Introduction
The Alaska Energy Authority initiated a commercial energy audit program in 2011 as one of many efforts to achieve the 15% by 2020 energy efficiency goal set by the Governor and Legislature in 2010. This is the third year of funding that has been made available under this program for privately owned commercial buildings.

The intent of the program is to provide high quality energy audits to private commercial building owners to help them identify and quantify the value of energy efficiency measures that could be implemented specific to their building. This program will pay for up to the full cost of a commercial building energy audit, the maximum reimbursement amount is based on the size and complexity of the building. The reimbursement maximums may or may not cover the full cost of a commercial building energy audit. It is the owner’s responsibility to pay for energy audit costs that exceed the rebate amount. The program does not pay for the implementation of the recommended efficiency measures.

The reimbursements for the 2013 energy audits are paid for with State funding. It is expected that this funding will cover between 100 and 150 energy audits, depending on the size of the buildings that participate.

All program information and updates are available at Alaska Energy Authority’s web site http://www.akenergyauthority.org/efficiencyaudits.html.

Program in Brief
Application period: November 1, 2013 to December 20, 2013 (4:30 pm)
Eligibility: Privately owned commercial buildings in Alaska
Reimbursement: $1,800 to $7,000 depending on building size/complexity
Auditor travel costs: $300 for communities 100 miles from local auditor
Number of buildings to be funded: 100-150 expected in 2013
Audits & audit reports complete: December 31, 2014 (4:30 pm)
Reimbursements requests due: February 27, 2015 (4:30 pm)
Apply online: http://www.akenergyauthority.org/efficiencyaudits.html

Application Period
The Alaska Energy Authority will accept applications from eligible commercial building owners during an open application period starting November 1, 2013 until 4:30 pm December 20, 2013.

Eligible Applicants
Eligible applicants are owners of commercial buildings in Alaska, including individuals, corporations, non-profit organizations, partnerships, LLCs, etc. To be eligible, an online application must be submitted by or on behalf of a building owner, and the owner must agree to the required commitments listed on the online application form.

Eligible Buildings
Eligible buildings are limited to commercial buildings in Alaska that are privately owned, including those owned by non-profit organizations. The building must be heated and have a minimum annual energy cost exceeding the building’s maximum reimbursement amount listed in the table below. Building uses may vary widely, including office buildings, restaurants, grocery stores, warehouses, retail, houses of worship, medical offices, hospitals, hotels, lodges, etc.

The energy audits are for whole buildings only; tenants of buildings are not eligible to have partial building audits conducted under this program, but are encouraged to invite their property owner to participate.

Services Provided
Approved applicants will be reimbursed for up to the full cost of an ASHRAE¹ Level II energy audit² or better. It is the applicant’s responsibility to select and hire a qualified energy auditor. Interested energy auditors’ statements of qualifications and customer ratings from last year’s program are available at www.akenergyefficiency.org. The energy audit and audit report must provide at least the minimum requirements outlined below. It is the applicants’ responsibility to ensure that their selected energy auditor fulfills the minimum requirements. In addition, the applicant may specify items of interest for the energy auditor to inspect more thoroughly while on site. Following the on-site energy audit, the auditor will prepare an energy audit report for the applicant and send a copy to AEA. The energy audit report will include a written report of recommended energy efficiency measures (EEM) and energy conservation measures (ECM). The energy audit will be equivalent to an ASHRAE level II audit or better, meaning that the report will list specific EEMs and ECMs and how cost effective each is. The audit will also include energy use benchmarking using past years’ energy utility data to compare the building’s energy use against itself and against similar buildings. The minimum contents of the energy audit are included in the “Required Elements of the Energy Audit Report” section.

¹ American Society of Heating, Refrigeration and Air Conditioning Engineers, www.ashrae.org
² For those not familiar with the levels of energy audits Wikipedia has descriptions:
Selecting an Energy Auditor

Depending upon how applicants plan to implement the recommended measures, there are two factors to consider when selecting an energy audit firm. Please note that at a minimum audits must be performed by an auditor who is a Certified Energy Auditor (CEA) or a Certified Energy Manager (CEM) or an AEA approved equivalent.

1. **Self-Implementation:** Many small businesses will self-implement energy audit findings using either existing staff or contractors. For these applicants, any qualified energy auditor will work. The most important selection criteria in this case will likely be matching the type and size building and your special interests to the expertise of the energy auditor. For example, a larger commercial building in need of comprehensive assessment of the HVAC system might choose an engineering firm or auditor skilled in mechanical systems. A relatively small residential-style commercial building might be best suited for an auditor that is skilled in blower-door testing, cold climate building envelope improvements, appliances, plug loads, and employee conservation measures. Other decision criteria include availability, price, past performance as rated by previous customers, and examinations of sample audits conducted in the past.

2. **Energy Savings Performance Contract:** For building owners who want to use Energy Savings Performance Contracts (ESPC) to implement the identified energy savings measures, they should select an auditor capable of providing performance contract services, typically called an Energy Service Company (ESCO). In a typical Energy Savings Performance Contract, the energy auditor identifies and implements energy efficiency measures with little or no up-front cost to the building owner. The building owner then pays back the ESCO for the efficiency improvements out of the energy savings achieved. Depending upon the contract arrangement, the energy savings are sometimes guaranteed by the ESCO. In that case if the prescribed energy savings are not achieved, the ESCO pays the difference. The benefits to this method are low or no up-front costs, the auditor also performs (or contracts for) the efficiency measures, and sometimes the energy savings are guaranteed. The primary disadvantage is higher overall cost due to a more extensive audit and a greater need for measurement and verification of energy performance. Performance contracts are most typical for large commercial buildings, and occasionally mid-sized buildings. The initial energy audit expenses associated with a performance contract are acceptable expenses through the Alaska Commercial Energy Audit Program, and may help to shorten the payback period of a performance contract.

AEA has established an online bulletin board where energy auditors are able to post a brief statement about their qualifications and their contact information. Previous customers in this program have also rated their energy auditors here. To view statements and customer ratings, go to: [http://www.akenergyefficiency.org/find-an-energy-pro/](http://www.akenergyefficiency.org/find-an-energy-pro/)

Reimbursement Information

The Alaska Energy Authority will reimburse approved building owners the cost of the energy audit up to the limits given in the reimbursement table below. The reimbursement limits are intended to cover most of the cost of a high-quality commercial building energy audit. Audit costs, especially those for facilities with more specialized equipment or more complex systems, may exceed the reimbursement amount. The building owner is responsible for paying the energy auditor. AEA will reimburse the building owner’s eligible audit expenses, up to the limits posted below. The energy audit must meet the minimum audit requirements listed below and be conducted by an auditor that meets the minimum requirements listed below to be reimbursed. Approved building owners are those who receive a Notice
to Proceed email from AEA after applying. The total amount of the reimbursement may be taxable. Please consult your tax advisor for additional information.

Reimbursement Table

<table>
<thead>
<tr>
<th>Square feet</th>
<th>Buildings with heat but no mechanical ventilation systems</th>
<th>Buildings with heating and mechanical ventilation systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not more than 2,500 sf</td>
<td>$1,800</td>
<td>$2,100</td>
</tr>
<tr>
<td>Not more than 5,000 sf</td>
<td>$1,950</td>
<td>$2,325</td>
</tr>
<tr>
<td>Not more than 10,000 sf</td>
<td>$2,300</td>
<td>$2,750</td>
</tr>
<tr>
<td>Not more than 15,000 sf</td>
<td>$2,650</td>
<td>$3,175</td>
</tr>
<tr>
<td>Not more than 20,000 sf</td>
<td>$3,000</td>
<td>$3,600</td>
</tr>
<tr>
<td>Not more than 30,000 sf</td>
<td>$3,700</td>
<td>$4,450</td>
</tr>
<tr>
<td>Not more than 40,000 sf</td>
<td>$4,400</td>
<td>$5,300</td>
</tr>
<tr>
<td>Not more than 50,000 sf</td>
<td>$5,100</td>
<td>$6,150</td>
</tr>
<tr>
<td>More than 50,000 sf</td>
<td>$5,800</td>
<td>$7,000</td>
</tr>
</tbody>
</table>

Rural Alaska Travel Stipend
In addition to the amounts listed above, if no qualified energy auditor is available locally or within 100 road or marine highway miles, the limit may be raised by $300 to partially cover auditor travel expenses. If an auditor conducts multiple building audits under the program in a community that does not have a local auditor the reimbursement amount is $300 additional dollars per building up to $1,200. Applicants may achieve this by conducting energy audits on more than one of their own buildings and/or by coordinating with other building owners in the same community. This coordination should start at the time of application—especially in small communities—to enhance the chances that other applicants from the same area are selected. A list of approved applicants by community will be posted on the AEA web page for this program. Each eligible building may earn the $300 rural travel stipend, up to a maximum of $1,200 community. The purposes of this Rural Alaska Travel Stipend are to encourage energy audits in rural parts of Alaska that are inaccessible by road and to reduce programmatic travel expenses by consolidating audits.

Commitments Required of Applicants
The numbers below correspond to the question numbers on the application form.

1. The building on the application form is a privately owned commercial building in Alaska, including ownership by nonprofit organizations.

2. Commit staff time to support the auditor during pre-meetings and walk-throughs; by providing as-built records, two years of historic energy utility records, and similar documents as needed; and by supporting the auditor in other related activities.

3. Commit to making at least some of the recommended low- and no-cost improvements. The minimum investment must be at least half the maximum reimbursement value listed on the
table above. Staff time to support the audit and implement the changes may be counted in this investment.

4. Provide a follow-up report within one year of the audit report date (and before December 31, 2015). This final report includes an update of the building’s utility, a list of the energy efficiency measures and implemented and date of implementation, investments made in improvements, and program feedback.

Commitments Preferred of Applicants

The following commitment is not required of applicants.

5. Allow public use of the building name and building location in association with the building energy use and/or energy savings through a written success story, or through a map interface of energy efficiency measures implemented in Alaska, or similar public information about energy efficiency improvements that have been implemented. If this commitment is not made, only the building name and city will be publicized and it will not include energy use of individual buildings. This program is publicly funded; therefore, any information submitted into the program is potentially subject to public information requests.

Rate your energy auditor at [http://www.akenergyefficiency.org/find-an-energy-pro/](http://www.akenergyefficiency.org/find-an-energy-pro/).

The Application and Program Process

1. **Applicant** completes the application form and submit to AEA prior to 4:30 pm December 20, 2013.

2. **Applicant** receive Notice to Proceed email from AEA if selected in early January 2014.

3. **Applicant** hires audit firm and notifies AEA: Once the notice to proceed (NTP) is received, the applicant has 60 days to notify AEA with the name of their selected auditor and the anticipated on-site audit date(s). Email the auditor name and scheduled audit date to energyaudits@aidea.org. Please include the building name in the subject line.

4. **Auditor** and **Applicant** conduct the energy audit.

5. **Auditor** emails reports: Auditor emails the following 2 reports plus any supporting documents to both the applicant and AEA (energyaudits@aidea.org, include building name in subject line) by 4:30 pm December 31, 2014:
   a. **Audit report** in auditor’s own style and format (pdf)
   b. **Audit Report Summary Form** (Excel)
   c. **Benchmarking Form** (Excel)

6. **Applicant** rates their audit firm: Applicants who committed to rating their auditor on the application form rate their auditors online at [http://www.akenergyefficiency.org/find-an-energy-pro/](http://www.akenergyefficiency.org/find-an-energy-pro/).

7. **Applicant** submits Request for Reimbursement: The applicant submits a request for reimbursement form including a copy of the auditor’s invoice and proof of payment. This form should be completed within 30 days of the audit report date, and no later than February 27, 2015.
8. **Applicant implements energy efficiency measures and submits final report:** Implement energy efficiency measures to at least the level committed to on your application form by December 31, 2015.

All forms and links are available at AEA’s program web site: 
www.akenergyauthority.org/EfficiencyAudits.html

**How Applicants Will Be Selected**

- Applications will be reviewed for meeting the eligibility requirements for buildings, applicants, and the required commitments. Ineligible applicants will not be considered further and will be notified by email.
- Applications will be evaluated for their energy use intensity based on square footage of building, reported energy use and type of building.
- Applications will be reviewed to ensure geographic distribution, the types of buildings served, and possibly other factors.
- Applications will be given preference if they come from communities in which there is no local energy auditor and the energy audit can be conducted in conjunction with another state funded efficiency program such as the Village Energy Efficiency Program.
- If all other application criteria are equal applications will be ranked on a first come first serve basis.
- If available funding is not fully committed after the application period, a second application period will be opened, or the application period may be extended.

**Completion of Program**

Applicants who do not follow the program guidelines or who do not complete the required or preferred commitments may have their reimbursement held, reduced, or cancelled at the sole discretion of AEA. This includes any approved applicants who do not meet the deadlines to complete the energy audit or the deadline to submit a complete final report. Selected applicants must provide a final audit report no later than December 31, 2014. Any forfeited funding will be rotated to other eligible applicants or used for other purposes.

**Guarantees**

AEA requires eligible auditors to meet minimum certification and professional standards, however AEA provides no guarantee of the quality of the energy audits provided or a guarantee of the savings stated in the audit reports. It is the responsibility of the applicant to select a qualified firm or individual. To assist some applicants, AEA has provided an online forum for applicants to score the services provided by the audit firms. This web “bulletin board” can also be used by energy audit firms to post their contact information, and a brief summary of their qualifications.

http://www.akenergyefficiency.org/find-an-energy-pro/. The format and web address of this rating system may change over time. Check the program web site listed on page 1 for the latest link.

Some energy audit firms may be willing to provide certain warranties or guarantees of energy savings, though the energy savings guarantees may increase the cost of the energy audit. The content of the agreement between the energy audit firm and the applicant is between those two entities, and AEA shall not be a party to that agreement. AEA’s only role is to provide funding, up to a limit, for qualifying energy audit services as described in this document.
Required Elements of the Energy Audit

The energy audit report provided by the energy auditor must meet ASHRAE level II commercial energy audit standards and contain the following elements in order for the approved applicant to be reimbursed. Beyond these minimum requirements, applicants may work with the energy auditor to focus more attention on certain systems of interest. When contracting with an audit firm, it is the applicant’s responsibility to ensure that the auditor will provide quality information in each of these areas.

1. Documents to be Submitted
   a. Energy Audit Report: An energy audit report documenting and providing details on findings of the on-site energy audit must be provided to the customer and to AEA by the deadline listed above. The report may be in the auditor’s preferred format and style, and should contain enough detail so the customer understands the recommendations and has enough information to make the recommended improvements. The report may also provide multiple options for some of the recommended measures. In the event that multiple options are given in the report, please indicate the most likely outcome in the Audit Report Summary. This report should be submitted in PDF format.

   b. Audit Report Summary: This Excel spreadsheet contains sections for building information, utility bill history, and a summary of recommendations section. The summary of recommendations section contains one row for every energy efficiency measure recommendation, including estimated implementation cost, energy savings, cost savings, simple payback, and similar information to inform the building owner’s decision making process regarding implementation. Auditors are required to complete this form and email it to AEA at the same time the energy audit report is sent to the applicant.

   c. Benchmarking Form: This Excel spreadsheet contains general building information and characteristics that will be used to standardize entry into the Alaska Retrofit Information System (ARIS). Auditors are required to complete this form and email to AEA at the same time the energy audit report and the report summary are submitted to the applicant.

   d. Supporting Materials: The auditor should submit to AEA any supporting materials used to support the energy audit findings such as AkWarm files, data log files, and calculations spreadsheets that support the findings.

2. Energy Use History and Benchmarking:
   Provide energy use history for at least two years prior to the audit date, and preferably more. This energy data must be entered on the provided energy benchmarking form.

3. Audit and Document All Major Building Systems in Narrative Report
   The energy audit must consider each of the following major systems of buildings.
   a. Heating system, ventilation system, and/or air conditioning
   b. Lighting (indoor and outdoor; equipment and controls; lighting level and distribution; and an assessment of after-hours lighting)
   c. Electrical equipment (motors, pumps, equipment, plug loads, appliances)
d. Specialized equipment (walk-in freezers, kitchen equipment, fan hoods, compressed air systems, etc.)

e. Domestic water heating
f. Building envelope
g. Energy conservation: Employee or building user behavior

For each piece of the above building systems audited, the auditor must provide a description of the existing status including brand names, model numbers, faceplate information, Wattage, observed hours of operation, R-value, measured or estimated load factor for motors, age, condition, or any other relevant information that is observed specific for that type of equipment. For systems where an energy efficiency measure is recommended, a description of the recommended measure and its estimated cost should be included. Enough information should be provided such that the building owner can easily take the next step toward implementation. In some cases such as retrofitting lighting, specifications should be provided, such as recommended brand, model, Wattage, etc. and its approximate cost. For more complex recommendations such as a major HVAC retrofit to a digital energy management control system, it may not be possible to specify the entire project, however, the building owner should gain enough information in the energy audit report to pursue more detailed bids for the work.

In addition to the typical major systems assessments common in commercial energy audits, auditors under this program are required to examine and report on three sometimes overlooked energy efficiency opportunities:

1. After-Hours
   Auditors should observe the building’s usage during hours of operation and during after-hours to determine whether energy savings opportunities exist after hours. The use of lighting and occupancy data loggers is recommended to “observe” sections of the building during evening hours. Watt Stopper InteliTimer® Pro Occupancy and Light Logger, or similar, provides convenient data logging and analysis software.

2. Energy Conservation
   Auditors should learn about the human factors of energy use in the building and prescribe energy conservation measures. Auditors are encouraged to provide hands-on training/education to building users in conjunction with the building’s contact and/or energy team. If auditors are not familiar with or comfortable addressing the human factors and the behavior change components, AEA recommends sub-contracting that service to local organizations that can offer these services.

3. Plug Loads
   Auditors should observe, measure and/or record energy use patterns of relatively smaller plug loads such as computers, printers, coffee makers, vending machines, domestic refrigerators, electronics, etc., and prescribe EEMs or ECMs to reduce their energy usage. Data logging can be obtained using Watt’s Up Pro Power Analyzers, or similar. Auditors should include data logs (in Excel) or findings from each plug load tested in order for AEA to compile a database of findings to make recommendations in the future. Include the name, model number, year, and other relevant information for the equipment tested.
This narrative section of the audit report may take any format preferred by the auditor so long as it includes the required elements. Where recommendations are made, these narrative sections should tie by number to the Summary of Recommendations Report.

4. **Photographs**

Photographs provide good information to the client and should be included in the audit report. Please include at least one exterior photograph of the building.

**Auditor Qualifications**

Audit firms or energy auditors are required to have at least one of the following licenses/certifications for the staff conducting the audit and/or the project manager:

- a. PE (Professional Engineer) with at least two years’ experience conducting building energy audits.
- b. CEA (Certified Energy Auditor, by the Association of Energy Engineers)
- c. CEM (Certified Energy Manager, by the Association of Energy Engineers)

A list of CEAs and CEMs in Alaska is available at the Association of Energy Engineers’ web site (http://www.aee-center.org/custom/cpdirectory/index.cfm) by searching under Alaska. Please note that many of the CEAs and CEMs listed currently are government employees who likely do not perform energy audits commercially.

If a single auditor or audit firm is not qualified to perform audits of all of the required building systems, they are required to team with a qualified firm or individual to provide a complete building energy audit. For example, a company specializing in HVAC audits and retrofits could team with an organization specializing in lighting or energy conservation methods and training.

Applicants or audit firms may petition for an exemption from these standards if they have considerable experience in the field of commercial energy audits, yet at this point lack the required certifications and professional licenses. In cases where exemptions are given, it will only be a temporary exemption until the auditor has an opportunity to take a CEA or CEM class and exam.

At this incipient stage of more widespread commercial and public building energy auditing in Alaska, it will be important for the program applicants to directly ask their potential auditors about their experience conducting complete building energy audits, and whether their in-house team or partnerships with other organizations will be able to thoroughly address each of the required elements of the audit in a cost effective manner.

In addition to the required certifications/licenses, there are many other certifications that would provide evidence of knowledge in particular areas, such as HVAC, lighting, cold climate building science, etc. These might include ASHRAE’s BEAP certification (American Society of Heating, Refrigerating and Air-Conditioning Engineers’ Building Energy Assessment Professional), LEED AP (the US Green Building Council’s Leadership in Energy and Environmental Design Accredited Professional), Lighting Certified (by the National Council on Qualifications for the Lighting Professions), cold climate building science classes offered by Alaska Housing Finance Corporation and their partners, and many more.
To help applicants select high-quality commercial energy auditors, AEA has created a forum for users of this program to rate their energy auditor, and a place for potential energy audit firms to post their qualifications. This forum can be found at http://www.akenergyefficiency.org/find-an-energy-pro/.

**Review of Auditors**
AEA may conduct an independent review of the energy auditors and their energy audit reports. For future rounds of funding for this program, AEA choose to select the highest scoring auditors identified in the independent review.

**Program Changes**
The program may undergo changes both prior to the application deadline, and possibly while underway. Please be sure to check back to the program web site for the most recent versions of this document and other applicable documents.

**Additional Information**
All current forms and information about this program will be posted on AEA’s web site www.akenergyauthority.org/EfficiencyAudits.html. Any other questions and comments may be addressed to:

Alaska Energy Authority  
Attn: Rebecca Garrett  
Program Manager  
813 West Northern Lights Blvd.  
Anchorage, AK 99503-2495  
energyaudits@aidea.org  
P (907) 771-3000  
P 1-888-300-8534 (in state only)  
F (907) 771-3044