Contractor Grade Scoring Methodology for the Single Family and Attached Low Rise (ALR) Program Administered by National Grid and Eversource

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Table of Contents

INTRODUCTION

This document describes how each scoring component of a Contractor Grade will be calculated and measured to establish a Trade Ally's overall contractor grade. Those grades will be used to rank the contractor pool and inform the Merit Based Work Allocation policy and any other contractor incentive programs or bonuses. The goal being to reward contractors with the highest grades with an increased percentage of weatherization projects to complete.

1.0 SCORE COMPONENTS

1.1 Work Quality Score

The quality of work is an important component of the scoring system as it is paramount to achieving predicted energy savings, has a large impact on customer satisfaction, and is integral to a positive evaluation of the overall program. Quality of work is established through a quality assurance site inspection by a trained QA inspector.

The Work Quality score is derived in three steps:

1. Establish the total number of available points at a given job. A job may consist of one or more Energy Efficiency Measures or EEMs;
2. Assign the number of points that the installing contractor has earned based on the completeness and quality of the work; and
3. Calculate a normalized Work Quality score by dividing the earned points by the available points and then applying a modifier if a return visit is required.

The details of the steps are as follows:

1.1.1 Establish the total number of available points at a given job

Point values are assigned to all tasks within each EEM (See **Exhibit I: Energy Efficiency Measures**). The point system weights tasks by assigning more points to tasks that are considered more important to an EEM. Task weighting was determined using the professional judgment of the CLEAResult Quality Control Manager and consultation with peers.

However, some tasks are not applicable at certain jobs and some tasks cannot be inspected because of site conditions. The point values for these tasks are also not counted toward the total available points for the job.

Therefore, the total available points for the job is equal to the sum of the assigned points for all applicable and inspected tasks on the job. This number defines a perfect score for the job.

1.1.2 Assign the number of points that the installing contractor has earned based on the completeness and quality of the work

At each inspection, the QA inspector will evaluate the EEMs and associated tasks that were performed at that site. Every task will be rated by the inspector on a six-choice scale, with each rating determining a multiplier to be applied to the total available points for that task.

The following table provides scores, descriptions, and multipliers.

EEM Ratings		
Rating	Description	Multiplier
Pass	Work was performed correctly.	1.0
Conditional Pass	Work was performed but minor issues were found that should be communicated to the contractor.	0.67
Fail	Work was performed poorly or was not performed. Return visit or billing adjustment almost always required. In some circumstances, inspector may be able to correct issue.	0
Safety Issue	The worksite was left in a dangerous condition requiring immediate action to safeguard the occupants or structure. There does not need to be an emergency actually occurring at the time of the inspection; rather, the conditions must have created the potential for an emergency to occur.	0
Not Inspected	Work that could not be inspected due to site conditions and therefore is not included in point calculations.	None
Not Applicable	This task was not applicable to the site, and therefore is not included in the point calculations	None

1.1.3 Calculate a normalized Work Quality score by dividing the earned points by the available points and then applying a modifier if a return visit is required.

The Work Quality score will be calculated by dividing the sum of the earned points by the total available points. The resulting 'percentage achieved' is then multiplied by 10 to normalize the score on a 10-point scale.
That score will then be multiplied by a modifier of either 1, if a return visit is not needed, or 0.70 if a return visit is needed and it has been determined that the contractor is at-fault.

Measurement period:

Work quality scores will be calculated using a minimum of 5 scores from completed inspections in the past 90 days from the 1st of the month. If there are fewer than 5 inspections from the past 90 days, the time period will be extended until a minimum of 5 jobs have been completed.

A return may be considered a “no fault” under the following circumstances:

- When a return would not be required by program but needed due to a customer request;
- When there is inconclusive evidence as to whether contractor or homeowner caused damage/issue

- When program rules have changed such that a return is now required for previously approved practices
- When an improper work scope leads to an improper but directed installation of a measure in need of remediation.
- No points are deducted for a “no fault” return.

1.2 Customer Service Score

Customer service by the contractor is a high priority for CLEAResult clients as it often impacts the overall program impression for the customer. While there are various means of gauging customer satisfaction with various aspects of a program, customer satisfaction with a contractor’s work will be measured through a short list of questions posed by the CLEAResult QA inspector at the time of the inspection. This approach is being taken to ensure that there is customer service data for each job inspected.

The Customer Service scores is derived in two steps:

1. Assign the number of points that the installing contractor has earned based on a set of customer service questions: and
2. Calculate a normalized Customer Service score as a function of the individual customer service element scores.

The details of the steps are as follows:

1.2.1 Assign the number of points that the installing contractor has earned.

Each customer service element will be rated by the customer on a five-choice or 2 choice scale, with each rating determining a multiplier to be applied to the total available points for that element. The following table provides scores, descriptions, and multipliers.

Customer Service Ratings		
Rating	Description	Multiplier
Extremely Satisfied	Contractor exceeded the expected level of service	1.00
Very Satisfied	Contractor met the expected level of service	1.00
Satisfied	Customer did not feel strongly either way	0.70
Somewhat satisfied	Contractor provided a substandard level of service	0.40
Not at all	Contractor provided an unacceptable level of service	0.00
Not applicable	Intended to reflect that Customer could not or would not give score; does not calculate into available points.	0.00
Yes	Contractor met the expected level of service	1
No	Contractor did not meet the expected level of service	0

1.2.2 Calculate a normalized Customer Service score as a function of the individual customer service element scores

The customer service score will be calculated by dividing the sum of the earned points of the survey by the sum of the total available points. The resulting 'percentage achieved' is then multiplied by 10 to normalize the score on a 10-point scale.

Measurement period:

Customer service scores will be calculated using a minimum of 5 scores from completed inspections in the past 90 days from the 1st of the month. If there are fewer than 5 inspections from the past 90 days, the time period will be extended until a minimum of 5 jobs have been completed.

1.3 Data/Documentation Quality Score

The completeness and accuracy of the documentation submitted, as part of the invoicing process, directly impacts the speed with which CLEAResult can process the invoices. This directly impacts invoicing and reporting on jobs to the utility client. Incomplete and/or inaccurate documentation delays the resolution of work and can result in the wrong incentive being paid as well as improper savings reported, all of which impact the overall integrity of the program.

When the invoice package is received, it is rated based on 6 questions to complete the Data/Documentation Quality score:

1. Discrepancies in documentation (COC, Invoice)
2. Recorded and submitted pre and/or post test results appropriately
3. Discrepancies between documentation and actual site
4. Invoiced in a timely manner with all required paperwork (COC, Invoice, Combustion Safety Test form, Combustion Safety Disclosure form, Air sealing work order, Change order)
5. Invoice reflects accurately the contract and any change orders
6. Returned calls to LV contract staff in a timely fashion

The Data/Documentation Quality score will reflect how well the contractor is actually completing the work as specified and documenting any conditions or changes that are made to the site.

The Data/Documentation Quality score is derived in four steps:

1. Establish the total number of available points for each question for any given invoice package.

2. Assign the number of points that the invoice package has earned for each question.

3. Calculate normalized scores for each question; and

4. Calculate a normalized Data/Documentation Quality score by combining the scores for each question.

The details of the steps are as follows:

1.3.1 Establish the total number of available points for each question

1. Discrepancies in documentation (COC, Invoice) *(Available points 15)*

This question looks for matching information on the trade ally's COC and invoice. CLEARESULT Admin rates whether there are any discrepancies between the data/doc elements.

2. Recorded and submitted pre and/or post test results appropriately *(Available points 1)*

All data fields in data/doc element were completed and contain reasonable entries. This includes but is not limited to blower door pre and post tests and Combustion Safety testing.

3. Discrepancies between documentation and actual site *(Available points 15)*

CLEAResult QA inspector rates whether there are any discrepancies between the submitted data/doc elements and site conditions.

Discrepancies between Data/Doc Elements & Site Conditions, a discrepancy is defined as follows:

A discrepancy needs to pertain to a measure that was billed/invoiced, and the contractor must have not attempted the work in question. Conversely, if the contractor attempted to install a billed/invoiced measure but did it poorly, that would NOT be a discrepancy.

For example:

- If the contractor claimed they insulated 3 attic hatches but only 2 were insulated, that would be a discrepancy because they actually did not attempt one of them, but it was billed for. It would also get a Fail for the specific task because properly insulating the attic hatches requires completing all of them.
- If they missed insulating an entire section of the attic that was listed on their paperwork, that also would be a discrepancy because they didn't attempt it. It would also be a Fail for the appropriate tasks because by not insulating it, they left gaps, voids, etc.
    - But if they only did 4" of insulation when they should have done 6" that would just be a Fail and not a discrepancy. They attempted it but did it poorly.
- Another case is when the contractor reports a passing worst-case draft test, but our inspector finds it fails. In this case that would not be a discrepancy, because 1) it's not pertaining to a billed/invoiced measure and 2) we can't really tell if they did or didn't attempt to fix it originally. They would, of course, get a Fail for the appropriate task.

4. Invoiced in a timely manner with all required paperwork (COC, Invoice, Combustion Safety Test form, Combustion Safety Disclosure form, Air sealing work order, Change order) *(Available points 3)*

The CLEAResult administrative staff person will rate whether the entire package is submitted whole and on time. On time is considered to be 7 business days after the customer signs the COC. The Invoice package must also be complete and have all required documents. If there is a discrepancy with one of the documents but the package is complete and on time, this will not be considered a failure.

5. Invoice reflects accurately the contract and any change orders *(Available points 1)*

The CLEAResult administrative staff person will rate this question based on the invoice reflecting the correct amounts for incentives and a final total to be paid out. The final invoice should accurately reflect the final contract and incorporate any change orders that may have been required

6. Returned calls to LV contract staff in a timely fashion *(Available points 1)*

When and if needed a CLEAResult administrative staff person may reach out to a trade ally with questions. The Trade Ally is expected to respond in a timely fashion.

1.3.2 Assign the number of points that the invoice package has earned for each question

After completing the work, the contractor will submit to CLEAResult the invoice package for rating.

Discrepancies in documentation (COC, Invoice)

Discrepancies in documentation (COC, Invoice)		
Rating	Description	Available Points
Satisfactory	Admin can process the job with submitted data/doc elements	15
Unsatisfactory	Admin must ask Trade ally for some additional work or to make corrections.	0
NA	This question is not scored	Not counted

Recorded and submitted pre and/or post test results appropriately

Recorded and submitted pre and/or post test results appropriately		
Rating	Description	Available Points
Satisfactory	All data fields in data/doc element were completed and contain reasonable entries (i.e. not necessarily correct, but plausible)	1.0
Unsatisfactory	One or more data fields in data/doc element were either not completed or contain an unreasonable entry (e.g. phone number on CFM50 field)	0
NA	This question is not scored	Not counted

Discrepancies between documentation and actual site

Discrepancies between documentation and actual site		
Rating	Description	Available Points
Pass	No discrepancies exist between data/doc elements and site conditions	15
Fail	At least one discrepancy exists between data/doc elements and site conditions	0
N/A	This question is not scored	Not counted

Invoiced in a timely manner with all required paperwork (COC, Invoice, Combustion Safety Test form, Combustion Safety Disclosure form, Air sealing work order, Change order)

Timeliness		
Rating	Description	Available Points
Satisfactory	All applicable data/doc elements were submitted within 7 business days from the customer signature date on the COC and together in one initial submittal	1.0
Unsatisfactory	A single submittal with all applicable data/doc elements was not received within 7 business days from the customer signature date on the COC. This includes any case in which multiple incomplete (i.e. not containing all applicable elements) submittals were sent, even if when combined all were received before the 7-day deadline.	0
NA	This question is not scored	Not counted

Invoice reflects accurately the contract and any change orders

Invoice reflects accurately the contract and any change orders		
Rating	Description	Available Points
Satisfactory	The Invoice reflects the proper amounts and all change orders	1.0
Unsatisfactory	One or more data amounts or change orders were either not completed or contain an inaccurate entry	0
NA	This question is not scored	Not counted

Returned calls to LV contract staff in a timely fashion

Returned calls to LV contract staff in a timely fashion		
Rating	Description	Available Points
Satisfactory	Response times were reasonable	1.0
Unsatisfactory	Response time was not reasonable	0
NA	This question is not scored	Not counted

1.3.4 Calculate a normalized Data/Documentation Quality score

The score will be calculated by dividing the sum of the earned points by the total available points. The resulting 'percentage achieved' is then multiplied by ten to normalize the score on a ten-point scale.

Measurement period:

Data/Documentation Quality score will be calculated using a minimum of 5 scores from completed inspections in the past 90 days from the 1st of the month. If there are fewer than 5 inspections from the past 90 days, the time period will be extended until a minimum of 5 jobs have been completed.

1.4 Time to Serve

The speed at which a customer is severed is a vital component to maintaining a high level of customer service. The time to serve has many aspects that contribute to the timeline including, the time it takes to accept a work scope, the time to schedule that customer and then the time to install that customer, to list a few. Maintaining a quick turnaround for job completion is a key component to high customer satisfaction and helps the utility clients meet program goals and targets for the year.

1.4.1 Definition of Tasks

Contractor time to serve for customers who receive weatherization contract from a lead vendor will be measured on multiple date stamps in the program software.

1. Time from assignment to acceptance
   - Time is measured from the assignment date of the acceptance task to the completion date of the acceptance task.
2. Time from acceptance to schedule date being entered in the program software
   - Time is measured from the assignment date of the scheduling task to the completion date of the scheduling task.
3. Time from acceptance to install date
   - Time is measured from the completion date of the acceptance task to the measure install date.
4. Time from install date to original invoice date
   - Time is measured from the measure install date entered in the weatherization work review task to the completion of the weatherization work review task

The expected "time to serve" (the time span from acceptance of a Customer Contract through the time the Customer Contract is completed) is defined by the Program, based on the time of year or subject to the PAs discretion, as:

- **4 weeks** during **May**, **June**, **July** and **August**
- **5 weeks** during **March**, **April**, **September** and **October**
- **6 weeks** during **November**, **December**, **January** and **February**

- 1.4.2 Timeline for Tasks

Each task will have a defined time limit measured in business days as listed below.

Lead Vendor Generated wx contract	
Task	Business Days to Complete
Task 1	2
Task 2	5
Task 3	>2 and <20-30 depending on time of year
Task 4	7

Total Time to Serve	29-39 business days

1.4.3 Scoring of Tasks

Each task will have a point value as listed in the charts below. Any task completed outside the listed days to complete will receive 0 points for that task.

Lead Vendor Generated wx contract	
Task	Score
Task 1	2.0
Task 2	2.0
Task 3	4.0
Task 4	2.0
Total Score	10.0

1.4.4 Calculating a Normalized Score for Time to Serve

All Projects will receive a Time to Serve score upon completion. All scores will be averaged to determine a normalized score on a ten-point scale.

Measurement period:

- Time to serve score will be calculated using a minimum of 5 scores from completed jobs in the past 90 days from the 1st of the month. If there are fewer than 5 jobs from the past 90 days, the time period will be extended until a minimum of 5 jobs have been completed.

1.5 Customer Recruitment:

Contractor's marketing efforts are important component to supplement the work provided by the LV. Being focused on bringing in customers helps contractors navigate through slower times of LV work, while also aiding the utility clients in meeting program goals and targets for the year.

The Customer Recruitment Score is derived from referrals sent in from contractors that result in completed weatherization work. Other rules and restrictions may apply and will be communicated outside this methodology.

1.5.1 Definition of a referral

A referral is a customer that has not been served by the program in the past 3 years. That customer must be submitted by the contractor with the required information and documentation through the LV process. Direct weatherization and Participating Contractor Referrals (PCRs) are both effective ways for trade allies to bring additional customers into the program. Customer requests do not count as referrals.

1.5.2 Establishing Customer Recruitment Score

The program will set a target of 5% of total work completed for the year by a trade ally must be from either Direct Wx or PCR generated customers. The trade ally generated work percentages will then be compared to the program standard. Points will be awarded based on a percentage below target. Trade allies can score up to 100 points. Which is then divided by 10 to align with the 10-point scale of all scoring components.

Examples (percent and scores can fall anywhere in between these examples)

Percentage	Points	Score
≥5%	100	10
2.50%	50	5
0%	0	0

1.5.3 First time or newly onboarded trade allies

For up to 6 months of participation in Lead Vendor allocated work, this component will be defaulted to 8.0. This is to ensure we have an adequate data size to calculate the component grade. while giving TA time to acclimate to the requirement.

1.6 Price Grade

Cost effectiveness is important to controlling the longevity of the overall program. One of the goals of the Mass Save Program is to provide the highest value of energy saving measures at the most cost-effective price. The introduction of the Measure Price Bidding RFQ allows us the opportunity to evaluate each trade ally's responses to determine their ability to meet the financial needs of the program.

1.6.1 Bid ranking process

The process to evaluate each bid will be to apply the price the trade ally bids for each line item to the total quantity of installed measures for a set time in the program past. This will provide the total value a respondent's bid would have on that line item for the same time period. All line items will be totaled and compared to the actual total of the measure spend for the set time period except any measure-level bids after request for clarification that continue to fall below two standard deviations from the mean, which will not be used in the calculation of your bid ranking. Trade Allies will then be ranked according to what percentage their bid would increase or decrease the total cost to the program for that time period. The trade ally with the lowest impact will be ranked number one. Bids will be ranked from lowest impact to highest impact.

Only the measures that are required as part of the bid package will be evaluated.

1.6.2 Scoring of each rank

The process to score a respondents' rank is as follows:

- Each trade allies bid will be ranked based on overall percentage from the established spend.

- Rank 1 will receive 10 points and each rank will subtract an equal point value from the previous rank based on the remaining number of ranked trade allies.
- Only trade allies with active participation agreements can be ranked.
- Trade allies that do not bid or join off cycle will not be ranked till the next bid. They will receive a zero for this component.
- Price grades will be a static score until the next round of bidding.

2.0 COMPONENT WEIGHTING

The component weighting supports the overall program goals as set by the PAs, in that it allows a PA or PAs to set preferences for relative importance of each component. The Component Weighting criteria are set prior to the rollout of the program through consultation with the PAs. Weighting is subject to change at any time to align to the program's needs or targets.

The weighting for the Job Score components is as follows:

Score Component Weights IICs	
Component	Weighting
Work Quality WFA	0.40
Customer Service WFA	0.10
Data / Document Quality WFA	0.05
Time to Serve / Capacity	0.15
Customer Recruitment	0.10
Pricing Grade	0.20
Total	**1.00**

3.0 CALCULATION OF THE CONTRACTOR GRADE

The calculation of the contractor grade is determined by multiplying the component score by its assigned weighting. Sum the weighted scores and round to the nearest hundredths place.

Example	Overall Grade 9.34					
Category	**Work Quality**	**Customer Service**	**Doc Quality**	**TTS/Capacity**	**Customer Recruitment**	**Pricing Grade**
Score	**9.75**	**9.65**	**8.75**	**8.78**	**7.2**	**10**
Weight	**0.40**	**0.10**	**0.05**	**0.15**	**0.1**	**0.2**
Result	**3.9**	**0.965**	**0.4375**	**1.317**	**0.72**	**2**

Exhibit I: Energy Efficiency Measures

Knob and Tube Wiring is not a scored item; however, it should be dealt with as follows if discovered:

Knob & Tube Wiring				
Task	**Description**	**Pts**	**Return**	**Homeowner Follow Up**
Knob and Tube Wiring **(SI!)**	If there is knob and tube wiring covered by insulation, the inspector should ask for the letter from the electrician certifying that it is deactivated. **If there is no letter, then it is a Safety Issue.**	N/A	ASAP	Inform the HO that this type of wiring should not be insulated over and that an electrician should have examined and signed off that the wiring is inactive before work proceeded. Either the contractor or electrician shall be made to return immediately.

Attic Air Sealing				
Task	**Description**	**Pts**	**Return**	**Home Owner Follow Up**
Top Plates Sealed	This refers to all interior and exterior wall plates.	1	-	-
Knee Wall Transition Bypass Sealed	Specific to the floor joist transition where an unfinished floor area meets a finished space at a kneewall.	1	-	-
Plumbing Wet Wall(s) Sealed	This includes not only the vent penetration but the wall plate or opening itself which may be a sizable gap requiring an approved backer.	1	-	-
Chimney Penetration(s) Sealed (SI!)	This can include masonry chimneys or metal flues. Fireproof materials must be used here. This task can receive a Conditional Pass or a Fail if fireproof materials are installed, but the quality of the work is either poor (fail) or could be improved by an FYI (conditional pass). **Safety Issue if NON-fireproof materials were installed.**	1	ASAP	Inform the HO that the chimney/flue clearance to combustibles does not meet program standards and will need to be adjusted.
Recessed Lights Covered/Sealed (SI!)	This would also refer to covering material (tops and sides) and clearance from the fixture. This task can receive a Conditional Pass or a Fail if the correct materials are used and the specified clearances are maintained, but the quality of the installation is poor (fail) or	1	48 Hrs	Inform HO that recessed lights clearances to combustibles does not meet program standards and will need to be adjusted. The HO should be made to understand that the

	could be improved by an FYI (conditional pass). **Safety Issue if correct materials are NOT used or specified clearances are NOT maintained.**			recessed lights are not to be used until the situation is addressed.
Attic Access(s) Sealed	This could include the insulated attic access cover.	2	-	-
Drop Soffit Area(s) Sealed	Approved material used and sufficiently supported.	1	-	-
Mechanical Chase(s) Sealed	Includes AC/heating boots	1	-	-
Attic Level Transitions Sealed	This refers to sealing the open wall bays where top plates should be when an attic transitions from one level to another.	1	-	-
Bath Fans Sealed	Self-explanatory.	1	-	-
Air Barrier (e.g. Rigid Board) Properly Installed Over Open Cavities	Air barrier must be consistent – no gaps and sealed seams and edges.	1	-	-

Attic Insulation				
Task	**Description**	**Pts**	**Return**	**Homeowner Follow Up**
Presence of Continuous Air Barrier Verified Prior to Insulating	If there were any problems found in the air sealing inspection, then the air barrier is not continuous and therefore the contractor did not verify it prior to insulating.	1	-	-
Specified R-Value Installed	Correct depth installed, as measured by the difference between final and pre-existing depth and matches what is specified on the work order.	1	-	-
Insulation Quality: No Gaps, Voids, or Compression (includes non-Densepack enclosed cavities)	All applicable areas insulated. Blown insulation must be level. Batt insulation must be installed across joists with no air space between layers. Enclosed spaces must be filled. Square footage of installed insulation matches what was specified to within +/- 10%.	1	-	-
Heat Sources Dammed (SI!)	Includes recessed lights, fan/light combos, heaters, chimneys, flue pipes, kitchen exhaust ducts. Heat sources are singled out for damming in this task because they are a potential fire hazard. This task could receive a Conditional Pass or Fail if the correct materials were used and the specified clearances were maintained, but the dam itself does not perform the task it was installed for. This may include not	1	Varies	If heat source can be made temporarily safe by not using it, inform the HO to not use it and have the contractor return to fix it within 48 hrs. If it is the type that cannot be shut off then the contractor shall return ASAP to fix it.

	extending far enough above the blown insulation to serve as an effective dam or not be secured or fastened well enough to remain in place for its' expected life years. **Safety Issue if fireproof materials were NOT installed.**			
Wind Baffles Installed	Bottom of the vent chute blocked properly with an air impervious barrier to prevent wind wash and insulation spillage.	1	-	-
Vent Chutes Properly Installed	Also known as propavents, they maintain an air passageway from the soffit up the roof slope.	1	-	-
Exhaust Fans Vented as Specified	Bathroom vent fans connected with an insulated hose to an approved termination outside of the attic.	1	-	-
Attic Venting Installed as Specified	Correct amount installed and was installed properly (i.e. no leaks, no straddling rafters, etc.).	1	-	-
Densepack: Installed Material is Densepacked	Self-explanatory.	1	-	-
Site Restored to Original Condition	No messes left behind, doors and hatches were closed properly, storage square footage was maintained.	1	-	-

Wall Insulation		
Task	**Description**	**Pts**
Specified R-Value Installed in Open Cavities	Self-explanatory.	1
IR Scan Detects No Gaps, Voids, or Compression	Self-explanatory. See the M&I Appendix TBD for IR scan procedures. Square footage of installed insulation matches what was specified to within +/- 10%.	2
Drill Holes Patched Properly	Plugged and one layer of spackle. This is for interior Drill and Blow.	1
Drainage Plane Repaired	Tyvek, EPS, or tar paper layer repaired so it sheds water shingle style.	2
Cladding/Sheathing Properly Repaired	Siding was replaced properly.	1
Site Restored to Original Condition	No messes, damaged landscaping, poor touch-up paint, etc.	1

Basement/Crawlspace Air Sealing (Incl. Frame Floor Over Ambient)				
Task	**Description**	**Pts**	**Return**	**Home Owner Follow Up**
Plumbing Penetrations Sealed	Self-explanatory.	1	-	-
Wiring Penetrations Sealed	Self-explanatory.	1	-	-
Chimney Chases Sealed (SI!)	Must use fireproof materials and methods. This task could be a CP or Fail if the correct materials were used, but the workmanship was too poor for the task to perform its intended function. This task could be a CP if the materials are correct, it performs its' function, but the workmanship could be improved by an FYI to the installer. **Safety Issue if fireproof materials were NOT installed.**	2	ASAP	Inform HO that clearances to combustibles does not meet program standards and that it will need to be adjusted.
Mechanical Chases Sealed	Approved material adequately fastened. Just like the attic this can include heating and cooling boots.	2	-	-
Rim and Band Joist Sealed	This would include open balloon framing.	2	-	-
Basement Access Sealed	Depending on where the thermal boundary is set, this may be from exterior to basement or from basement to living space.	1	-	-
Ground Cover Installed and Sealed	Vapor barriers over dirt floors.	2	-	-
Windows Caulked or Foamed	Depending on where the thermal barrier is set. If the basement is considered conditioned, then the windows should be made tighter if possible.	1	-	-

Basement/Crawlspace Ceiling Insulation (Incl. Frame Floor Over Ambient)		
Task	**Description**	**Pts**
Specified R-Value Installed	Self-explanatory.	1
Insulation properly installed	Insulation should be touching the floor it is keeping warm. No gaps between the insulation and the floor sheathing.	2
Rigid Board Insulation Is Continuous Without Gaps or Voids	This includes sealed seams and edges, as well as properly covering exposed edges of foil-faced and FSK board with foil tape. (not required on extruded polystyrene). Square footage of installed insulation matches what was specified to within +/- 10%.	1
Site Restored to Original Condition	No messes left behind, do doors and hatches were closed properly, storage square footage was maintained.	1

Basement/Crawlspace Wall Insulation (Includes Rim & Band Joist)		
Task	**Description**	**Pts**
Exposed rigid foam board or spray foam has a thermal barrier, if required	Foam board should have no areas of exposed core. Spray foam is required to have intumescent paint.	1
Rim and Band Joist Properly Insulated	Fiber glass or Rigid Board Insulation is continuous without gaps voids, or compression	1

Living Space Air Sealing (Garage Wall Mandatory)		
Task	**Description**	**Pts**
Interior wall penetrations sealed	Use a compatible material that can be finished by the homeowner.	1
Ext. Doors Swept and Weather stripped	Q-lon with backer or approved material.	1
Doors to Attached Garage Weather stripped	Q-lon with backer or approved material.	1

Combustion safety Visual Inspection				
Task	**Description**	**Pts**	**Return**	**Homeowner Follow Up**
Correct Fuel Identified	Correct test performed for fuel type.	1	-	-
Located All CAZ	All equipment was tested, and the depressurization set up accurately defined the CAZ. In homes with multiple CAZ, all were located and tested.	2	-	-
Correct Venting Type Identified	This will come from the TAs test results form also from whether or not the TA drilled holes or got test results. The TA must have also performed the correct tests based on the type of venting system.	2	-	-
Identified Any CAZ or Appliance Related Safety Issues (SI!)	Issues include detached or corroded flue pipes or problems with size or pitch, problems with DHW relief valve, broken or kinked oil lines, water leakage, open returns, no air filter, etc. Contractor should have corrected any issues. All of these issues can be either a Fail or a Safety Issue. They are a Fail if they exist, but the house is not imminent danger of explosion	1	ASAP/48 Hrs	This is a broad category. If the situation places the HO in immediate danger (elevated CO or gas levels) they should be asked to evacuate, and the contractor shall return immediately. Otherwise, the HO should be informed that the task does not meet program standards and that the contractor will return within 48 hrs to

	or fire, and the ambient CO is not elevated due to the problem.			adjust. Specific guidance can be offered depending on the situation.

Testing Inspection				
Task	**Description**	**Pts**	**Return**	**Homeowner Follow Up**
All Significant Gas Leaks Were Detected & Repaired (SI!)	Contractor's gas leak results must match inspectors. **Any gas leak that can be verified with a soapy solution should be considered a Safety Issue.**	1	ASAP	Each program should follow their client's procedures for this emergency.
Correctly Measured CAZ(s) De-pressurization (SI!)	Contractor's results must match inspectors. Includes proper set up of exhaust appliances and doors. If the CAZ fails the depressurization limit, but the appliances still pass spillage and draft under worst case this is a Fail. If the CAZ fails the depressurization limit, and under natural conditions the appliances fail spillage or draft, it is a Safety Issue.	1	24 Hrs	Inform the HO that the combustion testing has revealed a situation that does not meet program standards and that the contractor will need to return to adjust. If possible, make temporary adjustments to the CAZ to provide pressure relief and instruct the HO not to undo the temporary fix.
Spillage Assessment Correct (SI!)	Contractor's results must match inspector's. Spillage is occurring under worst case conditions, but not causing unsafe levels of CO would be a Fail. **Spillage occurring at worst case that does cause unsafe levels of CO or any spillage that occurs under natural conditions should be considered a Safety Issue.**	1	24 Hrs	See #2 above. If pressure relief to the CAZ does not stop spillage, the appliance should be turned off and the contractor shall return immediately.
Draft Measurements Correct (SI!)	Contractor's results must match inspector's. Includes test hole drilled in correct location. **Failure of the draft test under natural conditions or failure at worst case that is causing spillage and unsafe levels of CO is a Safety Issue.** Failure at worst case that is not spilling is a fail.	1	24 Hrs	See #2 above. If pressure relief to the CAZ does not stop spillage, the appliance should be turned off and the contractor shall return immediately.

Ambient CO Measurements Correct (SI!)	Contractor's results must match inspector's. **Ambient CO that exceeds 35 ppm under any circumstances is a Safety Issue. Ambient CO that exceeds 9 ppm (OSHA 8 hour exposure limit) under non-testing conditions is a Safety Issue.**	1	ASAP	If CO exceeds 35 ppm during testing, inform HO that house is temporarily unsafe and recommend leaving until ambient CO level returns to safe levels. If baseline CO is more than 9 ppm but less than 35, inform HO that house is not safe to be in for long periods of time and recommend that they have the system evaluated by a BPI certified HVAC contractor.
Appliance CO Measurements Correct (SI!)	Contractor's results must match inspector's. Includes number of results. **Appliance CO measurements should only be considered a Safety Issue if they are combined with either spillage or draft test failures at natural conditions**. Otherwise, it should be considered a Fail and the Action Levels Table referred to.	1	ASAP	Inform HO that appliance is producing unsafe levels of CO and not venting properly. Recommend turning off appliance and having it evaluated by a BPI certified HVAC contractor.
Test Results Interpreted Correctly	Contractor's actions must be consistent with BPI's Combustion Safety Test Action Levels Table based on the results of their combustion testing.	3	-	-

Duct Sealing				
Task	**Description**	**Pts**	**Return**	**Homeowner Follow Up**
Approved material used as sealant	Self-explanatory.	1		
All field seams sealed	Self-explanatory.	1		
All manufacture's seams sealed	Self-explanatory.	1		
Filter slot treated	Self-explanatory.	1		

Boots sealed to interior material	Self-explanatory.	1		
Air handler sealed	Self-explanatory.	1		

Duct Insulation				
Task	**Description**	**Pts**	**Return**	**Homeowner Follow Up**
Correct R-value installed	Self-explanatory.	1		
Insulation snug not compressed	Self-explanatory.	1		
Seams stapled securely	Self-explanatory.	1		
Vapor retarder continuous	Self-explanatory.	1		
Vapor retarder sealed w/duct tape	Self-explanatory.	1		

Blower Door Testing				
Task	**Description**	**Pts**	**Return**	**Homeowner Follow Up**
Contractor's post-test within 10% of inspector’s post-test	Self-explanatory.	3		
Post-test CFM 50 greater than or equal to 70% of BAS	Self-explanatory.	3		

Exhibit II

Question	Scored	Possible points
Overall, how satisfied were you with the scheduling process with your contractor for your insulation work?	Yes	1
Did the contractor arrive during the time window specified?	Yes	1
If not, did the contractor clearly communicate any delays prior to arrival?	Yes	1
Did the contractor present themselves professionally with identification?	Yes	1
How satisfied were you with the contractor's explanation of the work to be performed?	Yes	1
Did the contractor answer all your questions? If no, please explain in the comments section.	Yes	1
How satisfied were you with how well the contractor cleaned up following the installation of insulation and/or air sealing?	Yes	1
Would you recommend this contractor to a friend or family member?	Yes	1