



by James E. Houck

From sea to shining sea, and from city to country, fireplaces are everywhere and represent an immense market and opportunity.

THE FIREPLACE MARKETPLACE

Let's get right to the point. Today there are more than 37 million households in the United States with one or more fireplaces. Recent trends predict that as many as 900,000 new fireplaces annually will be sold/constructed with new houses. During the last year for which there are complete data (2004), 55 percent of the new one-family houses built had fireplaces. These are unbiased facts, just the facts without spin, marketing hype or agenda, and are supplied by the U.S. Department of Housing and Urban Development and the U.S. Census Bureau in public documents.

These numbers include wood-burning fireplaces; B-vent, direct-vent and vent-free natural gas- and LPG-fueled fireplaces; inside and outside fireplaces; freestanding fireplaces; built-in fireplaces; masonry fireplaces; manufactured zero-clearance fireplaces; fireplaces constructed from kits; fireplaces with gas inserts, with pellet inserts, with EPA-certified catalytic and non-catalytic wood-burning inserts and with pre-EPA certification wood-burning inserts; wood-burning fireplaces with gas log sets installed; and fireplaces in which manufactured wax/fiber and densified firelogs are burned.

Besides the sale/construction of new fireplace units, the sale of new or replacement inserts, the sale of gas log sets, and the sale of manufactured fuels,

a host of other hearth products are part of the market. Grates, andirons, screens, glass doors, mantels, floor protectors, chimney pipe, rain caps, flashing, wall thimbles, gas piping, gas flex lines, gas shut-off valves, creosote removal products, fire starters and cleaning supplies are all part of the mix.

New York	
Year	MSA 2003
Usable fireplaces (x1000)	545.5
Fireplaces with Inserts Used for Heating (x1000)	12.5
Fireplaces without Inserts Used for Heating (x1000)	37.7

Chimney sweeps, cordwood merchants, propane suppliers, homebuilders, masons and gas utilities also derive income from fireplaces. The fireplace market touches nearly every member of the hearth industry – manufacturers, distributors, retailers and service providers alike.

There are some socio-demographic trends of note. These include the fact

that, among the various regions of the country, there are the most fireplaces per capita in the West and fewest in the Northeast; and there are more fireplaces per capita in suburbs compared to either central cities or rural areas.

Forty-four percent of households in the West census region reported having one or more fireplaces in 2003 compared to 33 percent for the nation as a whole. In contrast, only 26 percent of households in the Northeast census region reported having one or more fireplaces. Forty-one percent of households in the suburbs reported having one or more fireplaces in 2003 compared to 27 percent in central cities and 28 percent in rural areas outside of Metropolitan Statistical Areas (MSAs). Ninety percent of fireplaces are in single-unit homes, while only 7 percent are in multi-unit structures and 3 percent are in manufactured/mobile homes.

While interesting, these types of socio-demographic statistics for fireplaces can be recited *ad nauseam*, but they are arguably superfluous for developing a business strategy around fireplaces – fireplaces are ubiquitous. The difference between 44 and 26 percent ownership is not overly important for most fireplace-related businesses when many hundreds of thousands to literally millions of units are involved. There is enough potential business to go around.

So what is important for the future of fireplaces and for developing a business strategy to capitalize on it? We would argue three key things: (1) consumer demand and preferences, (2) fuel availability and cost; and (3) regulatory impacts.

Consumer Demand and Preferences

Unequivocally, consumer demand for fireplaces is high. They are the third most popular household amenity after a two-car garage and air conditioning. It is well recognized that they add to the value of a home, and it has been estimated that each fireplace adds \$12,000 on average to that value. Fireplaces are more common in newer and more expensive homes and, not surprisingly, multiple fireplace ownership is far more common in upscale homes.

The Hearth, Patio & Barbecue Association (HPBA) conducts biennial surveys on home occupant attitudes about fireplaces and fireplace usage trends. (The HPBA provides these reports to member firms; they can be obtained by contacting Don Johnson, director of Market Research.) The most recent of these reports states: Fireplace owners choose as they do because “it makes the room more attractive.”

There are certainly many subtleties that come to play when tailoring fireplace-related products and their sale to the marketplace, but the overriding factor seems to be that most consumers see fireplaces in terms of aesthetics, not in

St. Louis	
Year MSA 2004	
Usable fireplaces (x1000)	417.6
Fireplaces with Inserts Used for Heating (x1000)	40.2
Fireplaces without Inserts Used for Heating (x1000)	36

terms of utility. Interestingly, some homeowners are passionate about burning “real wood;” others like the convenience of wax/fiber firelogs or gas-fueled fireplaces.

The passion for wood fire is real and a strong marketing force. According to Walter Moberg, president of Moberg

Seattle	
Year MSA 2004	
Usable fireplaces (x1000)	593.1
Fireplaces with Inserts Used for Heating (x1000)	134.8
Fireplaces without Inserts Used for Heating (x1000)	92

Fireplaces, “What I see in my day-to-day work as I travel around the country, and on several continents as well,

is that this natural, organic fire that people have in their psyche, if not in their experiences, is still a vital part of our culture. I work mainly at a very high-end business with my custom work. For example, I just designed 10 wood-burning fireplaces for Bruce Springsteen and 5 for Steven Spielberg. Both are very wealthy and are looking for the best, the ultimate. And for middle class Americans who are looking for something that has quality and value in their home, the ultimate is still wood-burning.

“I believe that, for everyone, having a wood-burning fireplace in the home, or in a special setting in a public building, brings a sense of community. It brings ambiance, and in the architectural world that I am in, it is

Big Numbers, Big Market

Estimates vary, but about one-third of fireplaces are used for aesthetic purposes, about one-third are used for secondary heat and about one-third are not used in any given year. Less than one percent, even including those that have heating inserts installed, are used for primary heating purposes. Generally, wood-fired fireplaces without inserts don't make very efficient heaters; even with glass doors and all the bells and whistles, efficiencies fall in the 30 percent range.

Fireplaces without inserts are most appropriately used for aesthetics, or to take the chill off a room during a “cold snap” in milder climates. An insert must be installed if the fireplace is to be used for serious heating, which is almost always defined as secondary heating, because a whole house is almost never exclusively heated with an insert.

Inserts generally have high efficiencies, just slightly lower than their freestanding counterparts. Their efficiencies are slightly lower due to the fact that radiant heat is somewhat restricted by the insertion of the unit and the exhaust pipe within the fireplace cavity/chimney. Inserts can be wood-, pellet- or gas-fueled.

Wood inserts must be EPA-certified, as they are a wood heater under federal law. In practice, pellet inserts, like pellet stoves, may or may not require EPA certification, depending on their design and, in some cases, the discretion of the manufacturer.

Because many homes have more than one fireplace, there are more fireplaces than homes with fireplaces. The number of total fireplaces is somewhere between 44 million and 50 million; of that, about 13 million are gas-fueled, and 7 million and 200,000 already have cordwood and pellet inserts, respectively, in them. That leaves somewhere between 24 million and 30 million wood-burning fireplaces without inserts ready to have one installed.

Additionally, of the approximate 7 million cordwood inserts, fewer than 10 percent of them are EPA-certified, with the remaining units being candidates for replacement. New exhaust pipes are required for gas and pellet inserts, and often the existing fireplace chimney needs to be relined for a cordwood insert.

These are big numbers and a big marketplace.

Pittsburgh	
Year MSA 2004	
Usable fireplaces (x1000)	294.9
Fireplaces with Inserts Used for Heating (x1000)	37
Fireplaces without Inserts Used for Heating (x1000)	27.3

the ultimate expression of those things. It's certainly not something that is going to disappear, even with regulations."

Fuel Availability and Cost

Fuel is needed for fire, and money is always the bottom line. In some parts of the country, and in many rural areas, natural gas is not available. Without natural gas, gas-fueled appliances are not as popular. The alternative, LPG, is more expensive than natural gas and, unless the home is already using LPG, the addition of that unsightly tank is a detractor and an inconvenience to install.

Therefore, if a manufacturer is selling gas-fueled fireplaces or gas log sets, Maine – where only about 3 percent of residences use natural gas, according to the American Gas Association – is not

as good a target as California, where 77 percent of residences use natural gas. Conversely, cordwood is more readily available and less expensive in rural Maine than in southern California. Wax/fiber firelog use is most prevalent in suburbia, where they are conveniently and inexpensively purchased at mass merchants. The Los Angeles area is one of the biggest markets for wax/fiber firelogs.

The use of wood-burning appliances, in general, has slowly gone out of vogue and has declined steadily since the 1950s, albeit with a slight and brief resurgence after the 1970 energy crisis. Following suit, the use of wood-burning fireplaces has decreased relative to gas-fueled fireplaces since the early '90s. Countering this trend, the recent skyrocketing costs of both natural gas and propane appear to have slowed the trend a bit.

Retailers across the country have watched the trend. For example, in northern Vermont, retailer Roy L'Esperance watched the pendulum swing dramatically in 2005. "Last year (2004) we were 70 percent gas and 30 percent wood," he says. "This year (2005) it's 70 percent wood and 30 percent gas."

Regulatory Impacts

Wood-burning fireplaces produce more air emissions than gas-fueled units. Among the various air pollutants emitted from wood-burning, particulate emissions are of most concern because a

number of areas are, have been or are projected to be in violation of federal particulate air quality standards. Until recently, wood-burning air quality issues have been focused in the West in response to the standard referred to as PM₁₀, promulgated in 1990. Recently, the concern has spread to the East in

Los Angeles	
Year MSA 2003	
Usable fireplaces (x1000)	1,121.5
Fireplaces with Inserts Used for Heating (x1000)	74.9
Fireplaces without Inserts Used for Heating (x1000)	173.2

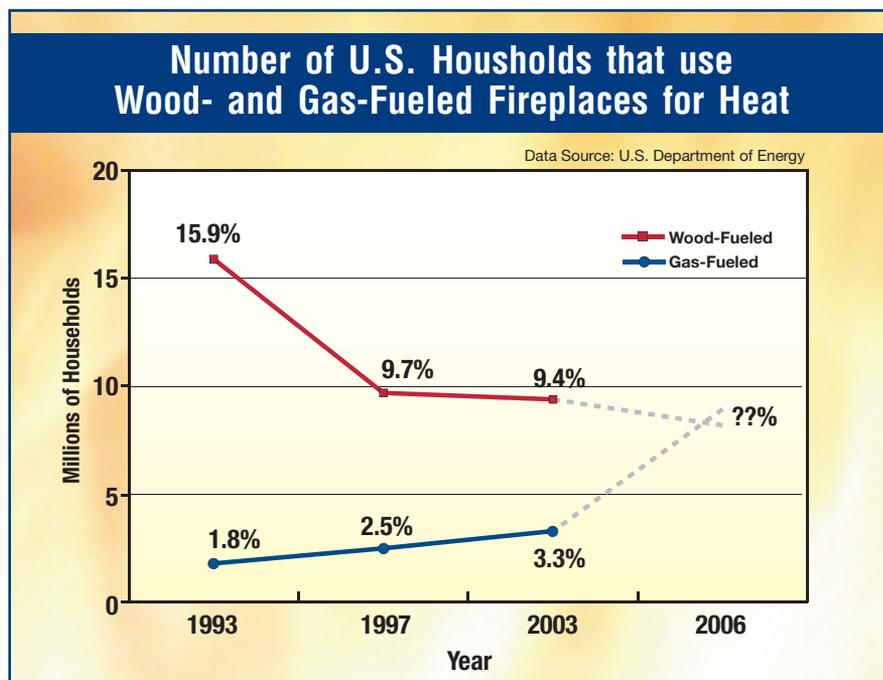
response to the particulate standard referred to as PM_{2.5}, mostly in place as of 2005. Even more significant for residential wood-burning is a proposal made by the administrator of the EPA for an even more stringent PM_{2.5} standard. A decision on that proposal is scheduled for the end of September.

State and local air quality jurisdictions are tasked to develop and enforce regulations to ensure that the federal standards are met. A spectrum of approaches has been taken to regulate wood-burning fireplaces. They have ranged from no regulations whatsoever, to approaches that can best be characterized as voluntary and educational, to the outright ban of new wood-burning fireplaces and the restriction on the use of existing ones.

Maricopa County in Arizona (Phoenix area) and the San Joaquin Valley of California have some of the most stringent wood-burning fireplace regulations. Wrongly, some folks have minimized the significance of the impact of the regulatory treatment of wood-burning fireplaces in these two locations. The rationale has been that they are, after all, only isolated areas with mild climates.

According to the American Housing Survey, there were 350,800 households with fireplaces in the Phoenix Metropolitan Statistical Area in 2002; most likely half of them were installed since 1990 due to the rapid growth in the area. The U.S. Census Bureau indicates

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Estimates for the last two years are based upon HBPA data that show the proportion of gas to wood appliance shipments has increased significantly.

The Regulators

John E. Hornback, Executive Director, Metro-4/SESARM

Metro 4 represents the interests of 17 local air pollution control agencies in the southeastern states. Southeastern States Air Resource Managers (SESARM) represents eight southeastern state agencies in Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee.

Historically, particulate matter has not been a major issue in the Southeast. However, several metropolitan areas around the Southeast were found to be in violation of the fine (PM_{2.5}) particle annual standard.

The newly proposed coarse particle standard (PM_{10-2.5}) and tightening of the 24-hour PM_{2.5} standard, will add additional areas of concern in the Southeast.

The southeastern agencies have an ongoing project to evaluate the nature of particles to determine their origin, such as fossil fuels, wood smoke and meat cooking. At this time, there are no known air quality regulations in existence in the Southeast to address fire-



place emissions.

Should fireplace emissions be identified as a significant contributor to non-compliance with federal air quality standards in a specific area, the state agency, and the local agency, if any, could very well suggest specific fireplace design standards for the purpose of lowering these emissions. Speculating just a bit, it is probably not highly likely that such a strategy would be employed, but it is certainly in the menu of options available to agencies if significant impacts were to be identified.

Natural gas is not always available at rural homebuilding sites (although propane is) but in metropolitan areas where particle problems are more likely to be encountered, natural gas is usually an option.

Air pollution control agencies have long recognized that emissions from gas fireplaces are substantially different from wood fireplaces – particle levels are much higher from wood fireplaces.

James Nolan, Director-Compliance, Puget Sound Clean Air Agency (WA)

“Our anecdotal observations are that people with fireplaces do not try to use them for heat and, therefore, use less wood over the season than people who use wood stoves for heat. However, we believe that fireplaces are often used on weekends and holidays.

“During a period of wintertime air stagnation that occurs over a weekend or holiday, it is very likely that fireplace emissions have a much more significant impact on air quality than wood stoves. That is one of the reasons why Washington State prohibits the use of fireplaces and uncertified wood stoves during a Stage 1 Burn Ban.

Because it is common for our stagnations to occur during the winter holiday

periods, it seems we are often the Grinch asking people not to use their fireplaces on Thanksgiving, Christmas, New Year’s or Super Bowl Sunday.

“In addition to our strategy of prohibiting fireplace use during Stage 1 Burn Bans, we also recommend that dedicated fireplace users upgrade to certified inserts (natural gas, propane or wood). They produce lower emissions, actually provide heat and can be used during Stage 1 Burn Bans.

“For the casual fireplace user, we recommend the use of manufactured firelogs. While they don’t provide heat and cannot be used during Burn Bans, they do provide the ambience with much lower emissions.

Bob Kard, Director Maricopa County Air Quality Department (AZ)



“The Maricopa County Air Quality Department has a federally mandated goal of reducing the emissions of particulate matter (PM-10). The county’s approach includes allowing the installation of fireplaces only if they have permanently installed gas or electric log inserts.

“When air quality degrades, the county also declares a ‘No-Burn’ day for solid fuel-burning. When wood fires are eliminated and the smoke dissipates, it actually becomes possible to take evening walks without choking on the air.”

Tom Jordan, Special Projects Administrator, San Joaquin Valley Air Pollution Control District (CA)

Solid-fueled residential fireplaces and heaters are significant contributors to the San Joaquin Valley Air Basin’s (SJVAB) wintertime particulate problem. In order to reduce this impact, the San Joaquin Valley Air Pollution Control District has implemented a multi-faceted program that includes voluntary and mandatory curtailment of (wood-burning fireplace) usage when air quality is unhealthy, and requirements to limit the density of (wood-burning fireplace) installation in new residential construction.

Editor’s Note: The key relevant statements in SJVAB rule 4901 are: “No person shall install a wood-burning fireplace in a new residential development with a density greater than two (2) dwelling units per acre,” and “No person shall operate a wood-burning fireplace...whenever the APCO notifies the public that an Episodic Curtailment is in effect...”

The density regulation essentially precludes the installation of wood-burning fireplaces in tract homes and in multi-family housing units, and limits the installation only to more upscale homes.

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that Maricopa County had the largest population increase of any county in the U.S. between the 1990 and 2000 censuses – 950,048 new residents or about 410,000 new households. Using these and other data and extrapolating to the present, it appears that there have been on the order of 200,000 fireplaces installed with new construction in the Phoenix area since 1990.

Similarly, the San Joaquin Valley is the home of 3.2 million people (about 1.1 million households); a University of California study in 2002 found that 30 percent of households have a fireplace. Perhaps even more important than the direct reduction in the market for wood-burning fireplaces and associated products represented by these regulations is the precedence that has been set. Air quality jurisdictions elsewhere may look to them as examples in the future. The slogan, “What happens in Vegas stays in Vegas,” probably doesn’t apply to Maricopa County and the San Joaquin Valley, where wood-burning air quality regulations are involved.

Finally, it should be noted that the regulations are only for wood-burning appliances, and the effect of the regulations actually appears to have increased the sale of gas-fueled fireplaces and log sets. So, the effect is not entirely negative for the hearth industry, but there is certainly a shift in the marketplace with clear winners and losers. Manufacturers and associated businesses able to provide both kinds of fireplaces and related products may not be really impacted, other than by shifting emphasis, perhaps.

For example, when Maricopa County (in which Phoenix is located) was considering a gas-only ordinance for fireplaces in new construction, Don Richardson, owner of Arizona Fireplaces, fought it strongly. He felt that going from a \$500 wood-burning fireplace to a \$1,500 or so gas fireplace would knock the bottom out of the market.

To a certain extent, that did happen. However, his hearth sales expanded in total dollars, and his gross revenues tripled. “That ordinance has been the engine that has allowed us to expand,” he says.

The Future of Fireplaces

There are many opinions on the future of fireplaces. It does seem that the future use of wood-burning units in many areas of the country may be contingent on models with documentable low emis-

sions. The hearth industry’s program to develop an ASTM fireplace standard to measure and document low emissions is moving in the right direction to achieve that end. Some claim low-emitting models are just around the corner. In contrast, some feel that a low-emission true wood-burning fireplace is not achievable and that the development of the ASTM standard is an exercise in futility.

One thing is certain: No low-emitting models have been produced, or at least made public, as of the time of this writing. The attitude of some manufacturers is, Who cares about wood-burning fireplaces? We can sell gas-fireplaces; we can sell EPA-certified wood heaters that are installed in the wall and look

like fireplaces, and we can sell inserts. Further, they say, it is unlikely that wood-burning fireplaces will go away completely; there still will be many places where they can be sold and used. This might be a prudent and realistic view.

Conversely, some feel passionately that the industry needs to keep the wood-burning option widely available because consumer demand for a real wood fire and the nation’s demand for increasingly scarce and costly natural gas and LPG are not likely to go away. 🏠

James E. Houck is president of OMNI Environmental Services. He can be contacted at (503) 643-3788 or houck@omni-test.com.

ASTM FIREPLACE TEST PROTOCOL UPDATE

For approximately two years now, a small group of interested people has been meeting to discuss and create a standard for wood-burning fireplaces. Although that standard still doesn’t exist, progress has been made. Last fall, the ASTM Fireplace Task Group sent it’s emissions and measurement protocol to subcommittee members for ballot. Most of the returns were affirmative, with just one substantive negative that needed to be addressed. This has allowed the process to move forward, with several industry R&D and test facilities trying to fine-tune the processes and move toward an agreed upon result.

Currently, there are two ASTM methods being developed. The first is a standard for emissions measurement currently being balloted. The second is a fueling protocol. The emissions measurement method was designed for all solid fuel combustion appliances, including fireplaces, stoves, furnaces, outdoor boilers and pellet equipment; it will measure what goes into the air from each appliance. The fueling protocol will be specific to each type of appliance being tested. EPA is awaiting the finalization of this protocol and may accept and certify such a standard as legitimate for testing emissions of these kinds of equipment.

As of now, the emphasis is on the fueling protocol for fireplaces. The Task Force has come up with a crib that is designed to replicate the emissions profile of conventional fireplaces in the field. It is hoped that agreement on this protocol will be reached within the next six months. When this occurs, manufacturers and designers who wish to develop the next generation of fireplaces that will reduce emissions and possibly qualify for use in restricted air sheds will have a standardized method to test to and a reliable tool to use for R&D. It is likely that some manufacturers and developers are already at work on this endeavor.

When new, lower-emission appliances reach the market and prove the technology developed with the use of this ASTM protocol, the EPA and/or individual states may use results to set emissions thresholds for allowable devices.

The key to this whole exercise is the “passing grade” that EPA will recognize. Establishment of that passing grade may become contentious, as it will really decide which fireplaces, if any, will be deemed low-emitting appliances.

— Paul Stegmeir

The Vesta Challenge & The Industry



In September of 2005, *Hearth & Home* issued the Vesta Challenge to hearth manufacturers. Two new Vesta awards were created for presentation to manufacturers who could produce (A) a low-emission wood-burning fireplace, with special consideration for those that burn cleanly with doors open, and (B) wood-

fired retrofit technology that reduces emissions in existing wood-burning fireplaces.

September may have been too late to issue that challenge for an awards program that takes place in March. As of this writing, there are no entries for the Vesta Challenge. The good news is that a number of manufacturers are tackling the problem in R&D and say they believe they will meet the challenge next year. However, not all are interested.



Mark Kline



Kurt Rumens



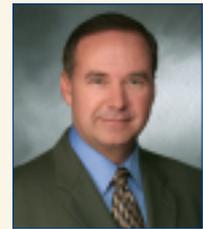
Wendy Howells



Bill Tweardy



Walter Moberg



Alan Trusler

“We had identified the creation of a low-emission wood-burning fireplace as an area of opportunity for us some time prior to getting the Vesta Challenge. It’s been on our radar, and we feel pretty good about the technology we’re working on. It will work. It won’t be ready this year, but we will have a Vesta entry next year.”

— Mark Kline,
President, FMI

“We’re not interested in a low-emission, wood-burning fireplace. Our FPX line is selling great, and we’re staying with that.”

— Kurt Rumens,
President, Travis Industries

“We will not be entering a product in the Vesta Challenge this year. We are a participant on the (ASTM) committee and don’t feel it can’t be done. We have it within our plan to have something within this product category and are trying to understand what that means.”

— Wendy Howells,
Vice President & General Manager,
Lennox Hearth Products

“We won’t be entering a product in the Vesta Challenge this year, but we are very interested in the subject and feel that open, wood-burning fireplaces can be made more efficient and less polluting. It’s definitely the way to go.”

— Bill Tweardy,
President, Monessen Hearth Systems

“I absolutely believe that we can make a major improvement on the essence of fireplaces. We certainly have in products that we’ve designed and manufactured. We’ve demonstrated an ability to improve the fireplace even with doors open. Once we have a standard for wood-burning fireplaces, we’ll have a product ready to test.”

— Walter Moberg,
President, Moberg Fireplaces

“We won’t have a unit ready this year, but it certainly can be done. We’ll have it ready for the Vesta Awards next year.”

— Alan Trusler,
Vice President Retail Channel,
Hearth & Home Technologies

Another Perspective: Chris Caron, Vice President, Brand Development, Duraflame



“Despite increasing air quality restrictions on the use of fireplaces in western states, sales of manufactured firelogs remain steady. At the beginning of the fourth quarter 2005, demand for packaged firewood, firelogs and firestarters spiked, as fear about

higher home heating costs drove consumers to seek alternatives. We actually received a number of phone calls from consumers with gas fireplaces who wanted to know if they could either burn our firelogs on top of the gas log set if the gas wasn’t on, or remove the gas log set and use our logs in the fireplace.

“Fireplace manufacturers need to seri-

ously consider the longer term impact on the industry of increasing energy prices, and shift their emphasis to flexible fuel fireplaces. They should de-emphasize direct-vent gas fireplaces and return to marketing zero-clearance fireplaces with chimneys and removable gas log sets that give consumers options in their choice of fuel.”