

Program Title

Professional Energy Audits for Town of Jaffrey Municipal Buildings

Program Type

Energy audits

Program Summary

Based on a recent Municipal Facilities Assessment completed by the H.L. Turner Group, Inc. (“Turner Group”), several town buildings appear inadequately insulated or poorly ventilated. The Town intends to retain a qualified contractor to perform energy audits at each of the municipal buildings owned by the Town of Jaffrey (“Town”).

While the Turner Group report provided a comprehensive overview of structural, electrical, and mechanical deficiencies for all buildings and suggested corrective actions, there are no in-depth technical assessments accompanied by specific recommended solutions especially in the area of energy conservation. If energy issues are addressed, the Town could realize significant savings but the solutions should be “smart” and for this reason, the Town needs to perform professional energy audits which at a minimum would identify with more specificity the various problems, identify corrective actions and estimate the likely energy savings that would result.

Low Income Residential Customer Qualification

Jaffrey is a rural community located in the Southwest Region of New Hampshire. Total county population by the 2007 estimate is 77,200 with a density of 109 persons per square mile. The Town of Jaffrey population at the 2000 US Census was 5,476 and is projected to 5,722 in the 2007 estimates per the NH Office of State Planning Data Center.

Jaffrey’s Median Household Income (MHI) by the 2000 Census is \$45,033, 91% of the State MHI at \$49,467. The unemployment rate at the end of 2008 in Jaffrey was 5.4%, with the State average at 4.6% (NH Employment Security, Economic & Labor Market Information Bureau).

Identification of Applicant Organization

Department of Public Works
Town of Jaffrey, New Hampshire
10 Goodnow Street
Jaffrey, NH 03452
(603) 532-6521

Contact: Douglas Starr, P.E.

Identification of Subcontractors and Partners

Douglas H. Starr, Town Engineer
Jo Anne Carr, Director of Planning and Economic Development
Jaffrey Energy Committee

Statements of qualifications and experience will be requested from interested subcontractor(s). Estimates were provided by Sustainable Energy Education Demonstration Services (SEEDS) and typical industry parameters and protocols.

Authorized Negotiator(s)

Michael Hartman, Town Manager

Projected Energy Savings

The energy audits will be able to quantify potential energy savings and additional opportunities for savings and greenhouse gas reduction.

Projected Greenhouse Gas Emissions Reductions

The energy audits will be able to project greenhouse gas emission reductions following energy audits and implementation of recommendations

Length of Program

Nine (9) months

Total Program Costs

\$17,750.00

GHGER Funds Requested

\$16,250.00

Executive Summary

In 2007 and 2008 the Town of Jaffrey contracted with the H.L. Turner Group, Inc. (“Turner Group”) to conduct a facilities assessment of all municipally owned buildings. The scope of work included examination of the structural, electrical and mechanical systems and equipment, architectural features including code and accessibility issues, and energy usage or ways to decrease energy usage in each building. The work was completed in two phases: the Phase I report was completed in September 2008 and included the Jaffrey Town Office Building, Police Station, Jaffrey Town Library and Town Recycling Center. The Phase II report was completed in January, 2009 and included the Department of Public Works, Fire Station, Water Department, Parks and Recreation Department, Wastewater Administration, Contoocook Town Beach building, and the Jaffrey Central Storage building.

A common finding for all buildings was the opportunity to decrease energy usage. For example, the report identified deficiencies in windows, doors, insulation, and inefficient HVAC systems. While the Turner Group report provided a comprehensive overview of structural, electrical, and mechanical deficiencies for all buildings and suggested corrective actions, there are no in-depth technical assessments accompanied by specific recommended solutions especially in the area of energy conservation. If energy issues are addressed, the Town could realize significant savings but the solutions should be “smart” and for this reason, the Town needs to perform professional energy audits which at a minimum would identify with more specificity the various problems, identify corrective actions and estimate the likely energy savings that would result.

The next logical step is to evaluate the energy usage in all the buildings by performing a professional energy audit to identify specific measures and detailed cost estimates for improving the energy performance of the buildings. The results of the audit will be used for funding plans including presentation at Town Meeting and/or future grant proposals.

Proposed Work Scope and Schedule

Scope

Buildings

- Jaffrey Town Office Building
- Police Station
- Jaffrey Town Library
- Town Recycling Center (Transfer Station)
- Department of Public Works (Administration and Highway Garage)
- Fire Station
- Water Department and Two (2) Well Houses, Booster Station and Two (2) Storage Tank Buildings
- Parks and Recreation Department
- Wastewater Administration and Four (4) Sewage Pump Stations
- Contoocook Town Beach Building
- Jaffrey Central Storage Building

Blower door testing

Infrared images

Total energy use analysis

- Building envelope
- HVAC performance

Existing heating system assessment

Recommended upgrades

Schedule

Nine (9) months

Project Benefits

The direct benefits of a professional energy audit is to identify specific measures and detailed cost estimates for improving the performance of the buildings. If energy issues are addressed, the Town could realize significant savings *but* the solutions should be “smart” and for this reason, the Town needs to perform energy audits which at a minimum would identify with more specificity the various problems, identify corrective actions and estimate the likely energy savings that would result. The results would be the basis for funding plans including presentation for Town Meeting and future grant proposals.

Measurement and Verification

The professional energy audit would identify with more specificity the various problems, identify corrective actions and estimate the likely energy savings that would result. Measurement and verification of savings will not be possible until corrective actions are begun to be implemented.

Greenhouse Gas Emissions Reduction Fund
Grant Application For Program to Reduce Greenhouse Gas Emissions in New Hampshire

Budget

Energy audit (performance assessment and recommendations): \$ 11,250.00

Additional HVAC analysis: \$ 5,000.00

Grant Administration: \$ 650.00

Project Management: \$ 850.00

Total: \$ 17,750.00

Applicant Qualifications

The Town of Jaffrey has had numerous successes with State and Federal loan and grant programs for achieving a wide array of community development goals such as housing rehabilitation, water and sewer facility upgrades, recreational facilities, land acquisition and transportation projects. The Town has demonstrated its capacity to manage multiple funding sources, successfully document progress and provide accurate and reliable record keeping for project accounts and in-kind services.

Prior Grant Sources include: USDA Community Facilities (WWTF/W), CDBG/CDFA (Housing rehab and Economic Development), EDA (WWTF), State Division of Historic Resources, Land and Water Conservation funding, Federal Highway ISTEA and County Funds (Rail Trail and pedestrian improvements).

The Town of Jaffrey is well prepared to undertake this Grant Program. Project staff include: Michael Hartman, Town Manager; Randall Heglin, Director of Public Works; Douglas Starr, P.E. Town Engineer, Pamela Bernier, Finance Director; Jo Anne Carr, Director of Planning and Economic Development.

Audits have met compliance requirements.

Plan for tracking and measuring progress: The Town customarily reports on a quarterly basis, provides internal audits on grant funds, and has capacity to manage and direct grant funded projects.

The Town of Jaffrey Energy Committee, acts as advisor to town officials, the schools, businesses and residents on energy matters, seeks to encourage energy conservation and sustainability (and to save money wherever possible) through the wise use of energy, giving special attention to minimizing carbon dioxide emissions, fossil fuel dependency, and wasteful energy consumption while maximizing clean renewable energy use. The committee advocates the following:

- Reduction of energy and environmental waste through smart recycling.
- Reduction of carbon and other harmful fuel emissions through technological innovations and through shifts to alternative energy sources that minimize fossil fuel dependency.
- Reduction of costs of residential, commercial and town lighting through elimination of unnecessary lighting, use of low energy lighting sources, and good lighting management practices.
- Reduction of heating and air conditioning costs in buildings by maximizing energy conservation and efficiency and other performance factors.
- Increase of energy efficiency through reformed building and property development codes.
- Collaboration with other local, state and national organizations, including other town energy committees, to advance the above-stated purposes.”