

# COMMUNITY HOUSING PARTNERS

WV Office of Economic Opportunity

RFQ GOE012014 for Quality Control Inspector (QCI) &  
Energy Auditor (EA) Refresher and Retesting

May 27th, 2014 1:30 p.m. Eastern Time



State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**Solicitation**

NUMBER
GOE012014

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
BETH COLLINS 304-558-2157

RFQ COPY

VENDOR

TYPE NAME/ADDRESS HERE  
*CHP Energy Solutions*  
*550 Industrial Drive*  
*Christiansburg, VA 24073*

SHIP TO

GOVERNORS OFFICE OF ECONOMIC OPPORTUNITY  
 950 KANAWHA BOULEVARD, EAST  
 CHARLESTON, WV  
 25301 304-558-8860

DATE PRINTED
04/30/2014

BID OPENING DATE: 05/22/2014 BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		924-35		
IN-SERVICE TRAINING						
REQUEST FOR QUOTATION (RFQ)						
THE WEST VIRGINIA STATE PURCHASING DIVISION FOR THE AGENCY, OFFICE OF ECONOMIC OPPORTUNITY, IS SOLICITING BIDS FOR TWO (2) REFRESHER COURSES AND RETESTING PER THE ATTACHED SPECIFICATIONS.						
***** THIS IS THE END OF RFQ GOE012014 ***** TOTAL:						

SIGNATURE <i>[Signature]</i>	TELEPHONE 540-382-2002	DATE 5-22-14
TITLE CAO	FEIN 54102 3025	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



**Solicitation**

State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

NUMBER	PAGE
G0E012014	1
ADDRESS CORRESPONDENCE TO ATTENTION OF	
BETH COLLINS 304-558-2157	

RFQ COPY

TYPE NAME/ADDRESS HERE

CHP Energy Solutions  
 550 Industrial Dr.  
 Christiansburg, VA 24073

GOVERNORS OFFICE OF ECONOMIC OPPORTUNITY

950 KANAWHA BOULEVARD, EAST  
 CHARLESTON, WV 25301 304-558-8860

DATE PRINTED
05/15/2014

BID OPENING DATE: 05/27/2014 BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
				ADDENDUM NO.01		
				THIS ADDENDUM IS ISSUED TO MODIFY THE ORIGINAL SOLICITATION PER THE ATTACHED DOCUMENTATION.		
0001	1	LS		924-35		
				IN-SERVICE TRAINING		
***** THIS IS THE END OF RFQ G0E012014 ***** TOTAL:						

SIGNATURE <i>[Signature]</i>	TELEPHONE 540-382-2002	DATE 5-22-14
TITLE CAO	FEIN 541023025	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**SOLICITATION NUMBER: GOE012014**  
**Addendum Number: 01**

---

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

**Applicable Addendum Category:**

- Modify bid opening date and time
- Modify specifications of product or service being sought
- Attachment of vendor questions and responses
- Attachment of pre-bid sign-in sheet
- Correction of error
- Other

*✓ 5/16/14*

**Description of Modification to Solicitation:**

This addendum is issued to provide answers to vendor submitted questions as well as clarifications.

The bid opening date will change to May 27, 2014 at 1:30 PM, EST.

**Additional Documentation:** Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

**Terms and Conditions:**

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

## Technical Questions and Clarifications for GOE012014

3.1.1.4 – Reads as “Vendor must purchase and provide to OEO, hard copy certificates for each participant who earned one, within 30 calendar days after the completion of each training.”

- **Should be deleted because Building Performance Institute administers the certificates after tests are sent in for grading, etc.**

3.1.1.6 – Reads as “Training will be begin in the afternoon of day one and both field and written testing will occur in the afternoon of day three. allowing for students to travel to the training site during the morning of day one and receive 2 days of instruction.”

- **Should be deleted**

3.1.1.7 – Reads as “Each Training must be 14 hours of instructional time.”

- **Should be deleted**

3.1.2.2 – Reads as “Vendor must provide a class for a maximum of 11 students.”

- **Should read as “Vendor must provide a class for a maximum of 11 students. Vendor must provide the written examination for 8 students and the field examination for 3 students. Training must include at least 21 hours of instructional time. Training will preferably be provided on Monday, Tuesday, and Wednesday and testing will preferably occur on Thursday and Friday of the same week.”**

3.1.3.2 Reads as “Vendor must provide a class for a maximum of 10 students.”

- **Should read as “Vendor must provide a class for a maximum of 10 students. Vendor must provide the written examination for 6 students and the field examination for 5 students. Training must include at least 21 hours of instructional time. Training will preferably be provided on Monday, Tuesday, and Wednesday and testing will preferably occur on Thursday and Friday of the same week.”**

*V. Jones*

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: G0E012014**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

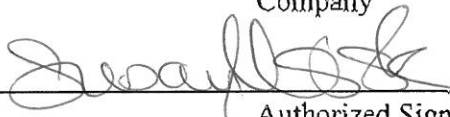
**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

(Check the box next to each addendum received)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

CHP Energy Solutions  
 Company  
  
 Authorized Signature  
5/22/14  
 Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.  
 Revised 6/8/2012

**Attachment A - Pricing Page**

**RFQ - GOE012014**

**Two (2) Refresher Training Courses**

<u>Section</u>	<u>Description</u>	<u>Unit of Measure</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Extended Price</u>
3.1.2 (Class #1)	Quality Control Inspector Refresher Course and Retesting for three days. (max. of 11 students per class) Price includes testing fees for 8 written and 3 field exams.	Class	\$12,350.00	1	\$ 12,350.00
	Mileage for Class #1 to vendor's training location listed below from agency address being: 700 Washington Street East, Charleston, WV 25301	Round Trip Miles (Mileage Rate \$0.47 x max. number of students being 11)	\$141.00	11	\$ 1,551.00
3.1.3 (Class #2)	Energy Auditor Refresher Course and Retesting for three days. (max. of 10 students per class) Price includes the test fees for 6 written and 5 field exams.	Class	\$12,500.00	1	\$ 12,500.00
	Mileage for Class #2 to vendor's training location listed below from agency address being: 700 Washington Street East, Charleston, WV 25301	Round Trip Miles (Mileage Rate \$0.47 x max. number of students being 10)	\$141.00	10	\$ 1,410.00
<b>**Class Course and Retesting Total</b>					\$ 24,850.00
<b>***Mileage Total</b>					\$ 2,961.00
<b>***GRAND TOTAL</b>					\$ 27,811.00

**Vendor's Training Location Class #1: (MUST be a physical address)**

Street:	550 Industrial Dr.			
City, State, Zip	Christiansburg, VA 24073			

**Vendor's Training Location Class #2: (MUST be a physical address)**

Street:	550 Industrial Dr.			
City, State, Zip	Christiansburg, VA 24073			

*Vendor must provide a physical address in which the training will take place.				
*The mileage must be calculated for round trip. Mileage amount is for evaluation purposes only.				
*Vendor's bid is to be all inclusive, no additional shipping or travelling costs will be paid.				
*Vendor should complete the pricing page as Unit Cost x Quantity = Extended Price.				
**Class Course and Retesting Total is the total of class #1 + class #2				
***Mileage total is round trip mileage for class #1 + round trip mileage for class #2.				
***Grand Total is Class Course and Retesting Total + Mileage Total.				



**ENERGY  
SOLUTIONS**

**RESEARCH &  
TRAINING**

# Training Services Agreement Between

**CHP Energy Solutions Research and Training**

and

**The State of WV- Office of Economic Opportunity**

## *History –*

CHP Energy Solutions is an Interstate Renewable Energy Council (IREC) Accredited Training Provider™ for its Quality Control Inspector, Energy Auditor, Crew Leader, and Retrofit Installer Technician courses.

In June 2012, CHP Energy Solutions became the first training center in the nation to obtain IREC accreditation for an energy efficiency program. The training center earned this distinction for its Retrofit Installer Technician course.

Subsequently, in May 2013, CHP Energy Solutions became an IREC Accredited Training Provider™ for its Quality Control Inspector and Energy Auditor training programs, and in December 2013, it earned IREC accreditation for its Crew Leader training program.

CHP Energy Solutions has delivered its Quality Control Inspector course since November 2012. It has delivered its Energy Auditor course since May 2012, its Crew Leader course since April 2013, and its Retrofit Installer Technician course since October 2011.

CHP Energy Solutions has also licensed its Quality Control Inspector curriculum to the Building Performance Center, which became IREC accredited in December 2013 using this curriculum.

## **CHP Energy Solutions Services:**

### *Training Center -*

In addition to our experience as a WAP provider, CHP is also home to a nationally-renowned energy training center – CHP Energy Solutions Research and Training, formerly the New River Center for Energy Research and Training (NRCERT). Since 1999, CHP Energy Solutions Research and Training (CHP) has trained over 30,000 participants in building science and energy conservation techniques in over 40 states across the United States.

**Community Housing Partners**  
www.CommunityHousingPartners.org

550 Industrial Drive, Christiansburg, VA 24073 | (540) 260-9081, fax: (540) 260-9084 | (540) 260-9084







**ENERGY  
SOLUTIONS**

**RESEARCH &  
TRAINING**

**Community Housing Partners**

550 Industrial Drive, Christiansburg, VA 24073 | (540) 260-9081, fax: (540) 260-9084 | www.CommunityHousingPartners.org



## **RFQ GOE012014 Proposed Services Response:**

CHP Energy Solutions has been an IREC accredited training center since June 2012 (See attached certificates). The training center is fully prepared to offer QCI and EA refresher courses and testing **3.** in the following formats: QCI refresher Monday thru Wednesday June 16<sup>th</sup>-18<sup>th</sup> with testing to be completed on Thursday June 19<sup>th</sup> for eight (8) written and three (3) field exams; Energy Auditor refresher Monday thru Wednesday June 23<sup>rd</sup> – 25<sup>th</sup> with testing for six (6) written and five (5) field exams to take place Thursday June 26<sup>th</sup> and Friday June 27<sup>th</sup>. The refresher courses and testing will occur at CHP Energy Solutions' training center. It houses three test houses approved by BPI to accommodate the testing schedule needed to complete the process by June 27<sup>th</sup>.

### **The following are responses to RFQ GOE012014 requirements:**

**3.1.1.1** CHP Energy Solutions is fully capable and prepared to provide the QCI & EA Refresher courses and testing at its location at 550 Industrial Drive, Christiansburg, VA.

**3.1.1.2** CHP Energy Solutions is an IREC accredited training provider and documentation is included within this response.

**3.1.1.3** CHP Energy Solutions provides all of its students with binders full of power point slides, reference documents, the JTAs associated with the course, BPI field guides for studying, and many other resources. Each student also has access to quizzes and pre-tests to prepare them for the BPI exams.

**3.1.1.4** Has been deleted per addendum 1.

**3.1.1.5** All costs have been included in the outlined costs listed in the pricing sheet.

**3.1.1.6** Has been deleted per addendum 1. Outline of training times is included in the above paragraphs.

**3.1.1.7** Has been deleted per addendum 1. CHP Energy Solutions has modified its response accordingly.

**3.1.1.8** CHP Energy Solutions is prepared to meet the June 27<sup>th</sup> deadline to fulfill the terms of RFQ GOE012014.

**3.1.1.9** CHP Energy Solutions will verify with the students that they have been approved to take the exams. Approval letters will be collected and filed per BPI's regulations. All students that have been approved to sit for the exams in the Pilot Phase in 2012 are still approved to take the exams.

**3.1.1.10** CHP Energy Solutions has three training and testing houses within its facility that have been BPI approved for QCI and EA training and testing.



**ENERGY  
SOLUTIONS**

**RESEARCH &  
TRAINING**

**Community Housing Partners**

550 Industrial Drive, Christiansburg, VA 24073 | (540) 260-9081, fax: (540) 260-9084 | www.CommunityHousingPartners.org



### ***Class # 1- Quality Control Inspector Refresher Course and Retesting***

**3.1.2.1** No response needed.

**3.1.2.2** CHP Energy Solutions is prepared to provide training and testing for a maximum of 11 students for QCI.

**3.1.2.3** CHP Energy Solutions will coordinate with the WV Office of Economic Opportunity concerning student's names and needs around exams types.

### ***Class # 2- Energy Auditor Refresher Course and Retesting***

**3.1.3.1** No response needed.

**3.1.3.2** CHP Energy Solutions is prepared to provide training and testing for a maximum of 10 students for Energy Auditor.

**3.1.3.3** CHP Energy Solutions will coordinate with the WV Office of Economic Opportunity concerning student's names and needs around exams types.

The agency is responsible for registering all students in the course through CHP Energy Solutions' Learning Management System (LMS) located here <https://lms.chplearning.org/app/register> prior to the students attending the training or testing.

The WV Office of Economic Opportunity agrees to reimburse and pay CHP Energy Solutions for the two (2) trainings as outlined in this agreement. This cost covers CHP Energy Solutions' staff time for preparation, instruction, travel, lodging, per diem, binders/handouts, and trainer during the training and other costs directly related to the training as well as technical assistance provided before and after the training sessions.

Any changes to this agreement must be made in writing and agreed to by both parties.

Proposal for Costs for the QCI and EA Refresher and Retesting courses not to exceed: \$27,811.00



**ENERGY SOLUTIONS**

**RESEARCH & TRAINING**

**Community Housing Partners**

550 Industrial Drive, Christiansburg, VA 24073 | (540) 260-9081, fax: (540) 260-9084 | www.CommunityHousingPartners.org

**Tentative class Schedule:**

*QCI Refresher and Retesting:*

Monday- Wednesday June 16<sup>th</sup> – 18<sup>th</sup> Refresher training

Thursday June 19<sup>th</sup> QCI Retesting (8 written & 3 field)

*Energy Auditor Refresher and Retesting:*

Monday – Wednesday June 23<sup>rd</sup> – 25<sup>th</sup> Refresher training

Thursday – Friday June 26<sup>th</sup>-27<sup>th</sup> EA Retesting (6 written & 5 field)

If you require any further clarification or information please don't hesitate to contact Phil Hull at the office or by cell. The office phone is (540) 260-9081 EXT 4012; my cell phone is (540) 239-0917.

Susan Sisk  
Date  
Chief Administrative Officer

5/22/14

State of West Virginia  
Date  
Office of Economic Opportunity  
Authorized Representative





THIS IS TO ATTEST THAT

**CHP Energy Solutions, LLC**

is recognized as an

**IREC ACCREDITED TRAINING PROVIDER**

for the job task analysis **Quality Control Inspector** for the course

**Quality Control Inspector**

AS ASSESSED BY THE IREC REGISTERED ASSESSORS AND THE IREC AWARD COMMITTEE

Date of Issue: 5/23/2013  
Date of Expiration: 5/23/2018  
Certificate Number: IREC\_80004\_TP\_QCI

A handwritten signature in black ink, appearing to read "Jane M. Weissman".

Jane M. Weissman  
President and Chief Executive Officer  
Interstate Renewable Energy Council, Inc.



This is to certify that **New River Center for Energy Research and Training** is recognized as an

**IREC ISPQ Accredited Training Program**

for curriculum covering the Job Task Analysis

**Energy Auditor (NREL)**

for the course(s):

**Energy Auditor**

As assessed by the IREC ISPQ Registered Assessors and the IREC ISPQ Award Committee to the  
IREC ISPQ International Standard 01022:2011

Approved by

Jane M. Weissman, President and  
Chief Executive Officer  
Interstate Renewable Energy Council, Inc.  
North American IREC ISPQ Licensee

Date of Issue  
May 23, 2013

Certificate Number(s)  
IREC\_60009\_TP\_EA

Date of Expiration  
May 23, 2018



THIS IS TO ATTEST THAT

**CHP Energy Solutions, LLC**

is recognized as an

**IREC ACCREDITED TRAINING PROVIDER**

for the job task analysis **Crew Leader** for the course

**Crew Leader**

AS ASSESSED BY THE IREC REGISTERED ASSESSORS AND THE IREC AWARD COMMITTEE

Date of Issue: 12/12/2013  
Date of Expiration: 12/12/2018  
Certificate Number: IREC\_70011\_TP\_CL

A handwritten signature in black ink, appearing to read "Jane M. Weissman".

Jane M. Weissman  
President and Chief Executive Officer  
Interstate Renewable Energy Council, Inc.



THIS IS TO ATTEST THAT

**CHP Energy Solutions, LLC**

is recognized as an

**IREC ACCREDITED TRAINING PROVIDER**

for the job task analysis **Retrofit Installer Technician** for the course

**Retrofit Installer Technician**

AS ASSESSED BY THE IREC REGISTERED ASSESSORS AND THE IREC AWARD COMMITTEE

Date of Issue: 6/7/2012  
Date of Expiration: 6/7/2017  
Certificate Number: IREC\_50008\_TP\_RIT

A handwritten signature in black ink, appearing to read "Jane M. Weissman".

Jane M. Weissman  
President and Chief Executive Officer  
Interstate Renewable Energy Council, Inc.



**ENERGY  
SOLUTIONS**

**RESEARCH &  
TRAINING**

V14

**CHP Energy Solutions Research and Training**

550 Industrial Drive

Christiansburg, VA 24073

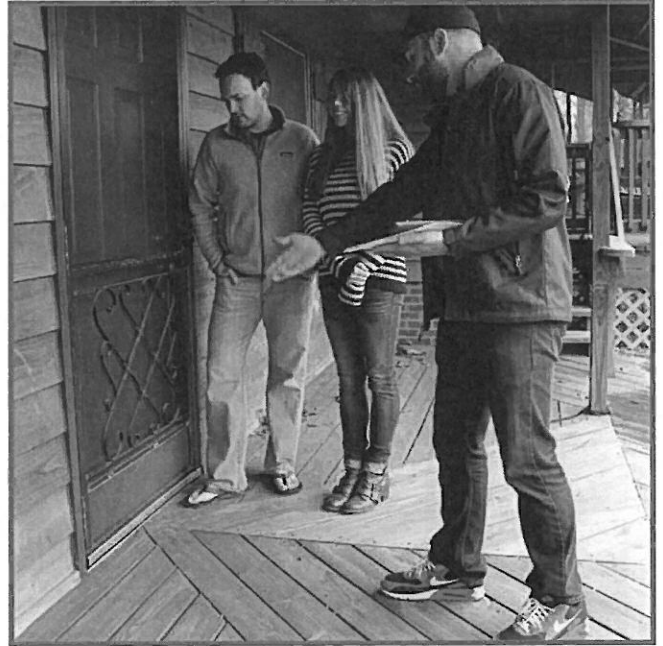
phone: 540-260-9081 fax: 540-260-9084

[www.CHPTrainingCenter.org](http://www.CHPTrainingCenter.org)

# Quality Control Inspector

## Course Description

The Quality Control Inspector (QCI) course is based on a National Renewable Energy Laboratory/U.S. Department of Energy Job Task Analysis\* (JTA) of the same name. The course is broken down into a week of instruction focusing on the job description/duties outlined in the JTA. Students will be exposed to and practice the skills needed to become a successful QCI. These skills include: conducting a precise audit of the building, verifying the work performed against the work plan, observing the retrofit work, understanding specifications and standards, performing building and safety diagnostics, recording/reporting findings and concerns, specifying corrective actions, communicating effectively with the client, and determining the final pass/fail of the work performed. This course is designed to prepare students to take the BPI Home Energy Professional Quality Control Inspector certification exam.



State-of-the-art technology is used in both the classroom and the labs to provide students with a high quality learning environment. Students will get feedback about learning progress by taking online quizzes via our Learning Management System (LMS) throughout the course. Students will take one written test, also delivered through the LMS, and three hands-on tests of their QCI skills. Upon successful completion of these tests, each student receives a certificate of completion.

## Course Objectives

- ▶ Conduct work-in-process visual/sensory quality checks
- ▶ Conduct post-work visual/sensory quality checks
- ▶ Perform post-work diagnostic inspections
- ▶ Evaluate and ensure worker professionalism
- ▶ Inspect and assess the building envelope
- ▶ Ensure program or project compliance

## Skills You'll Take Home

- ▶ Blower door testing
- ▶ Pressure pan testing
- ▶ Zonal diagnostics
- ▶ Exhaust fan flow verification
- ▶ Client, crew leader, and technician interaction
- ▶ Combustion appliance diagnostics
- ▶ Worst-case-scenario draft testing
- ▶ Work verification
- ▶ And much, much more!







# ENERGY SOLUTIONS

## RESEARCH & TRAINING

CHP Energy Solutions Research and Training  
550 Industrial Drive  
Christiansburg, VA 24073  
phone: 540-260-9081 fax: 540-260-9084  
www.CHPTrainingCenter.org

# Quality Control Inspector

### Organization

This is a lecture-lab course. Topics will be presented in a classroom setting and then followed up with student involvement in the lab. The class will be geared toward those who have had experience in the field as auditors or crew leaders. Student participation is very important. Testing for this course will involve both a written and field practical. Note: The BPI Home Energy Professional Quality Control Inspector certification is a separate test with an additional fee.

### Grading Criteria and Passing Score

The exam consists of four sections: one written and three hands-on. Students must pass each section with an 80% score or higher. If a student does not pass a section, he or she will be allowed to retake that particular section in accordance with CHP Energy Solutions Research and Training's retesting policy.

### Grading Plan

Written Section (delivered via our LMS)	65 points (52 points to pass)
Blower Door Hands-on Section	21 points (17 points to pass)
CAZ Hands-on Section	35 points (28 points to pass)
Duct Tester Hands-on Section	15 points (12 points to pass)

### Topics

### % of Weight of JTA in Course

Worker compliance with safety rules	2
Worker professionalism	12
Addressing work problems	2
Determining client satisfaction	10
Reviewing work scope	7
Exterior and interior visual/sensory inspection	8
Determining pass/fail of the work	8
Comparing installed measures against guides and work scope	2
Conducting health and safety tests	13
Conducting diagnostic tests	14
Identifying post-work problems	13
Communication skills	1
Professional credentials	2
Funding allocations	2
Close out of project (files/records)	4

### Cost

One-week Course \$1750

\*Note: The BPI Home Energy Professional Quality Control Inspector certification is a separate test with an additional fee.

To enroll in this course, students must be 18 or older and pass a Quality Control Inspector prerequisite pre-test which assesses their literacy levels, understanding of basic math, and understanding of basic building science. This Job Task Analysis may be viewed online at <http://www.energy.gov/sites/prod/files/2014/01/f7/51670.pdf> and at [CHPTrainingCenter.org](http://www.CHPTrainingCenter.org).



**ENERGY  
SOLUTIONS**

**RESEARCH &  
TRAINING**

V14

**CHP Energy Solutions Research and Training**

550 Industrial Drive

Christiansburg, VA 24073

phone: 540-260-9081 fax: 540-260-9084

[www.CHPTrainingCenter.org](http://www.CHPTrainingCenter.org)

# Energy Auditor

## Course Description

The Energy Auditor course is based on a National Renewable Energy Laboratory/ U.S. Department of Energy Job Task Analysis\* (JTA) of the same name. This two-week course provides the student with a comprehensive understanding of the auditing process, from diagnosing basic energy-related issues to combustion safety testing and developing a work-scope. Students will study how the house works as a system, learn how to apply building science principles to identify, prioritize, and correct energy-related issues within the building envelope, and learn about health and safety concerns associated with these issues. This course is designed to prepare qualified students to take the BPI Home Energy Professional Energy Auditor certification exam.



State-of-the-art technology is used in both the classroom and the labs to provide students with a high-quality learning environment. Three diagnostic house labs controlled by iPad technology provide students with a variety of real-life scenarios. Students will take one written and three hands-on tests of energy assessment skills. Upon successful completion of these tests, each student receives a certificate of completion.

## Course Objectives

- ▶ Recognize the different heating systems and fuel types being used
- ▶ Properly perform combustion testing (SSE and WC Draft)
- ▶ Calculate combustion air needed
- ▶ Measure exhaust flow and perform ASHRAE 62.2 calculations
- ▶ Perform duct diagnostic testing
- ▶ Inspect and assess the building envelope
- ▶ Perform basic math calculations
- ▶ Properly gather infiltration data (Blower Door)
- ▶ Use lab experience to gain a practical understanding of the lessons being taught

## Skills You'll Take Home

- ▶ Blower door testing
- ▶ Pressure pan testing
- ▶ Zonal diagnostics
- ▶ Exhaust fan flow verification
- ▶ Client interaction
- ▶ Combustion appliance diagnostics
- ▶ Worst-case-scenario draft testing
- ▶ Work-scope write-up
- ▶ And much, much more!



TM



# ENERGY SOLUTIONS

## RESEARCH & TRAINING

# Energy Auditor

### Organization

This is a lecture-lab course. Topics will be presented in a classroom setting and then followed up with student involvement in the lab. The class will be geared toward those who have little or no previous training in the field. Student participation is very important. Testing for this course will involve both a written and field practical. Note: The BPI Home Energy Professional Energy Auditor certification is a separate test with an additional fee.

### Grading Criteria and Passing Score

The exam consists of four sections: one written and three hands-on. Students must pass each section with an 80% score or higher. If a student does not pass a section, he or she will be allowed to retake that particular section in accordance with CHP Energy Solutions Research and Training's retesting policy.

### Grading Plan

Written Section	50 points (40 points to pass)
Blower Door Hands-on Section	21 points (17 points to pass)
CAZ Hands-on Section	35 points (28 points to pass)
Duct Tester Hands-on Section	15 points (12 points to pass)

### Topics

### % of Weight of JTA in Course

Heating System Fundamentals	2
Heating System Efficiency Ratings	2
Combustion Air	12
Worst-Case Depressurization	12
Duct Diagnostics	3
ASHRAE 62.2	6
Exhaust Fans and Measuring Flow	6
Client Interaction	5
Baseload	11
Safety	1
House as a System/Building Science	12
Visual Assessments	33
Math Basics	1
Envelope Inspections and Assessments	21
Work-Scope Development	2
Blower Door	11
Auditing Software (NEAT and SIR)	0

### Cost

Two-week Course \$2995

\*Note: The BPI Home Energy Professional Energy Auditor certification is a separate test with an additional fee.

To enroll in this course, students must be 18 or older and pass an Energy Auditor prerequisite pre-test which assesses their literacy levels, understanding of basic math, and understanding of basic building science. This Job Task Analysis may be viewed online at <http://www.energy.gov/sites/prod/files/2014/01/f7/51672.pdf> or at [CHPTrainingCenter.org](http://CHPTrainingCenter.org). CHP Energy Solutions Research and Training's Energy Auditor course is approved by the Virginia Department of Professional and Occupational Regulation (DPOR) as an accredited residential building energy analyst training program that satisfies the Virginia energy analyst licensing requirement for education of residential building energy analysts.

CHP Energy Solutions Research and Training  
550 Industrial Drive  
Christiansburg, VA 24073  
phone: 540-260-9081 fax: 540-260-9084  
[www.CHPTrainingCenter.org](http://www.CHPTrainingCenter.org)



**ENERGY  
SOLUTIONS**

**RESEARCH &  
TRAINING**

V14

**CHP Energy Solutions Research and Training**

550 Industrial Drive

Christiansburg, VA 24073

phone: 540-260-9081 fax: 540-260-9084

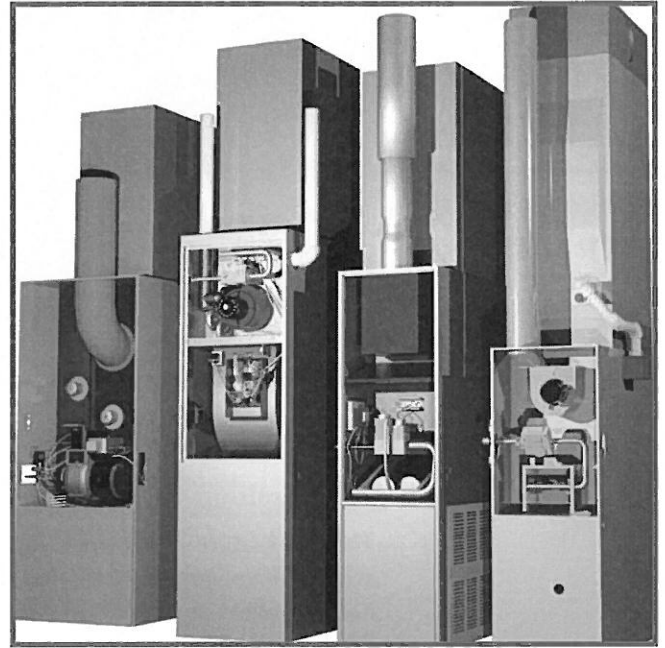
[www.CHPTrainingCenter.org](http://www.CHPTrainingCenter.org)

# HVAC Fundamentals

## Course Description

HVAC Fundamentals provides a foundational understanding of HVAC systems, controls, diagnostic testing and evaluation of efficiency performance, and Combustion Safety evaluation and recommendations. The class curriculum is suitable for weatherization crews and those seeking a better understanding of heating systems.

The class focuses on a variety of heating systems and how to properly test for their safe and efficient operation. Hands-on practice with these systems in our HVAC Lab and Diagnostic Houses is a core component of this class. Students will take both a written test and a hands-on test to demonstrate their understanding of how to evaluate HVAC systems for safety and efficiency. Upon passing these tests, each participant receives a certificate of completion.



## Course Objectives

- › Understand why we work on heating systems
- › Recognize different heating systems and fuel types being used
- › Inspect and test draft of different venting systems
- › Perform duct distribution diagnostic tests
- › Perform a worst case CAZ depressurization test
- › Perform combustion safety and efficiency testing
- › Explain safety and efficiency improvement
- › Use lab experience to give students a practical understanding of the lessons being taught

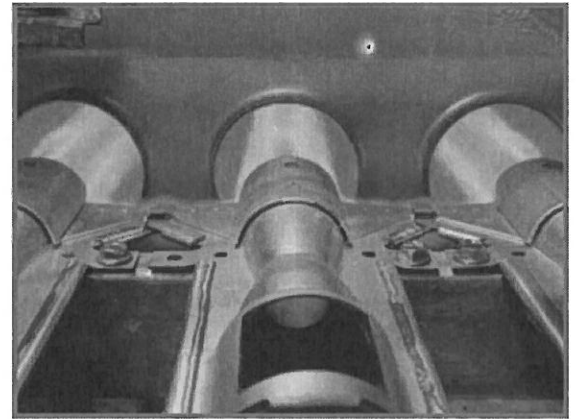
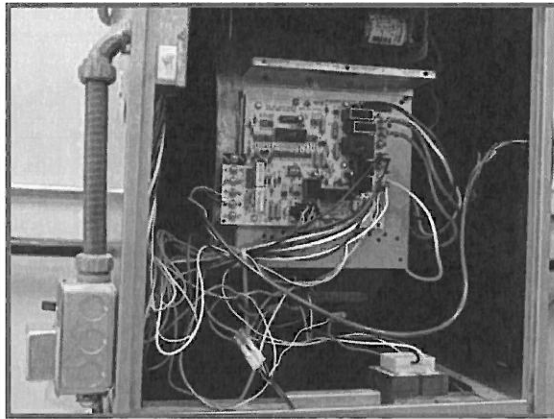
## Skills You'll Take Home

- › Heating system identification
- › Worst case draft testing
- › Efficiency analysis
- › HVAC diagnostic testing
- › Basic troubleshooting
- › Vent sizing
- › Heat pump operation
- › Combustion air calculations
- › And much, much more!



**ENERGY SOLUTIONS**  
RESEARCH & TRAINING

# HVAC Fundamentals



## Organization

This is a lecture-lab course. Topics will be presented in a classroom setting and then followed up with student involvement in the lab. The class will be geared toward little or no previous training in the field. Student participation is very important. Testing for this course will involve both a written and field practical.

## Grading Criteria and Passing Score

The exam consists of two sections: one written and one hands-on. Students must pass each section with an 80% score or higher. If a student does not pass a section, he or she will be allowed to retake that particular section in accordance with CHP Energy Solutions Research and Training's retesting policy.

## Grading Plan

Written Section	40 points (32 points to pass)
CAZ Hands-on Section	35 points (28 points to pass)

## Cost

\$1750

Note: Contact the Training Center for Course Costs and Group Pricing Information.

CHP Energy Solutions Research and Training  
550 Industrial Drive  
Christiansburg, VA 24073  
phone: 540-260-9081 fax: 540-260-9084  
www.CHPTrainingCenter.org

RFQ No. GOE012014

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code §61-5-3*) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: CHP Energy Solutions

Authorized Signature: [Signature] Date: 5/22/14

State of Virginia

County of Montgomery, to-wit:

Taken, subscribed, and sworn to before me this 22<sup>nd</sup> day of May, 2014.

My Commission expires 11-30, 2016

**AFFIX SEAL HERE**

**NOTARY PUBLIC**

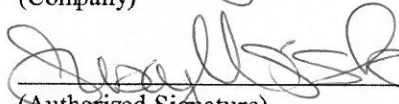
[Signature]  
*Purchasing Affidavit (Revised 07/01/2012)*



**CERTIFICATION AND SIGNATURE PAGE**

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Community Housing Partners  
(Company)

  
(Authorized Signature)

Susan M Sisk, CAO  
(Representative Name, Title)

540-382-2002      540-382-1935  
(Phone Number)      (Fax Number)

5/22/14  
(Date)