category when considering an energy efficiency project. Size is also related to both ownership and functionality. Typically, more than half of NPOs in a region are likely to be churches. Among the non-churches, 90% are probably small renters. Together with churches, these NPOs are akin to low income households in their time horizons, money, and ability to leverage other resources with their own. They may represent 50% of the space occupied by nonprofits, and 40% of the sector's utility spending. They are too numerous and in need of help to be ignored, but they offer few or no leveraging opportunities (at least until utility on-bill financing is an option), and most community energy programs are too small to make a large dent in their energy-related capital needs.

In a city of 300,000 there may be 50 large NPOS—the universities, private secondary schools, hospitals, YMCAs (collectively), museums, symphony hall, and a few large churches. The collective utility bill for these may be \$150-250 M (disproportionately the major universities and the hospitals). An LEA organization with a \$250K incentives budget cannot serve more than 1 or 2 of these, and even then can only marginally affect their energy decision-making or investment—unless the LEA can facilitate energy performance contracting. The timeframe for a large organization is 12-18 months from the first meeting to construction commencement.

150-200 medium-sized NPOs which have some resources, can to some degree finance improvements, and may move from very small investments to significant investments as a result of the LEA's efforts. Many of these agencies do not require investment grade audits, but could benefit sufficiently from walk-through audits to make spending decisions—if they were offered with some financial incentives in addition.

Targeting Market Subsectors

Without very significant financial resources, no NPO EE program can serve all NPO markets. Even a well endowed program should sequence its marketing and delivery programs. Three criteria suggest themselves for selecting subsectors:

- 1) Degree of Capital need;
- 2) Commitment of umbrella organizations;

3) Financial resources available

The local energy agency (LEA) may lack the resources to accurately assess the level of the need by sector, but anecdotal evidence can be persuasive. If the United Way has stepped up with a financial and in-kind commitment to move forward; or an arts umbrella organization has done so, these actions should take priority in the selection of an initial marketing target.

Forging Local Partnerships

Without the local electric and gas utilities, the city government, the community foundation, and the major umbrella organization for an NPO subsector, it will be very difficult to plan and execute a program. These parties should be at the table from the beginning to formulate program designs, marketing plans, financial commitments, and commit additional resources. Each should make specific commitments to the program.

The Training and Deployment of Volunteers

Churches, United Ways, and arts organizations have survived and thrived with volunteers for decades. Volunteers can be trained to do preliminary energy audits, install low cost measures, serve on building committees, and agitate for their agency's taking action to implement EE and renewable technology upgrades. Programs with strong residential components can cross-sell their home energy and incentives programs to these same volunteers. The example of Interfaith Power & Light above is a powerful one.

Program Design and Financing Availability

An appropriate program design must provide audits, measure incentives, a financing program accessible to mostly non creditworthy agencies, and a strong marketing plan. The marketing plan is best directed through an umbrella organization or funder, like a community foundation or United Way. Typical applications for funding should ask whether and when energy audits were completed and what EE measures have been installed in the past five years.

Local universities may provide students to do walk-through audits, as the Greater Cincinnati Energy Alliance has done with the University of Cincinnati Engineering School. Large corporations may also donate the time of their in-house energy engineers for the same purpose. So too the local utility may donate a member of its commercial engineering staff. Some cost-sharing of investment grade audits should be available for larger, more sophisticated NPOs.

A financing program sponsored by a community foundation or United Way, and seeded in part with their funds, can both help overcome Board and staff reluctance to entertain debt AND win underwriting approval. While the structuring of such a program deserves another paper, the offering of low interest, 10-12 year financing is a critical ingredient for a successful program.

To see how a program design and incentive structure might be organized, a hypothetical program is set forth below. Note the integration of existing utility incentives into the program.

Setting Objectives, Incentives, Milestones, and Schedules for an LEA NPO Program

With a \$250,000 Budget

I. LEA NPO Objectives: First Year

1. Serve 12-18 NPOs with identification of measures and financial incentives
2. Expend \$250,000 on audits and financial incentives
3. Maximize the LEA's leverage in committing resources, achieving at least a 1:1 match from other sources
4. Meet minimal kwh, therm and water saving goals, consistent with EECBG goals
5. Serve at least one large NPO and two medium NPOs among all served¹.

Instrumental or secondary objectives:

1. Move at least one large NPO to an EPC
2. Complete case studies on at least three agencies
3. Document investment levels and savings for all customers served
4. provide behavioral EE services to at least a dozen clients addressing facility operators and building occupants
5. test and recalibrate of the service and incentive model for small, medium and large NPO sizes

II. Preliminary Incentive Recommendations

1. Large NPOs: The value-add would be publicity, documentation, case study, and modest financial incentive, unless they are good candidates for energy performance contracting, in which we could play owner's agent role(see papers on Facilitating EPCs and C&I for that description)

¹ Small NPO can alternatively be defined by annual budget of \$500K or below; medium is \$500K-\$2 M; large is >\$2M

Suggested Incentive Pool: \$80K for total incentives, provided as follows

15% of investment with minimum of \$20 K total project value (\$3k incentive) and maximum of \$30K incentive per project (for \$200K project value), with \$5k bonus incentive for any project achieving 20% savings or better; investment can be either grant, interest rate write-down or combination. In addition, an Investment Grade Audit cost share of up to \$10K share, for one audit only, might be considered if there is appropriate Letter of Intent from client; the \$10K is paid back if client does not go forward to implement at least 50% of measures recommended. Measures must be prequalified by full engineering audit or equivalent professionalism from in-house engineering staff

2. Medium NPOs (20-50,000 square feet): The value add would include all of the large building values plus walk through audits, contractor arranging service, and securing of all applicable utility incentives. Assistance with financing qualification is also possible

Suggested Incentive Pool: \$60 K for total incentives, provided as follows: 25% of investment with minimum of \$10K total project value (\$2500 incentive); and maximum of \$20 K incentive for \$80K total project value; with \$5K bonus incentive for any project achieving 20% savings or better. Instead of audit incentives a combination of walk-throughs and contractor cost and savings estimates could be offered. Measures prequalified by walk-throughs only.

3. Small NPOs (below 20,000 square feet): Value add same as medium NPOS, plus recruiting of members and/or occupants for residential services.

\$100k for total incentives, provided as follows:

100% grant for measures up to \$10K; 50% match for increment above 10K to 20K; no incentive bonus. So maximum any agency can receive is \$15K. Minimum grant of \$1,000. Measures would be prequalified by walk-through, and must meet 20 year payback as package (not each individual measure). Exception: Agencies which own their own buildings AND have endowments or capital funds above \$20K would be treated as medium NPOs regardless of size (they can afford to cost-share). Measures prequalified by walk-throughs only. All applicable utility incentives would be arranged.

III. Protocols for Serving Agencies

- A. Large Agencies: Referral from LEA sponsor
- B. Medium Agencies: Provision of Letter of Intent, capital measures priority list, one year of monthly utility bills for each measure, and submission to telephone questionnaire to prequalify on first come, first serve basis: little or no outreach.

- C. Small agencies: Geographic inclusion in targeted neighborhoods first; then Letter of Intent, utility bills submission and telephone questionnaire to prequalify. A great deal of outreach and publicity done to generate interest.

Note: Not addressed here is the need to approach funders about their protocols about energy efficiency, and assistance and/or hosting for loan fund: this is a parallel track function of NPO program.

IV. Pilot Project Process and Timeline

Pilot organizations will partner with the LEA through the following steps:

1. Collect utility data and answer pre-qualification questions
2. Preliminary walk-through Audits and Interviews
3. Energy Assessment Report, containing (Months 2 & 3):
 - a. Survey of existing building condition
 - b. Analysis of current utility bills
 - c. Recommended energy conservation measures (ECMs), in prioritized list
 - d. Suggested no/low-cost behavioral education and DIY projects
4. Package of Financial Incentives, including (Months 3 & 4):
 - a. utility Incentives
 - b. LEA Incentives
 - c. In-kind contributions
 - d. Possible incentives from LEA and/or in partnership with other organizations (e.g. revolving loan fund, denominational grants, judicatory loan)
 - e. Non-profit organization's responsibility
 - f. Other possible sources
5. Interim Steps may include (Months 4 & 5):
 - a. Support in presentation to the organizations' Boards
 - b. Facility Manager Training
 - c. Behavioral training
 - d. Support for DIY projects, including lighting, caulk, weather stripping, indoor storms windows, etc (at minimum, info listed on website)
 - e. Consider behavioral training/outreach workshop 6 months after initial behavioral training
6. Implementation of retrofits (Month 6; begin implementation by Month 8)
 - a. LEA will provide a list of pre-qualified contractors
 - b. It is the responsibility of the organization to hire and oversee contractors
 - c. Quality Assurance required of LEA: third party inspector (allow \$15k out of \$250k budget)

Next Steps, Other Resources

Contacting the Interfaith Power and Light chapter in your state is a start. Speaking with your community foundation and United Way is particularly important. Visiting the Greater Cincinnati Energy Alliance web site: www.greatercea.org.