



# NEWS RELEASE

CONSORTIUM FOR ENERGY EFFICIENCY, INC.

Expanding Markets for Super-Efficient Technologies<sup>sm</sup>

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## Availability of high-efficiency gas furnaces hits all-time high Utilities and other organizations using financial incentives to promote this equipment

With the likelihood of a more stringent federal standard looming and the demands for energy-saving equipment increasing, manufacturers are producing more high-efficiency residential gas furnaces than ever before. According to CEE research, **22 percent of all available models are rated at 90 percent Annual Fuel Utilization Efficiency (AFUE) or higher**, compared to just 12 percent in 1998.

In its High-Efficiency Residential Gas Heating Initiative, CEE defines a high-efficiency gas furnace as one rated at 90 percent AFUE or above. There are currently **22 utilities and energy organizations promoting high-efficiency residential gas heating through the CEE initiative**. A list of qualifying products can be found on the ENERGY STAR<sup>®</sup> Web site: [www.energystar.gov](http://www.energystar.gov).

"We're thrilled to see the increase in the number of efficient furnaces on the market," said Stephanie Jones, CEE Program Manager for Residential Gas Heating. "With more high-efficiency products available, consumers should have an easier time choosing a furnace that can save them money in heating their homes."

Energy savings from efficient furnaces can vary greatly, depending on locale. High-efficiency heating equipment makes the most sense in cooler climates where it is used more frequently (see page 3). In Portland, Ore., for example, **an efficient gas furnace can save \$127 a year**. Since many gas furnaces last 20 years or more, savings can really add up over the lifetime of the equipment.

The current federal minimum is 78 percent AFUE but the U.S. Department of Energy is researching a possible revision, which could be finalized as early as 2004.

### CEE REVISES PERFORMANCE LEVELS

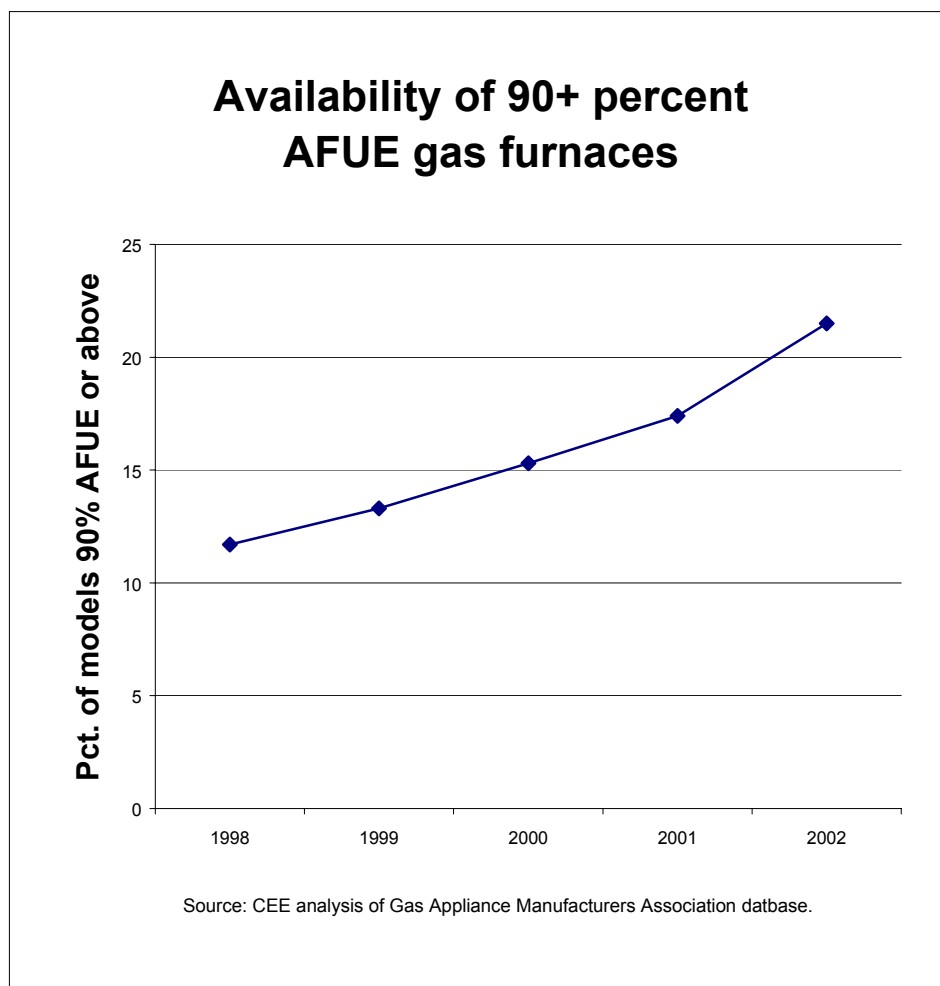
Responding to this market trend toward higher efficiency, CEE revised the performance levels for furnaces within its Residential Gas Heating Initiative in October 2002, setting tiers at 90, 92, and 94 percent AFUE. CEE's original specification, set in 1998, was 90 percent AFUE.

This approach allows local energy-efficiency programs to be tailored to specific climate differences. Check with your local utility for programs promoting high-efficiency appliances and practices.

### ABOUT CEE

CEE is a national nonprofit corporation that has been promoting energy-efficient technologies and services since 1991. Members include utilities, state energy offices, environmental groups, and state and regional energy-efficiency organizations.

## More energy-efficient models are on the market



As you can see in the above chart, the availability of high-efficiency gas furnaces has increased dramatically. The number of available models rated at 90 percent AFUE or higher has nearly doubled in the past four years.

Thanks to the efforts of utilities and energy-efficiency organizations, more homeowners than ever before are buying high-efficiency furnaces. Manufacturers have responded to this demand by producing a wider assortment of models from which to choose.

# Efficient furnaces save gas and money

## Savings, however, vary greatly by region

Savings from high-efficiency gas furnaces can vary widely, depending on the climate, the size of the home, usage patterns and the local cost of fuel. In the northernmost regions of the continental U.S., annual Heating Load Hours (HLH) can exceed 3,000. In southern Florida, annual HLH are fewer than 500. Obviously, potential savings and cost effectiveness are greater in regions where more heating is required.

The three cities used in these charts are compared below.

### Comparison of cities

City	HLH*	Cost of fuel (per therm)
Boston	2,413	\$0.85
Portland, Ore.	2,495	\$1.00
Los Angeles	1,815	\$0.67

\*Annual Heating Load Hours (calculated by CEE using data from National Climatic Data Center)  
Cost of fuel data provided by CEE members

### What are the estimated savings and incremental costs?

CEE research has produced varying figures for incremental costs of equipment and installation. For the purposes of calculating simple paybacks, \$800 was used as the incremental cost for a 70,000 Btu/hr. unit and \$1,000 was assumed as the incremental cost for a 90,000 Btu/hr. model. Installation accounts for a bulk of this incremental cost. It is likely that installation costs will decline when high-efficiency equipment becomes more commonplace and contractors are more familiar with installation practices. Lower incremental costs will then translate into shorter payback periods for this equipment.

According to the Gas Appliance Manufacturers Association, **75 percent of high-efficiency furnace sales (90+ percent AFUE) in 2001 were for models rated at 92 percent AFUE or higher.** Furnaces with efficiencies up to 96.6 percent AFUE are currently on the market. Although greater savings can be achieved with these higher-efficiency units, comprehensive savings data for equipment rated at 90+ percent AFUE is unavailable at this time.

#### 70,000 Btu/hr. gas furnace (average-sized home)

City	Therms used /yr. (78% AFUE)	Therms used /yr. (90% AFUE)	Savings/yr. (therms)	Savings/yr. (monetary)	Simple payback*
Boston	916	795	121	\$104	7.7 yrs.
Portland, Ore.	948	822	126	\$126	6.4 yrs.
Los Angeles	689	598	91	\$61	13.0 yrs.

#### 90,000 Btu/hr. gas furnace (large home)

City	Therms used/yr. (78% AFUE)	Therms used/yr. (90% AFUE)	Savings/yr. (therms)	Savings/yr. (monetary)	Simple payback*
Boston	1,178	1,022	157	\$133	7.5 yrs.
Portland, Ore.	1,218	1,056	162	\$162	6.2 yrs.
Los Angeles	886	769	118	\$79	12.7 yrs.

\*Based on annual savings, amount of time required to recover incremental cost of equipment plus installation charge

Source: CEE calculations based on Federal Energy Management Program data

# Local programs promote efficient furnaces

*NW Natural, serving more than a half million natural gas customers in Oregon and southwest Washington, is offering up to \$400 in cash rebates for the purchase and installation of a high-efficiency gas furnace. In addition, Oregon residents are eligible for a \$350 tax credit.*

“Through our gas furnace program, the number of high-efficiency furnace adoptions in the past 12 months has nearly doubled from 2001. One major distributor in our area now stocks only furnaces rated at 90 percent AFUE or better. In order to purchase an 80 percent AFUE furnace from this distributor, you have to place a special order with the manufacturer.”

**Steve Bicker**  
Director of Energy-Efficiency Programs  
NW Natural

*Members of GasNetworks, a New England gas utility collaborative, offer a \$200 rebate for the purchase and installation of high-efficiency furnaces. CEE members belonging to GasNetworks include Bay State Gas, Berkshire Gas, New England Gas, NSTAR Gas and KeySpan Energy Delivery.*

“Since 1997, KeySpan has trained thousands of heating contractors in the proper installation and maintenance of high-efficiency gas heating equipment. High-efficiency furnace shipments to KeySpan customers in Massachusetts have increased from about 45 percent of all shipments in 1997 to approximately 65 percent today. During the same period of time, incremental costs of high-efficiency furnaces (compared to standard models) have decreased from \$450 to about \$200.”

**Bruce Johnson**  
Director of Energy Management  
KeySpan Energy Delivery New England

*In 2001 and 2002, Southern California Gas offered a \$200 rebate for the purchase and installation of a high-efficiency gas furnace.*

“Southern California Gas has completely sold out its energy-efficiency programs for gas furnaces the past two years. San Diego Gas & Electric has also produced strong results in its high-efficiency gas furnace programs. Energy-efficiency programs stimulate consumer interest in this equipment, which eventually drives down the incremental cost.”

**Lance DeLaura**  
Manager of Consumer Market Programs  
Southern California Gas

# Participants in CEE's Residential Gas Heating Initiative

(CEE members in **bold**)

**Aquila**

N.J. Clean Energy Collaborative

Avista Utilities

New Jersey Natural Gas

**Bay State Gas**

**NSTAR Gas**

**Berkshire Gas**

**NW Natural**

British Columbia Gas

Oregon Office of Energy

CenterPoint Energy Minnegasco

Owatonna Public Utilities

Elizabethtown Gas

**Pacific Gas & Electric**

**Fitchburg Gas & Electric (Unitil)**

**Public Service Electric & Gas**

GasNetworks

**San Diego Gas & Electric**

**Gaz Metropolitan**

**South Jersey Gas**

**KeySpan Energy Delivery**

**Southern California Gas**

MidAmerican Energy

**Vermont Gas**

**New England Gas Company**

**Xcel Energy**

Initiative participants promote the purchase and installation of high-efficiency residential gas furnaces and gas boilers through a combination of financial incentives and consumer education. The State of Oregon offers tax credits.