



# CLARK COUNTY DEPARTMENT OF BUILDING & FIRE PREVENTION

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Ronald L. Lynn, Director/Building & Fire Official  
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## SUBJECT: TG-95-2011 ENERGY EFFICIENCY TESTING SERVICES

**1.0 PURPOSE:** Section 402.1.2 of the International Energy Conservation Code (IECC) requires two options to demonstrate air sealing and insulation; testing and visual inspection. This guideline provides instruction on the process approved by the Building Official where testing is used to verify compliance with building envelope air tightness per Section 402.4.2.1.

**2.0 SCOPE:** This guideline provides information for the listing of approved energy efficiency testing agencies and approved energy efficiency testing technicians. This guideline also provides information for the testing, reporting, submittal, review and acceptance of certain energy efficiency testing services performed by the approved energy efficiency testing agencies.

### 3.0 ABBREVIATIONS & ACRONYMS:

- BAC:** Building Administrative Code of Clark County
- CCDDS-BD:** Clark County Department of Development Services-Building Division
- EETA:** Energy Efficiency Testing Agency
- FIG:** Field Inspection Guideline
- HERS:** Home Energy Rating System
- IECC:** International Energy Conservation Code
- LEED:** Leadership in Energy and Environmental Design
- QSM:** Quality Systems Manual
- RESNET:** Residential Energy Services Network
- USGGC:** United States Green Building Council
- TG:** Technical Guideline

**APPROVED DATE: APRIL 29, 2011**

**EFFECTIVE DATE: MAY 15, 2011**

| Written By:                       | Concurred By:                                     | Approved By:                              |
|-----------------------------------|---|---|
| <i>Brenden Scherr</i>             | <i>Wesley Walters</i>                             | <i>Brenda Thompson</i>                    |
| Brenden Scherr<br>Senior Engineer | Wesley Walters<br>Building Inspections Specialist | Brenda Thompson<br>Manager of Inspections |

**4.0 DEFINITIONS:** For the purposes of this technical guideline, certain terms, phrases, words and their derivatives shall be construed as specified in this section and the Building Administrative Code of Clark County.

**Approved Energy Efficiency Testing Agency:** Is an agency approved by the Building Official to engage in testing of energy efficiency performance and reporting of test results.

**Energy Efficiency Testing Services:** Is a collection of tests performed by an approved energy efficiency testing agency of certain energy efficiency components and systems to verify compliance with Clark County codes.

**Quality Assurance Designee:** The Quality Assurance Designee is employed by the Rating Provider to independently verify internal consistency of a minimum of 10% of all building input files and 1% of the homes from each approved energy efficiency testing agency.

**Quality Systems Manual:** A quality systems manual is composed of a series of documents that contain policy statements, procedures, reporting requirements and personnel qualifications. The QSM defines the procedural responsibilities to ensure the operations are completed, reviewed and documented.

**Rating Provider:** Accredited rating providers have the responsibility of ensuring the quality of rating services. Rating providers are responsible for administering rating programs. These responsibilities include certification of raters, selection of accredited rating software programs, rating quality assurance and marketing of rating services. Rating providers are accredited by RESNET.

## **5.0 REFERENCES:**

International Energy Conservation Code, Latest Adopted Edition

Building Administrative Code of Clark County, Latest Adopted Edition

Southern Nevada Amendments to the International Energy Code, Latest Adopted Edition

International Building Code, Latest Adopted Edition

International Residential Code, Latest Adopted Edition

## **6.0 RESPONSIBILITIES:**

### **6.1 Design Professional:**

6.1.1 Designate on the plans the method used to demonstrate compliance with the above referenced codes; visual inspection option per Section 402.4.2.2 or testing option per Section 402.4.2.1.

### **6.2 Permit Holder:**

6.2.1 The permit holder shall engage an approved Energy Efficiency Testing Agency (EETA) to perform all required energy efficiency testing services where the testing option is selected.

6.2.2 The permit holder shall cause the EETA to provide an Energy Rating Certificate for submission to the Building Official for approval.

6.2.3 The permit holder shall coordinate energy efficiency testing services with the approved

EETA.

6.3 **Energy Efficiency Testing Agency:**

6.3.1 The agency designated to perform energy efficiency testing services shall be approved by Clark County.

6.3.2 An agency seeking approval status shall apply for approval using forms available for that purpose. Forms are available at CCDDS-BD website @ [http://www.clarkcountynv.gov/Depts/development\\_services/engineering/Forms/806-C.pdf](http://www.clarkcountynv.gov/Depts/development_services/engineering/Forms/806-C.pdf). In order to obtain approval, an EETA must submit to CCDDS-BD for review and approval a Quality Systems Manual (QSM), other information as required in this guideline and the listing fees.

6.3.3 A QSM shall be prepared in accordance with Section 7.1.6 of this TG.

6.3.4 The QSM shall be approved in writing by a company officer and the Quality Manager.

6.3.5 The approved energy efficiency testing personnel employed by the approved EETA shall perform all required testing and other services as required in the IECC and this guideline.

6.3.6 The approved EETA shall submit all required reports to CCDDS-BD

6.4 **Clark County Department of Development Services-Building Division**

6.4.1 CCDDS-BD personnel shall review the EETA's initial application package for compliance to this guideline and referenced codes and standards.

6.4.2 CCDDS-BD shall review the EETA's annual renewal package for compliance to this guideline and referenced codes and standards.

6.4.3 CCDDS-BD personnel shall receive and review energy efficiency testing reports in accordance with Section 7.0. After the review of energy efficiency testing reports, CCDDS-BD personnel shall disposition required energy efficiency inspections as appropriate in the permit inspection history.

**7.0 PROCEDURES:**

7.1 **Initial Approval Requirements**

Agencies wishing to become approved to perform energy efficiency testing services shall submit the following:

7.1.1 Request Letter

7.1.2 Application Form 806C.

7.1.3 Designated Quality Manager employed by the agency.

7.1.4 Designated Energy Efficiency Technician employed by the agency.

7.1.5 Listing of proposed energy efficiency testing technician along with:

7.1.5.1 Current copy of training certification card.

7.1.5.2 Current copy of Training Verification Form. A sample form is provided in Appendix B.

7.1.6 Quality Systems Manual: The QSM shall contain all the following elements:

7.1.6.1 Description of the organization including complete legal name and address.

- 7.1.6.2 Names and positions of the principal owners, officers, and directors.
  - 7.1.6.3 Agency's managerial structure and principal personnel.
  - 7.1.6.4 Name of the Rating Provider.
  - 7.1.6.5 Name of the Quality Assurance Designee.
  - 7.1.6.6 Scope of agency services.
  - 7.1.6.7 Written procedures shall be established for the inspection, testing, and reporting of each service area.
  - 7.1.6.8 A listing of energy efficiency testing and other equipment required to perform proposed scope of agency services.
  - 7.1.6.9 Written procedures shall be established for the subcontracting of calibration, verification and testing of equipment.
  - 7.1.6.10 Qualifications of proposed energy efficiency testing technicians.
  - 7.1.6.11 Test Report forms. Sample energy efficiency testing form is provided in Appendix A.
- 7.1.7 Fees are detailed in the Clark County Building Administrative Code.
- 7.1.7.1 Initial agency listing fee of \$150.00.
  - 7.1.7.2 Initial technician listing fee of \$50.00 per technician.

## 7.2 **Annual Renewal Requirements**

Agencies wishing to remain on Clark County listing as an approved energy efficiency testing agency shall submit the following:

- 7.2.1 Request Letter
- 7.2.2 Application Form 806C.
- 7.2.3 Designated Quality Manager employed by the agency.
- 7.2.4 Designated in writing an Energy Efficiency Technician employed by the agency.
- 7.2.5 Listing of proposed energy efficiency testing technician along with:
  - 7.2.5.1 Current copy of certification as a Certified Home Energy Rater through RESNET.
  - 7.2.5.2 Current copy of Training Verification Form. A sample form is provided in Appendix A.
- 7.2.6 Quality Systems Manual: Provide an update for any changes such as:
  - 7.2.6.1 The agency name or location.
  - 7.2.6.2 The agency's managerial structure and principal personnel.
  - 7.2.6.3 The agency's Rating Provider and Quality Assurance Designee.
  - 7.2.6.4 The scope of agency services.
  - 7.2.6.5 The report forms used to document energy efficiency testing activities.
  - 7.2.6.6 Testing or inspection procedures.

**7.3 Energy Efficiency Rating Certificate**

7.3.1 The Energy Rating Certificate shall demonstrate compliance with the IECC current adopted edition.

7.3.2 An Energy Rating Certificate shall be submitted to the CCDDS-BD.

7.3.3 Acceptance of the certificate by the Building Official will result in an entry of approval of required Energy Efficiency Inspection clearance under the residential mechanical permit.

**8.0 RECORDS:**

8.1 Controlled Copy of the Quality Systems (QSM). All report forms that are used by technicians to conduct an energy efficiency test of a structure shall be submitted with the QSM for review. Both the agency and CCDDS-BD shall maintain permanent, controlled copies of the QSM.

8.2 Final Testing Report and Energy Rating Certificate. CCDDS-BD shall maintain a permanent record of the Final Testing Report and Energy Rating Certificate.

**9.0 ATTACHMENTS:**

**Appendix A (Mandatory Information):** Training Verification Form.

**10.0 REVISION HISTORY:**

| Title | Revision/Approved Date | Effective Date |
|-------|------------------------|----------------|
|       |                        |                |

**TG-95 – Appendix A**

**TRAINING VERIFICATION RECORD**

\_\_\_\_\_  
Energy Efficiency Testing Agency

Employee Name \_\_\_\_\_

Date of Hire \_\_\_\_\_

Certification No. \_\_\_\_\_ Expiration Date \_\_\_\_\_

| Type Test | Initial Training Date | Follow-up Training Date |
|-----------|-----------------------|-------------------------|
|           |                       |                         |
|           |                       |                         |
|           |                       |                         |
|           |                       |                         |
|           |                       |                         |

Training Provided By \_\_\_\_\_  
(Quality Manager)                      Print Name                      Signature

Training Provided By \_\_\_\_\_  
(Manufacturer)    Print Name/Manufacturer

( ) I acknowledge the above training and a current copy of TG-95.

Employee Signature \_\_\_\_\_ Date \_\_\_\_\_

**This Form Must be Submitted for Each Technician Approval/Renewal Request**



**CLARK COUNTY DEPARTMENT OF BUILDING**  
 4701 West Russell Road, Las Vegas, NV 89118 ~ (702) 455-3000  
**Energy Efficiency Testing Agencies (NON-QAAs)**  
**Request For Initial or Renewal of Clark County Approval**  
**Application Form**



COMPANY NAME \_\_\_\_\_

QUALITY MANAGER \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

TELEPHONE \_\_\_\_\_ FAX \_\_\_\_\_

E-MAIL ADDRESS \_\_\_\_\_

**FEES REQUIRED TO BE SUBMITTED WITH APPLICATION**

|  |   |
|--|---|
| <b>Initial Agency Listing</b> (\$150.00) \$ _____        | <b>Annual Agency Renewal</b> (N/C) \$ _____             |
| <b>Initial Listing-Technician</b> (\$50.00/per) \$ _____ | <b>Annual Renewal-Technician</b> (\$50.00/per) \$ _____ |

Total Amount Submitted: \_\_\_\_\_

**DOCUMENTATION REQUIRED TO BE SUBMITTED WITH APPLICATION**

|   |  |
|---|--|
| <p><b><u>INITIAL AGENCY LISTING:</u></b> TG-95 approval process</p> <p>Request Letter</p> <p>Quality Systems Manual</p> <p>Proposed Personnel</p>                                       | <p><b><u>ANNUAL RENEWAL:</u></b> TG-95 Renewal process</p> <p>Latest Revisions to the Quality Systems Manual, (QSM).</p> <p>If no revision in the past year, provide the current revision number and date. Rev# _____ date _____</p> |
| <p><b><u>INITIAL TECHNICIAN LISTING:</u></b> TG-95 approval process</p> <p>Copies of Current Certifications with Expiration Dates</p> <p>Current copy of Training Verification Form</p> | <p><b><u>TECHNICIAN RENEWAL:</u></b> TG-95 Renewal process</p> <p>Copies of Current Certifications with Expiration Dates</p> <p>Current copy of Training Verification Form</p>   |

**RETURN THIS APPLICATION FORM WITH YOUR CHECK TO THE FOLLOWING ADDRESS:**

Clark County Building Department  
 Attn: Brian Lenihan  
 4701 W. Russell Rd.  
 Las Vegas, Nevada 89118

Please submit a check or money order, along with the required documentation, with each application.

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_