

Residential Energy Audit Program Manual

Version 1.1 | December 18, 2019

Contents

1	Program Summary	1
1.1	Introduction	1
1.2	Administration and Implementation Services	1
2	Customer Participation	2
2.1	Customer Eligibility	2
2.2	Eligible Building Types:	2
2.3	Customer Participation	2
3	Participating Auditor Participation	3
3.1	Participating Auditor Eligibility	3
3.2	How to Apply	3
3.3	Participation Benefits	4
4	Required Documentation	5
4.1	Residential Energy Audit Program Tool	5
4.2	Customer Attestation Form	5
4.3	Electronic Signature Policy:	5
5	Residential Energy Audit Process	6
5.1	Residential Energy Audit Process Overview:	6
5.2	Audit Submission	7
5.3	Audit Submission Deadlines:	7
5.4	Audit Reimbursement	7
6	Participation Status, Quality Assurance, and Compliance	8
6.1	Participation Status Change	8
6.2	Quality Assurance and Quality Control	8
7	Financing	9
7.1	Access to Financing for Residential Energy Audit Customers	9
	Appendix A: NY Residential Income Limits	10
	Appendix B: Residential Energy Audit Technical Requirements	11

Definitions

Area Median Income (AMI):

The statistical midpoint of household earnings for each county in New York State, or State median income, whichever is higher.

Assisted Home Performance with ENERGY STAR:

NYSERDA sponsored residential energy efficiency program that offers incentives for customers with incomes between 60% and 80% of AMI. Learn more at nysesda.ny.gov/assisted-home-performance

EmPower New York:

NYSERDA sponsored residential energy efficiency program that offers incentives for customers with incomes below 60% AMI. Learn more at nysesda.ny.gov/empower

New York Home Performance Portal (NY HP Portal):

Web-based program management software used by NYSERDA, implementation contractors and Participating Auditors to input audit information and upload documents.

Participating Auditor:

Participating Auditors who have met the participation criteria as detailed in this Program Manual, the Residential Energy Audit Participation Agreement and any Program announcements and have been approved by NYSERDA to offer Residential Energy Audits. Participating Contractors in NYSERDA's Residential Existing Homes Program meet the requirements of a Participating Auditor, with submitted proof of auditing credentials.

Participation Agreement:

The agreement between NYSERDA and Participating Auditors that stipulates the requirements and guidelines for participation in the Residential Energy Audit Program.

Public Service Electric and Gas Long Island (PSEGLI):

Electric utility provider for customers located in Long Island New York.

Residential Audit Workflow:

The section within the NY HP Portal where Participating Auditors will enter audit information and upload required documents specific to the Residential Energy Audit Program.

Residential Energy Audit:

An energy audit conducted by a Participating Auditor in accordance with the policies and procedures detailed in this Program Manual, the Residential Energy Audit Participation Agreement and any Program announcements. The Residential Energy Audit is one type of energy audit that meets the Green Jobs - Green NY (GJGNY) audit criteria. Other NYSERDA Programs, such as the Residential Existing Homes Program, also offer energy audits that meet the GJGNY criteria, but have different requirements and procedures.

Residential Energy Audit Program Tool (Audit Tool):

An Excel-based tool used for data collection and production of an energy audit summary report that meets the criteria of a Residential Energy Audit.

1 Program Summary

1.1 Introduction

The New York State Energy Research and Development Authority (“NYSERDA”) administers the Residential Energy Audit Program (herein referred to as “the Program”) under the authority of Title 9-A of the Public Authorities Law of the State of New York, as amended known as the Green Jobs-Green New York Act of 2009.

The objective of the Program is to provide homeowners with trusted information about their homes’ performance and to provide them with an audit report that will guide them in making informed energy efficiency, comfort, health and safety and clean energy investments in their homes. The Program offers free residential energy audits to eligible owners of one to four-unit residential buildings who have income levels above 80% of Area Median Income and where the audits are performed using a network of participating, certified, participating residential energy auditing contractors – herein referred to as “Participating Auditors”. NYSERDA provides free residential energy audits for eligible owners of one to four unit residential buildings who have income levels below 80% of Area Median Income through its Residential Existing Homes Program.

The policies and procedures described in this manual are applicable only to the Residential Energy Audit Program. Customers and Participating Auditors looking to participate in other NYSERDA incentive programs such as Assisted Home Performance with ENERGY STAR or EmPower will need to follow the processes and policies specific to those programs. Customers located on Long Island and Participating Auditors seeking to serve these customers will apply through the PSGELI program offering.

1.2 Administration and Implementation Services

Contacts

Primary Contact Method:

- Toll Free: 1-877-NYSMART
- Email: homeaudits@nyserda.ny.gov

NYSERDA

- Bill Keating – Project Manager
- Phone: 518-862-1090 ext. 3089
- Email: bill.keating@nyserda.ny.gov

Implementation Contractor (CLEAResult)

- Rebecca Lloyd, Associate Program Manager
- Phone: 518-207-4514
- Email: Rebecca.Lloyd@clearesult.com

Roles and Responsibilities

NYSERDA

- Program administration
- Establish audit standards

- Program design and policy development
- Participating Auditor management
- Issue payments to Participating Auditors

Implementation (CLEAResult)

- Program inquiries
- Program process inquiries
- Payment invoicing to NYSERDA
- Audit submittal reviews and quality assurance

2 Customer Participation

2.1 Customer Eligibility

All owners of one- to four-unit residential buildings in New York State* who have income levels above 80% of Area Median Income using a Participating Auditor are eligible to receive a no cost Residential Energy Audit through this Program. Please see Appendix A for the NY Residential Income Limits.

** PSEG Long Island electric customers are not eligible for NYSERDA's Residential Energy Audit Program and may apply for an energy assessment directly through their utility.*

2.2 Eligible Building Types:

Residential buildings consisting of one to four dwelling units are eligible for the Program where the building configuration meets the following criteria:

- A single exterior building entrance serves no more than 4 dwelling-units
- A building has no more than 4 dwelling units between firewall separations
- Any heating system serving the building does not exceed an output of 300,000 BTU

In two- to four- unit buildings, each unit is eligible for reimbursement for the cost of an audit.

2.3 Customer Participation

Customers will work directly with their chosen Participating Auditor to schedule and complete their audit. The Program does not require customers to fill out an audit application. The Participating Auditor will provide the customer with the results of the energy audit and then the Participating Auditor will provide the required audit information and documentation directly to the Program using the Residential Audit Workflow in the NY HP Portal. Customers will be required to sign a Customer Attestation Form after the completion of the audit. The Participating Auditor will include this documentation as part of their audit submittal.

NYSERDA's website provides information about the Residential Energy Audit Program and a list of Participating Auditors, available at nyserda.ny.gov/homeaudits. Customers can also access a list of Participating Auditors and information about the Program by calling 1-877-NYSMART.

3 Participating Auditor Participation

3.1 Participating Auditor Eligibility

Required Certifications

All Participating Auditor staff who conduct Residential Energy Audits must personally hold at least one of the below certifications.

- Association of Energy Engineers (AEE) Certified Energy Auditor
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) - Building Energy Assessment Professional
- Building Performance Institute (BPI) Building Analyst
- Building Performance Institute (BPI) Energy Auditor
- Building Performance Institute (BPI) Multifamily Building Analyst
- Investor Confidence Project (ICP) Quality Assurance (QA) Assessor
- Leadership in Energy and Environmental Design (LEED) Rater
- Residential Energy Services Network (RESNET) Home Energy Rater (HERS) Rater

The Participating Auditor shall provide NYSERDA written documentation that identifies each individual in the Participating Auditor's Participating Auditor business and their certifications by completing the Residential Energy Audit Program Participation Agreement Signature Form. As an ongoing requirement, the Participating Auditor shall immediately contact NYSERDA via e-mail at homeaudits@nyserda.ny.gov to inform of any change to the list of certified staff that would affect a staff member's eligibility to work in the program.

3.2 How to Apply

Participating Auditor Application and Evaluation

To apply for participation in the Residential Energy Audit Program the applicant must submit the following documentation:

- Completed Participation Agreement Application Signature Form. The applicant must read and submit a completed Agreement Application Signature Form to NYSERDA indicating agreement with its terms. The Agreement Application Signature Form must be submitted by an individual with the full power and authority to enter into an Agreement on behalf of the company.
- Employee roster of certified individuals who will be conducting Residential Energy Audits. See the Participation Agreement Application Signature Form.

- Proof of certification credentials including credential certificate or invoice.
- Detailed description of at least three audits or energy efficiency projects completed in the last six-months including customer address and phone number.
- Certificate of Insurance (Refer to Sections 2.06 and 2.07 of the Participation Agreement for full details):
 - Commercial general liability insurance with minimum limits of \$1,000,000
 - Workers' Compensation coverage as required by New York State.
 - Professional liability insurance (errors and omissions) with minimum limit of \$1,000,000 if applicable¹
 - Insurance policies shall list NYSERDA and the State of New York as additional insured
- DBA form (if applicable)

It is NYSERDA's sole discretion to request additional information as necessary for determining the eligibility of an applicant. For applicants who have participated in or who are currently participating in other NYSERDA programs, the past performance of the applicant and/or certified individuals in other NYSERDA programs will be considered. Refer to Section 3.02 of the Participation Agreement for a list of the evaluation criteria.

EmPower or Assisted HP Participants

If you are a Participating Contractor in good standing with NYSERDA's EmPower or Assisted HP Programs, and you have not explicitly opted out of participating in the Residential Energy Audit Program then you will be automatically enrolled in the Residential Energy Audit program and you do not need to apply separately.

3.3 Participation Benefits

Ability to Offer Free Energy Audits

By becoming a Participating Auditor, you will be able to offer state-supported energy audits to your customers and prospects. Customers may not be charged for these services but NYSERDA will provide funding of \$150 to Participating Auditors for each complete audit submitted to NYSERDA.

Marketing and Promotional Opportunities

NYSERDA invests in marketing and outreach throughout New York to promote energy audits, energy efficiency upgrades, and clean heating and cooling solutions. This helps generate customer awareness on the value of energy efficiency and directs leads to Participating Auditors listed on NYESERDA's website.

Use of NYSERDA Marketing Materials

Participating Auditors gain access to the use of approved NYSERDA marketing materials to help educate their customers on how to improve the performance of their homes.

Offset Customer Acquisition and Sales Cost

¹ Consult with your insurance company to determine if you need this coverage based on your business model.

Receive prompt payment of audit reimbursements to help offset your customer acquisition and sales costs.

Value Added Services

Add value for your customers by offering a snapshot of their home with a path to increased comfort and lower operating costs.

4 Required Documentation

4.1 Residential Energy Audit Program Tool

Participating Auditors will be required to complete and submit a copy of the **Residential Energy Audit Program Tool (Audit Tool)** to the Program. Participating Auditors will also provide a copy of the energy audit summary report generated by the tool to their customers. A review of the customer's energy bills is required, and savings estimates must be compared to the customer's energy consumption and cost history from their energy bills to validate that projected savings estimates generated by the tool are realistic before they are presented to the customer.

Participating Auditors shall provide this summary report to a customer in a printed or PDF format; not in the Excel based format.

4.2 Customer Attestation Form

For each audit submitted for reimbursement, the Participating Auditor must ensure the Customer Attestation Form is completed and signed by the customer. The Customer Attestation Form includes a Customer Attestation and Utility Data Release section where a customer will attest to the fact that they had an energy audit completed in their home and consent to release energy usage information as well as other information. It is important that the customer's utility information is filled out completely and accurately.

4.3 Electronic Signature Policy:

Signatures are a declaration that a customer or Participating Auditor understands and accepts the statements above the signature. As such:

- It is inappropriate to transfer one signature to another document. Altering documents by changing dates of signature or pricing is not allowable. It is unlawful to alter a document after a customer has signed it.
- Changing pricing or signature dates after the signature was obtained will be cause for disciplinary actions from NYSERDA.

Authentic signatures are critical. Currently the only acceptable processes for obtaining signatures are as follows:

- The customer’s physical signature on a paper document (a “wet signature”).
- An electronic signature created by the customer directly on the specific document, after the document has been completed. Staff must ensure that no information or data points above the signature are modified after the signature has been executed.
- If a customer is incapable of providing a signature according to the above, please document the reason on the form.

Cutting and pasting a signature from another document or forging a signature can result in disciplinary action from NYSERDA.

5 Residential Energy Audit Process

5.1 Residential Energy Audit Process Overview:

Step 1: Audit customer contacts Participating Auditor to schedule audit

Step 2: Participating Auditor performs audit

Step 3: Participating Auditor completes NYSERDA Audit Tool

Step 4: Participating Auditor provides a copy of the audit summary report and Customer Attestation Form to customer, preferably within 24-hours of completing the audit but no later than 7 calendar days following the audit.

Step 5: Customer signs Customer Attestation Form

Step 6: Participating Auditor enters customer information in NY HP Portal and uploads Excel copy of Audit Tool and the signed Customer Attestation Form within 30 days of audit completion

Step 7: Participating Auditor receives reimbursement of \$150

Customers will typically contact a Participating Auditor after hearing about the Residential Energy Audit Program through public awareness campaigns, marketing efforts, word or mouth or some other avenue. There is no customer application or approval process. Customers work directly with the Participating Auditor of their choice and schedule the audit.

The Participating Auditor will then conduct the audit in compliance with the requirements detailed in this Program Manual, (including the Residential Energy Audit Technical Requirements found in Appendix B) the Participation Agreement and any Program announcements, complete the NYSERDA Audit Tool, provide the customer with the recommendations report, and have the customer sign the Customer Attestation Form.

5.2 Audit Submission

Participating Auditors will provide the required audit information and documentation to NYSERDA using the Residential Audit Workflow in the NY HP Portal after the audit site visit has been completed and the audit report was delivered to the customer. Participating Auditors will log into NY HP Portal access the Residential Energy Audit Workflow, enter the customer's information into the system and upload the following documents:

- NYSERDA Audit Tool in Excel format
- Signed Customer Attestation Form

For two- to four- unit buildings, the Participating Auditor must separately submit documentation and will receive the \$150 payment for each unit that received an audit in a building.

5.3 Audit Submission Deadlines:

A completed audit recommendations report, generated by NYSERDA's Audit Tool, must be submitted to the customer no more than 7 calendar days after the completion of the energy audit. It is best practice to review the audit report with the customer in person at the conclusion of the home energy audit visit and to provide a copy of the report to the customer on paper or as an electronic pdf within 24 hours of the audit. Participating Auditors who wish to use another energy modeling tool may do so, but it is not required by NYSERDA nor will it result in additional compensation from NYSERDA.

The Audit Tool, in its Excel format, and the signed Customer Attestation Form must be uploaded to the Residential Audit Workflow in the NY HP Portal no more than 30 calendar days after completion of the energy audit. Participating Auditors are encouraged to submit audits for reimbursement as soon as feasible after the audit is completed in order to receive timely payment.

For step by step instructions on accessing and uploading documents to the Residential Audit Workflow in the NY HP Portal please refer to the Residential Audit Workflow User Guide.

5.4 Audit Reimbursement

Audits successfully entered into the NY HP Portal and passing Quality Control review will be eligible to receive a reimbursement in the amount of \$150 per completed audit. NYSERDA will process invoices on a weekly basis. NYSERDA reserves the right to deny reimbursements for audits that are determined not to have met Program requirements and deadlines.

For 2-4-unit buildings that meet the building type eligibility criteria detailed in Section 2.2, Participating Auditors may submit an audit for each of the units individually and be reimbursed for each individual unit at a rate of \$150 each.

Participating Auditors may not submit an audit to multiple programs for reimbursement; only one audit incentive is allowed per completed audit.

Add-on Audit Services

Participating Auditors may offer enhanced inspection, diagnostic, and assessment services that go above and beyond NYSERDA's minimum requirements to customers for an additional fee at their own discretion. Participating Auditors may not charge customers for completing services that are within NYSERDA's prescribed minimum requirements.

6 Participation Status, Quality Assurance, and Compliance

6.1 Participation Status Change

The Participating Auditor shall be designated as one of four participation status types including **Full, Probation, Suspended or Terminated**. NYSERDA reserves the right to modify the definition, limitations, and requirements of the participation status designations at any time. NYSERDA retains sole discretion for determining the Participating Auditor's status designation. In all cases, NYSERDA's written decision is final. Please refer to the Residential Energy Audit Participation Agreement for more information about the Participation Statuses.

Status Review Process:

The status review process for administering probationary, suspended, or terminated status is as follows:

- NYSERDA will provide written notice of Participating Auditor violations which may result in a change in status. The participating Auditor will be allowed a grace period of no less than 10 business days to respond to the notice. The notice will outline a description of the violation(s) with supporting documentation and the specifics for potential disciplinary action.
- During this period, the Participating Auditor will have an opportunity to respond to the notice, appeal, or accept the terms of the notice.
- If the Participating Auditor fails to respond to NYSERDA prior to the end of the notice period, the stated disciplinary action will go into effect without further notice.
- NYSERDA will promptly review any request for an appeal before the end of the notice period.
- NYSERDA will confirm, reverse, or place its action on hold based upon a review of all information received within 10 business days of receipt.
- Intended and final action letters will be sent via email and U.S. mail. The notice period commences on the date of the email from NYSERDA. NYSERDA reserves the right to shorten these notice periods or take immediate action in the event of an emergency, as determined by NYSERDA.

6.2 Quality Assurance and Quality Control

Each submitted audit will be reviewed for completeness and to ensure all required forms are submitted. A deeper review of submitted Residential Energy Audits will be completed on a sampled basis to ensure program rules are followed and customers are receiving quality energy audits.

The Program will review at least one audit per Participating Auditor per invoicing period and will provide feedback to the Participating Auditors. If patterns of poor-quality audits are found a higher rate of review will be instituted and the Participating Auditor will be notified via e-mail and US mail by NYSERDA's Implementation Contractor of the on-going deficiencies and asked to rectify the identified quality deficiencies. Any issues found in a submitted audit will be sent backward in the NY HP Portal Residential Audit Workflow (refer to Residential Audit Workflow User Guide) by NYSERDA's Implementation contractor with directions to address the audit submittal deficiencies. Note: **Emails are not sent when audits are returned for submission errors. It is the Participating Auditor's sole responsibility to check the NY HP Portal on a regular basis to address any returned audit. Audit submissions must be corrected within 14 calendar days of the audit submission being rejected in order to be eligible for reimbursement.**

Field Quality Control (QC) will be completed on an as-needed basis based on the outcome of administrative reviews. The Participating Auditor shall not inhibit or discourage customers from participating in the QC process and shall make a good faith effort to facilitate this process.

Upon findings of persistent errors or a pattern of poor-quality audits the Participating Auditor may be subject to a change in Participation Status as detailed in Section 6.1.

7 Financing

7.1 Access to Financing for Residential Energy Audit Customers

The Green Jobs-Green New York Act of 2009 GJGNY requires that customers who receive a GJGNY loan must first receive an energy audit. Residential financing is available to all eligible customers. Customers not participating in an incentive-based program (such as Assisted Home Performance with ENERGY STAR) will be able to work directly with NYSERDA's loan servicer, Energy Finance Solutions, (EFS) to access the GJGNY loan, if they are working with a participating loan contractor. For more information on the process for accessing Financing for your customers please refer to the Financing Program Manual listed on NYSERDA's website.

Appendix A: NY Residential Income Limits

NY Residential Existing Homes Programs										
Income Limits Effective December 2019										
Household Size	1	2	3	4	5	6	7	8	9	10
80% State Median Income	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
80% Area Median Income										
Albany County	\$50,350	\$57,550	\$64,750	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Allegany County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Bronx County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Broome County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Cattaraugus County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Cayuga County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Chautauqua County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Chemung County	\$41,450	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Chenango County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Clinton County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Columbia County	\$44,200	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Cortland County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Delaware County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Dutchess County	\$52,850	\$60,400	\$67,950	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Erie County	\$43,050	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Essex County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Franklin County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Fulton County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Genesee County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Greene County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Hamilton County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Herkimer County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Jefferson County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Kings County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Lewis County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Livingston County	\$42,400	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Madison County	\$44,550	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Monroe County	\$42,400	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Montgomery County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Nassau County	\$62,300	\$71,200	\$80,100	\$88,950	\$96,100	\$103,200	\$110,300	\$117,450	\$127,600	\$139,387
New York County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Niagara County	\$43,050	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Oneida County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Onondaga County	\$44,550	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Ontario County	\$42,400	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Orange County	\$52,850	\$60,400	\$67,950	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Orleans County	\$42,400	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Oswego County	\$44,550	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Otsego County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Putnam County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Queens County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Rensselaer County	\$50,350	\$57,550	\$64,750	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Richmond County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Rockland County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Saratoga County	\$50,350	\$57,550	\$64,750	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Schenectady County	\$50,350	\$57,550	\$64,750	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Schoharie County	\$50,350	\$57,550	\$64,750	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Schuyler County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Seneca County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
St. Lawrence County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Steuben County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Suffolk County	\$62,300	\$71,200	\$80,100	\$88,950	\$96,100	\$103,200	\$110,300	\$117,450	\$127,600	\$139,387
Sullivan County	\$41,900	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Tioga County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Tompkins County	\$47,000	\$53,700	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Ulster County	\$46,700	\$53,350	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Warren County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Washington County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Wayne County	\$42,400	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Westchester County	\$59,750	\$68,300	\$76,850	\$85,350	\$92,200	\$101,312	\$105,850	\$115,813	\$127,600	\$139,387
Wyoming County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387
Yates County	\$39,904	\$52,192	\$64,480	\$76,752	\$89,040	\$101,312	\$104,027	\$115,813	\$127,600	\$139,387

Appendix B: Residential Energy Audit Technical Requirements

STANDARDS FOR 1-4 UNIT RESIDENTIAL ENERGY AUDITS

OVERVIEW:

Per the Green Jobs – Green NY Act of 2009, an energy audit is defined as “a formal evaluation of a building’s energy consumption for the purpose of identifying methods to improve energy efficiency and conserve energy, including associated health and safety issues conducted pursuant to standards established by NYSERDA”.

This document details the standards for a Green Jobs – Green NY (GJGNY) 1 to 4-unit whole home residential energy audit for existing homes, herein referred to as a Residential Energy Audit. Any program offering a Residential Energy Audit must follow this standard as a minimum requirement but may wish to include additional elements that support programmatic goals.

This standard aligns with ANSI/BPI-1100 Home Energy Auditing Standard and ANSI/BPI 1200 Standard Practice for Basic Analysis of Buildings but does not require diagnostic testing at the time of the Residential Energy Audit. **Diagnostic testing during the audit is a best practice and may be offered to the customer as part of the sales process or for an additional charge if the contractor chooses to do so. Diagnostic tests should be conducted prior to or in conjunction with the installation of relevant measures (e.g. blower door tests when air sealing is installed).**

A Residential Energy Audit shall include a visual inspection of the whole building, analysis of the building’s overall energy performance, identification of related health and safety hazards, development of a list of recommended improvements, and an assessment of the energy savings anticipated from improving the energy performance of the building. This should also include a review of monthly electric and heating fuel consumption data from the customer’s energy bills when it is available (preferably 12 months of historical usage data) that relate to the whole building. When monthly billing data is unavailable, the contractor shall review the customer’s reported annual energy costs and compare that to the predicted energy savings for recommended measures to ensure predicted energy savings are reasonable.

Residential Energy Audit Program Tool (Audit Tool):

Participating Auditors will be required to submit a completed Residential Energy Audit Program Tool to the Program. This tool produces a summary report with the following information:

- Residential Auditor Company name
- Name of Auditor
- Date of Audit
- Customer name
- Building address
- Documentation of existing conditions, including health & safety concerns
- List of recommended upgrades
- Estimated annual savings, represented as a percentage of total energy consumption

Participating Auditors may use other energy modeling tools (in addition to the NYSERDA Audit Tool) to support their sales process, but it is not required by NYSERDA nor will it result in additional compensation from NYSERDA. The accuracy of the inputs will be the sole responsibility of the auditor.

BILLING REVIEW

The audit must include an evaluation of the customer's whole building energy consumption through a review of monthly electric and heating fuel consumption data from the customer's energy bills (preferably 12 months of historical usage data) when available. When a complete 12-months of billing data is unavailable, the Participating Auditor shall make reasonable efforts to estimate the customer's energy usage based on the customer's knowledge of what they pay their energy providers or other means available.

AIR SEALING:

Visual inspection, evaluation and documentation of the following elements as they relate to the energy performance of the home:

- Weather-stripping at exterior doors and attic access hatch
- Duct boots
- Mechanical, electrical, and plumbing chases
- Recessed lights and other electrical fixture penetrations through ceilings and walls
- Bath fan ceiling penetrations
- Plumbing penetrations
- Drywall-to-top-plate connections
- Wood-to-wood seams
- Drop soffits
- Knee wall door
- Overhangs, Floor bay connections under knee walls, and other interstitial framing details
- Top of balloon-framed walls
- Rim joists

Document leakage areas to be addressed and estimate of leakage reduction that may be achieved in the home based on sealing those leaks. Although the use of a blower door to determine air leakage is considered a best practice it is not required at the time that the Residential Energy Audit is conducted.

INSULATION:

Visual inspection, evaluation and documentation of, but not limited to, the following elements on the thermal boundary, including:

- Attics
- Knee Walls and knee wall floors
- Exterior walls
- Rim joists
- Overhangs
- Crawlspace
- Basement

Document type, and effective R-value, of insulation as well noting any degradation per BPI Technical Standard for Building Analyst Professional or installation issues with existing insulation.

Document all insulation under consideration for replacement, including type, effective R-value, depth and square footage.

WINDOWS-SKYLIGHTS AND DOORS:

Visual inspection, evaluation and documentation of, but not limited to, the following elements:

- Frame material (wood, metal, vinyl, fiberglass; presence of thermal break)
- Glass type (number of panes, low-e coatings, gas fill)
- Evaluate window condition and operation
- Determine whether the door is insulated.
- Determine whether the door is wood, metal, or fiberglass
- Evaluate door condition and operation

HEATING-COOLING AND DOMESTIC HOT WATER SYSTEMS

For each heating appliance, Central AC system, heat pump and domestic water heater locate and record the following system information from the nameplate when available and as applicable to the individual appliance:

- Size in BTUh
- Efficiency rating
- BTUh input and
- BTUh output
- Refrigerant type

Heating Systems

Heating system efficiency can be assessed by referencing the name plate data. When name plate data is not available a default efficiency may be assumed in accordance with BPI 2400.

Participating Auditors should conduct a visual inspection, evaluation and documentation of the heating system appropriate for the system type (furnace, boiler, heat pump) and distribution type including:

- Location and condition of the heating appliance
- Condition of return and supply duct connections
- R-value of duct insulation
- Inspect for restrictions to duct system airflow
- Inspect for gaps, leaks and disconnected duct work
- System filter and filter slot cover
- For condensing units check the condition of condensate drain connections, drain line and the condition of the condensate pump
- Inspect for evidence of leakage, corrosion and deposits at the appliance and local piping
- Verify presence of an automatic feeder valve for water systems
- Inspect for soot, debris, or signs of spillage around flue collar, barometric draft control, or draft hood
- Note condition of the expansion tank

Central Air Conditioning / Heat Pump:

Visual inspection, evaluation and documentation of, but not limited to, the following elements:

- Location and condition of the indoor and outdoor equipment
- Examine the outdoor coil cabinet
- Evaluate the clearance on all sides of the outdoor coil cabinet
- Examine the condition of the outdoor coils
- Examine condition of the insulation on the refrigerant piping at the outdoor coil
- Examine the indoor coil air handler cabinet
- Check the system filter condition and filter slot cover
- Check the condition of condensate drain pan connections, drain line and the condition of the condensate pump if one exists

Ductless mini split:

Visual inspection, evaluation and documentation of, but not limited to, the following elements:

- Examine the outdoor coil cabinet
- Examine the indoor head(s)
- Examine the refrigerant piping (lineset) insulation
- Check the filter and the accessible surface of the coil for dirt build up, obstructions or damage

Provide estimated measure cost and energy savings associated with ductless mini-split improvements.

Solid Fuel Burning Appliance:

Visual inspection, evaluation and documentation of, but not limited to, the following elements:

- Recommend a certified hearth professional to conduct an inspection of appliance.
- Determine if the appliance is the primary heating source.
- Determine when the chimney and vent connector were last cleaned and inspected.
- If they have not been cleaned and inspected within the past year, recommend servicing by a certified hearth professional.
- Visually inspect and note the type and condition of flooring material where the appliance is installed. Recommend service or replacement by a qualified professional shall be if any of the following indicators are noted:
 - Appliances installed on carpets, wood floors or other combustibles.
 - Inadequate clearance to combustible materials. Consult the appliance documentation for required clearances. If no documentation is available, refer to NFPA 211.
 - Signs of structural failure, such as cracks or broken welds, of any components.

Domestic Hot Water Systems:

Visual inspection, evaluation and documentation of, but not limited to, the following elements:

- Note the location, type, and general condition of the domestic water heater
- Inspect for soot, debris, or signs of spillage around flue collar, barometric draft control, or draft hood
- Verify the presence and condition of tank insulation wrap, if present verify proper installation and recommend modification or removal if the tank wrap presents a safety risk or voids the manufacturer's warranty of the water heater
- Verify the presence and condition of overflow pan
- Document temperature control setting
- Verify pipe insulation type and location
- Verify the presence of the TPR valve and note its rating
- Verify the presence of TPR piping
- Inspect for leaks at the storage tank

THERMOSTATS AND CONTROLS:

Visual inspection, evaluation and documentation of, but not limited to, the following elements:

- Document the type, number and location of thermostats and or other mechanical system controls

APPLIANCES:

Visual inspection, evaluation and documentation of refrigerator, freezer, dishwasher, clothes washer, clothes dryer and other major appliance and pumps to include the following elements:

- Date of manufacture or approximate age
- Condition
- Dryer fuel source and venting
- Number and types of pumps (sump, septic, well pumps)
- Pool and/or spa size (gallons), type, and usage (hours per day and months per year)
- Pool and/or spa pump rated horsepower

LIGHTING AND PLUG LOADS:

Visual inspection, evaluation and documentation of, but not limited to, the following elements:

- Evaluate existing lighting and make recommendations for lighting efficiency upgrades, including LED light bulbs, and hardwire LED fixtures, where appropriate
- Recommend, and educate homeowner about, smart power strips for plug load clusters such as an entertainment center or home office

WATER CONSERVATION

The energy audit shall include an assessment of potential water conservation measures. The energy audit shall include the following:

- Determine if the water supply is from a private well and identify the approximate age of the well pump
- Evaluation of water usage and presence of low flow devices for toilets, shower heads, faucets, and clothes washers.

- Advice to the homeowner/occupant about the value of water efficiency and conservation strategies and user-controlled changes that may reduce water consumption

HEALTH AND SAFETY:

General:

- Visual inspection for existence of knob and tube wiring
- Identification of observable electrical hazards
- Check for presence of carbon monoxide and smoke detectors
- Identification of areas containing known or suspected hazardous materials, including but not limited to, lead, asbestos, or mold

Combustion Appliance and Fuel Distribution System Inspection:

- Identification of building-related conditions that may require immediate health and safety remediation
- Fire combustion appliances including ovens, range tops and unvented heaters and monitor ambient air for carbon monoxide (CO)
- Monitor ambient air for combustible gas
- Inspection of oil-fired appliance fuel supply system (tank, supply line, burner) for leaks
- Inspection of combustion venting systems for damage, leaks, disconnections, inadequate slope and other safety hazards.

Direct testing at the appliance for carbon monoxide, combustible gas leaks, and spillage of flue gases is not required at the time of the audit but can be conducted at the discretion of the auditor. When testing is conducted the testing equipment must comply with the specifications detailed in BPI 1200 sections 7.1.1.1 through 7.1.4.2.2.

The auditor shall not proceed with work when CO concentrations in the work environment exceed 35 ppm or if any measured concentrations of combustible fuel gas exceed 10% of the LEL.

When either of these conditions occur, the auditor shall inform the homeowner/occupants of the unsafe condition and advise evacuation of the home. The auditor shall leave the home and the appropriate emergency services and fuel gas providers shall be notified from outside the home. The auditor shall contact the appropriate emergency services only if the homeowner/occupant is unable to do so.

Indoor Air Quality and Ventilation:

- Identification of sources of indoor air pollutants
- Identification of air leakage pathways from garage to living space and its attic area
- Evaluation of terminations of all exhaust fans and clothes dryer vents
- Evaluation of existing ventilation systems in the dwelling
- Determination of the ventilation needs

Moisture Control:

The energy audit shall include a visual/sensory inspection of each home for moisture issues.

- Inspection for evidence of exterior water intrusion, such as roof leaks, foundation leaks, fenestration assembly leaks and ground-water intrusion
- Inspection for evidence of damage caused by interior water sources, such as plumbing leaks or condensation on piping, ductwork or interior surfaces
- Inspection for effects of water damage on buildings, such as structural damage, mold, mildew, efflorescence, and stains
- Identification of existing vapor retarders, flashing, gutters or other moisture-control strategies

Unvented Heaters:

Unvented heaters present a health and safety risk for homeowners due to the potential dangers of CO, moisture, oxygen depletion and NO₂.

The Residential Audit Program strongly recommends that in every instance where an unvented space heater is found to be operating in a customer's home that the Participating Auditor educate the customer about the dangers of unvented space heaters and explore all reasonable options for removing the unvented heating and installing a heating system replacement.

MINOR REPAIRS:

Visual inspection, evaluation and documentation of minor repairs that are necessary to ensure maximum efficiency from the provision of qualified energy efficiency services. For example, repairing roof leaks prior to the installation of attic insulation so as not to damage newly installed insulation.

BEST PRACTICES:

- Follow energy audit guidelines as detailed in ANSI/BPI-1200-S-2017 Standard Practice for Basic Analysis of Buildings
- Photo documentation of existing conditions
- Use of IR camera to assess insulation and air infiltration
- Energy education and coaching with customer