

### 2.4.3 Home Performance Contractor Business Model

The **home performance contractor** model walks through the “one-stop-shop” model for home energy upgrades. It illustrates both the opportunities and barriers for starting as a home performance contractor company from the beginning, rather than expanding from an existing model, such as a remodeler.

**OPPORTUNITY STATEMENT:** Starting a new business as a dedicated home performance contractor provides several advantages over a business expansion model. A new business allows a firm to better define its goals, understand its market before entry, determine its key selling points, and undertake training before the launch of the business. Once in the market, firms should push for rapid growth to build a sustainable customer base, because most home performance contractor sales come from repeat business or customer referrals.

#### 2.4.3.1 Governance

Home performance contractors typically are small, private companies with only the company owners engaged in decision-making, as shown in Figure 2-18. A few large, established home performance contractors are completely stakeholder-owned entities or franchises. Many home performance contractors have lean governance structures, enabling quick and agile decision-making. To keep overhead costs down and maintain a sustainable home energy upgrade business, they will need to navigate the incentive landscape without taking on too much of the administrative burden. When the home performance contractor partners with an efficiency program, external reporting regulations will provide all decision-making.

Home Performance Contractor Governance Models			
	Completely Stakeholder-Owned Entity	Franchise	Sole Proprietorship (Majority of Current Industry)
Description	Entity is owned by a group of equity holders	Firms are privately owned; larger company grants the right to use branded solutions to attract clients (e.g., “canned business”)	Entity owned by individual or shareholders
Stakeholders Involved in Decisions	Equity holders, board of directors, shareholders (if public)	Owners, franchisees, shareholders (if public), franchise rules and guidelines	Owners
Implications	Product and service mix affected by equity or shareholder interests and community needs; profit motive is influential	Delivery of products and services aligned with larger company branding; may be free to form partnerships and set prices	Free to form partnerships and set prices; easy to enter and exit new markets

Source: Booz Allen research

Figure 2-18: Home Performance Contractor Governance Models

#### Key Insights

Home Performance Contractor Insights		
	Observations	Impact on Potential Entry into Residential Energy Efficiency Market
Governance	<ul style="list-style-type: none"><li>Home performance contractors are typically small, private companies with clear chains of command focused around the owner.</li><li>In markets where the home performance contractor interacts with an efficiency program,</li></ul>	<ul style="list-style-type: none"><li>Home performance contractors can take advantage of lean governance structure to make decisions quickly and adapt to both market and partnership regulations.</li><li>The ability to navigate the incentive landscape</li></ul>

Home Performance Contractor Insights		
	Observations	Impact on Potential Entry into Residential Energy Efficiency Market
	decision-making will be influenced by external reporting regulations associated with the capture of incentives, on behalf of both the firm and the customer.	without taking on too much of the administrative burden is critical to keeping overhead costs down and maintaining a sustainable home energy upgrade business.

### 2.4.3.2 Financial Model or Structure

The home performance contractor's financial structure plays an influential role in its sustainability within the energy efficiency market. Small home performance contractors are funded primarily through personal finance. These contractors are typically small startups, where the owners use personal savings or “sweat equity” to build their businesses. Most of them also must borrow funds to start their business. These funds come primarily from credit cards, bank loans, or, more rarely, outside funding sources such as venture capital firms (see Figure 2-4, Section 2.1.1.4 for more information on venture capital firms). To remain profitable, a contractor must bring in enough revenues to cover the cost of equity (including the risk premium) and the cost of debt, which together form the hurdle rate as discussed in Section 2.1.1.3.

The life cycle of the home performance contractor differs slightly from those of remodelers and HVAC contractors. A home performance contractor life cycle typically is a newer and less-established business type. Therefore, sources of funding may be available to a home performance contractor that would not be available to a firm in a well-established industry, such as HVAC contractors. Venture capital firms banking on future growth in the demand for home performance services, or even retailers seeking to get into a specific local market, may be sources of funding as a home performance firm matures. The availability of these sources of funding will be tied closely to a home performance contractor's understanding of its market and ability to demonstrate future demand for its services. Additionally, the availability of funding depends on the presence of a sound strategic plan for the business and qualified management. The home performance contractor's ability to grow beyond the \$1 million in annual revenue range will hinge on the owner's ability to raise additional funding to support the business, either from internal profits or outside sources (see Figure 2-1 in Section 2.1.1.2).

### Key Insights

Home Performance Contractor Insights		
	Observations	Impact on Potential Entry into Energy Efficiency
<b>Financial Model or Structure</b>	<ul style="list-style-type: none"> <li>Small home performance contractors are primarily funded through personal finance, such as credit card debt or home equity loans. Personal credit cards and home equity loans carry high cost of debt (between 5 and 16 percent) and high risk, due to the use of personal assets as collateral.</li> <li>Home performance contractors may be able to raise funding outside of funds already available to firms in more established markets (e.g., venture capital) due to the potential for future demand for their services.</li> </ul>	<ul style="list-style-type: none"> <li>The high cost of start-up debt lowers profitability of smaller firms. To this end, a business line of credit, which protects small business owners from personal credit risk, may be the best option for financing growth.</li> <li>Many home performance contractors that do not secure external funding to grow or work with an energy efficiency program administrator cannot grow beyond \$1 to \$3 million in revenue per year.</li> <li>Home performance contractors must develop an understanding of market demand and leverage partnership opportunities to reach their target revenue threshold and achieve sustainability for the business.</li> </ul>

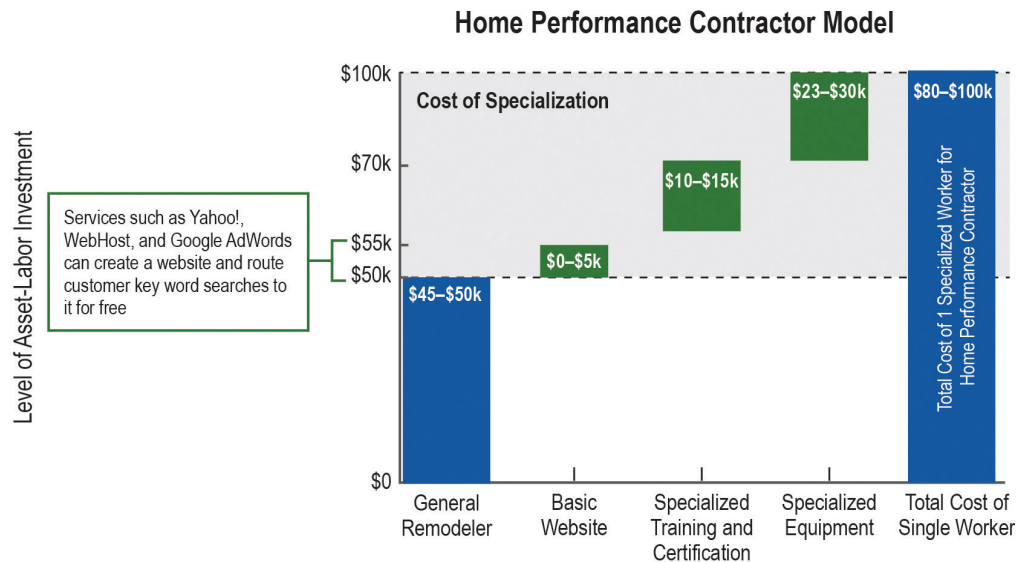
Home Performance Contractor Insights		
	Observations	Impact on Potential Entry into Energy Efficiency
		<ul style="list-style-type: none"> <li>Seeking additional external funding to grow the business is critical. Home performance contractors must develop a sound business plan and demonstrate that there is sufficient market demand for home energy upgrades to secure external financing, establish key partnerships, and become sustainable.</li> </ul>

### 2.4.3.3 Assets and Infrastructure

Assets and infrastructure include physical assets, software, and training. An examination of the up-front investment necessary to start a home performance business reveals that new home performance contractors require the same basic assets as a more established general contractor, including the following:

- Basic contracting materials
- Basic website to advertise services and communicate with consumers
- Sales and marketing training

However, home performance contractors also need specialized energy efficiency equipment and training, which result in additional costs (Figure 2-19), similar to what HVAC contractors need for expansion as listed in Section 2.3.3.3. The required costs to expand a home performance contractor's service offering to include energy efficiency upgrades may be twice the costs required for general contractor services. However, many of the basic pieces of equipment necessary to start up or expand the business can be leased. Leasing lowers the up-front cost to the business, but requires a steady source of sales to cover annualized costs. In order to run a home performance contracting business, all of the same assets of a general remodeler are required, which gives the remodeler an advantage in transitioning into the home performance market over a brand-new contracting business with less experience.



Source: Industry interviews and Booz Allen

**Figure 2-19: Home Performance Contractor Model**

#### 2.4.3.3.1 Software

As a firm grows, the need for increased back office functionality will require a larger support infrastructure, such as additional office space and equipment. Many back office functions can be streamlined through the use of CRM software and/or job reporting software to lessen the need for dedicated administrative staff to handle paperwork. A software system can

be used to control administrative costs, track sales leads, develop project cost estimates, and conduct market analysis. Home performance contractors typically lease a software system, rather than design one in-house; the cost of leasing a software system can range from \$100,000 to \$250,000.<sup>26</sup> Figure 2-20 lists the various software types available and the implications of these for firms at various growth stages. Implementation of such software can be costly up front, but it can eventually pay for itself over the long term.

Software Options		
Firm Size/Sophistication	Standard Software Types	Implications
<b>Small/Unsophisticated</b> (Generally \$<500K in Revenues/Year)	Basic accounting software and basic website (optional)	Many of these firms do not use software at all, and must be forced to automate externally (e.g., via manufacturer requirements)
<b>Medium/Growing</b> (Generally \$500K-4M in Revenues/Year)	Basic accounting software, established website, customer relationship management software, job estimation software	Firms at this stage have realized the value of streamlining back office and job functions, and may be open to using program software services
<b>Large/Sophisticated</b> (Generally >\$4M in Revenues/Year)	Advanced accounting software, established website (although no customer interface), customer relationship management software, job estimation software	Firms at this stage are not only capable of expanding into new lines of business, but would be open to purchasing software that would allow customers to track jobs online; to date, few firms have taken this step in areas where programs have not developed this solution for them

Source: Booz Allen research

Figure 2-20: Software Options

#### 2.4.3.3.2 Training

Training staff is a particularly high-cost item. In addition to investing in the cost of a training program, home performance contractors must invest time and resources in on-the-job training. They typically require a new employee to shadow an experienced employee for three months. Not only will the business need to cover the cost of the new employee's training and salary during that period, but on-the-job training also limits the number of energy efficiency projects that trainees can complete during this time. This opportunity cost may be easily overlooked by program administrators seeking to build contractor capacity within their local markets.

### Key Insights

Home Performance Contractor Insights		
	Observations	Impact on Potential Entry into Residential Energy Efficiency Market
<b>Assets and Infrastructure</b>	<ul style="list-style-type: none"> <li>The cost of starting up a basic home performance contractor business ranges between \$80,000 and \$100,000, and includes basic remodeling equipment costs as well as specialized equipment and training costs.</li> <li>As a contractor's business enters the growth stage, overhead costs typically increase due to additional administrative staff needed to manage job reporting and tracking, incentive paperwork, staff training, and marketing efforts.</li> </ul>	<ul style="list-style-type: none"> <li>A primary asset to invest in for overhead cost control purposes is CRM, job tracking, and reporting software.</li> </ul>

<sup>26</sup> Source: Industry interviews. (See "Acknowledgements" for a complete list of industry representatives interviewed.)

### 2.4.3.4 Service Offering

Home performance contractors provide four broad categories of services: energy assessments, customer financing and incentives, installation, and quality assurance, as shown in Figure 2-21.

Home Performance Contractor Service Offerings				
	Energy Assessment	Customer Financing and Incentives	Installation Core Offering	Quality Assurance
<b>Services Offered</b>	<ul style="list-style-type: none"> <li>Trained auditors to conduct energy assessments</li> <li>2-3 hour assessment of home performance plus suggestions for improvement</li> </ul>	<ul style="list-style-type: none"> <li>Access to capital and special offers via partnership with financial organizations</li> <li>Incentive money through available incentive programs</li> </ul>	<ul style="list-style-type: none"> <li>Energy efficient upgrades beyond standard remodeling, such as duct sealing, blow-in insulation, on-demand water heaters</li> </ul>	<ul style="list-style-type: none"> <li>Inspection of installation quality and energy performance conducted; inspection necessary to claim relevant energy efficiency incentives</li> </ul>
<b>Implications to the Business Model</b>	<ul style="list-style-type: none"> <li>Critical tool for marketing efforts, provides besttoehold</li> <li>Requires certified staff (e.g., BPI, RESNET) and on the job training (~3 months)</li> </ul>	<ul style="list-style-type: none"> <li>Helps lower risk to consumer and is a primary selling point</li> <li>Requires understanding of financial offerings and programs</li> </ul>	<ul style="list-style-type: none"> <li>One-stop shop more convenient and economical for consumers</li> <li>Requires skilled staff</li> <li>Prime target for incentives</li> </ul>	<ul style="list-style-type: none"> <li>Understanding of best practices and incentive requirements helps do quality work, and capture incentives to lower costs</li> <li>Advantageous in generating referrals</li> </ul>
<b>Cost Implications</b>	<ul style="list-style-type: none"> <li>Often subsidized in order to attract customers and increase sale size (e.g., \$500 value offered for \$100)</li> <li>Cost of training per employee is ~\$15K</li> </ul>	<ul style="list-style-type: none"> <li>High investment in personnel managing paperwork (e.g., 10 projects/week, 500 projects per year requires 2-2.5 FTE)</li> </ul>	<ul style="list-style-type: none"> <li>Specialized assets required up front</li> <li>Additional training and certification for staff</li> </ul>	<ul style="list-style-type: none"> <li>Additional labor cost – also typically requires additional specialized training and equipment if not already offering energy assessments</li> </ul>

Source: Industry interviews

**Figure 2-21: Home Performance Contractor Service Offerings**

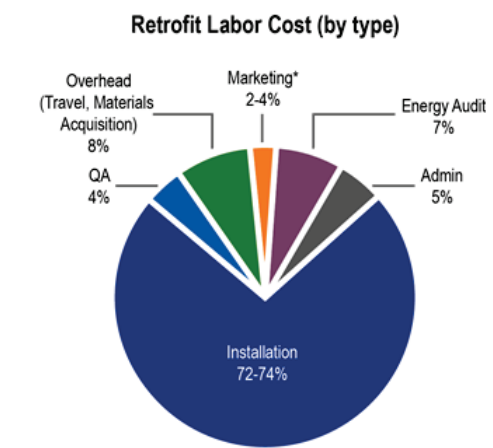
Energy assessments are critically important tools for marketing and messaging efforts because they provide the best opportunity to educate customers on the merits of efficiency, assuming the customer is home during the assessment. Consequently, energy assessments are often subsidized to attract customers and increase sale size (e.g., an energy assessment valued at \$500 may be offered for \$100). Energy assessments require certified staff (e.g., with BPI certification) and on-the-job training (generally, for a period of three months at an average cost of \$15,000). Because the misdiagnosis of a health or safety issue can present significant legal risk to the contractor, the majority of contractors prefer to do the home energy assessment themselves. Most contractors prefer to conduct all phases of the home energy upgrade from start (assessment) to finish (quality assurance) because of their ability to control their risk and deliver their message directly (although many contractors are comfortable with outsourcing quality assurance services to save on labor costs). Thus, business models built around only providing assessment services have not typically been found viable to date, although new models are being explored. Customer financing and incentives help to lower the high up-front costs to consumers purchasing home energy upgrades and may be an important selling point. Understanding and managing financial offerings and financial incentive programs requires a sizable investment in personnel. Industry sources indicated that management of 500 projects per year required 2.0 to 2.5 full-time equivalents with the primary function of processing paperwork associated with customer incentives.



While the aggregation of program incentives service offerings may be costly in terms of administrative labor hours, it is one of the key means by which home performance contractors can differentiate their businesses from remodelers and other contractors not familiar with the market for home energy upgrades. Financing options and incentive programs can motivate consumers to invest in home performance services, or can drive the cost of a more expensive home energy upgrade below the cost bid for more standard work by a home performance contractor's competition. Therefore, understanding the full range of these options and incentives and communicating the details on these options to homeowners can help home performance contractors close sales. Home performance contractors interviewed indicated that incentives can drive up to 50 percent of their business in certain markets. While these incentives provide contractors with opportunities, they also present a significant risk to these companies. Should they disappear, their service offering models may no longer be viable. Thus, home performance contractors should consider building core marketing services and other capabilities that could drive sales in an unsubsidized market when leveraging market incentives.

Irrespective of incentives, the primary service offering for the home performance contractor is the installation of energy-efficient products. This is an area where the specialized home performance contractor can truly differentiate itself from remodelers and other competitors. Installation requires specialized assets, additional training, and certification for technicians. By offering a one-stop shop for home performance, specialized contractors can capitalize on the convenience offered to customers as well as sell customers on their certification and skills. Quality assurance is often required for customers to be able to claim incentives. An understanding of the best practices and requirements for specific incentives, paired with a quality assurance process, improves the likelihood that quality work will be performed well and that repeat business can be generated from customers. Good quality assurance practices also help to limit labor costs, although up-front costs are typically required to obtain training and certifications that would qualify a worker or firm to conduct quality assurance.

In addition to acquiring assets to better manage the business, home performance contractors must continually examine their service offerings to identify ways to reduce associated labor costs and maximize their profit for each component of a home energy upgrade job. Figure 2-22 breaks down the allocation of costs for a sample home energy upgrade job for a home performance contractor. While installation accounts for the largest portion of labor costs, a home performance contractor's attempt to reduce labor costs could result in a sacrifice of overall job quality if not closely monitored. Additionally, home performance contractors place significant value on building positive customer relationships, as customer referrals are a primary source of future revenues (see "Customers and Customer Acquisition" below). Any cost-cutting measures that could sacrifice quality for reduced labor cost could significantly impact a home performance contractor's core business model. Consequently, home performance contractors often find the best way to control costs is by focusing on streamlining other aspects of the home energy upgrade job,



Note: Labor hours assumed equivalent to % labor costs. \$10,000 retrofit, building size 2,500 square feet

\*Marketing costs for half of grantee respondents are subsidized through program administrator efforts.

**NOTE:** All costs (in this figure) are variable (e.g., costs per job) in nature, and exclude fixed costs necessary for business operation, such as basic tools and equipment and marketing material development. These fixed costs represent a large portion of overhead cost, as well as materials directly used for installation.

Source: Booz Allen research

**Figure 2-22: Retrofit Labor Cost**

such as marketing, administration, and energy assessments.

In addition to labor, materials represent the other major cost driver for a standard job. The exact ratio of materials to labor will vary widely depending on the region and climate zone. In general, materials cost is outside the immediate control of the home performance contractor. Most home performance contractors typically get the cheapest possible rate on their materials by buying them in bulk through a wholesaler or distributor.<sup>27</sup>

### Key Insights

Summary of Home Performance Contractor Insights		
	Observations	Impact on Potential Entry into Residential Energy Efficiency Market
<b>Service Offering</b>	<ul style="list-style-type: none"> <li>■ Home performance contractors are a one-stop shop for homeowners, providing a variety of home energy upgrade services including energy assessments, customer financing and incentives, installation, and quality assurance.</li> <li>■ Many home performance contractors differentiate themselves from their competition by demonstrating their knowledge of local efficiency rebates and incentives.</li> <li>■ Materials and installation labor amount to approximately 80 percent of the cost of an average home performance job.</li> <li>■ Materials costs are generally set by the market. Contractors attempt to control labor costs by limiting them; however, by trying to streamline installation labor costs, they may inadvertently increase quality assurance costs.</li> </ul>	<ul style="list-style-type: none"> <li>■ Home performance contractors should know the full range of financing, incentives, and reporting options, and communicate these options to consumers to drive home energy upgrade sales.</li> <li>■ While incentives can be helpful in driving demand and closing sales, it is critical that home performance contractors business reduce their reliance on them because incentives are not always available.</li> <li>■ Home performance contractors can collaborate with program administrators and implement software solutions to control administrative, marketing, energy assessment, and quality assurance costs. These costs are 20 percent of the cost of an average job.</li> <li>■ As customer referrals are the primary source of new jobs, it is essential that home performance contractors complete home energy upgrades correctly the first time.</li> </ul>

### 2.4.3.5 Customers and Customer Acquisition

Currently, 90 percent of a home performance contractor’s work is for customers that self-identify a need for home improvement. As shown in Figure 2-23, these customers typically are well-educated, upper-middle-income homeowners with disposable income and the willingness to pay for energy efficiency upgrades. Their homes are typically small to medium-sized, built between the 1960s and the 1990s. This business accounts for only 8 percent of the total home improvement market.

<sup>27</sup> While control of materials cost is outside the scope of this analysis. A separate Department of Energy program, “Building America,” has made this topic a primary area of study. Details can be found at [http://www1.eere.energy.gov/buildings/building\\_america/](http://www1.eere.energy.gov/buildings/building_america/).

## Key Marketing Demographics

### Household Income



#### Reasons for Target:

- ✓ Higher credit score
- ✓ Lower debt to income ratio
- ✓ More disposable income, making them more willing and able to pay

### Year Home Was Built



#### Reasons for Target:

- ✓ Less complex systems
- ✓ Closer to modern standards
- ✓ Majority of housing stock

### Size of Home



#### Reasons for Target:

- ✓ Less complex systems
- ✓ Lower cost to upgrade entire living space
- ✓ Lower risk of huge surprises

### Education



#### Reasons for Target:

- ✓ People with higher education and females tend to be more interested in retrofits

### Gender



Figure 2-23: Key Marketing Demographics



Home performance contractors use a wide range of marketing techniques and channels to reach customers, as shown in Figure 2-24. Some of the more effective marketing channels include customer referrals, community outreach, direct mailing, discounts/rebates, customer upselling, and limited duration offers.

Home Performance Contractor Marketing Channels					
Stage	Strategies Employed	E	C	S	
Awareness/ Demand Creation (Marketing Campaigns)	Customer Referrals				
	Community Outreach (e.g., hold events with local community groups)				
	Internet Search Engine Optimization (e.g., keyword searches)				
	Purchased Leads (e.g., Energy Savvy, Clean Energy Experts)				
	Public Relations (e.g., write-ups in local newspapers)				
	Advertising (e.g., radio, television, print)				
	Direct Mailing (e.g., through utility bills)				
	Discount/Rebate (e.g., price energy audit below market value)				
	Third-Party Referrals (e.g., program administrator referrals)				
Engagement (Direct Interaction)	Trusted Source (e.g., establish customer relationship during energy audit)				
	Customer Education (e.g., seminars)				
	Customer Up-selling				
Conversion (Closing the Sale)	Limited Duration Offers (e.g., incentive expiring)				
	Third-Party Validation (e.g., consumer reviews)				
KEY	E Effectiveness – Successfulness in generating revenues and traffic		Highly Unfavorable		Favorable
	C Cost Effectiveness – Cost per sale generated		Unfavorable		Highly Favorable
	S Sustainability – Creation of longer-term revenue generation		Average		
		Highlighted for discussion			

Source: Booz Allen research

Figure 2-24: Home Performance Contractor Marketing Channels

**Advertising**, such as that presented during radio broadcasts, provides the opportunity to educate a broad audience on energy efficiency benefits and available services. However, such advertising often is prohibitively expensive, and is not an effective use of funds for home performance contractors. Home performance contractors that wish to maximize the effectiveness of any funding they put toward mass marketing may benefit from a partnership with other organizations, such as program administrators, who often have dedicated budgets for customer education. In general, homeowners are more likely to trust a neutral **third-party source** touting the benefits of energy efficiency than a contractor that has a vested interest in selling a service. In sample markets where program administrators ran ads promoting home performance, home performance contractors that placed their ads in the advertising slot immediately next to the program's slot saw an immediate uptick in sales of home performance services.

In general, given the large expense of mass-media advertising, the most effective way for home performance contractors to generate home energy upgrade business is through the energy assessment process (with the customer at home during the assessment process) or **customer upselling of services**. While the process is time-intensive and costly, it helps to engage and educate homeowners on possible home energy upgrades and helps the contractor build relationships that will eventually translate to follow-on sales. This makes the sales aspect of the assessment, in addition to the technical aspects, critical to the contractor. Technical assessors are often not trained in or unable to effectively explain the process and the value of home performance to the homeowner, which limits their ability to sell the full home energy upgrade on top of the assessment itself. To increase the “conversion rate” or percentage of jobs generated by the average assessment, home performance contractors should consider sending not only a contractor to the audit but also a trained salesperson who can better communicate with the customer.

## Key Insights

Summary of Home Performance Contractor Insights		
	Observations	Impact on Potential Entry into Residential Energy Efficiency Market
<b>Customers and Customer Acquisition</b>	<ul style="list-style-type: none"> <li>■ The primary drivers of sales for most home performance contractors are referrals from existing customers or repeat business. Building strong customer relationships is critical to developing referrals.</li> <li>■ The home performance contractor’s energy assessment process is the best venue for the sale of home energy upgrades, provided the customer is home when the assessment takes place. Engaging the homeowner throughout the process will increase likelihood of a sale.</li> <li>■ While homeowners trust contractors as experts in their field, third-party validation that a contractor is knowledgeable of home energy upgrades is helpful during the sales process.</li> <li>■ Home performance contractors with business and sales training often relate to customers better than those with only technical training.</li> </ul>	<ul style="list-style-type: none"> <li>■ Home performance contractors should coordinate with local efficiency programs as much as possible to benefit from neutral third-party validation and referrals. For example, mass media advertising in time slots adjacent to program-sponsored advertisements has been shown to produce a bump in home energy upgrade sales for home performance contractors that have tried this strategy.</li> <li>■ Home performance contractors should consider involving both a technical and a sales staff member in the assessment to increase understanding of the value of the home energy upgrade and address technical questions.</li> <li>■ Home performance contractors should include options for discounted financing (either bought down by the contractor in conjunction with a private financial institution or arranged through a local efficiency program) in their sales pitches to help with the closing of sales.</li> </ul>