



# **TAKING ADVANTAGE OF THE DOE HOME IMPROVEMENT EXPERT PROGRAM**

Peter Troast, Founder & CEO

Energy Circle Webinar Series

*November 6, 2019*

# Energy Circle On The Road

12/04 - 12/08: **North American Passive House Conference** | Washington, DC

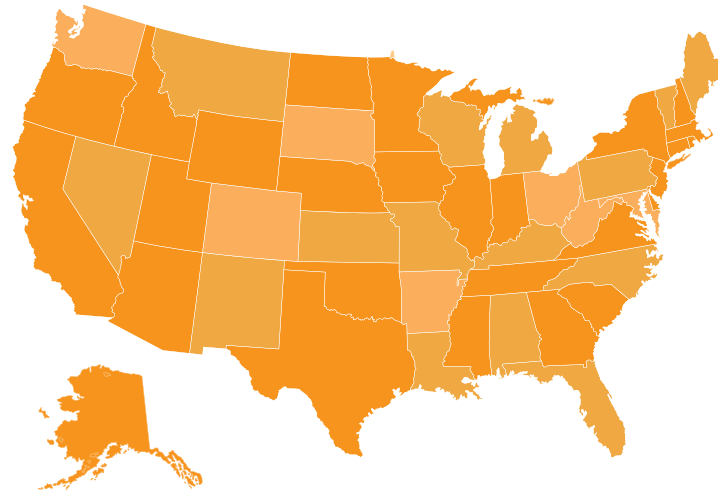
02/04 - 02/06: **Better Buildings by Design: Efficiency Vermont** | Burlington, VT

02/11 - 02/12: **Building Performance Association Northeast Regional** | Saratoga Springs, NY

03/09 - 03/11: **Better Building Better Business WI** | Wisconsin Dells, WI

03/18 - 03/21: **JLC Live** | Providence, RI

04/27 - 04/30: **2020 Building Performance Association National Conference** | New Orleans, LA





# Challenge Accepted #5: People Dislike Utilities — So Make Them Love You



By Jake VP | October 23, 2019

If you've followed the news coming out of Northern California this month, you probably already know that **738,000 PG&E customers** in 38 counties were without power for as long as 48 to 72 hours. This may be the most recent utility PR calamity, but it is by no means the only one.

Here in Maine, electricity supplier Central Maine Power has been dealing with **fraudulent billing** issues that have all but obliterated the public's trust in their electricity supplier. And just south of us in Massachusetts' Merrimack Valley, multiple in-home gas explosions, causing one death, have ended in an **\$80 million settlement**.

Many of the businesses in our industry work directly or indirectly with electric, gas, and water utilities, and headlines like the ones we mentioned have a heavy influence on public opinion. In this week's installment of our Challenge Accepted series, we are taking insights from Energy Circle CEO Peter Troast's **most recent webinar** and examining some of the ways home performance contractors can navigate the murky waters of a PR disaster in your service area.

**Today's Challenge: Finding the appropriate opportunities to educate your customers and generate leads during a time of utility distrust.**

## The Ask

**In Short:** To convince customers that your HVAC, home performance, or solar company can be a resource in a time of utility-crisis.

**In Long:** To have marketing materials and tactics in place before disaster strikes, so that your



# Reminder: Take Advantage of Co-op Dollars Before Year's End... Seriously!



By Jake VP | November 6, 2019

Back in August, we wanted to shine some light on why solar, home performance, and HVAC contractors should be taking advantage of co-op marketing dollars. Why August? Because in order to utilize those dollars with a comprehensive and integrated digital marketing strategy, you need to get in the game well before the year ends — and that takes time!

There are only two months left in 2019, but manufacturers, as well as state and dealer run programs, are still offering up free money in the form of co-op dollars that can help with your end-of-year push, such as:

- Mitsubishi
- TRANE
- Nu-Wool
- Owens Corning
- Panasonic

So, if you missed our August post, here's a reminder that there's still time to use your co-op dollars with these tips and best practices... but only if you act now! We'll show you how you can make a few extra sales before the end of the year and get a little financial help with marketing your business and bringing in leads.



## **NAVIGATING THE TURBULENCE: THE LATEST CHANGES IN GOOGLE MY BUSINESS**

Peter Troast, Founder & CEO, Energy Circle

Energy Circle Webinar Series

*October 23, 2019*

**[www.energycircle.com/webinars](http://www.energycircle.com/webinars)**



# **TAKING ADVANTAGE OF THE DOE HOME IMPROVEMENT EXPERT PROGRAM**

Peter Troast, Founder & CEO

Energy Circle Webinar Series

*November 6, 2019*

# What We'll Discuss

- 1 Quick Intro: Home Improvement Experts™ Program**
- 2 Why Energy Circle is Excited About HIE**
- 3 Sales & Marketing Strategies to Take Advantage**



**INTRO:**  
**THE HOME IMPROVEMENT**  
**EXPERTS™ PROGRAM**



U.S. DEPARTMENT OF ENERGY Energy Efficiency & Renewable Energy

Log in or register to create Field Kits and Sales Worksheets. [Why register?](#)

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## Building America Solution Center

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### Home Improvement Expert™

#### Why Home Improvement Expert?

Home Improvement Expert is an easy way to get a quality job for energy equipment replacement and other retrofit projects. Research findings reveal that when improvements are properly installed, energy savings can be high with performance risks minimized. However, improper installations can significantly reduce these benefits and increase performance risks. Homeowners can leverage these expert recommendations to help ensure quality installations by attaching Home Improvement Expert checklists to vendor contracts and only accepting the work after vendors complete and sign the checklists.


**Who is the Home Improvement Expert?** The Home Improvement Expert does not refer to any one person, but rather the combination of expertise from Building America researchers, the U.S. Department of Energy, and DOE's national labs. The Home Improvement Expert brand brings together their best and most useful insights to give every American access to high quality home energy improvements.

#### Ready To Do More?


This U.S. Department of Energy Home Improvement Expert website provides access to factsheets and checklists that cover more than 20 home improvements. Use them to help optimize energy savings and improve performance related to comfort, health, safety, and durability. See all factsheets/checklists by clicking "View Checklists;" click "Partner Resources" to become a partner and download customized checklists; use the "Partner Map" to find partners around the country.

#### Looking for Consumer Information?


If you are a homeowner, visit the consumer [Home Improvement Expert Website](#) for more information.



View Checklists



Partner Resources



Partner Map

# Building America Solution Center

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## Home Improvement Expert™ Checklists

**Home Improvement Expert™ is an easy way to get a quality job.**

Proper installation of all home improvements related to energy efficiency is critical but often a significant challenge for homeowners. Research findings reveal significantly reduced energy savings and potential performance risks where home improvements are not properly installed. Now the U.S. Department of Energy has a tool that homeowners can use to help ensure quality installation. Home Improvement Expert fact sheets and checklists compile best practices from industry leaders and national laboratories for twenty-one home improvements related to energy efficiency.

All homeowners have to do to hold projects accountable to these standards for excellence is include one or more of the appropriate checklists in their vendor contracts. In doing so, homeowners will act in their best self-interest to optimize energy efficiency, comfort, health, durability, and safety.

Find all of the Home Improvement Expert fact sheets and checklists below and click to download them for your next home improvement project.

### ENCLOSURE UPGRADES

- + Attic Air Sealing and Insulation
- + Basement Wall Insulation
- + Framed Wall Insulation
- + Masonry Wall Insulation
- + Home Air Sealing
- + Vented to Unvented Attic
- + Vented to Unvented Crawl Space
- + Window Replacement

### HEATING & COOLING

- + Air Conditioner Replacement
- + Gas Furnace Replacement
- + Heat Pump Replacement
- + Oil or Gas Boiler Replacement
- + Duct Sealing and Insulation

**» Did You Know?**  
Research findings reveal most HVAC installations do not meet manufacturer specifications, which can reduce efficiency up to 20% and cause comfort problems.

## Home Improvement Expert™ Factsheet Heat Pump Replacement

### WHY HOME IMPROVEMENT EXPERT?

An easy way to get a quality job.

Research findings reveal significantly reduced energy savings and potential performance risks where home improvements are not properly installed. To help homeowners address this challenge, the U.S. Department of Energy has compiled world-class expert guidance from industry leaders and national laboratories in factsheets and checklists under the name *Home Improvement Expert*. Homeowners can leverage these expert recommendations to help ensure quality installation by attaching Home Improvement Expert checklists to vendor contracts and ensuring the vendor completes and signs the checklist before accepting the work.

### READY TO DO MORE?

This factsheet and accompanying checklist cover one of more than 20 home improvements covered by the U.S. Department of Energy Home Improvement Expert. Use them to help optimize energy savings and improve performance related to comfort, health, safety, and durability.

To download other checklists: [bascc.pnnl.gov/home-improvement-expert](http://bascc.pnnl.gov/home-improvement-expert)

For more customized home improvement recommendations:

- Get your *Home Energy Score* from a qualified assessor ([www.home-energy-score.gov](http://www.home-energy-score.gov))
- Schedule an expert assessment through Home Performance with ENERGY STAR® ([www.energystar.gov/homeperformance](http://www.energystar.gov/homeperformance)).



### BENEFITS

Installed correctly, heat pumps and cooling systems for many other systems can provide quality installation and cooling systems, therefore per

### RELATED HOME IMPROVEMENTS

Before purchasing an assessor to evaluate your home includes:

- selection of significantly upgrades a
- integration particulates
- integration particulates

For more information, contact the Home Improvement Center, [bascc.pnnl.gov](http://bascc.pnnl.gov)

### TIPS FOR HOME IMPROVEMENT

- Look for local energy efficiency programs
- Check references
- Get multiple quotes
- Check with rebates and incentives
- Include the quality installation
- Consider using a Home Performance with ENERGY STAR Analyst, or the work.

### HOME IMPROVEMENT EXPERT

#### ENCLOSURE UPGRADES

Attic Air Sealing and Insulation

Basement Wall Insulation

Framed Wall Insulation

Masonry Wall Insulation

Home Air Sealing

Vented to Unvented Attic

Vented to Unvented Crawl Space

Window Replacement

#### HEATING & COOLING

Air Conditioner Replacement

Gas Furnace Replacement

Heat Pump Replacement

Duct Sealing and Insulation

Oil or Gas Boiler Replacement

#### HOT WATER HEATING

Gas Tank Water Heater

Gas Tankless Water Heater

Heat Pump Water Heater

#### FRESH AIR SYSTEM

Bathroom Exhaust Fan

Kitchen Exhaust Fan

Balanced HRV/ERV

Balanced Supply plus Exhaust

Supply Integrated with HVAC

### PROPER INSTALLATION

Through the research process, optimizing energy efficiency includes a (shown below) their upgrade safety, and health.

#### STEP 1:

Have expert efficiency health, a

#### STEP 2:

Ensure e

#### STEP 3:

Ensure a of walls t

#### STEP 4:

Capture insulation

#### STEP 5:

Insulate for your quality, a

#### ANYTIME

Replace windows they fail qualified more eff



This U.S. Department of Energy checklist includes important specifications that can contribute to a complete and quality installation. All work shall comply with these specifications, all relevant codes and standards, and all manufacturer installation instructions. The contractor shall check each box on the checklist below and sign and date at the bottom to certify the work is completed.

## Home Improvement Expert™ Checklist Heat Pump Replacement

### PREPARATION

- All exposed ducts (e.g., attic, basement, and crawlspace) shall be inspected; all damaged or disconnected ducts shall be repaired or replaced, and all visible leaks shall be sealed with UL 181 tape and/or mastic.
- A room-by-room load calculation shall be performed in accordance with the Air-Conditioning Contractors of America [ACCA] Manual J.
- The heat pump selected shall be ENERGY STAR certified and sized in accordance with ACCA Manual S based on ACCA Manual J load calculation results.
- The system shall be evaluated to determine if the supply and return air flows are balanced and if ducts are properly sized. Recommendations shall be made to the homeowner if the ducts are not the right size.

### INSTALLATION

- The heat pump shall be installed in accordance with ANSI/ACCA Standard 5 HVAC Quality Installation Specifications.
- The air filter shall be replaced with a MERV 8 or higher filter selected for appropriate air flow across the coil.
- If the air filter is installed in a filter media box attached to the air handler, the access panel for the filter should be fitted with a flexible, air-tight gasket to prevent air leakage.
- Where a new thermostat location is provided, it shall be located on an interior wall away from heating or cooling registers, appliances, lighting fixtures, exterior doors, skylights, windows, and areas that receive direct sunlight or drafts.

### COMMISSIONING

- Proper refrigerant charge shall be verified in accordance with the manufacturer's instructions.
- Pressure balance testing (pressure pan and/or flow hood) for proper room-to-room air flow shall be performed and adjustments shall be made to address any imbalances.
- Air flow across the coil shall be tested following procedures approved by ANSI/ACCA Standard 5 QI-2015 to verify it is within the CFM range specified by the equipment manufacturer. If it is not, adjustments shall be made as required.
- The home shall be inspected for the presence of a whole-house ventilation system. If one is present, the actual air flow shall be tested and verified to meet or exceed a target ventilation rate based on house size as follows: 50 cfm for up to 1,500 ft<sup>2</sup>, 70 cfm for 1,501 to 2,500 ft<sup>2</sup>, and 100 cfm over 2,500 ft<sup>2</sup>, per ASHRAE 62.2-2013. Recommendations shall be made to the homeowner for either installing a new whole-house ventilation system compliant with the target rate if one is not present, or repairing an existing system to be compliant with the target rate if airflow is not adequate.

I hereby certify that, to the best of my knowledge and ability, all checked items on the above checklist have been accomplished as part of completion of this home upgrade.

Contractor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contracting Organization: \_\_\_\_\_

THE U.S. DEPARTMENT OF ENERGY DOES NOT WARRANT OR ENDORSE THE WORK, PRODUCTS, OR SERVICES OF ANY OF ITS PARTNERS.

## Home Improvement Expert™ Factsheet Heat Pump Replacement



### WHY HOME IMPROVEMENT EXPERT?

An easy way to get a quality job.

Research findings reveal significantly reduced energy savings and potential performance risks where home improvements are not properly installed. To help homeowners address this challenge, the U.S. Department of Energy has compiled world-class expert guidance from industry leaders and national laboratories in factsheets and checklists under the name *Home Improvement Expert*. Homeowners can leverage these expert recommendations to help ensure quality installation by attaching Home Improvement Expert checklists to vendor contracts and ensuring the vendor completes and signs the checklist before accepting the work.

### READY TO DO MORE?

This factsheet and accompanying checklist cover one of more than 20 home improvements covered by the U.S. Department of Energy Home Improvement Expert. Use them to help optimize energy savings and improve performance related to comfort, health, safety, and durability.

To download other checklists: [basic.pnnl.gov/home-improvement-expert](http://basic.pnnl.gov/home-improvement-expert)

For more customized home improvement recommendations:

- Get your *Home Energy Score* from a qualified assessor ([www.home-energy-score.gov](http://www.home-energy-score.gov))
- Schedule an expert assessment through Home Performance with ENERGY STAR® ([www.energystar.gov/homeperformance](http://www.energystar.gov/homeperformance)).

### BENEFITS

Installed correctly, a new heat pump can cut utility expenses while improving comfort.

Systems for heating and cooling your home use more energy and cost more money than any other system in your home—typically over 50% of your utility bill. High-efficiency heat pumps such as variable-speed systems save energy and last longer. However, a quality installation is integral to a well-performing system. Nearly half of all heating and cooling systems in U.S. homes are not installed to manufacturer's instructions and therefore perform below rated capacity and efficiency.

### RELATED HOME IMPROVEMENT CONSIDERATIONS

Before purchasing a new heat pump, consider working with a qualified home energy assessor to evaluate other related home performance needs and opportunities. This includes:

- selection of two-speed or variable-speed equipment that can better adapt to significantly reduced heating and cooling loads when insulation and air sealing upgrades are planned;
- integration of fresh air into the heating and cooling system to provide ventilation; and
- integration of high-capture filters in the return duct to more effectively remove particulates from the air you breathe.

For more information on heat pumps, please search the Building America Solution Center, [basic.pnnl.gov](http://basic.pnnl.gov)

### TIPS FOR HIRING A CONTRACTOR

- Look for licensed, insured, and certified contractors.
- Check references and reviews on home improvement web sites.
- Get multiple bids in writing.
- Check with your utility and state, local, and federal weatherization programs for rebates and incentives.
- Include the Home Improvement Expert™ checklist in bids and contracts to ensure quality installation.
- Consider using a Residential Energy Services Network (RESNET) certified Home Energy Rating System (HERS) rater, Building Performance Institute (BPI) certified Building Analyst, or other qualified professional (e.g., licensed engineer or architect) to inspect the work.

# Checklists

## Home Improvement Expert™ Checklist Heat Pump Replacement

### SEQUENCING OF HOME IMPROVEMENTS

Through the U.S. Department of Energy's Building America arch program, expert guidance has been developed for optimizing whole-house energy-efficiency upgrades. This guide provides a recommended sequence for home improvements (shown below) to help ensure homeowners get the most out of their upgrade investments while minimizing potential harm to health, indoor air quality, and moisture issues. The contractor shall check each box on the checklist below and sign and date at the bottom to certify the work is completed.

#### EP 1: ENSURE SAFE AND DURABLE

Energy experts assess opportunities to improve energy efficiency and identify comfort, moisture management, health, and safety issues.

- All exposed ducts (e.g., attic, basement, and crawlspace) shall be inspected; all damaged or disconnected ducts shall be repaired or replaced, and all visible leaks shall be sealed with UL 181 tape and/or mastic.

#### EP 2: ENSURE FRESH AIR

Ensure effective ventilation before increasing air tightness. The system shall be evaluated to determine if the supply and return air flows are balanced and if ducts are properly sized.

- Fresh air intake shall be made to the homeowner if the ducts are not the right size.

#### EP 3: ENSURE MOISTURE CONTROL

Ensure adequate water protection before reducing the ability walls to dry by adding air sealing and insulation.

- The heat pump shall be installed in accordance with ANSI/ACCA Standard 5 HVAC Quality Installation Specifications.
- The air filter shall be replaced with a MERV 8 or higher filter selected for appropriate air flow across the coil.

#### EP 4: ENSURE DRAFT-FREE

Ensure air sealing opportunities are not a possible afterthought. Where a new thermostat location is provided, it shall be located on an interior wall away from heating or cooling registers, appliances, lighting fixtures, exterior doors, skylights, windows, and areas that receive direct sunlight or drafts.

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#### EP 5: ENSURE THERMAL COMFORT

Proper refrigerant charge shall be verified in accordance with the manufacturer's instructions. Proper refrigerant charge shall be verified in accordance with the manufacturer's instructions. Proper refrigerant charge shall be verified in accordance with the manufacturer's instructions.

- Air flow across the coil shall be tested following procedures approved by ANSI/ACCA Standard 5 QI-2015 to verify it is within the CFM range specified by the equipment manufacturer. If it is not, adjustments shall be made as required.

#### FINAL TIME: EQUIPMENT UPGRADES

The home shall be inspected for the presence of a whole-house ventilation system. If one is present, the actual air flow shall be tested to ensure it meets the target ventilation rate based on house size as follows: 50 cfm for up to 1,500 ft<sup>2</sup>, 70 cfm for 1,501 to 2,500 ft<sup>2</sup>, and 90 cfm for 2,501 to 4,000 ft<sup>2</sup>, per ASHRAE 62.2-2013. Recommendations shall be made to the homeowner for either installing a new system compliant with the target rate if one is not present, or repairing an existing system to be compliant with the target rate if airflow is not adequate. Recommendations shall be made to the homeowner for either installing new products or better, and improve systems to operate more efficiently.

I hereby certify that, to the best of my knowledge and ability, all checked items on the above checklist have been accomplished as part of completion of this home upgrade.

Contractor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Contracting Organization: \_\_\_\_\_

## WHY HOME IMPROVEMENT EXPERT?

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Research findings reveal significantly reduced energy savings and potential performance risks where home improvements are not properly installed. To help homeowners address this challenge, the U.S. Department of Energy has compiled world-class expert guidance from industry leaders and national laboratories in factsheets and checklists under the name *Home Improvement Expert*. Homeowners can leverage these expert recommendations to help ensure quality installation by attaching Home Improvement Expert checklists to vendor contracts and ensuring the vendor completes and signs the checklist before accepting the work.

## READY TO DO MORE?

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## BENEFITS

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## RELATED H

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For more inf...  
Center, [bascc.pnnl.gov](http://bascc.pnnl.gov)

## TIPS FOR H

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## HOME IMPROVEMENT EXPERT

### ENCLOSURE UPGRADES

Attic Air Sealing and Insulation

Basement Wall Insulation

Framed Wall Insulation

Masonry Wall Insulation

Home Air Sealing

Vented to Unvented Attic

Vented to Unvented Crawl Space

Window Replacement

### HEATING & COOLING

Air Conditioner Replacement

Gas Furnace Replacement

Heat Pump Replacement

Duct Sealing and Insulation

Oil or Gas Boiler Replacement

### HOT WATER HEATING

Gas Tank Water Heater

Gas Tankless Water Heater

Heat Pump Water Heater

### FRESH AIR SYSTEM

Bathroom Exhaust Fan

Kitchen Exhaust Fan

Balanced HRV/ERV

Balanced Supply plus Exhaust

Supply Integrated with HVAC

## PROPER SEQUENCING OF HOME IMPROVEMENTS

Through the U.S. Department of Energy's Building America research program, expert guidance has been developed for optimizing whole-house energy-efficiency upgrades. This includes a recommended sequence for home improvements (shown below) to help ensure homeowners get the most out of their upgrade investments while minimizing potential harm from safety, indoor air quality, and moisture issues.

### STEP 1: ENSURE SAFE AND DURABLE

Have experts assess opportunities to improve energy efficiency and identify comfort, moisture management, health, and safety issues.



### STEP 2: ENSURE FRESH AIR

Ensure effective ventilation before increasing air tightness.



### STEP 3: ENSURE MOISTURE CONTROL

Ensure adequate water protection before reducing the ability of walls to dry by adding air sealing and insulation.



### STEP 4: ENSURE DRAFT-FREE

Capture air sealing opportunities not accessible after insulation is installed.



### STEP 5: ENSURE THERMAL COMFORT

Insulate at least to the latest national code recommendations for your location after addressing related safety, indoor air quality, and moisture management issues.

### ANYTIME: EQUIPMENT UPGRADES

Replace heating and cooling equipment, water heaters, windows, appliances, lighting, fans, and electronics when they fail or become out of date with ENERGY STAR® qualified products or better, and improve systems to operate more efficiently.

# Checklists

## Home Improvement Expert™ Checklist Heat Pump Replacement

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Date: \_\_\_\_\_

# Checklists

## Home Improvement Expert™ Factsheet Heat Pump Replacement

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### BENEFITS

Installed correctly, **Frame and Insulation** can cut utility expenses while improving comfort.

Systems for heating and cooling use more energy and cost more money than any other system in your home—typically over 50% of your utility bill. High-efficiency heat pumps such as **Heat Pump Replacement** systems save energy and last longer. However, a quality installation is integral to a well-performing system. Nearly half of all heating and cooling systems in U.S. homes are not installed to manufacturer's instructions and therefore perform below rated capacity and efficiency.

### RELATED HOME IMPROVEMENT CONSIDERATIONS

Before purchasing a **Heat Pump Replacement**, consider working with a qualified home energy assessor to evaluate other related home performance needs and opportunities. This includes:

- selection of two-speed or variable-speed equipment that can better adapt to significantly reduced heating and cooling loads when insulation and air sealing upgrades are planned.
- integration of fresh air into the heating and cooling system to provide ventilation; and
- integration of high-efficiency return duct to more effectively remove particulates from the air you breathe.

For more information on heat pumps, please search the Building America Solution Center, [basic.pnnl.gov](http://basic.pnnl.gov) or **Gas Boiler Replacement**

### TIPS FOR HIRING A CONTRACTOR

- Look for licensed, insured, and certified contractors.
- Check references and reviews on home improvement web sites.
- Get multiple bids from at least three contractors.
- Check with your utility, state, and federal weatherization programs for rebates and incentives.
- Include the Home Improvement Expert™ checklist in bids and contracts to ensure quality installation.
- Consider using a Residential Energy Services Network (RESNET) certified Home Energy Rating System (HERS) rater, Building Performance Institute (BPI) certified Building Analyst, or other qualified professional (e.g., licensed engineer or architect) to inspect the work.

- **Balanced Supply plus Exhaust**
- **Supply Integrated with HVAC**

### PROPER

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- The system shall be evaluated to determine if the supply and return air flows are balanced and if ducts are properly sized. Recommendations shall be made to the homeowner if the ducts are not the right size.

### INSTALLATION

- The heat pump shall be installed in accordance with ANSI/ACCA Standard 5 HVAC Quality Installation Specifications.
- The air filter shall be replaced with a MERV 8 or higher filter selected for appropriate air flow across the coil.
- If the air filter is installed in a filter media box attached to the air handler, the access panel for the filter should be fitted with a flexible, air-tight gasket to prevent air leakage.
- Where a new thermostat location is provided, it shall be located on an interior wall away from heating or cooling registers, appliances, lighting fixtures, exterior doors, skylights, windows, and areas that receive direct sunlight or drafts.

### COMMISSIONING

- Proper refrigerant charge shall be verified in accordance with the manufacturer's instructions.
- Pressure balance testing (pressure pan and/or flow hood) for proper room-to-room air flow shall be performed and adjustments shall be made to address any imbalances.
- Air flow across the coil shall be tested following procedures approved by ANSI/ACCA Standard 5 QI-2015 to verify it is within the CFM range specified by the equipment manufacturer. If it is not, adjustments shall be made as required.
- The home shall be inspected for the presence of a whole-house ventilation system. If one is present, the actual air flow shall be tested and verified to meet or exceed a target ventilation rate based on house size as follows: 50 cfm for up to 1,500 ft², 70 cfm for 1,501 to 2,500 ft², and 100 cfm over 2,500 ft², per ASHRAE 62.2-2013. Recommendations shall be made to the homeowner for either installing a new whole-house ventilation system compliant with the target rate if one is not present, or repairing an existing system to be compliant with the target rate if airflow is not adequate.

I hereby certify that, to the best of my knowledge and ability, all checked items on the above checklist have been accomplished as part of completion of this home upgrade.

Contractor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contracting Organization: \_\_\_\_\_

# Checklists Cover 21 Measures

## ENCLOSURE UPGRADES

- + Attic Air Sealing and Insulation
- + Basement Wall Insulation
- + Framed Wall Insulation
- + Masonry Wall Insulation
- + Home Air Sealing
- + Vented to Unvented Attic
- + Vented to Unvented Crawl Space
- + Window Replacement

## HEATING & COOLING

- + Air Conditioner Replacement
- + Gas Furnace Replacement
- + Heat Pump Replacement
- + Oil or Gas Boiler Replacement
- + Duct Sealing and Insulation

## FRESH AIR SYSTEM

- + Bathroom Exhaust Fan
- + Kitchen Exhaust Fan
- + Balanced HRV/ERV
- + Balanced Supply plus Exhaust
- + Supply Integrated with HVAC

## HOT WATER HEATING

- + Gas Tank Water Heater
- + Gas Tankless Water Heater
- + Heat Pump Water Heater

## PREPARATION

- The attic shall be inspected for water leaks and moisture, structural, or pest damage. A list of all needed repairs shall be provided to the homeowner before attic work begins so remediation can be fully addressed as necessary.
- The attic shall be inspected for sufficient attic ventilation (e.g., ridge vents, soffit vents). Ventilation issues shall be addressed before proceeding with attic air sealing or insulation.
- If there is active knob and tube wiring present in the attic, insulation shall not be installed until wiring is replaced or properly boxed. Work shall not proceed if existing insulation is vermiculite, which may contain asbestos.
- All exhaust fans shall be modified as required to vent to the outside, not into the attic.
- A combustion safety test shall be performed if any natural draft combustion equipment exists in the home to ensure there is no backdrafting or spillage of combustion emissions. Any combustion safety issues shall be addressed before proceeding with attic work.
- The contractor shall state whether existing insulation is to be removed or moved aside for air sealing.

## INSTALLATION: ATTIC AIR SEALING AND AIR BARRIERS PRIOR TO INSULATION

- All gaps, cracks, seams, and penetrations between conditioned and unconditioned space (such as gaps around lighting fixtures, HVAC duct boots, electric wiring, plumbing pipes, and flues) shall be sealed with sealants alone (e.g., caulk, foam, aerosol sealant) if the gaps are narrow enough or with rigid blocking material sealed in place with sealants, per the sealant manufacturer's instructions. Fibrous insulation is not an air barrier and shall not be used for air sealing.
- The seams where drywall attaches to the top plate at all interior and exterior walls shall be sealed from the attic side with a caulk, spray foam, or sprayer-applied sealant.
- Larger gaps and openings (such as uncovered dropped soffits and openings under knee walls or at the tops of balloon-framed gable walls) shall be closed off using a solid material such as rigid foam or OSB that is sealed at the edges with caulk, sealant, or mastic.
- Gaps around masonry chimneys or gas appliance vents shall be sealed with high-temperature-rated caulk or foam and insulation dams shall be constructed around them as needed using heat-safe materials in accordance with building code requirements.
- Attic access panels, doors, and drop-down stairs shall be insulated with a minimum of R-10 rigid foam insulation and gasketed (not caulked) to provide a continuous air seal when closed.
- All non-ICAT recessed light fixtures shall be boxed with a solid material such as drywall or rigid foam that is sealed at all seams with a sealant such as caulk, mastic, or spray foam.
- Before installing fibrous attic floor insulation, baffles shall be installed at all attic eaves adjoining vented soffits to prevent air flow through the insulation and to provide a path for ventilation air from the soffit vents to the ridge vents. The baffles shall extend at least 6 inches above the height of the attic insulation.

## INSTALLATION: ATTIC INSULATION

- Continuous R-19 insulation shall be installed at attic knee walls, skylight shaft walls, vertical portions of all dropped ceilings, and any other vertical wall adjoining conditioned space.
- All joints, cracks, and penetrations in the wall air barrier shall be fully sealed with caulk, foam, or equivalent.
- Attic insulation shall be installed at all flat and sloped surfaces adjoining the conditioned space with less than 2% gaps, voids, and compressions and at levels that meet or exceed prescriptive levels specified by the 2012 International Energy Conservation Code.
- All attic insulation shall be uniform and conform to manufacturer-specified density with attic rulers to verify full depth.

## COMMISSIONING

- At the completion of the work, a radon test kit shall be provided to the homeowner with a recommendation to initiate a radon remediation strategy if post-retrofit radon measurements exceed EPA acceptable levels.



# Wide Open Opportunity for Contractors

## As of Today

~46 Partners

~38 Contractors

The screenshot displays the 'Building America Solution Center' website. At the top, it features the U.S. Department of Energy logo and navigation links for 'Log in' and 'Register'. The main heading is 'Building America Solution Center' with a search bar. Below this, there's a breadcrumb trail: 'EERE > BTO > Building America > Solution Center > Home Improvement Expert™'. A sidebar on the left lists various program and resource categories. The central focus is the 'Home Improvement Expert™ Partner Map', which shows a map of the United States with states color-coded in shades of blue and dark blue. A 'View All Partners' button is located to the right of the map. Below the map, there are small boxes representing territories: FG, PR, MP, GU, AS, VI, PW, MH, FM, NH, RI, MD, NJ, MA, VT, DE, CT, and DC.



**POLL**



# **WHY ENERGY CIRCLE**

(wearing demand generation/marketing hat)

## **IS EXCITED ABOUT**

## **HOME IMPROVEMENT EXPERTS**

# We Think This is a Significant Opportunity

- **High Trust of US Department of Energy**
- **Expert Third Party Authority on Jobs Done the Right Way**
- **Key Differentiator Against "Regular" Contractors**
- **Antidote to Low Price Competitors**
- **Powerful Messaging for Marketing & Sales**



# **MARKETING STRATEGIES TO TAKE ADVANTAGE**

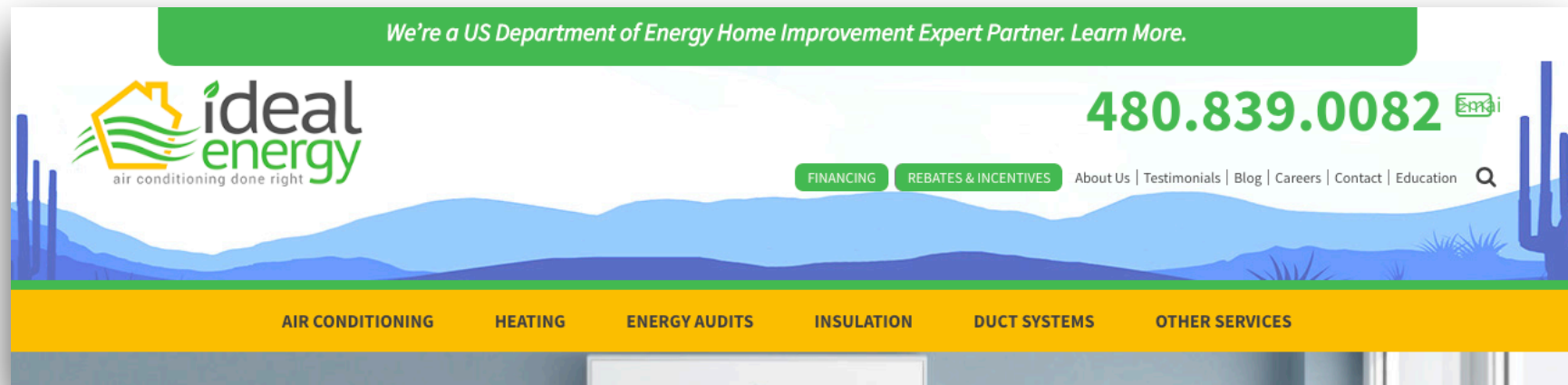
# Agreement with DOE

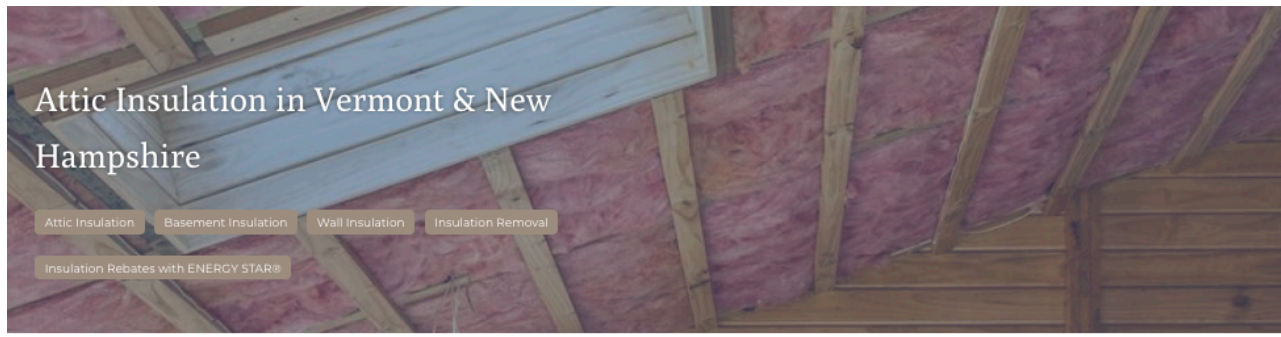
## ***Home Improvement Expert Partner Commitments to DOE***

1. Partner will promote and distribute HIE fact sheets and checklists on at least three consumer-facing communications each year. Communications can include product packaging, in-store displays, company/organization web site, advertising, brochures, blogs and/or signage intended to reach the general public.
2. Partner will provide a link from their website to DOE's Home Improvement Expert page on DOE's Home Energy Saver website – the DOE website for consumer content on energy efficiency. To ensure that viewers will see DOE's most up-to-date information, Partner will link to the DOE website rather than downloading portions of the DOE website to another web server.
3. Partner will educate their own employees/staff about HIE program.
4. Partner will maintain an active partnership by meeting the agreed upon commitment to promote HIE and report to DOE on a quarterly basis the activities they have undertaken as part of the HIE program. Partners not fulfilling this requirement will be deemed 'inactive' and must promptly cease all association with HIE. DOE will notify partner by email of any nonconformance regarding this commitment and provide 30 calendar days to comply before taking action to deem inactive.
5. Partner will only use DOE Logo on HIE fact sheets and checklists. Partner may add their logo to fact sheets and checklists for co-branding with the HIE program, but shall not alter the content in any other way without express written permission from DOE.
6. In any written materials, documents, or other representations to its home improvement customers, Partner and any Partner affiliated entities, will not use any language that constitutes or implies an endorsement by DOE of any of its products or services.

# Make a Splash Upon Sign Up

- **Press Release or Blog Post**
- **Distribution to Local Media**
- **Mention in About Us pages**
- **Inclusion in Email Newsletter**





# Beef Up Key Service Pages

Whether you want to make the second floor of your home cooler in the summer, or you're looking for ways to keep your energy bills down year-round, there are many reasons you might decide to upgrade your attic [insulation](#). Attic insulation is one of the most cost effective home improvements you can make for greater indoor comfort, increased energy savings, and longer lasting heating and cooling equipment. And with [insulation rebates](#) available through Home Performance with ENERGY STAR® (HPwES), insulating your attic is more affordable than ever.

Vermont Foam Insulation is proud to offer expert attic insulation services for homeowners throughout southern Vermont and southwestern New Hampshire, including Rutland, Brattleboro, and Keene.

## The Best Types of Insulation for Attics

When choosing the [best types of insulation](#) for your attic, our team will consider your attic's unique insulation needs, as well as how you plan to use your attic space. We typically install spray foam insulation and blown in cellulose insulation in attics here in southern Vermont and southwestern New Hampshire.

### Spray foam insulation

Spray foam insulation is one of the most effective insulation materials on the market. In addition to controlling heat flow, it also offers air and moisture resistance. We typically use spray foam in the attic to seal air leaks around recessed lighting, the attic hatch, and other key areas. If the attic will become a finished space, we will apply spray foam to the roof slope above.

The spray foam insulation we install is made from renewable materials and has an R value (effectiveness rating for controlling heat flow) of R7.5.

### Blown-in cellulose insulation

Blown in cellulose insulation is made from recycled newspaper that has been treated to provide fire, mold, and pest resistance. Many homeowners like blown-in cellulose because it is especially eco-friendly and offers impressive thermal resistance. We typically install blown-in cellulose in loose fill form over the attic floor when the attic will remain an unfinished space.

### Air Sealing Goes Hand in Hand with Insulation

## Experience the benefits of proper attic insulation.

Book a free site visit to get started! 802-231-4616

Question or Comment

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GET STARTED

## Our Work Standards:

ENERGY

DO THE ENERGY EFFICIENT & AFFORDABLE ENERGY

Home Improvement Expert™ FactSheet  
**Attic Air Sealing and Insulation**

**WHY HOME IMPROVEMENT EXPERT?**

An easy way to get a quality job. Research findings reveal significant risk-and energy savings and potential performance risk where home improvements are not properly installed. To help homeowners address this challenge, the U.S. Department of Energy has compiled scientific expert guidance from industry leaders and national laboratories in fact sheets and checklists under the name Home Improvement Expert. Homeowners can leverage these expert recommendations to help ensure quality installation by engaging Home Improvement Expert checklists to vendor contracts and ensuring the vendor completes and signs the checklist before accepting the work.

**READY TO DO MORE?**

This fact sheet and accompanying checklist cover one of more than 20 home improvements covered by the U.S. Department of Energy Home Improvement Expert. Use them to help optimize energy savings and improve performance related to comfort, health, safety, and durability.

To download other checklists, [visit post.gov/homeimprovementexpert](#)

For more customized home improvement recommendations:

- Get your Home Energy Score from a qualified assessor: [https://www.energyscore.gov](#)
- Schedule an expert assessment through Home Performance with ENERGY STAR: [www.energyscore.gov/homeperformance](#)

**REBATES**

Done correctly, attic air sealing and insulation can reduce utility costs while improving comfort, indoor air quality, and durability.

In older homes, attics may have asbestos holes, cracks, and missing air barriers and inefficient insulation that allow unwanted heat loss in cold weather, heat gain in hot weather, and infiltration of contaminants year-round. Air sealing, uncontrolled leaks and adding insulation between the attic and the home is one of the most cost-effective measures to improve your home's performance. It can reduce your heating and cooling bills, improve comfort by stopping drafts, keep contaminants such as moisture, dust, and pests from entering your home, and reduce moisture-related durability problems.

**RELATED HOME IMPROVEMENT CONSIDERATIONS**

Before air sealing and insulating your home's attic, consider working with a qualified home energy assessor to help ensure combustion safety and sufficient fresh air once the home is made more airtight. They will check for:

- required combustion air for any natural draft combustion equipment (e.g., the home's natural draft furnace, stove, or water heater);
- adequate fresh air throughout the home;
- exhaust fans in bathrooms to remove moisture; and
- an exhaust fan in the kitchen to remove cooking emissions.

For more information on attic air sealing, please search the Building America Solution Center: [https://baec.org](#)

**TIPS FOR HIRING A CONTRACTOR**

- Look for licensed, insured, and certified contractors.
- Check references and reviews on home improvement web sites.
- Get multiple bids in writing.
- Check with your utility and state, local, and federal weatherization programs for rebates and incentives.
- Include the Home Improvement Expert™ checklist in bids and contracts to ensure quality installation.
- Consider using a Residential Energy Service Network (RESNET) certified Home Energy Rating System (HERS) rater, Building Performance Institute (BPI) certified Building Analyst, or other qualified professional (e.g., licensed engineer or architect) to inspect the work.



# Messaging in Google Ads

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Foam Installer | Call To Insulate Your Home

Ad [vermontfoaminsulation.com/home/insulation](http://vermontfoaminsulation.com/home/insulation)

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Home Improvement Expert Checklists. Call Vermont Foam  
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Insulation Types. Certified & Trained Staff. In Operation...

About Us

Energy Audit

Our Work

Moisture Mitigation

# The Quest for Quality Links: Great One!

## Georgia

### **Arbor Insulation Solutions**

2300 Holcomb Bridge Road, #103-126

Roswell, GA 30022

(404) 728-0001

<http://www.AtlantaInsulationSolutions.com>

# Incorporate in Sales Process

- **Client Presentations**

This is our standard

- **Attachment to Quotes**

- **Use to Overcome Price Objections**

- **Differentiate from Blow & Go/Box Swappers**

# Support for Richer Review Copy



**Jim Salsgiver**

2 reviews

★★★★★ 2 years ago - 

VFI did a great job at my house. We had an old drafty stone-walled basement - full height and crawlspaces. VFI covered the dirt-floored crawlspaces with a heavy-duty plastic we had found & foamed the basement walls from the sills down to the plastic vapor barrier. Made a huge difference. Where they foamed the stone walls - that solved a long-standing water penetration issue, and even brightened up the basement. Customer service was great. The crew was very professional and left the place clean as a whistle. I highly recommend VFI.



1



**THANK YOU!**

**QUESTIONS OR COMMENTS?**

[peter@energycircle.com](mailto:peter@energycircle.com)