



Commercial Energy Audit Program 2010 Program Manual

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1.1 INTRODUCTION

Welcome to Oncor's Commercial Energy Audit Program (the "Program"). All commercial, governmental, nonprofit, and academic customers ("Customers") that receive electric service from Oncor are eligible to apply for this Program. The Program provides energy audits at eligible sites to determine the best way to reduce their energy use and demand through funding from Oncor's energy efficiency programs. This manual includes detailed information about the Program guidelines for participation.

Take A Load Off, Texas[®] is provided by Oncor Electric Delivery LLC as part of the company's commitment to reduce energy consumption and demand. Nexant, Inc. implements the Program as an independent contractor. For more information, visit www.takealloadofftexas.com

Oncor is a regulated electric distribution and transmission business that uses superior asset management skills to provide reliable electricity delivery to consumers. Oncor operates the largest distribution and transmission system in Texas, providing power to 3 million electric delivery points over more than 120,000 miles of distribution and 14,000 miles of transmission lines. While Oncor is owned by a limited number of investors (including majority owner, Energy Future Holdings Corp.), Oncor is managed by its Board of Directors, which is comprised of a majority of independent directors. Information about Oncor is available by going directly to www.oncor.com.

As part of this Program, an energy audit is conducted at a Customer's site selected to participate in the Program. Oncor assists with funding on this portion of the work and provides incentives under other Oncor programs to help buy down the capital investment of recommended Energy Efficiency Measures (EEMs).

Oncor offers the energy audits to the following groups of customers at no cost:

1. Commercial (with maximum monthly peak demand less than or equal to 250 kW for each of the preceding 12 months)
2. Government (including state, county, and city facilities)
3. Nonprofit
4. Public education

Commercial customers whose highest monthly demand is above 250 kW will receive a 50% cost share from Oncor and will be responsible for contributing the additional 50% according to the following schedule:

| Facility floor area | Cost to Customer |
|---------------------|------------------|
| ≤250,000 sq ft | \$3,175 |
| >250,000 sq ft | \$4,000 |

1.2 BACKGROUND

Oncor provides a variety of energy efficiency programs and services to its Customers. The Program will provide energy audits for commercial, nonprofit, academic, and governmental facilities to help building owners and operators make informed efficiency decisions and implement energy efficiency strategies. Energy audits can help identify economically viable efficiency improvements. The Program is designed to identify and refer Customers to Oncor's existing energy efficiency standard offer and market transformation programs for incentives.

1.3 PROGRAM GOALS

The goal of the Program is to identify potential areas for energy efficiency improvements that can help reduce summer peak demand at commercial, nonprofit, academic, and governmental facilities receiving service from Oncor. The secondary Program goals are to:

1. Encourage and assist commercial, nonprofit, academic, and governmental facilities in adopting energy-efficient technologies.
2. Achieve Customer energy and cost savings.
3. Stimulate investment in efficient technologies with the capability to reduce Oncor's peak demand during summer peak periods.
4. Develop a network of Oncor energy audit service providers.

1.4 ELIGIBILITY

All commercial, nonprofit, academic, and governmental customers that receive electric service from Oncor are eligible to apply for this Program. To confirm that a facility

receives service from Oncor, review the ESI ID number on the electric bill. The ESI ID number is a 17-digit number. If the third through seventh digits are “44372” or “17699,” then this account is serviced by Oncor.

- Example: 10 **44372** 000 1234567

Facilities having a high Energy Utilization Index (EUI) — high annual energy use, kWh per square foot — will be prime candidates for this Program. Characteristics used to assess potential Program applicants include historical energy use, operational procedures, building equipment types and age, and motivation of the building owners and operators.

Based on considerations such as those listed above, the Program Implementer and Oncor will identify applicant facilities that have the highest perceived opportunity for energy savings to participate in the Program.

Each Customer will be limited to apply for a maximum of 25 buildings during the Program year.

1.5 CONTACT INFORMATION

The Program Implementer can address questions not answered in this manual or discuss Program components in more detail. Contact information for the Program Implementer is:

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2.1 OVERVIEW

This section provides information on participating in the Program including the Program process, required submittals, and milestones. The Program begins when a Customer submits an application(s) to the Program Implementer. The Program Implementer will process applications on a first-come, first-served basis and will continue to accept applications for the Program until all funds have been committed. After this time, submitted applications are placed on a waiting list. Applications are reviewed and evaluated to determine if there is potential for significant energy and demand savings. Applications that have potential for significant energy and demand savings will be scheduled to receive an energy audit according to the Program guidelines outlined in this manual.

2.2 PHASES OF PARTICIPATION

Customer participation in the Program involves three basic phases:

1. Application
2. Energy Audit
3. Energy Audit Follow-up

A discussion of the requirements of each phase follows.

2.3 APPLICATION PHASE

2.3.1 Application and Agreement

The Program begins with the Application Phase. The Application and Agreements for the Program are available on Oncor's Web site: www.takealoadofftexas.com. There are two Application and Agreements; one is specifically for governmental, public education, nonprofit, and commercial facilities with a peak demand of equal to or less than 250 kW. The second Application and Agreement is specifically for commercial facilities that have a peak demand greater than 250 kW.

The Customer will complete the Application and Agreement and submit it to the Program Implementer for review. The Program Implementer will review the application and collect data to benchmark the building's energy performance using an Energy Utilization Index (EUI) or the EPA's ENERGY STAR[®] Portfolio Manager to determine if the facility presents significant opportunity for energy savings and demand reduction. Additionally, characteristics such as historical energy use, operation and maintenance procedures, building and equipment types and age, and motivation of the building owners and operators are considered in the assessment of potential Program applicants. The Program Implementer reserves the right to accept or reject the application based on the savings potential.

2.4 ENERGY AUDIT PHASE

The Energy Audit Phase begins after acceptance of the application. Once an application is approved, the Program Implementer or a Qualified Service Provider (QSP) will contact the applicant to schedule the energy audit. The following activities are conducted in this phase.

1. A one-day site visit is scheduled where engineers from the Program Implementer or a QSP conduct interviews with facility representatives, review available drawings and schedules, tour the facility, and inspect the energy using equipment.
2. The auditing firm will produce an Energy Audit Report, which will include a description of recommended improvements, energy savings projections, assumptions and calculations, implementation cost estimates, and a simple payback calculation. The results are tabulated in a Summary Table. See Appendix B for an example of the Summary Table.

The Summary Table is designed to demonstrate potential savings available at a facility. Assistance is provided in locating Oncor incentive-based programs to assist with funding for energy efficiency projects selected by the Customer, such as those listed in Table 1.

Table 1: Examples of Energy Efficiency Measures that are Eligible for Oncor's Incentive-based Programs

| |
|--|
| 1. Chiller replacement |
| 2. Packaged cooling unit replacement |
| 3. Heat pump water heater electric |
| 4. Constant air to variable air-side conversions (if included with other measures) |
| 5. Fan and pump motor efficiency upgrades |
| 6. Fan and pump variable speed drive (VSD) installations (if included with other measures) |
| 7. Heat pipe, enthalpy wheel, and other forms of energy recovery |
| 8. High efficiency fluorescent lighting that replaces less efficient lighting |
| 9. LED lighting |
| 10. Induction lighting |
| 11. Exterior lighting under a roof/ceiling (e.g., loading dock) |
| 12. Lighting controls to reduce operating hours (if included with other measures) |
| 13. CFLs with hard-wired ballasts or permanent socket conversions |
| 14. Air cooling and refrigeration compressor replacement |
| 15. Refrigerated case doors |
| 16. Motor efficiency upgrades |
| 17. Cool roof |
| 18. Cogeneration projects |
| 19. Renewable technologies (solar, wind, tidal, geothermal, etc.) |
| 20. Fuel switching from electric to gas (net energy use must decrease, e.g., gas-fired booster heaters in dishwashers) |
| 21. Compressed air system optimization |
| 22. Compressed air compressor replacement |
| 23. Heat recovery |
| 24. Controls |
| 25. Cooling towers |

3. The auditing firm will submit the audit report to Oncor and the Customer.

2.5 ENERGY AUDIT FOLLOW-UP PHASE

After the Customer has reviewed the Energy Audit Report, a follow-up meeting is scheduled between the Program Implementer, the auditing firm, and the Customer to discuss the audit findings. The follow-up meeting will be a teleconference call among all the participating parties.

The key discussions in the follow-up meeting are:

1. Selection of EEMs proposed in the report.
2. Explanation of the incentive application process.
3. Transfer of the EPA's ENERGY STAR Portfolio Manager Account with baseline information to the Customer.

Within six months of submittal of the audit report, the Program Implementer will follow up with the Customer to track the implementation of any EEMs.

3.1 OVERVIEW

This section provides information on how service providers can participate in the Program, including the qualification process, training, and participation in energy audits.

3.2 PHASES OF PARTICIPATION

Qualified Service Provider participation in the Program involves four basic phases:

1. Qualification
2. Training
3. Energy Audit
4. Energy Audit Follow-up

A discussion of the requirements of each phase follows.

3.3 QUALIFICATION PHASE

3.3.1 Request for Qualification

In 2010, Oncor will release a Request for Qualification (RFQ) for service providers that are interested in participating in the 2010 Program. Each interested service provider shall complete and submit its qualifications as requested on the RFQ. Oncor and the Program Implementer will review the qualifications submitted from service providers and select the most qualified respondents to participate as Qualified Service Providers (QSPs) in the 2010 Program. The Program will not re-open for enrollment until 2011.

3.3.2 Selection of QSPs

QSP's are selected based on qualifications that best meet the needs of the Program. Each respondent is evaluated based on the following evaluation criteria, not necessarily listed in the order of priority:

1. Respondent's ability to provide quality services consistent with the Program goals.
2. Respondent's proposed approach to identifying Energy Efficiency Measures.
3. Respondent's ability to meet the requirements of the services requested.
4. Respondent's experience in similar job functionalities.
5. Respondent's ability to allocate resources to meet the deliverable schedule.
6. References.
7. Minority and/or Woman-owned Business Enterprise (M/WBE) certification and/or participation.
8. Other relevant factors determined by the Program Implementer and Oncor.

Selected QSPs are required to execute a contract with Oncor that outlines the scope of services to be performed and compensation schedules.

3.4 TRAINING PHASE

The selected QSPs will be trained by the Program Implementer regarding the following issues:

1. The Program and its goals.
2. The energy auditing process.
3. Common Energy Efficiency Measures and the associated calculation procedures for the peak demand and energy savings.
4. The energy audit report requirements and template.

A training session is held with selected QSPs. During this training session, the Program Implementer reviews the audit process, the Program goals, the audit report template, how to effectively calculate savings, and other relevant information.

3.5 ENERGY AUDIT PHASE

After successfully completing the training session, the selected QSPs may be assigned audits to complete by the Program Implementer based on Program demand, QSP's area of expertise, and geographic location. QSPs may also bring audit projects to the Program, but each site must be pre-approved by the Program Implementer prior to an audit being conducted by the QSP. For each audit, the QSP will perform the following tasks in this phase:

1. QSP will perform an energy audit via a site visit. During the visit, the QSP will conduct an interview with facility representatives, review available drawings and schedules, tour the facility, inspect and document the energy-using equipment, and identify potential Energy Efficiency Measures (EEMs).
2. QSP will produce an energy audit report which includes the following key information:
 - a. Existing and proposed equipment inventories, including equipment counts, equipment efficiencies, and equipment nameplate data.
 - b. Data used to assess occupancy, equipment operation including capacities, condition, hours of operation, and energy use.
 - c. Identification and analysis of EEMs.
 - d. Engineering calculations estimating energy and demand savings based on the efficiency of the baseline equipment compared to that of proposed equipment.
 - e. Estimated implementation costs from published information or knowledge of best practices.
 - f. A description of applicable incentives and programs available from Oncor, pertinent to each of the proposed EEMs.
 - g. Estimated incentives (from Oncor's incentive-based programs).
 - h. Simple payback period for each EEM.
 - i. A Summary Table that tabulates the recommended EEMs, energy savings, demand savings, energy cost savings, implementation cost estimates, applicable Oncor incentive-based programs, estimated incentives, and the simple payback periods.

3. QSP will submit the energy audit report to the Program Implementer for approval according to a project schedule agreed by the Program Implementer. The report shall utilize the reporting formats and standardized templates provided by the Program Implementer and Oncor.
4. QSP will revise the energy audit report according to the Program Implementer's recommendations if the report is not approved by the Program Implementer. QSP will resubmit the report to the Program Implementer for approval.
5. QSP will submit the approved energy audit report to Oncor and the Customer.

3.6 ENERGY AUDIT FOLLOW-UP PHASE

QSP will attend a follow-up meeting via either in-person meeting or teleconference to discuss the audit findings with the Program Implementer and the Customer. The Program Implementer will continue to conduct follow-up with the Customer at a later date to verify if any of the recommendations from the audit have been implemented.

3.7 QUALITY CONTROL

The Program Implementer will be responsible for reviewing audit reports and receiving feedback from Customers to assess the quality of work provided by the QSP. If issues or errors are found, the Program Implementer will document the information and will report these issues to the QSP and Oncor. QSPs that have repetitive performance issues will be assigned fewer audits. If issues are not resolved, Oncor reserves the right to terminate the contract with the QSP.

Below is a list of common industry terms that are used in the audit report.

Annual Energy Savings: The energy savings calculation estimates the annual electrical energy (kWh) savings potential for a given savings measure.

Annual Cost Savings: The cost savings calculation that accounts for energy and demand savings due to implementation of measures.

Baseline Energy Use: The calculated or measured energy use by a piece of equipment or a site prior to the implementation of the project measures. Baseline physical conditions, such as equipment counts, nameplate data, and control strategies, will typically be determined through surveys, inspections, and/or metering at the site.

Deemed Savings Estimates: A pre-determined, validated estimate of energy and peak demand savings attributable to an energy efficiency measure in a particular type of application that a utility may use instead of energy and peak demand savings determined through measurement and verification activities.

Demand Savings: The maximum one-hour average demand reduction (in kW) that occurs when the system undergoing retrofit is operating at peak conditions during the summer period. The summer period is defined as weekdays, between the hours of 1 p.m. and 7 p.m. from June 1 to September 30, excluding federal holidays.

Energy Efficiency Measure (EEM): A system, piece of equipment, or materials that result in either reduced electric energy consumption, or reduced peak demand, or both.

Energy Efficiency Project: An energy efficiency measure or combination of measures installed under a Standard Agreement that results in both a reduction in Customer's electric energy consumption and peak demand, as well as a reduction in energy costs.

Implementation Cost Estimate: The cost for materials, equipment, and labor to fully implement the measure. Estimate must include the source of the estimate, which may consist of list pricing, an actual quotation, or a recognized cost estimation database.

Pre-Installation (or Pre-Retrofit) Energy Use: The calculated energy usage (or demand) by a piece of equipment or a site before implementation of the project.

Project: The term "project" refers to a single application's set of proposed Energy Efficiency Measures or other improvements that are necessary to produce energy savings under the Program.

Simple Payback: The simple payback is a calculation that determines the amount of time required for cost savings to equal the implementation cost. The simple payback is calculated as the implementation cost divided by the annual cost savings. This value is included in the implementation list.



Summary Table
Oncor Commercial Energy Audit Program

Project: Sample Project

| No. | Measure Description | Savings | | | | Installed Cost | Oncor Incentive Program | Estimated Oncor Incentive | Simple Payback Period |
|--|---------------------|----------------|--------|--------|-------|----------------|-------------------------|---------------------------|-----------------------|
| | | Peak Summer kW | kWh/yr | \$/kWh | \$/yr | \$ | | \$ | Years |
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| Table Total (All Measures Combined) | | | | | | | | | |