

EXHIBIT A

PROGRAM GUIDE FOR EXISTING RESIDENTIAL ENERGY AUDITS AND RETROFITS



PROGRAM GUIDE FOR EXISTING RESIDENTIAL ENERGY AUDITS AND RETROFITS

Introduction

On October 18, 2006, the City of Las Vegas approved a Green Building Resolution (R-81-2006) which helped create the City's Green Building Program. Together with the city's community partners, this program was developed as an evolving program to support and expand green building. Additionally, the resolution requires that the City use its best efforts to ensure that all public buildings built by and for the City are built to LEED Silver standards (or equivalent) and established the Green Building Special Revenue Fund, which receives 25 percent of any incremental increase in utility franchise fees, not to exceed \$2.5 million per year.

The City revised its Green Building Program in August 2009 by including new incentives and standards for new residential and commercial construction, as well as retrofits to existing homes and commercial structures. The City recognizes the HomeFree Nevada program, Southern Nevada's Home Performance with ENERGY STAR program, as a standard for providing energy efficient retrofits for homeowners. Under the updated Program, the City offers a rebate to HomeFree Nevada certified Auditors and Contractors for work performed at the homes of program applicants using Green Building Special Revenue Funds. Payments for energy audits are valued at \$500 per home, while up to \$500 is paid for energy savings improvements.

Given the success of the HomeFree Nevada program at providing low cost energy audits during the economic downturn in Southern Nevada, the City of Las Vegas and HomeFree Nevada recognize the needs of homeowners to save money on their energy bills, in addition to improving the energy efficiency, comfort, health, safety, durability, and value of their homes. The City of Las Vegas and HomeFree Nevada have created demand for energy auditing and retrofitting services, which has created jobs for the region. As a result of new HomeFree Nevada program standards and the desire to help further the goals of HomeFree Nevada and its Sustainability Initiative, the City of Las Vegas is launching an expanded home energy audit and retrofit incentive program. Under this new program, the City of Las Vegas will provide rebates to HomeFree Nevada approved Auditors and Contractors that complete jobs to HomeFree Nevada and Home Performance with Energy STAR standards:

- HomeFree Nevada approved Auditors- \$550 rebate for audit and test out
 - \$350 rebated for comprehensive energy audit
 - \$200 rebated for post retrofit installation tests
- HomeFree Nevada approved Contractors- \$250-\$500 matching rebate for installation of energy retrofit measures

City of Las Vegas Green Building Program: Energy Audit and Retrofit Incentives for Auditors and Contractors

Comprehensive Home Energy Audits

As a part of its Green Building Program, the City of Las Vegas will provide \$350 (as funds are available) to qualified energy auditing firms that perform a comprehensive home energy audit and retrofit to HomeFree Nevada program standards for residents that live within the limits of the City of Las Vegas. Qualifications and energy audit and retrofit procedures are specified in the HomeFree Nevada Program Implementation Plan (update forthcoming) and HomeFree Nevada Auditor and Contractor Program Guide and must include:

- 1. Home Energy Audits in accordance to HERS/RESNET and BPI standards**
- 2. Develop a Report Listing Audit Results and Recommended Improvements**
- 3. Installation of measures**
- 4. Post-Installation Tests or “Test-out”**

Participation

To participate in the City’s Green Building Program under HomeFree Nevada, firms that provide auditing services must meet all HomeFree Nevada program standards. In addition to the standards established by HomeFree Nevada, as specified in the HomeFree Nevada Auditor and Contractor Program Guide, Auditors must:

- have a City of Las Vegas Business License
- be registered with the City as a vendor

After an Auditing firm signs up with HomeFree Nevada and verifies that their employees performing energy auditing services meet the HomeFree Nevada requirements and that they wish participate in the City’s Green Building Program, HomeFree Nevada will provide the name and contact information of the auditing firm to the City. The City will then verify with the Auditing firm that they are licensed and registered as a vendor with the City and approve the firm to perform audits under the Green Building Program.

Estimates

Payments are made to auditors on a bi-monthly revolving cycle. Once approved by both the City of Las Vegas and HomeFree Nevada, energy audit work may begin. Each firm will provide an estimate to the City of Las Vegas that contains:

- The address of each home to be audited
- A quote of payment for services performed.

All estimates will be submitted electronically as a PDF to:
greenbuildingprogram@lasvegasnevada.gov

The City will then verify that each home is within the City of Las Vegas and create a requisition based on the estimate. Once a Purchase Order is created, the City will approve the Auditor to begin work and provide the Purchase Order number. For each auditing cycle, no more than 10

energy audits may be performed per Auditing firm (subject to change based on funding availability).

Performing Energy Audits

To receive payments for energy audit work performed, all energy audits must be performed to HomeFree Nevada standards, as specified in the HomeFree Nevada Auditor and Contractor Program Guide. At the completion of the energy audit and discussion of the audit report with the homeowner, the Auditor will submit an electronic copy of the completed Audit Report to auditreports@homefreenevada.org and pay the required \$10 processing fee to HomeFree Nevada.

Receiving Payments

No later than the submission date specified in the schedule below, the Auditor will provide the City an invoice for work performed that contains the Purchase Order number. Should the estimate vary from the work performed, the Auditor will provide the City a new estimate with the corrected amount and the Purchase Order number.

All invoices will be submitted electronically as a PDF to:
greenbuildingprogram@lasvegasnevada.gov

After the Invoice is received, the City will verify with HomeFree Nevada that the reports for the homes listed in the invoice have been received and will process payment. Payments will be made to auditors net thirty days after invoices are submitted.

Schedule for Energy Audit Payment

By the 1st and 15th of each month, each auditor will:

- Submit projected (estimated) number of audits for the next cycle
 - Submit to greenbuildingprogram@lasvegasnevada.gov
- Perform the audits
- Submit completed audit reports (with processing fee)
 - Submit to auditreports@homefreenevada.org
- Submit an invoice for the completed audit reports
 - Submit to greenbuildingprogram@lasvegasnevada.gov
- Payments will be made to auditors net thirty days after invoices are submitted (i.e. for invoices due on the 15th of the month, payment will be made on 1st of the next month). Please refer to the chart on the accompanying page for a sample three month representation of the bi-monthly revolving cycle.

Please make all required submissions **ON** or **PRIOR TO** the listed dates (in the event of weekends or holidays). Late submissions will be included in the next cycle.

Installation of Energy Efficient Retrofit Measures

As a part of its Green Building Program, the City of Las Vegas will provide a minimum of \$250 up to a \$500 (as funds are available) **matching rebate** to qualified home performance contracting firms that install the energy retrofit measures described in a HomeFree Nevada Audit Report and listed in a scope of work. The installation of these measures must be to HomeFree Nevada

program standards for residents that live within the limits of the City of Las Vegas. Homeowners may choose other options to complete the retrofit work, but will not be eligible for the matching retrofit rebate unless using a contractor who meets the program requirements. In addition, the City will provide a \$150 rebate to Auditors for completing all post installation tests for retrofits, as applicable and required. All test outs must be performed independent of the Contractor that performed the retrofit work.

Participation

Until June 30th, 2010, to participate in the City's Green Building Program, firms that provide home performance contracting services must meet the following requirements:

- BPI Certified Building Analyst and pass RESNET Written Exam
- Nevada Contractor's License and Bond
- Possess valid State and City of Las Vegas Business License
- Provide a completed W-9 Form
- General Liability Insurance (\$1,000,000 minimum)
- Automobile Liability Insurance (\$500,000 minimum)
- Workman's Compensation (as required by law; employer's liability - \$500,000)
- Be registered with the City as a vendor
- Perform all contracting work to HomeFree Nevada standards and meet HomeFree Nevada guidelines

Copies of applicable documentation should be submitted to greenbuildingprogram@lasvegasnevada.gov for verification.

Beginning July 1st, 2010, participating Contractors must meet ***all*** HomeFree Nevada program standards and verify they have submitted a signed Contractor Participation Agreement with HomeFree Nevada. For Contracting firms signing up after July 1st, 2010, once the firm signs up with HomeFree Nevada and verifies that their employees performing retrofit services meet the HomeFree Nevada requirements and that they wish participate in the City's Green Building Program, HomeFree Nevada will provide the name and contact information of the Contractor to the City. The City will then verify with the Contractor that they are licensed and registered as a vendor and approve the firm to perform retrofits under the Green Building Program.

Estimates

Payments are made to contractors on a bi-monthly revolving cycle. Once approved by both the City of Las Vegas and HomeFree Nevada, post-audit retrofit and test out work may begin. Each Contractor and Auditor will provide an estimate to the City of Las Vegas that contains:

- The address of each home that was retrofitted and tested out (must have received an energy audit from a HomeFree Nevada approved Auditor)
- A quote of payment for services performed.

All estimates will be submitted electronically as a PDF to: greenbuildingprogram@lasvegasnevada.gov

The City will then verify that each home is within the City of Las Vegas, received an energy audit from an approved Auditor, and create a requisition based on the estimate for each retrofit and test out. Once a Purchase Order is created, the City will approve the Contractor and Auditor to begin work and provide each a Purchase Order number. For each auditing cycle, no more than 10 energy audits may be performed per contractor (subject to change based on funding availability).

Scope of Work and Homeowner Match

A scope of work based on the Audit Report will be developed between the homeowner, Auditor, and Contractor to perform the measures specified in the Audit, as specified in the HomeFree Nevada Auditor and Contractor Program Guide and the HomeFree Nevada Installation of Measures Guidelines. Within the scope of work, the Contractor must clearly identify that the homeowner has provided \$250 to \$500 in matching funds and must provide an estimate of the cost to install the recommended measures, signed by the homeowner. The Contractor will submit an electronic copy of the completed scope of work to SOW@homefreenevada.org and pay the required \$25 processing fee to HomeFree Nevada.

Installation of Energy Retrofits

To receive payments for work performed, all retrofits must be performed to HomeFree Nevada standards, as specified in the HomeFree Nevada Auditor and Contractor Program Guide.

Test Out

All post installation tests for retrofits must be performed independent of the contractor that has completed the work and must be performed to HomeFree Nevada standards, as specified in the HomeFree Nevada Auditor and Contractor Program Guide under the Post Installation Tests or “Test Out” section. Each job is not considered complete until HomeFree Nevada has received a signed HomeFree Nevada Post-Installation Tests and Inspection Form that indicates that all standards have been met (i.e., all tests and inspections have been passed successfully) and that no further actions are required. This form will be sent to testout@homefreenevada.org.

Receiving Payments

Retrofits

No later than the submission date specified in the schedule below, the Contractor will provide the City an invoice for work performed that contains the Purchase Order number. Should the estimate vary from the work performed, the Contractor will provide the City a new estimate with the corrected amount and the Purchase Order number.

All invoices will be submitted electronically as a PDF to:
greenbuildingprogram@lasvegasnevada.gov

After the Invoice is received, the City will verify with HomeFree Nevada that a HomeFree Nevada Post-Installation Tests and Inspection Form has been received for the homes listed in the invoice have been received and will process payment. Payments will be made to Contractors net thirty days after invoices are submitted.

Test Out

No later than the submission date specified in the schedule below, the Auditor will provide the City an invoice for the test out performed that contains the Purchase Order number. Should the estimate vary from the work performed, the Auditor will provide the City a new estimate with the corrected amount and the Purchase Order number.

All invoices will be submitted electronically as a PDF to:
greenbuildingprogram@lasvegasnevada.gov

After the Invoice is received, the City will verify with HomeFree Nevada that a HomeFree Nevada Post-Installation Tests and Inspection Form has been received for the homes listed in the invoice have been received and will process payment. Payments will be made to Auditors net thirty days after invoices are submitted.

For homeowners that have started retrofit work at homes previously audited by a HomeFree Nevada Auditor prior to April 15, 2010, Auditors may provide invoices for test out rebates until May 31st, 2010. Beginning June 1st, 2010, test out rebates will be paid only for work performed by a Contractor meeting the standards specified in the "Participation" subsection above.

Schedule for Energy Retrofit and Test Out Payment

By the 1st and 15th of each month, each Auditor and Contractor will:

- Submit projected (estimated) number of retrofits for the next cycle
 - Submit to greenbuildingprogram@lasvegasnevada.gov
- Perform the retrofits
- Submit completed scope of work, containing estimate (with processing fee)
 - Submit to sow@homefreenevada.org
- Ensure that the Auditor has submitted a signed HomeFree Nevada Post-Installation Tests and Inspection Form
 - Submit to testout@homefreenevada.org
- Contractors an invoice for the completed retrofits
 - Submit to greenbuildingprogram@lasvegasnevada.gov
- Auditors submit an invoice for completed test outs
 - Submit to greenbuildingprogram@lasvegasnevada.gov
- Payments will be made to contractors net thirty days after invoices are submitted (i.e. for invoices due on the 15th of the month, payment will be made on 1st of the next month). Please refer to the chart on the accompanying page for a sample three month representation of the bi-monthly revolving cycle.

Please make all required submissions **ON** or **PRIOR TO** the listed dates (in the event of weekends or holidays). Late submissions will be included in the next cycle.

Energy Audit and Retrofit Job Procedures

At a minimum, all qualifying HomeFree Nevada programs must consist of the following elements, as specified by HPwES:

- 1. Home Energy Audits in accordance to HERS/RESNET and BPI standards**
- 2. Develop a Report Listing Audit Results and Recommended Improvements**
- 3. Installation of measures**
- 4. Post-Installation Tests or “Test-out”**

After an auditor or a contractor is approved by HomeFree Nevada under a qualifying program to perform work, they may proceed, provided that they perform the work as specified. While each auditing and contracting firm may customize their own line of work, they must follow these minimum guidelines and procedures.

Home Energy Audits in accordance to HERS/RESNET and BPI standards

Homeowner Interview

Auditors are first required to conduct an in-person or telephone interview to collect information about the home and homeowner's concerns, motivations and goals. HomeFree Nevada collects information from homeowners that sign up through the HFN website and will provide this information to the auditor when available. At a minimum, auditors should discuss the following information:

- Age of home and square footage
- Years the homeowner has lived there and number of occupants.
- Remodeling, additions, window replacements, or other recent changes or modifications
- Basic information about HVAC system(s), type of fuel, and age of systems (if known)
- Swimming pool or spas –pump operation, heated or not, heating source(s)
- Utility bill information- annual power and gas bills, highest monthly power and gas bills
- Comfort complaints (cold rooms/hot rooms, drafts, moisture and humidity)

Although not required, Auditors may consider conducting a walk-through with the homeowner to ascertain additional information.

Conduct Home Energy Audit

Auditors will conduct a comprehensive Home Energy Audit to HERS/RESNET and BPI standards for the homeowner, covering the following areas:

- **Building Envelope Inspection**

The building envelope offers many opportunities for energy efficiency improvements. Auditors are required to conduct an inspection of the building envelope:

- Collect basic information on the envelope of the home
- Note condition of external building envelope features (siding, trim, fascia, soffit areas, etc.) and check for moisture
- Identify the Building Envelope's Thermal Characteristics, checking doors, windows, and thermal boundary
- Identify air leakage characteristics (Blower door test to standard, infrared camera; zonal pressure differential test as needed)
- Identify exterior wall insulation levels

- Identify renewable energy opportunities, if applicable
- Heating, Ventilation, and Air Conditioning (HVAC) and Domestic Hot Water Systems Inspection**

The HVAC and hot water systems can offer dramatic comfort and energy savings opportunities. Therefore, participating contractors will perform a basic inspection of the HVAC and hot water systems in the home as follows:

 - Determine number and type of thermostats and determine settings
 - Inspect the heating system and its characteristics
 - Inspect the air conditioning system and its characteristics (Duct Blaster and duct leakage testing)
 - Determine air conditioning refrigerant charge and condition of air handler and coil
 - Estimate AFUE of heating system and HSPF/SEER of heat pump/cooling system
 - Inspect distribution systems, filters, insulation, and ductwork
 - Inspect hot water system and its characteristics
 - Inspect the combustion appliance zone (CAZ) for safety issues
 - Inspect the living space for safety issues
 - Inspect mechanical exhaust ventilation systems (if present in bathrooms, kitchens, garages, attics, or other spaces).
- Instrumented Tests on Combustion Appliances, Combustion Appliance Zone (CAZ) and Living Space**

Performing these tests can help identify problems that affect the health and safety of the customer. Therefore, participating Auditors will perform diagnostic tests on combustion equipment including vented heating systems, water heaters and ovens, in accordance with the BPI Standards. This inspection includes:

 - Combustion appliance and CAZ tests of vented heating systems, water heaters and ovens including
 - Testing for Carbon monoxide measurement at each appliance
 - Testing for gas leaks
 - Draft measurement and spillage evaluation for atmospherically vented appliances
 - Worse-case negative pressure measurement for each CAZ
 - Ambient carbon monoxide readings.
- Moisture Inspection**

Performing inspections for moisture can help identify problems that affect the health and safety of the homeowner. This inspection includes the following:

 - Inspect basements and crawlspaces for moisture or moisture damage
 - Inspect around exterior of foundation for signs of moisture
 - Inspect attic for moisture deposition or damage on roof deck, rafters, joists, and insulation (wet or moisture-compacted insulation).
 - Inspect condition of windows and look for signs of condensation or other conditions that could cause damage or affect durability.
 - Inspect living space for evidence of high moisture levels in the living space, check for discoloration on walls behind headboards, furniture – corners of closets on

exterior walls, and other areas of stagnation and cold temperature for moisture deposition or damage and conditions that promote fungal growth

- **Appliance, Water Fixture, and Lighting Inspection**

Performing inspections of appliances and lighting can help identify home essentials that could potentially increase the costs of energy usage. This inspection includes the following:

- Review age and condition of major appliances and water fixtures.
- Inspect high-use lighting areas for any obvious opportunities to upgrade old lighting with CFLs and energy efficient fixtures.

Develop a Report Listing Audit Results and Recommended Improvements

Once a HFN Auditor completes an audit and subsequent analysis of tests and findings, they are to review the findings of the audit with the homeowner. This is the opportunity to present the homeowner with the improvement opportunities and energy conservation measures discovered during the Audit and determine the solutions for improving the performance of the home. Therefore, the participating Auditor will discuss inspection findings and present a recommended scope of work to the homeowner.

At a minimum, the following elements are required to be included in a HFN Audit Report provided to a homeowner after the Audit has been completed and can be completely customized to the auditing firm's specifications:

- A cover page and/or introduction page(s) that include the following, at a minimum:
 - Participating Auditor name, contact information, and name of technician completing the Audit.
 - Homeowner's address
 - Date Audit was performed
 - HomeFree Nevada AND Home Performance with ENERGY STAR logo
- Required documentation must be included, either as an appendix or as a part of the Audit Report
 - A signed audit agreement between the auditing company and the homeowner
 - A RESNET Home Energy Rating Standard Disclosure Form
 - The home's rating information
 - Include the Home Energy Rating Certificate (HERS Rating)
 - Include the Home Performance with ENERGY STAR Energy Rating Certificate
- The body of the Audit Report containing the existing conditions, including REM/Rate Reports as specified (included as appendices for homeowner):
 - Air leakage visual inspection or diagnostic results.
 - Include Air Leakage REM/Rate Report
 - Insulation levels for walls, attic, rim-joists, and foundation (crawl, basement, or slab).
 - Approximate age and condition of HVAC equipment (heating, cooling, and ventilation fans), water heating equipment, and condition of exhaust flues for HVAC or water heating equipment that consumes fossil fuel.

- Type and condition of windows and doors.
- Duct system visual inspection findings.
- Approximate age and condition of appliances.
 - Include Lights and Appliances Summary REM/Rate Report
- Any signs of moisture deposition, building performance failures or conditions affecting the durability of the home.
- Results of tests related to the use of combustion appliances (draft, spillage, carbon monoxide, combustion appliance zone (CAZ) depressurization and gas leak testing).
- A summary of the home's approximate environmental impact
 - Include Emissions REM/Rate Report
- A set of recommended energy conservation measures that is reasonably comprehensive in identifying measures that save energy, address combustion safety, comfort, moisture deposition, durability or other building performance problems. Recommendations in the comprehensive work scope must address air leakage between the house and attached garage due to the potential for infiltration of carbon monoxide and other fumes. An estimate of current energy costs and potential energy savings from recommended improvements and improvement installation costs should also be included.
 - Include Action REM/Rate Report
 - Include Improvement Analysis REM/Rate Report
- A list of incentives and financing options for energy conservation measures, including tax credits, loans, rebates from NV Energy, Southwest Gas, Southern Nevada Water Authority, program sponsors, or other entities.
- A list of HFN Contractors approved by HFN to perform the recommended energy conservation measures. Auditors that have agreements with HFN approved Contractors may recommend them to perform the work; however, the Auditor must disclose to the homeowner that any HFN Contractor may be used.

Upon completing the discussion of the Audit Report with the homeowner, a copy of each Audit Report must be submitted to HFN electronically to the appropriate HFN staff or through the HFN website and to any other HFN approved program that requires such a report. HFN requires an administrative fee of \$10 for each report that is submitted through the program, to be paid on the HFN website. Auditors are required to keep records of all HFN reports for a period of 5 years.

Installation of measures

HomeFree Nevada will provide a list of HFN Contractors approved by HFN to perform the recommended energy conservation measures to each Auditor to include in the Audit report. If HomeFree Nevada staff is available, they will meet with the homeowner and Auditor to make Contractor arrangements based on the scope of work established by the Auditor and homeowner. After arrangements are made, an agreement will be made between the homeowner and Contractor to perform the measures specified in the scope of work, based on the HomeFree Nevada Installation of Measures Guidelines. Any subcontractor used by a Contractor must also be approved by HomeFree Nevada. All installed measures will be in accordance with industry best practices.

Post-Installation Tests or “Test-out”

When a participating contractor completes home performance improvements for a customer, the Auditor that performed the Audit will perform the post-installation tests and inspections described in this section, and enter the results in a “HomeFree Nevada Post-Installation Tests and Inspections” Form.

Minimum Post Installation Test Requirements

The required post-installation tests will depend upon the scope of work:

- Confirmation that measures are properly installed
- A Blower Door test will be completed after installation of any of the following measures:
 - Enclosed cavity insulation representing more than 15% of the total building shell area.
 - Air sealing.
 - Sealing of ductwork outside the building envelope.
 - Replacement of atmospherically vented combustion appliance with sealed combustion appliance (due to removal of an exhaust appliance from the home).
- Minimum house ventilation requirement calculation will be performed whenever changes to the building shell requiring a blower door test have occurred to ensure that the home is receiving adequate outside air per BPI Standards
- Combustion appliance tests on all combustion equipment including vented heating systems, water heaters, and ovens, in accordance with BPI Standards, will be completed whenever changes to the building envelope and/or heating system have occurred. This inspection includes all of the following tests:
 - Carbon monoxide measurement at each appliance (including ovens).
 - Draft measurement and spillage evaluation for atmospherically vented appliances.
 - Worst-case negative pressure measurement for each CAZ.
- Inspection and testing of orphaned water heaters: water heaters may not be left venting alone into a previously shared chimney without ensuring the chimney meets appropriate NFPA requirements under the new condition and the water heater has been tested and passed all required combustion safety tests (spillage, draft, CAZ depressurization).
- If a new central air conditioner, heat pump, or furnace is installed, then the Contractor will provide a commissioning report documenting that the installation met the ACCA HVAC Quality Installation Specifications

If any of the tests or inspections show the need for corrective action, the Contractor can record the action item(s) in the Form or postpone completing the Form (including having the customer sign it) until those corrective actions have been made. Each job is not considered complete until HomeFree Nevada has received a signed HFN Post-Installation Tests and Inspection Form that indicates that all standards have been met (i.e., all tests and inspections have been passed successfully) and that no further actions are required.

At the conclusion of the test-out, each homeowner must sign and receive a copy of the HomeFree Nevada Post-Installation Tests and Inspections Form signifying their agreement that the job has been completed.

MONTH 1						MONTH 2						MONTH x					
	1	2nd -14th	15	16th-EOM	EOM		1	2nd -14th	15	16th-EOM	EOM		1	2nd -14th	15	16th-EOM	EOM
CYCLE A																	
Submit Projected # of Audits																	
Perform Audits																	
Submit Completed Audit Reports																	
Submit Invoice																	
Receive Payment For Audits																	
CYCLE B																	
Submit Projected # of Audits																	
Perform Audits																	
Submit Completed Audit Reports																	
Submit Invoice																	
Receive Payment For Audits																	



PERFORMANCE PERIOD
 SUBMISSION DEADLINE
 PAYMENT DATE
 EOM = End of Month (30th/31st)