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**Proposed Furnace Efficiency Standards
Would Benefit Affordable Housing**

NOTE TO READERS

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**PROPOSED FEDERAL FURNACE EFFICIENCY
STANDARDS WOULD GENERATE SUBSTANTIAL
AFFORDABLE HOUSING BENEFITS IN ADDITION
TO ENERGY AND ENVIRONMENTAL BENEFITS**

Massachusetts affordable housing advocates and developers have a distinct interest in the promulgation of reasonable energy efficiency standards for residential furnaces.¹ In furtherance of that interest, comments prepared by Fisher, Sheehan & Colton (FSC) on behalf of a local nonprofit Housing Trust endorsed the promulgation of a two-part standard with different minimum efficiencies required for "northern" and "southern" states as those terms are defined in the Notice of Proposed Rulemaking (October 6, 2006).

In particular, the Housing Trust endorsed the 90% AFUE furnace efficiency standard for northern states.

The interest of the Housing Trust in energy efficiency standards for residential furnaces is grounded in the Home Energy Affordability Gap.² The Home Energy Affordability Gap presents an annual analysis of the dollar difference between actual home energy bills facing low-income households and affordable home energy bills. In 2005, the most recent year for which the Affordability Gap had been released at the time of the comments, the Affordability Gap facing Massachusetts residents reached nearly \$658 million dollars. According to that 2005 analysis, the Affordability Gap facing low-income Massachusetts households has increased by nearly \$222 million simply from 2002 to 2005. The 2002 Home Energy Affordability

¹ Any further reference to "furnaces" in these comments is intended to be limited to residential natural gas fired furnaces unless the context otherwise clearly indicates.

² The Home Energy Affordability Gap, by state, can be found at www.HomeEnergyAffordabilityGap.com.

Gap in Massachusetts (released in April 2003) had been \$435,822,130.

The Affordability Gap is of concern to the Housing Trust as a developer of affordable housing. The calculation of the Affordability Gap is based on a determination of the dollar amount by which actual home energy bills exceed 6% of gross household income. Home energy bills as a percentage of household income are referred to as the "home energy burden," with a 6% burden determined to be "affordable."³

In Massachusetts, the 2005 Affordability Gap reports, home energy burdens for households at various levels of the Federal Poverty Level⁴ ranged up to more than 60% of household income. Even for the highest income bracket

³ The Affordability Gap analysis presents the documentation for the determination of this 6% affordability standard.

The 6% standard has been adopted by states such as New Hampshire and New Jersey as the basis for their low-income utility rate affordability programs. Moreover, the recent evaluation of the New Jersey Universal Service Fund (USF), prepared for the New Jersey Board of Public Utilities by Apprise, Inc., found that as home energy burdens increase above 6% of income, home energy bill coverage ratios (the percent of the total bill which is paid) substantially decrease. Apprise, Inc. (April 2006). Impact Evaluation and Concurrent Process Evaluation of the New Jersey Universal Service Fund: Final Report, prepared for New Jersey Board of Public Utilities, Apprise, Inc.: Princeton (NJ).

⁴ The generally accepted measure of "being poor" in the United States today indexes a household's income to the "Federal Poverty Level" published each year by the U.S. Department of Health and Human Services (HHS). The Poverty Level looks at income in relation to household size. This measure recognizes that a three-person household with an annual income of \$6,000 is, in fact, "poorer" than a two-person household with an annual income of \$6,000. The federal government establishes a uniform "Poverty Level" for the 48 contiguous states. Since 100 percent of Poverty Level is generally considered to be too low to be a reasonable demarcation of "being poor," other estimates range from 150 to 200 percent of Poverty or more. A household's "level of Poverty" refers to the ratio of that household's income to the Federal Poverty Level. For example, the year 2005 Poverty Level for a two-person household was \$12,830. A two-person household with an income of \$6,415 would thus be living at 50% of Poverty. A two-person household with an income of \$19,245 is said to be living at 150% of Poverty.

studied in the Home Energy Affordability Gap (from 150% to 185% of Federal Poverty Level), the home energy burden in 2005 was more than 9%.⁵

From the perspective of a developer of affordable housing, these home energy burdens are viewed in the context of overall shelter burdens. The generally-accepted definition of an affordable total shelter burden (which includes rent/mortgage payments, plus all utilities except telephones) places the upper limit on affordable shelter burdens at 30% of income. Whether using program funds such as federal HOME dollars, or Low-Income Housing Tax Credits (LIHTC), or some other generally-available funding source, households with total shelter burdens exceeding 30% of income are considered to be over-extended.

Diversion of Household Resources from Housing to Energy

At even the highest level of Federal Poverty Level studied by the Home Energy Affordability Gap (150% to 185% of FPL), it is virtually impossible to absorb existing energy bills and to meet that 30% shelter affordability standard. Low-income households cannot pay between 10% and 25% of their income simply for home energy and have any reasonable expectation that they will be able to limit their total shelter costs to 30% of income.

As a result, these high home energy burdens impede the production of affordable housing units. Every dollar by which a low-income household's home energy burden exceeds the 6% affordability standard is a dollar that is not available to pay for the housing component of the 30% total shelter affordability standard. What the 2005 Home Energy Affordability Gap documents, in other words, is that, because of unaffordable home energy bills, more than \$660 million that should have been available to pay

⁵ These 2005 Home Energy Gap and home energy burden calculations were before the fly-up in natural gas prices in the 2005/2006 winter heating season.

for housing costs is being diverted to the payment of energy costs instead.⁶

Quite aside from the impact that increasing energy prices/bills/burdens have on low-income households in Massachusetts, in other words, is the impact that those increasing energy prices/bills have on the affordable housing programs supported by HOME and/or other public funding. The increase in prices not only makes “affordable housing” less affordable, but it makes it less possible to produce affordable housing units with which to begin. As a result of increasing energy prices, Massachusetts affordable housing developers, between 2002 and 2005, lost more than \$220 million in financial capacity to provide affordable housing units for low-income households in the Commonwealth as resources are diverted from housing costs to energy costs.

FMRs Not Keep Up With Energy Price Increases

The loss of affordable housing “purchasing power” attributable to rising energy prices can be seen in Massachusetts through a review of the Fair Market Rents (FMRs) applicable in different communities throughout the state. FMRs present a regulatory dollar cap (imposed by HUD) on the total shelter costs that can be charged to residents under a variety of federal affordable housing programs.⁷ HUD updates FMRs on an annual basis. A recent analysis compared those annual modifications in FMRs for various Massachusetts communities to utility

⁶ An additional portion of the difference between actual home energy burdens and the 30% shelter affordability standard will be devoted to water and wastewater bills. Since these bills are not implicated by the proposed furnace efficiency standard, they are set aside for purposes of these comments.

⁷ See generally, 24 C.F.R. §888.111(b) (2006) (“Fair market rent means the rent, including the cost of utilities (except telephone), as established by HUD, pursuant to this subpart, for units of varying sizes (by number of bedrooms), that must be paid in the market area to rent privately owned, existing, decent, safe and sanitary rental housing of modest (non-luxury) nature with suitable amenities.”) See also, 24 C.F.R. §888.113.

bills as affected by changes in energy prices for the same years. The analysis used FMRs for two-bedroom units as the standard for shelter costs. The analysis examined FMRs and energy costs for the Massachusetts communities of Boston, Worcester, Pittsfield, and Fall River.

Increasing home energy bills are generating a substantive downward pressure on the contract rents that are implicit within the FMRs for Massachusetts communities. The Massachusetts data documents the extent to which home energy is taking an increasing proportion of the FMRs published by HUD for the four Massachusetts communities identified above. In all four instances, the proportion of the FMR that would be devoted to home energy given changes in fuel prices has significantly increased in the four years 2003 through 2006.

The data documents that energy bills in Massachusetts are increasing faster than FMRs are increasing. While home energy comprised 15.2% of the Boston FMR in 2003, it comprised 21.9% of the FMR in 2006. While home energy made-up 15.4% of the Worcester FMR in 2003, it made-up 24.7% of the FMR in 2006.

The impact of this disparity in the growth rate of home energy bills and FMRs is that fewer dollars of an FMR are available to pay for rent. From 2003 to 2006, the dollars available for rent actually decreased in both Boston (down \$28, from \$665 in 2003 to \$637 in 2006) and Worcester (down \$115, from \$719 in 2003 to \$602 in 2006). Even the increases in dollars available for rent, however, were insignificant. The Pittsfield FMR provided \$24 more for rent in 2006 as compared to 2003, while the Fall River FMR provided only \$36 more for rent in 2006 compared to 2003.

The Massachusetts data shows the percentage change for each year relative to 2003 for both the FMR as a whole and the FMR that is available for rent.⁸ As home energy prices have

⁸ Again, one must remember that part of the FMR remaining after paying home energy must be devoted to other

increased faster than the FMRs, the change in the FMR is often misleading about what resources are available for rent. While FMRs in Boston increased by 4% from 2003 to 2006, for example, the resources available for housing decreased by 4.3% after taking into account the disproportionate increase in home energy bills. While the Worcester FMR decreased by 6.0% from 2003 to 2006, the resources available for housing decreased by 16.4% after taking home energy into account.

Impact on Affordable Housing Production

It is unquestioned that Massachusetts has a profound shortage of funds in relation to existing affordable housing needs. According to the most recent Consolidated Plan filed by Massachusetts with HUD (2005),⁹ the Commonwealth is able to serve only a small percentage of the probable total number of households in need. The increasing energy prices faced by residential consumers today, however, represent a direct threat to the ability of the Trust (and other affordable housing developers) to follow-through on this need. Consider how one developer described the impacts of energy price increases in California:

Because publicly funded low-income housing operates with legal affordability restrictions, the combination of past and anticipated utility rate hikes is dramatically limiting borrowing capacity.* * *[W]ith increasing utility rates, either tenants can pay less rent or property owners have to pay higher energy costs.¹⁰ Either way, net

operating income declines. As a consequence, developments can afford to support less debt financing, creating a gap in the development budget . * * *[O]n a statewide level [in California], this situation is increasing the amount of scarce public funding required per project, thereby reducing the total number of affordable units that can be built.¹¹

This statement by Herald and Shoemaker is a truism, which is equally applicable to Massachusetts. “[W]ith increasing utility rates, either tenants can pay less rent or property owners have to pay higher energy costs. Either way, net operating income declines.” Accordingly, the total number of affordable units that can be built decreases.

Furnace Efficiency Standards

As is evident, the furnace efficiency standard is not simply an “energy efficiency” proposal. By helping to cost-effectively reduce energy consumption (and thus energy bills), the standard is also a positive and appropriate response to the barriers that unaffordable home energy pose to producers of affordable housing units.

The benefit that the 90% AFUE furnace efficiency standard would deliver to the Massachusetts affordable housing community (and to the low-income constituency that it serves) is considerable. While there is not a reliable data base that tracks unduplicated units of affordable housing produced each year in the

utility costs, other than telephone.

⁹ A “Consolidated Plan” is a planning document that participating jurisdictions must periodically submit to the U.S. Department of Housing and Urban Development (HUD) as a precondition to receiving federal housing funds.

¹⁰ This explanatory footnote added by author of DOE comments: A household’s total shelter payment is limited by the 30% of income rule. If a household’s monthly income is equal to \$1,500 (annual household income of \$18,000), for example, the household has \$450 available for total shelter costs ($\$1,500 \times 0.30 = \450). To the extent that total shelter costs (rent/mortgage plus all utilities except telephone) exceed this \$450 level, benefits must be

paid to reduce the total shelter burden to \$450. In the simplest case, assume that total shelter costs are \$600, \$150 in utility costs and \$450 in rent. The developer could either pay a \$150 utility allowance and receive \$450 a month in rental income or pay \$0 as a utility allowance and receive \$300 a month in rental income. In the first case, the developer experiences higher expenses. In the second case, the developer experiences lower income. In both cases, the energy costs limit the developer’s borrowing capacity.

¹¹ Mike Herald and Doug Shoemaker, “How the Energy Crisis Affects Affordable Housing: An Overview of the Problem,” Property Compliance Report (July 2001).

Commonwealth,¹² the State HFA Fact Book published annually¹³ by the National Council of State Housing Agencies (NCSHA) provides some insights. According to that NCSHA publication, from its inception in FY 1992 through FY 2003, the federal Home Investment Partnership program funded more than \$462 million of affordable housing in the Commonwealth. In 2003 alone, HOME provided nearly \$19 million in affordable housing funds in Massachusetts.¹⁴

Of the committed HOME funds in Massachusetts, there was considerable support for the lowest income households. This distribution is important because the extent to which energy has an adverse impact on the ability to produce housing falls most heavily within the lowest income population (because home energy burdens are highest and the diversion of funds from housing costs to energy costs is accordingly greatest).

Similarly, in 2003, Massachusetts allocated Low-Income Housing Tax Credits to 26 developments, producing 1,715 units of housing. From its inception in 1987 through 2003, Housing Tax Credits have been used to produce 24,471 HC-qualified units.¹⁵

Summary

As is clear, the promulgation of increased furnace efficiency standards will have a substantial and positive effect on affordable housing development in the Commonwealth. New construction and substantial rehabilitation, by their very nature, will involve the installation of new furnaces. To the extent that energy inefficient furnaces are installed, they represent

lost opportunities for decreasing energy consumption, improving energy affordability, and mitigating the adverse impacts that increasing energy prices have on the ability to produce affordable housing units. New furnaces, once installed in new and/or rehabbed affordable housing units, will not be replaced before the end of their useful lives. The 90% AFUE furnace efficiency standard would benefit not simply thousands of low-income households, but tens of thousands of low-income households in Massachusetts alone.

For more information on how the impact that energy prices are having on local Fair Market Rents (FMRs), readers may contact FSC directly at:

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FSC now has the capacity to compare energy price increases to FMR increases for each jurisdiction in the country.

Fisher, Sheehan and Colton, Public Finance and General Economics (FSC) provides economic, financial and regulatory consulting. The areas in which FSC has worked include energy law and economics, fair housing, affordable housing development, local planning and zoning, energy efficiency planning, community economic development, poverty and telecommunications policy, regulatory economics, and public welfare policy.

¹² Duplicated units would arise because many affordable housing units use more than one funding source to subsidize their production.

¹³ The most recently available of this “annual” publication is the 2003 State HFA Fact Book.

¹⁴ 25% of HOME-supported housing units received no other source of subsidy in 2003.

¹⁵ Tax credit housing is significant in that only 54% of HOME-supported units are also supported by the LIHTC.