



# ENERGY STAR<sup>®</sup> HVAC QUALITY INSTALLATION PROGRAM

*A new approach to residential HVAC efficiency and performance*

The U.S. Environmental Protection Agency (EPA) is partnering with sponsors around the country to offer the ENERGY STAR HVAC Quality Installation (QI) program, which supports the proper installation of residential heating, ventilation and air conditioning (HVAC) systems. This innovative program helps utilities go beyond simple equipment incentives to deliver additional savings by improving HVAC installation procedures.

The QI program helps homeowners identify contractors who have been trained to install HVAC equipment to the ENERGY STAR QI guidelines. By purchasing high efficiency equipment and having it properly installed, a homeowner can lower their energy bills, increase comfort and extend the useful life of the equipment. In addition, contractors who participate in QI programs are able to differentiate themselves in a competitive market and increase their customers' confidence in the installation.

I thought it was great that our utility came out after installation to do testing. It was nice to know that the system was doing what the contractor said it would. The ENERGY STAR program was well worth it.

- Customer in Connecticut

The ENERGY STAR HVAC QI program protocols are based on the Air Conditioning Contractors of America's (ACCA) ANSI recognized HVAC Quality Installation Specification. Eligible systems include residential retrofit and new construction installations of central air conditioners, air-source heat pumps and furnaces. The four main requirements are:

- Proper sizing of equipment and component matching
- Correct amount of refrigerant, or correct refrigerant charge
- Adequate airflow to match refrigerant capacity
- Properly sealing ducts to minimize leaks

We joined the ENERGY STAR Quality Installation program to differentiate our company from others in a competitive environment. The utility rebates really help, and it's the right thing to do. We did 30 ENERGY STAR installations in the first year and received a lot of positive feedback. It makes you feel good to be able to deliver.

- Participating contractor

The ENERGY STAR QI program requires a local sponsor, such as an electric or gas utility. By adding the ENERGY STAR HVAC QI program to an existing energy efficiency program portfolio, program sponsors can reduce electricity consumption while helping to ensure that homeowners receive the full efficiency and comfort benefits of their new HVAC equipment. In partnership with EPA, program sponsors have the opportunity to help transform the HVAC market.

## WHY HVAC QI IS NEEDED

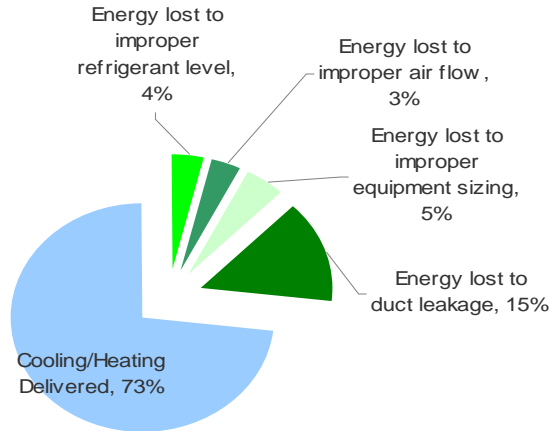
When homeowners purchase a new high-efficiency HVAC system, they expect it to perform at the advertised capacity and efficiency. Unfortunately, more than half of all HVAC systems in U.S. homes are believed to perform poorly due to one or more installation issues, which wastes energy and can increase peak load.

The charts below show the average losses in typical residential HVAC systems. Quality installations help deliver the equipment's full potential.

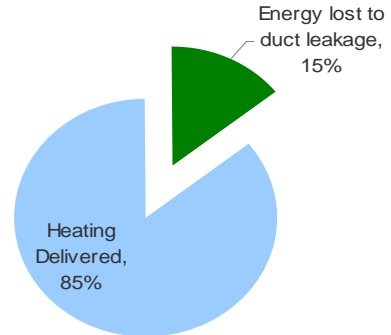
Our house is more comfortable than it has ever been in 25 years. With the ENERGY STAR Quality Installation program, we felt we had back up to make sure that the system that was installed correctly. It's not just the rebate money, it's the confidence it gives you in the company putting the system in.

- Customer in California

### Typical Air Conditioner or Heat Pump Installation



### Typical Furnace installation



While savings from improved installations will vary, estimated savings potential ranges from 18% to 36% for air conditioners and heat pumps and 11% to 18% for furnaces.

## PROGRAM DESIGN AND IMPLEMENTATION

By sponsoring an ENERGY STAR HVAC Quality Installation program sponsors can help to:

- Address homeowners' comfort problems
- Reduce customers' energy bills
- Focus attention on energy-efficient practices that go beyond traditional equipment upgrades
- Offer new and improved services to residential customers
- Improve public perception by being an advocate for energy efficiency
- Reduce air pollution and greenhouse gas emissions
- Meet energy efficiency mandates for utilities

As noted above, the ENERGY STAR QI program blends an industry-accepted set of installation guidelines, based on the ACCA specification with the government's recognized ENERGY STAR label to help consumers identify high-quality installations.

EPA is dedicating resources to develop the right tools, consumer messages and materials to support this program. We provide program sponsors with the installation guidelines, implementation guidance based on lessons learned from programs conducted in 2009-2010, and ENERGY STAR materials including:

- Program design and on-going implementation support
- Free in-person training to help local contractors building the fundamental skills of QI
- Free on-line presentations for contractors, covering both technical and marketing topics
- Free ENERGY STAR QI brochures co-branded with your utility logo and contact information
- An ENERGY STAR certificate template to recognize customers with completed QI installations
- Case studies posted on the ENERGY STAR website to highlight QI success stories
- Sample contractor participation agreement
- Commissioning and verification form templates

## FOR MORE INFORMATION AND ASSISTANCE

Currently, there are ENERGY STAR QI programs in five states: California, Connecticut, Massachusetts, Rhode Island and Texas. Read more about the program at [www.energystar.gov/HVACQI](http://www.energystar.gov/HVACQI)

EPA is looking for new partners to become program sponsors and implement the ENERGY STAR HVAC QI program. For more information please contact Ted Leopkey at EPA: (202) 343-9659 or [leopkey.ted@epa.gov](mailto:leopkey.ted@epa.gov)