Contractor Engagement & Workforce Development – Develop Implementation Plans

Description

An implementation plan for contractor engagement and workforce development defines the program’s:

- Contractor recruitment strategy
- Contractor participation procedures
- Procedures for ensuring the quality of energy upgrade installations
- Actions to encourage contractor participation and success
- Training and contractor support activities.

The extent and quality of services that your program is able to deliver will in large part be determined by how well you engage with contractors. These activities are an integral part of your program’s overall implementation plan and will be the basis for how you will evaluate your efforts.

Your implementation plan for this component will include a work plan with strategies and tactics, budget, staffing, and schedules for contractor engagement and workforce development activities.

In this handbook, you will find resources and step-by-step guidance on how to:

- Plan contractor recruitment and enrollment activities
- Plan for program process and business support for contractors
- Outline contractor training, incentives, and financial support
- Establish contractor participation procedures
- Define the quality assurance plan for your program
- Create a workforce development plan
- Plan for ongoing coordination and feedback with contractors and workforce development partners
- Develop a staffing plan, timeline, and budget.

Contractor Engagement & Workforce Development

Stages:

1. Overview
2. Assess the Market
3. Set Goals & Objectives
4. Identify Partners
5. Make Design Decisions
6. Develop Implementation Plans
7. Develop Evaluation Plans
8. Develop Resources
9. Deliver Program
10. Assess & Improve Processes
11. Communicate Impacts
Find related information across other program components:

- **Market Position & Business Model – Create a Business Plan**
  Create your organization’s business plan, which describes how your operational and financial structure will support the delivery of energy efficiency services.

- **Program Design & Customer Experience – Develop Implementation Plans**
  Develop a detailed plan for launching and operating your program that integrates all program components into a process that is customer-friendly and efficient for contractors and other partners.

- **Marketing & Outreach – Develop Implementation Plans**
  Develop a marketing and outreach plan that details your strategies and tactics, workflows and timelines, staff roles and responsibilities, and budget.

- **Financing – Develop Implementation Plans**
  Develop a plan to implement your financing activities, with defined roles for financial institution partners, contractors, customers, and your program.

### Step-by-Step

Building on your work thus far, craft an implementation plan for contractor engagement and workforce development that will help contractors effectively deliver your program’s services and support the development of the local workforce.

Coordinate across program staff to ensure that activities in other program areas, such as marketing, financing, and data collection will be featured in or aligned with contractor engagement activities within your full program implementation plan. For example, you will want contractor recruitment, enrollment, training, and readiness to deliver customer services that align with major marketing milestones.

### Plan contractor recruitment and enrollment activities

As discussed when you developed your contractor recruitment strategy, recruiting and sustaining contractor participation in programs generally requires ongoing effort. Demonstrating the value of the program to contractors is your objective. As you prepare the content for recruitment materials, whether written or for presentation, establish very clear and easy actions for contractors. Your key messages should include a program overview, the contractors’ advantages for participating (the benefits to them), and the process for joining.

#### Group Outreach

Working with partners who can communicate to large groups of contractors is often most efficient and effective. With these groups you can:

- Help draft content for newsletters or email blasts to be sent by your partner(s) to their constituents.
  - Some organizations will welcome your detailed assistance. Others will want just the facts so that they can craft into their own pieces.

- Present the opportunity to participate at webinars or in-person meetings, whether they are dedicated to your program or added on to meetings organized for other purposes.

- Offer a guest post on a partner organization’s blog.

Participating in trade conferences or similar events, formally with a booth and informally via networking, is another way to go where the audience is already. You can check with you partners to learn which events might be appropriate and plan accordingly.

You can also organize your own recruiting meetings and webinars. While you have full control of the agenda in these settings, the cost of marketing to lure contractors to the meetings falls on your program in this approach. It can be much more difficult to attract an audience to you than to go where the audience is already gathered.
With a clear idea of how you will implement your recruitment process and your contractor participation procedures (see the “Establish contractor participation procedures” step below), you will be better able to craft materials to explain the program. By having the application or enrollment procedures in hand during these meetings, those interested can immediately start the process.

Group outreach is efficient and builds interest in your program. Just as you will experience with consumer-focused marketing, however, you are likely to find that it is not enough.

One-on-one Outreach
In parallel to mass outreach, you should be prepared to have one-on-one conversations with promising contractors. Early adopters are likely to include contractors that you identified earlier and those from whom you’ve sought input and feedback on program design and implementation. Others may express interest in learning more after group sessions or after hearing about the program through word-of-mouth. Many programs have had the most success recruiting new contractors in these individual, one-on-one, meetings.

Take full advantage of one-on-one conversations. While the exact flow will vary from conversation to conversation, the essential elements are the following:

1. **Find out about the prospective partner.** You can do some of this in advance by visiting the contractor’s website and talking with others. Very early in the conversation, though, you should ask the contractor to give you an overview of their business, and listen carefully to the response. You may learn there is not a good fit, and you can reallocate your time accordingly. Alternatively, you may learn what is really important to the contractor. You can also learn about the quality of the contractor through:
   - Their Better Business Bureau score, which shows reliability and customer trust
   - The age of the business
   - Online reviews
   - Any previous successful participation in energy efficiency programs.

2. **Be concise and compelling as you describe the program.** Be prepared to answer: What is the program? Why should the contractor care?

3. **Ask how they see the program fitting within their current business or future plans.** Contractors generally participate when they see the value to them. Whether through lead generation, differentiation in the market, incentives designed to stimulate sales, new product or service lines, co-marketing, you want to understand—and help them understand—how the program might help. In the process, you may find the critical hook to garner the contractor’s support. You also want to set realistic expectations.
   - For example, if the contractor says they are primarily interested in getting leads from the program, and your program design and budget don’t emphasize lead generation, you could end up wasting your time with a contractor who won’t really participate.

4. **Have the enrollment checklist and materials ready.** Be prepared for when contractors express interest. Ask what assistance they might need in completing the enrollment process.

5. **Set up a follow-up conversation or action.** Make sure you and the contractor agree on the next action.

### Understanding the Contracting Business

To be able to capture the interest of contractors and have them give serious consideration to participating in your program, you need to focus on their goals and objectives, not yours. You’ll need to ask a lot of questions—but you’ll want to do this in an informed way, demonstrating a basic understanding of the contracting business and discussing the program in ways that relate to contractors’ concerns. This requires learning about contracting businesses, finding staff that can do this, and budgeting time to allow them to gain the knowledge they need.

Useful resources and case studies to help you understand the business case and some of the concerns about program participation that contractors may bring to the conversation include:

- **A Business Case for Home Performance Contracting.** This U.S. Department of Energy (DOE) Building America report presents eight case studies of home performance contractors, with in-depth information about their business models. The case studies provide key metrics of success, and information on typical startup costs, employee certifications, and marketing.

- **Better Buildings Neighborhood Program Business Models Guide.** This DOE report includes detailed descriptions and analysis of four contractor business models: the remodeler, the HVAC contractor, the home performance contractor, and the retailer. The summary of each business model includes market roles, operating environments, competitive landscapes, and collaborative landscapes.
For HVAC Contractors, Home Performance Delivers a Year-Round Blast. This Home Energy magazine article highlights contractors that have added home performance to their HVAC businesses and explains some of the business reasons for doing so. One contractor reported that since moving into the home performance industry, staff are more engaged in their work, projects are growing, clients are referring more business, and annual revenues are increasing dramatically.

Contractor Blueprint: Getting from HVAC to Home Performance. This guide, developed by the California Center for Sustainable Energy and the Home Performance Resource Center, shows HVAC contractors how to get started in the home performance market. It explains the approach of treating a house like a system and provides step-by-step instructions on setting up a home performance contracting business.

The Contractor-Participation-Inducing Home Performance Program Design Recipe Part 1. This presentation by OmStout Consulting summarizes the elements needed to induce and sustain contractor participation in home performance programs: contractor involvement, learning the contractors’ business, rewarding desired outcomes, striving for consistency, tapping customers’ true motivations, and working closely with contractors.

Plan for program process and business support for contractors

Program Process Support

Contractors will need some support for understanding and navigating the stages of program implementation, from enrollment and orientation to project delivery, reporting, and follow up. The support that your contractors need from your program could include:

- Help understanding and completing the enrollment process
- Help understanding the project workflow from the program’s perspective
- Training on the basic participation process, as well as sales training
- Regular support with elements such as energy modeling, rebate determination, working with any online interfaces the program requires, and more.

You need to budget for and assign responsibility for this support for every contractor you bring on board, and on a project basis too. Sometimes, a program designates an account manager to focus on facilitating smooth interactions between the program and contractors, helping contractors move through the upgrade process by addressing contractor issues and needs as they arise. You may also have other dedicated and specialized staff to help contractors with the types of program support issues mentioned above, from energy modeling to working with online tools.

Scale Program Support for Contractors to Allow Them to Run Their Businesses

Program-contractor partnerships are more sustainable when programs help contractors succeed in the home performance market, rather than try to run the contracting business processes themselves. Some words of wisdom for program design that facilitates effective contractor engagement, based on the Efficiency Vermont Home Performance with ENERGY STAR program include:

- When in doubt, ask yourself: Are contractors building the infrastructure such that they could deliver the same services if my program disappeared tomorrow? (The answer should be “yes.”)
- Allow contractors to market directly to homeowners and set their own prices for their work.
- Understand contractor business processes, marketing, sales, operations, administration, and minimize reporting and paperwork requirements to only what you need.
- Provide business development and sales and marketing support, such as sales training or co-marketing materials, to contractors.
- Help contractors with training and support for certification and re-certification.


Direct Business Support

Successful programs sometimes take on some of the contracting business functions beyond training. The most common area is marketing and lead generation. A few programs are also tackling project coordination, such as managing the assessment and upgrade process with the customer up to the point of contracting.

Distributing Leads
Your program will need to field some customer inquiries and refer some customers to contractors, regardless of your approach to lead generation. If your program design includes actively generating leads, you should define a process for distributing leads to contractors. Options include the following:

- **Refer customers to a list of contractors.** You can refer customers to a list of contractors participating in your program. This is simplest to administer. Behavioral research suggests that overwhelming customers with choice may inhibit action; thus, a narrower or differentiated list is generally more helpful. Furthermore, a comprehensive evaluation of over 140 programs across the country found that successful programs were more likely to foster participant trust in contractors by providing homeowners with lists of pre-approved contractors and the flexibility to contract directly with the contractor.

- **Evenly distribute leads in order.** You can make a revolving list and evenly distribute leads based on which contractor is next in line. This is a simple process, though it might mean you'll refer people to inexperienced or less committed contractors that otherwise don't generate volume for the program (along with the experienced contractors that have shown the ability to deliver).

- **Allocate leads by established criteria based on contractor capacity and services.** Allocating leads according to pre-established criteria is another strategy. Increasingly, programs are establishing formulas to distribute leads based on the volume and quality of work a contractor does, rewarding commitment and effort. This involves more program staff time, but helps motivate contractor partners and can provide better services to customers (e.g., by not overwhelming contractors with too much demand).

- **Consider employment diversity goals in the lead allocation process.** Some programs have addressed contractor employment diversity goals through the lead distribution process (e.g., providing leads to small, minority-owned, and/or women-owned contracting businesses), as well as considering contractor capacity and past performance. This process is consistent with the program's high-road standards.

Maintain transparency and impartiality and avoid the appearance of favoritism by develop a lead distribution process with criteria clearly defined. Also, establish clear criteria for removing nonperforming contractors from the lead distribution list as part of your program's quality assurance plan (described below).

### Project Coordination

A few programs have taken on project management to facilitate contractor capacity – even helping contractors schedule projects including among different trades.

- **NeighborWorks of Western Vermont** holds regular meetings with contractors to hear their feedback, including input on project scheduling and capacity. The program established a temporary labor pool to help contractors with workload without the burden of paperwork, high cost, and high turnover rate associated with regular hiring.

- **SustainableWorks in Washington state** was a general contractor that managed the upgrade process with customers and conducted energy assessments and upgrades. SustainableWorks maintained a list of subcontractors for its program, and awarded projects to those subcontractors through geographic-based bid packs of 4 to 20 projects.

Recognizing that most consumers do not make every upgrade they possibly could all at the same time and that many contractors do not do a good job with downstream opportunities, some programs are now exploring mechanisms to promote staged energy upgrades. This approach involves maintaining detailed customer information, including what specific measures are still recommended in each home, and reaching out to customers on a recurring basis. If your program marketing plans include this strategy, you will need to build the necessary database infrastructure.

You will also need to create a plan for both reaching back out to the customers and coordinating with your participating contractors on follow-up. You will have to answer questions such as:

- Who leads the customer relationship?
- Do contractors who have previously served the customer get the first attempt at additional business with that customer?
- Is the program staff the main contact point?

### Outline contractor training, incentives, and financial support

As discussed in the Make Design Decisions handbook, along with process and business support for contractors, your contractor engagement efforts may include technical and business skills training, contractor incentives, and loans or other financial support. For each of these, you will need to create schedules, procedures, and staff assignments, which should be documented in your implementation plan.

### Technical Skills and Business Skills Training
In assessing contractors' needs for new skills and certifications, identifying workforce development and training partners, and deciding what training to offer and in what format, you should have determined to what extent contractors' staff need technical or business skills training and how focused you will be on providing technical training to potential workforce prospects.

Get Energy Smart – Eagle County, Colorado Partners with Local College to Provide Technical Training

The Energy Smart program in Eagle County, Colorado, partnered with Colorado Mountain College to provide training for local technicians. The program chose to partner with the college because it had offered training to prepare for BPI certification in the past and was familiar with the structure and content of the course.

To be able to access a cadre of trained contractors with as wide a range of backgrounds as possible to perform home energy assessments, Eagle County targeted a variety of building professionals for BPI training, including electricians, plumbing and mechanical contractors, window contractors, and insulation professionals.

Energy Smart promoted its training programs in press releases to the local media, on the program’s website, in local newspapers, at local home builder association events, and through direct emails and cold calls to contractors.

Create a plan for who will provide training, a schedule for initial training, and a basic timeframe for ongoing and follow-up training. Consider the types of training that are most appropriate given the skill development needs, and plan a combination of classroom training, lab or in-field training, and/or mentoring that meets the needs of contractor staff in your community. See the discussions on content and approaches for training, developing training resources and delivering your program for examples of specific training activities.

Incentives and Financial Support

Financial assistance and support, along with financial and non-financial incentives, can help contractors participate in your program and reward good performance. Startup costs for engaging in the home performance market, including technical and business skills training, certifications and accreditations, and equipment costs, can be considerable, especially for a small businesses. Options for financial support and incentives include:

Improving Contractor Productivity and Performance

- Awards and recognition
- Financial incentives or rebates to reward productivity
- Program-generated leads allocated to contractors

Improving Contractor Skills and Qualifications

- Tuition or training reimbursement, including for business skills training
- Mentoring for newer technicians

Attracting Contractors to Participate and Lowering Costs

- Loans for equipment and tools
- Renting or leasing equipment
- Bulk purchasing of equipment
- Working capital in the form of advance rebate payments
- Co-marketing support, including materials and sales training

Best Practices for Sales Support

The best salespeople are honest and dependable, have good people skills, do not use high-pressure sales tactics, and can educate on a simple level. The Building Science Academy advises: “People buy from people they like and who know what they are talking about!” Home performance professionals should be trained on how to sell a project (e.g., promptly return calls) and understand that a successful initial homeowner interview is the first step to success.

Other resources for sales training and support include:
Depending on the type of financial support you've decided to provide (e.g., a loan application form for an equipment loan program, subsidy for training and certification, or cash rebates for completed upgrade projects), you will need to develop application, review, and award procedures and forms.

You will also have to allocate staff to process and disburse funds. For proper fiscal control, these two functions generally require at least two people, with the person processing applications or assisting contractors different from the person actually writing checks.

Other types of incentives, including marketing and recognition, will have additional coordination needs, and staff and budget implications. For example, if you have an award and recognition program, you may need to organize and create publicity around award ceremonies and will certainly want to spread the word among contractor partners in advance. Or, if you offer loans to contractors or cash-based performance incentives you will need staff and time to publicize to contractors, coordinate processing of loan applications and invoices, and orchestrate disbursement and repayment.

**Establish contractor participation procedures**

Through the Make Design Decisions handbook you have decided on your program’s contractor participation criteria, including necessary experience, training, certifications, and licensing. When documenting the requirements for your program, remember that instructions should be clear, complete, and simple so contractors can easily understand and act on them.

Consider creating checklists and flow charts to help program staff and contractors establish a common understanding for how they will work together in the program. Include these procedures, along with the quality assurance procedures (see the next step) and other program requirements, in contractor participation agreements you establish with contractors for your program.

Arizona Public Service Streamlines Its Contractor Data Submission Process While Providing Flexibility to Contractors

In an effort to reduce costs while improving quality and efficiency, Arizona Public Service (APS) moved from requiring contractors to use utility-prescribed energy modeling software to a flexible system that gives contractors more choice in software and modeling tools. In the new system, contractors may select their energy assessment and modeling software tools, provided that they transmit data automatically to APS via the HPXML standard. This change reduced the administrative time APS staff spend per project from 97 to 67 minutes, and increased contractor satisfaction. For more information, see APS' presentation on Deploying HPXML.

You will want to define responsibilities and outline procedures (using checklists and flow charts, where possible) for the following aspects of program-contractor activities:

- **Marketing, lead generation, and customer referrals**, including the marketing roles and the customer referral process (see program process and business support step above)

- **Energy assessment and upgrade coordination**, including the roles of the program, energy assessors (whether independent or associated with the contractor), and contractor in relation to the customer

- **Data analysis and reporting**, including what data contractors need to collect, any requirements for diagnostic tools and energy modeling software that must be used, and the frequency and format for reporting those data to the program and the customer
• **Quality assurance processes**, including inspections, feedback, and corrective action processes (see the step below)

• **Incentives and loan processing**, including the role of contractors in assisting with customer loan or rebate applications and procedures for processing of contractor loans and incentives.

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**Energy Impact Illinois Contractor Reporting Requirements**

**Energy Impact Illinois** developed a **Whole Home Reporting Packet** for contractors to report on home improvement projects with homeowners. The PDF-format forms can be filled in and submitted electronically. The forms in the packet include:

1. Retrofit Reporting Form
2. Home Owner Utility Bill Release
3. Tenant Utility Bill Release (for tenants with separately metered units)
4. Loan Completion Form
5. Interest Rate Reimbursement Form
6. Townhome/Condo Approval Form (confirmation that the unit owner of a condominium or townhome is responsible for improvements).

Along with relevant forms in the packet, contractors must submit an assessment report showing the results of the energy assessment conducted at the home and a final invoice that delineates cost for labor and materials and any rebates and discounts.


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Consider putting contractor requirements and procedures in checklist form. If contractors know what you expect of them and can verify it with a checklist, they are less likely to be frustrated or surprised by your requirements. Similarly, if program staff are working off the same checklists, they can more easily and efficiently review what needs to be checked and avoid bottlenecks and delays. For examples and additional guidance on contractor participation resources, see the **Develop Resources handbook**.

The collection of procedures that a contractor has to follow for each project often has multiple steps. You may need separate checklists for steps that happen before, during, and after the project. It can be very helpful to capture these workflow steps in a flow chart, indicating the various decisions and actions required. The flow chart should include:

- All major activities and responsibilities for the contractor, the program, and any third parties such as building officials and loan underwriters
- The time expectations for each step of the process, including the review and approval process with turnaround times committed to by program for projects, incentives, and financing (see the **standards for how program staff interact with contractors**).

This flow chart not only helps clarify the process for everyone involved but also helps identify points in processes where delays might occur. You can then determine whether the process needs to be adjusted or whether to add additional resources to make it work effectively.

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**PG&E’s Energy Upgrade California Project Process Flow Chart**

This flow chart, used by **Build It Green** in implementing PG&E’s **Energy Upgrade California** program summarizes the basic steps a typical project goes through. The chart indicates which areas are the contractors’ responsibility (labeled as Program Participant) and which are the program’s responsibility.
Define the quality assurance plan for your program

The quality of services that your program, contractors, and other partners deliver is fundamental to the integrity and success of your program. A well designed and executed quality assurance plan will help ensure that you meet your quality work standards and provide good customer service. Your quality plan will consider both quality control and quality assurance:

- **Quality control (QC)** consists of observation techniques and activities involved in inspecting, testing, or checking an installation to verify that it meets applicable standards, and then fixing the installation if something is not correct.
- **Quality assurance (QA)** is the set of planned and systematic actions intended to ensure compliance with applicable standards in a systematic, reliable fashion. Quality assurance includes the entire process by which work gets done and includes a focus on preventing defects rather than simply finding them.
Think of QC as part of a larger QA process that also includes elements such as standards, training to deliver work to those standards, and processes that help verify work is correct as you do it – not just at the end of the upgrade process. The foundation of your QA process are the quality standards you established for your program, but the QA process also includes training, reviews and inspections, feedback, and other procedures to reinforce and promote high-quality work and customer service.

An in-depth examination of selected strategies implemented by the DOE Better Buildings Neighborhood Program’s (BBNP) grantees showed that effective QA and QC provided a foundation for quality upgrades. Numerous QA/QC strategies and approaches were used, which enabled grantees to improve contractor accountability, increase customer trust and satisfaction, target opportunities for contractor training, and assess overall progress toward programmatic goals and objectives.

The key stages of a QA process, which are further described below, include:

1. Setting standards for your program, including technical work standards, standards for installed equipment and diagnostic software, and standards for professionalism and customer interactions
2. The training and mentoring delivered to help achieve those standards
3. A paper review of required forms and submissions to help ensure that the right projects are taken on before they are actually delivered
4. Inspection of upgrades in the field (QC)
5. Feedback to contractors as a means to clarify standards and assist with training and education to improve quality
6. Corrective actions as needed to remedy problems.

Home Performance with ENERGY STAR Minimum Requirements for Quality Assurance

The Home Performance with ENERGY STAR Sponsor Guide and Reference Manual (v1.5) describes a set of minimum requirements that programs and contractors should meet to ensure that they provide quality energy efficiency services to customers. These requirements address:

- Compliance with the ENERGY STAR Brand Book
- Contractor participation agreements that include requirements for QA compliance
- Conflict resolution procedures to address issues identified by QA/QC activities and customer feedback
- On-site inspection procedures (including inspection sampling rate, findings, and corrective actions) and maintenance of records of QA activities with contractors
- Procedures for due process and remedial actions
- Implementation of one of two options:
  - A QC option that relies on third-party checks and inspections to verify compliance with standards
  - A quality management system option that employs a systems-based approach to QC

More information about these requirements, including the requirements for the QC or quality management system options for implementation, is available in the Sponsor Guide.

The Weatherization Assistance Program’s Quality Work Plan provides an example of guidelines for work quality, training, and inspection of completed work, and how to integrate these elements into an overall quality assurance plan.

Your participation agreements with contractors will reference these QA steps and reinforce contractors’ understanding of program standards. Downstream measurement and evaluation of data will help you verify that both the installed work and the standards themselves are delivering the results intended (e.g., predicted levels of energy savings are actually achieved).

New York’s Quality Assurance Process

The New York State Energy Research and Development Authority (NYSERDA) has developed QA procedures for its Home Performance with ENERGY STAR program and worksheets to help contractors and inspectors follow the procedures. The QA procedures verify that projects meet program requirements while maintaining healthy, safe living conditions for occupants.
Your implementation plan will document your program’s approach to QA and QC. Include a schedule for implementing your QA/QC procedures, assigned staffing, contractor participation agreements, and your program’s standards and processes.

**Paper Review**

The paper review of required forms is critical for all of your program’s projects if there are rebates or incentives involved. You need to at least review the basic information to determine whether the customer and contractor are meeting eligibility requirements. Customer incentives are discussed in the Marketing & Outreach design handbook and contractor incentives, which may or may not be financial, are discussed in the Contractor Engagement & Workforce Development design handbook.

Conduct paper reviews of submitted materials, including applications or project reports, as well as assessment reports and recommendations, checklists, parameters for home energy software models, and contract work scopes. Depending on your program design and requirements, the types of information you are looking for could include the following:

- Have all required diagnostic tests been performed and is the information provided consistent with program policies and procedures?
- Do findings reflect strong adherence to the technical guidelines and local program requirements?
- Have combustion equipment tests been completed and appropriate recommendations been made to mitigate any failures?
- Are recommendations comprehensive and consistent with program policies and procedures and with the assessment findings?
- Is the software model reasonable and consistent with program requirements related to measured data and values for key assumptions?
- Has the contractor provided estimated savings for proposed improvements as part of the summary report?
- Is the contract scope of work consistent with recommendations and with program requirements?

**Field Inspections**

Inspection of the work completed in the field (quality control) is very important. Common practice has not kept pace as building science and new technology have evolved over time. Some of the standards and specifications you require may be new to contractors, and you will want to verify that critical tasks have been completed properly. DOE’s Standard Work Specifications (SWS) in the Guidelines for Home Energy Professionals define minimum requirements for upgrade work and can be used to develop inspection checklists or verify that contractors are completing critical tasks.

Make sure that field inspections align with the technical standards you have adopted (especially for program-specific standards) and that inspection protocols are understood by contractors and your inspectors alike. QC inspectors, whether in-house staff or outside parties, should have a thorough knowledge of the program standards as well as the training and certification necessary to inspect contractor work against the standards. Consider requiring that any inspector has at least the same certifications that you require for contractors or use the DOE Quality Control Inspector Job Task Analyses or standardized curricula as the basis for additional training for your field inspectors.

Field inspections can be expensive. From the scheduling to actually sending an inspector out to the home, they potentially add a few hundred dollars to the cost of completing a project. Few programs can afford to do 100% field inspection, although some do. Most programs use a sampling protocol, conducting field inspections of a sample of completed upgrades. Examples of sampling protocols include:

- The Home Performance with ENERGY STAR (HPwES) Program requires that field inspections are conducted for at least 5% of projects completed by each participating contractor. In 2012, 48% of the HPwES programs reported using field inspection sampling rates of 5-10%, 12% of programs inspected all projects, and the average sampling rate across all HPwES projects was 35% (see the Home Performance with ENERGY STAR Sponsor Guide and Reference Manual (v1.5), page 96).
- In New York, NYSERDA has established a tiered sampling protocol for field inspections. In this tiered system, inspection rates vary based on the contractor’s status in the program, as follows (see NYSERDA’s QA Procedures).
The first three completed projects for all contractors are inspected. After these initial projects, contractors have 15% of completed projects inspected, and at least one project annually. Customers may also request that field inspections be conducted within one year of the contractor’s work. If contractors have repeated QA/QC issues, NYSERDA may increase the field inspection sampling rate, generally to 50% or more. If problems persist and do not get resolved, NYSERDA may suspend contractors from the program according to its corrective action procedures.

It is important to balance the cost and confidence in the quality of work with the level of risk your program is willing to assume if quality issues are missed.

- You may choose to perform more sampling if contractor participants have had quality issues or if your program’s risk tolerance for quality issues is low.
- You may choose a less rigorous sampling regime if you have limited resources or have not had quality issues.
- You may adjust sampling rates based on energy efficiency measures installed. Some measures are more prone to installation errors than others, so you can target more field inspections to those measures.

Example Sampling Protocol for Field Inspections of Upgrade Work

Most programs use a sampling protocol to determine when to conduct field inspections of upgrade projects rather than inspect all upgrades. Elements of a sampling protocol for field inspections could look something like the following:

- For all contractors, the first five projects that a contractor completes for the program are inspected. These inspections should happen as close to completion of the projects as possible, or even as technicians are finishing the work. This approach allows for timely feedback, corrective actions, and retraining before any deficiencies in training or skills affect other upgrade projects.
- 100% sampling continues until five projects have been completed without major deficiencies found at the initial inspection. It may continue longer depending on the experience of the participating contractors, the level of certification required, and the level of training you have provided or required.
- Once five projects without major deficiencies have been completed, the sampling could be reduced to 20%, or 1 in 5 upgrade projects as you balance cost with your confidence that energy efficiency measures are being properly specified and installed.
- As contractors gain experience and the deficiency rate decreases, sampling could be lowered to 10% or even 5%, again balancing cost against confidence.

This example is provided for illustrative purposes, and should be adapted to meet your program’s specific situation.

Building inspectors in some jurisdictions might also be inspecting the work of contractors. A typical program requirement is that all projects have necessary building permits, although only some types of work triggers the need for permits. This basic building inspection provides a built-in mechanism for much of the field inspection, helping to ensure that installed energy measures meet building codes and are installed in a workmanlike manner. Discussing the permitting and building inspection process with contractors and local building departments will help you develop a plan that avoids duplication or conflict. Where possible you may be able to create a plan that coordinates program field inspections so they happen at the same time as building inspections to minimize the burden for contractors and customers.

While most field inspections happen after project completion, you may want to also consider doing some inspections after an assessment of the home but before the project commences to ensure the integrity of the assessment process. These pre-installation inspections can both verify that energy assessors are able to correctly diagnose homes and that contractors are not gaming existing conditions to qualify for bigger rebates or incentives. Pre-installation inspections are particularly useful at the beginning of a program, but you might keep this as a random possibility on every project.

Providing Feedback

Providing feedback to contractors on the work they are doing – from the assessment to installing improvements, and even to meeting program submission requirements – is invaluable. It is how contractors know whether and where they can make improvements.

You have choices in how to provide feedback – both in form and timing. Common and effective ways to give feedback include:

- Provide clear, constructive feedback on what was done well and what needs improvement.
- Use a checklist to ensure all aspects of the work are inspected and approved.
- Conduct follow-up inspections to ensure that any issues have been resolved.
- Encourage contractors to ask questions and provide feedback on the feedback process.

By providing effective feedback, you help ensure that quality work is delivered consistently and that contractors continue to improve their skills and methods.
• Having contractors walk alongside inspectors during field visits. Field inspection can be part of a QA process, not merely a QC inspection. You may consider the initial field inspections a form of mentoring, and provide a suitable trainer. As any deficiencies are spotted, instruction can be given about what the deficiencies are and about how to repair and avoid the problem in the future. If the contractor was not present for the field inspection, you may also schedule a feedback discussion on performance.

• Documenting findings in written reports as important accompaniments to the field inspections. Much of the documentation can be in checklist form. Provide written notification of recurring, systematic, or serious non-compliance with program policies, standards of behavior, or applicable laws or regulations.

• Providing contractors with regularly updated dashboards or scorecards to keep them informed about their performance trends. These tools can also help contractors see how they are performing as compared to other contractors. Dashboards can be incorporated into program or project software to enhance their usefulness.
  - For example, NeighborWorks of Western Vermont used monthly scorecards to keep contractors informed about their own performance and comparison to other contractors.

Any necessary corrective actions should be documented and communicated to the contractor as soon as possible (see below).

**Corrective Actions**

When issues are discovered as a result of reviews of applications or reports, customer surveys, customer inquiries and concerns, or onsite inspections, the first step should be to contact the contractor and try to resolve the issue in a positive way. You want to help the contractor to:

- Understand deficiencies to correct them and to better avoid them in the future
- Help keep the contractor excited about participating
- Protect the customer and ensure a high-level of satisfaction.

You should explain the problem as part of the feedback process. If required, the program and the contractor can prepare corrective action work scopes and verify completion.

In addition to fixing the immediate problem, strengthening the QA process and preventing similar incidents in the future is the end goal for successful programs. Inspections and corrective actions should be viewed as a way to improve that process not as a punitive action.

Occasionally a program will discover that the core problem requiring follow up is the standard itself or the way the program applies the standard, which is something your program can correct and communicate as part of continuous improvement. For example, requiring combustion safety testing that conflicts in approach with local code and licensing requirements might trigger a program quality issue, but the resolution might require a change in the program standard.

For recurring problems and deficiencies that do not need to be immediately remedied, consider offering or requiring additional contractor training or mentoring to address the deficiencies in performance. You may also need to increase field inspections until the contractor demonstrates improvement.

Of course, with recurring, systematic, or serious non-compliance with program policies and standards or applicable laws or regulations by a contractor, you do have to make provisions for disciplinary action, such as probation or suspension from the program. Those provisions should detail a clear process, including a contractor appeal process.

**Create a workforce development plan**

If you are incorporating broader workforce development into your program (e.g., helping untrained individuals become trained technicians), you will want to coordinate specific training content and scheduling with your training and development partner(s). You should strive to schedule training so that students finish at the same time that contractors will be looking to expand their workforce.

Your workforce development plan should include the topics and formats for training, and the overall structure, timing, limitations and goals of the workforce development program. For example, you should strive to schedule training so that students finish at the same time that contractors will be looking to expand their workforce. This handbook’s Examples tab has several resources to help you consider how to build, engage, and maintain a trained workforce. The Topical Resources tab has several case studies and publications that describe technical training program best practices and lessons learned.
This presentation by Clean Energy Solutions, Inc. provides a helpful overview of the steps and considerations needed to develop an effective workforce development plan, from a program’s perspective and experience.

This Maryland Energy Administration presentation provides a helpful summary of the development of its weatherization training program, as well as lessons learned from partnering with community colleges.

Work with your workforce development partners to establish plans for the following:

- Curriculum of specific classes that technicians will be required to complete, including:
  - Training content (e.g., technical training, including training to acquire professional certifications, as well as business development and sales skills)
  - Formats for training (e.g., practicum and in-field mentoring opportunities, short-term training, and career pathways for technicians to advance as home performance professionals)

- Schedule for training classes and how that aligns with the needs of contractors in your program
  - This Energy Coordinating Agency’s presentation has example course schedules for apprenticeship programs at their Knight Green Jobs Training Center.

- Incentives or subsidies for training, certification, and mentorship that your program will offer

- Recruitment of students to your training program, both contractor staff seeking to enhance or maintain their skills and technicians who are new to the residential energy efficiency market

- The number of students your program will aim to have complete training, and the number who will receive financial assistance for attending classes or completing certifications

In Their Own Words: Training a Workforce to Meet Local Needs


Using your market analysis, your broader program implementation plan, and further conversations with contractors, estimate when work should be ramping up and contractors will need to hire. Based on your schedule, you can then determine the time to begin training and, before that, when to recruit students for your program. Consult with your contractor partners to time training and recruitment activities when they work best for their business (e.g., do not impose new training requirements during contractor busy periods).

Consider that you may have a mix of employed and unemployed students in training courses. These students may be working in related professional industries, or may be entirely new to the energy efficiency industry. In addition to technical skills and professional certifications, students may need assistance with finding work and developing business skills to be successful.

Fostering Employment Through Mentoring in New Hampshire
New Hampshire’s Beacon Communities Project worked with local community colleges to provide Building Performance Institute (BPI)-certified training in order to develop more qualified home performance professionals. For students who completed classroom trainings and needed more experience in the field before working on their own, the program supplemented the training with mentoring opportunities. From 2011 to May 2012, 36 students had been trained through these classes and mentorships.

Framework to Connect Trained Workforce to Jobs

Typically, trained people don’t create work for a company; they get hired into companies that expect to or already have work for them. If you are training people that you plan to see hired into companies, create a plan to help position those newly trained professionals for those jobs. The Green for All Energy Efficiency Toolkit, Workforce Development Tools section is a useful resource for guidance and examples of workforce development and employment resources for energy efficiency professionals. Among several options you can include in your workforce development plan are:

- **Maps of career pathways** to outline skills and certifications students need and the types of jobs they can find in the local residential energy efficiency market.
- **Employment coaching**, such as group classes or individualized assistance on job-finding skills and orientation to the home performance industry.
- **Non-technical job skills training**, including project management, sales, management, and other business skills. Consult with local contractors to determine what skills, qualifications, and certifications they are looking for in new hires.
- **Mentoring opportunities with existing contractors**, including pairing experienced contractors with newly certified technicians and providing for networking and communication forums among contractors
  - For example, Enhabit’s mentoring program pairs top-performing contractors with contractors new to the program and rewards the mentors with additional customer leads.
- **Direct placement with contractors**, possibly with incentives for hiring recent trainees. Your relationships with your contractor partners and local contractor associations and unions can help establish these connections.
  - For example, the Community Power Works (CPW) program in Seattle connected contractors with a local community college and the building guild to provide free weatherization training to entry-level workers.
- **Using state and local placement services and job boards** to direct new technicians toward potential opportunities with contractors.
  - State and local workforce investment boards (WIBs) oversee one-stop career centers that can provide a good starting point for local employment networks.

Fayette County, Pennsylvania: Developing the Skills and Tools for Workforce Success

Fayette County, Pennsylvania leveraged regional expertise to build up its workforce, increase the number of local certified technicians, and help new contracting businesses get off the ground. This three-pronged approach involved recruiting contractors, providing grants and financing to minimize startup costs, and giving contractors the opportunity to provide Building Performance Institute (BPI) certification to their technicians.

The decline of the mining industry in the region brought with it a rise in unemployment. To reverse the trend, the county leveraged existing partners to usher in a new generation of clean energy professionals. The program partnered with a local private industry council to train contractor technicians to become BPI-certified at no cost to students. The training included sales and business development topics.

The program helped new home performance professionals start new businesses and provided grants and low-interest loans to purchase computer software and professional equipment. With training and certification in the energy efficiency industry, county residents had the opportunity to get not just any job, but stable and well-paying careers.


Plan for ongoing coordination and feedback with contractors and workforce development partners

In order to maintain effective contractor partnerships, provide opportunities to hear contractors’ views early and often. Listening to contractors in this way not only helps improve the program, but it also increases buy-in and supports recruiting and increased participation.
Your implementation plan should include ways to gather information from contractors both individually and collectively through mechanisms such as quarterly meetings, monthly conference calls, and webinars.

Depending on the nature of your workforce development efforts, you will also want to periodically coordinate with training and workforce development partners to monitor progress, identify and address issues, and discuss any potential program changes.

Along with gathering information on a daily basis from contractors as you work with them, you should institute a regular forum for formal input and feedback. This could be in the form of quarterly meetings, monthly conference calls and webinars, or similar mechanisms from all participating contractors. You might also work with local industry associations who will often aggregate feedback across all its membership.

For example, the Home Performance Guild of Oregon provides input and feedback to Enhabit, formerly Clean Energy Works Oregon, on behalf of its contractor members. Enhabit regularly engages the Guild to understand contractors’ views early in decision-making processes, such as when Enhabit engaged a new financing partner and engaged the Guild to examine the loan product and approval process. The Guild also surveyed its members to provide guidance when Enhabit was considering providing business development support.

State and local Efficiency First chapters in New York, California, and Maryland routinely work with the programs to improve processes to increase participation and success.

Austin Energy meets regularly with contractors to gather feedback on what is and is not working in the field, address their concerns, and collect input on program ideas.

Approaches for structuring contractor feedback opportunities, including information on quality and customer satisfaction, are further discussed in Develop Evaluation Plans, Assess and Improve Processes, and Communicate Impacts.

Your implementation plan is a good opportunity to solicit feedback from your contractor and workforce development partners. Just as you engaged with your key partners to vet initial program design, it will be useful to re-engage with these partners once you have refined your plans and developed a draft implementation plan. Check with partners to ensure that key aspects of your implementation plan, such as schedules for milestones, participation processes, and QA procedures, will work for contractors and training providers, or whether adjustments need to be made before proceeding.

Develop a staffing plan, timeline, and budget

In addition to the steps above, your implementation plan should detail when you are going to do them, which staff or outside partners will be responsible for the planned activities, and how much you can invest into the implementation. Your implementation plan should thus include at least a timeline and estimates for staffing needs and resources, all within the context of your overall program design and budget.

Many programs have found it helpful to identify a manager who will oversee your program’s contractor engagement, with the ability to make day-to-day decisions or delegate the decisions to account managers who work directly with contractors and monitor every upgrade project. Regular check-in meetings across your program—marketing, training, accounting, etc.—help ensure consistency among efforts and proper prioritization at the program level, and allow for the steady communication of progress.

When developing a budget for your contractor engagement activities, you will need to consider the following constraints:

- Be aware of the intensive nature of many of the engagement functions, in particular, how much hands-on support your program plans to provide. For example, much of the recruitment, training, mentoring, and QA work is often in the field with one contractor at a time.

- Look closely at your assumptions about how much time you’ll spend each week or month with each contractor, including travel time as appropriate. It can be more effective to put more resources into a select number of activities, or even key contractor accounts, than to spread your budget too thinly across many tactics and many more contractors.

- With a limited budget, you simply won’t be able to deliver every type of training or support imaginable. So, you’ll want to allocate your budget to the focus where you can have the biggest impact.

Below is an example budget template developed by the Home Performance with ENERGY STAR program, including contractor recruitment, training, mentoring, contractor incentives, QA inspections, and other activities and goals. Costs will vary depending on the scope, geographic reach, and goals of your program.
Scaling Contractor Support

Every program faces the danger of being consumed by providing contractor and workforce development support. Many programs experience the 80/20 rule with contractors, where 80% of the upgrades are completed by 20% of the contractors. That means that the remaining 80% of the contractors only do 20% of the work, and yet programs report spending an inordinate amount of time and resources on those contractors.

Build It Green of Oakland, California Targets Contractor Support to Deliver Results

Build It Green in Oakland, California, noticed that it was spending an excessive amount of time supporting contractors who were not producing results, and not enough time supporting those contractors who were performing well. The program decided to shift away from a reactionary approach to contractor support and toward a proactive model of support for contractors that make the program work. The program expedited the time it takes for a higher-performing contractor to integrate home performance into its business, by providing training on non-technical skills and spending less time with underperforming contractors. The new Build It Green contractor support model includes:

- Customized concierge mentoring for a select group of high-performing contractors
- Consistent communication with active contractors
- Internal and external feedback loops to collaborate with engaged contractors.

The new model allows the program to focus attention and resources on the contractors that are making the program successful.

To avoid spending most of your time supporting contractors who are not delivering results for you, you might include thresholds for support in your process, with levels of support ratcheting up as contractors’ volume ratchets up. The intensity of effort you are able to provide will depend on the resources you are about to assign to this.
Oregon Creates a System for Growing a Quality Contractor Base

Enhabit developed a tiered system for growing its base of new and experienced contractors that promotes program sustainability through high-quality work.

To help new contractors become experienced with home energy assessments and upgrades, the program assigned projects to either “full” contractors, who had a proven track record with Enhabit, or “basic” contractors who were new to the program or had not met quality standards on previous projects sponsored by the program. This differentiation allowed program staff to tailor contractor support to the needs of different segments of the contractor pool, while also offering a path for contractors to increase their qualifications and grow their business.

To become full contractors, basic contractors had to obtain the program’s required certifications, follow the high road standards, and bring a minimum of six assessment customers into the program, as tracked by a unique “instant rebate” code assigned by the program. All work conducted was reviewed by Enhabit’s quality assurance team.

This tiered system not only assisted new contractors with entering the home energy assessment market, but required them to put in a proportionate amount of work to bring new customers into the program and meet program standards for continued support. By scaling the level of program support, this system favored high-performing contractors while creating opportunities for new contractors to sell their own projects and gain experience to become full contractors.


Contractor Engagement & Workforce Development Implementation Plan Template

Developed by the U.S. Department of Energy, the Contractor Engagement & Workforce Development Implementation Plan Template will help you develop a strategy for planning, implementing, and evaluating your workforce activities.
Tips for Success

In recent years, hundreds of communities have been working to promote home energy upgrades through programs such as the Better Buildings Neighborhood Program, Home Performance with ENERGY STAR, utility-sponsored programs, and others. The following tips present the top lessons these programs want to share related to this handbook. This list is not exhaustive.

Maintain a sufficient workforce from program launch into program maturity

Your program will rely on its contractor base in order to succeed, so take steps to ensure that the capacity of the workforce is sufficient to launch your program and to maintain it as it grows. An evaluation of over 140 programs found that successful programs fostered and maintained relationships with a large pool of contractors. Many Better Buildings Neighborhood Program partners took the time to learn about contractors’ businesses and align program promotions with those needs. Focus on expanding contractors’ businesses and avoid interrupting or complicating a sale. Also, remember that it is important not to take contractors’ leads to their competitors, as can occur when programs pool all leads and distribute them on a rotating basis. Contractors are protective of leads they generated themselves, so this can become a disincentive for contractors to participate in your program.

If you understand contractors’ business processes and align promotions during contractors’ periods of greater availability, you can help ensure that your program will retain a reliable workforce into the future. One way that you can attract the contractors you need is to design your program in a way that will benefit contractors. Take steps to ensure that contractors want to work with your program, and to reduce barriers to their ability to do so.

- **Enhabit**, formerly Clean Energy Works Oregon, created a system to help ensure that the program did not interfere with competition among contractors, or cause contractors’ leads to be given to their competitors. Initially, the program pooled all leads and referred them to contractors on a rotating basis, assigning them to the next contractor in line. This led to some contractors’ leads being given to other contractors. The program later improved that process by assigning a code to each contractor, and when a contractor generated a lead, the customer would use the appropriate code. In that way, Enhabit would be able to assign the work to the appropriate contractor.

- **Seattle’s Community Power Works** coordinated with contractors before launching marketing initiatives that were going to drive a spike in demand. Contractors could then prepare in advance for the increase in customer interest, and the program was able to establish required timelines for contractors to follow, to ensure that new customers received an evaluation in a timely manner.

Design a program that provides value for contractors and considers their seasonal business cycles

Many residential energy efficiency programs run into challenges maintaining an appropriately sized, well-trained workforce from program launch through maturity, as well as through the fluctuating demand of the seasons of the year. Some programs found that their contractors preferred a smooth annual workload in order to avoid layoffs during the slow off-season months, while others found that they benefited from seasonal fluctuations in demand. By understanding your contractors’ schedules and capacity, you can schedule campaigns to generate demand for their services when they want it and pursue innovative strategies to help them manage their workload accordingly. Coordinate with your contractors to identify their needs and preferences and explore ways that you can help drive demand or increase the number of available professionals.

- **Austin Energy** acquired an extensive understanding of the existing contractor workforce and gathered key insights into local contractors’ schedules and capacity. Austin’s hot weather keeps contractors busy dealing with home cooling issues during the warm months of the year. Austin Energy purposely launched its Best Offer Ever promotion in fall 2010 to take advantage of contractor availability and provide more work during otherwise slow contracting months. This approach increased the likelihood that upgrades would be completed in a timely manner, while also helping Austin-area contractors avoid seasonal layoffs.

- **NeighborWorks of Western Vermont** realized that fluctuating seasonal demand for home energy efficiency upgrades posed challenges for contractors. Contractors were reluctant to hire additional technicians during peak season because they knew that demand would ebb in the spring and summer. The result was a backlog of projects. The program created a pool of temporary employees to help contractors in need of home performance professionals, including small contractors. This approach helped participating contractors weather the changing demand for home performance upgrades by offering them the flexibility to grow and shrink their workforce as needed. Many contractors expressed enthusiasm for the temporary employee pool, and the extra staffing helped reduce the number of backlogged projects throughout the community.

Establish collaborative partnerships with contractors and communicate with them early and often
Contractors are more likely to serve as program champions when the program engages with them throughout program design, delivery, and improvement. Your contractors are the primary contact points with your customers, and the quality of their interactions and services strongly influences how customers view your program. Many Better Buildings Neighborhood Program partners found that gathering contractor input during the program’s planning phase helped ensure that the program would create value for contractors as well as for customers. The programs built personal relationships with contractors by demonstrating interest in their business concerns and needs. Indeed, an evaluation of over 140 programs across the United States found that programs were more successful when they fostered relationships with their contractors and communicated frequently with them.

**In Their Own Words: Engage with Contractors From Day One**

By communicating regularly (e.g., via a monthly breakfast meeting, other outreach events) with a core group of contractors, programs were able to better monitor program implementation and receive suggestions for improvement. These programs elicited feedback from contractors about how customers perceived program offerings, as well as input about what was working and what was not for both contractors and customers. Some programs surveyed contractors to collect a regular stream of information about how program implementation was going and to get feedback before rolling out new offers or program design changes.

- **NeighborWorks of Western Vermont** maintained steady lines of communication with its network of contractors to help ensure that barriers to getting work done in a timely manner were identified early and that solutions were collaborative. The program held monthly one-on-one meetings with each contractor to review client status and progress and to identify any problems and potential training opportunities. The program also organized bimonthly group contractors meetings focused specifically on sharing new techniques or products. NeighborWorks used regular contractor communications, performance feedback, and contractor incentives and competitions to help contractors improve their assessment-to-upgrade conversion rates. By engaging contractors and including them from the start on any proposed program revisions or promotions, NeighborWorks was able to improve program delivery.

- **Enhabit**, formerly Clean Energy Works Oregon, program is charged with saving energy and supporting clean economic growth. Much of its success has come from engaging contractors in a continual learning and improvement process. Enhabit solicits feedback from contractors at meetings every two weeks and uses this feedback to guide improvements. With support from the Energy Trust of Oregon, a few contractors collaborated to create the **Home Performance Contractors Guild of Oregon**, which enables contractors to organize their opinions into a unified voice and have a more formal role in program and regional policy discussions. When Enhabit engaged a new financing partner, the program asked the Guild to examine the loan product and approval process. Input from the Guild helped ensure that the product was something that contractors would be able to explain and promote to customers.

- In Washington State, the **Repower Kitsap** program started in a region where the home improvement market was fragmented and under-developed. Contractors were initially wary of one another, tended to work only in their specialty, and often did not have working relationships with one another. The program established monthly brown bag meetings to discuss program goals and requirements and to gather contractor input on the program. The monthly meetings helped contractors get to know and trust one another and develop productive working relationships. Many contractors even shared leads with other contractors who specialized in the types of projects they could not or did not want to handle.
The Long Island Green Homes program began consulting with contractors during program design and continued to do so as the program launched and began full service operations. The program established contact with a core group of contractors it trusted, meeting with them regularly to review program status and direction. In particular, the program made it a priority to engage with contractors when rolling out program changes, asking them about their needs, concerns, and current state of business. In this way, the program ensured that program offerings were adding value for the home performance industry and that program requirements were manageable for contractors. For more information on the Long Island Green Homes’ launch and other pilot programs, visit the October 2011 Better Buildings Residential Network Peer Exchange Call Summary.

Help contractors enter the home performance market by lowering barriers to entry and providing training, networking, and mentoring opportunities

Entering a new market adds risk to contractors’ businesses. As several Better Buildings Neighborhood Program partners focused on their efforts to attract contractors, they realized that it would be valuable for them to help contractors enter the home performance market. Many programs took steps to lower or eliminate unnecessary hurdles or barriers to contractors’ successful entry into the market. These barriers included long delays to receive payment for the program, paperwork burdens that were sometimes excessive enough to make contractors reluctant to participate, program expectations that were unclear to contractors, and upfront costs (e.g. for equipment purchases).

To help contractors overcome these barriers and enter the home performance market, many programs have provided program orientations covering expectations and procedures, offered mentoring and networking opportunities, and worked with contractors to improve work processes. Some programs have offered equipment loan programs, subsidized training, and other services to lower the upfront costs of entering the home performance market. Taking steps to help contractors enter the home performance market can help you establish a trained workforce of high-quality contractors to support home performance work.

- Rutland County, Vermont recruited and trained qualified technicians and “loaned” them to smaller contractors, to help them scale up to meet demand while mitigating business risk. The program set up a temporary labor pool that contractors could access when they needed greater capacity to meet demand. The labor pool helped new technicians enter the home performance industry, and helped smaller contractors weather seasonal fluctuation in market demand. Ten employees had worked in the labor pool as of 2012, with about three to five workers in the pool at any given time.

- Fayette County, Pennsylvania helped contractors enter the market by providing grants and financing to minimize startup costs, and by giving contractors the opportunity to provide Building Performance Institute (BPI) certification to their technicians. The program partnered with a local private industry council to train technicians to become BPI certified at no cost to students. The partnership program helped new home performance professionals start new businesses, for example, by providing grants and low-interest loans to purchase computer software and professional equipment. Ninety-four individuals completed the training through the partnership program. Training and certification in the home performance industry provided Fayette County residents with an opportunity for stable and well-paying careers.
New Hampshire’s Beacon Communities Project sought to reinvigorate the local economy of Berlin, New Hampshire, following the 2006 closure of a pulp mill. The program began working with local community colleges to provide BPI-certified training to develop more qualified home performance professionals. The program supplemented the training with mentoring opportunities for students who completed classroom trainings but needed more experience in the field before being hired by a contractor or starting their own company. In the nearly three years since the program's launch in September 2013, 42 students were trained through these classes and mentorships. These trained students helped the program offer quality home performance upgrades to homeowners, and the mentorship helped students become qualified home performance professionals.

Enhabit, formerly known as Clean Energy Works Oregon, provided networking and mentoring opportunities to help contractors enter the home performance market. The program connected new contractors with peer mentoring services, allowing them to shadow an experienced professional in the field and office and get focused guidance from top-performing contractors. Mentors are compensated with additional project leads from the program. Enhabit also held morning meetings twice monthly for contractors to connect with each other. Contractors were able to use these meetings to organize and coordinate with the Home Performance Guild of Oregon, helping enable the Guild to expand significantly and to hire its first full-time executive director. As of December 2015, the Guild had over 50 home performance contractor members across Oregon, including more than two-thirds of the program’s contractors.

Contractors are your sales team – educate and empower them with the skills to sell home energy upgrades

Many home performance programs have confronted the challenge of how to reach out to more customers and to improve conversion rates of customer interest into completed upgrades. Realizing that the contractor is a primary face-to-face link between customers and the program, some Better Buildings Neighborhood Program partners took steps to empower contractors to market program services through co-marketing and sales training. A comprehensive evaluation of over 140 programs across the United States found that successful programs have contractors who are skilled at helping customers understand the benefits of home energy improvements. Because contractors are often the main point of contact with participants, contractors must be trained to persuade homeowners to move forward with potentially costly projects.

Some programs were able to empower contractors by co-marketing and co-branding with them to reach new homeowners. Co-marketing can help both contractors and programs; a cooperative advertising model allows programs to share the costs to develop and distribute marketing materials. Co-marketing helps programs leverage contractor resources to increase their market presence, and extends contractors’ ability to market themselves even if they have limited resources.

In Their Own Words: Empower Contractors by Building Sales and Business Skills


Programs have found that offering sales training to home performance professionals can significantly boost sales and improve customer experience and conversion rates. During sales training, technicians can learn about the program's upgrade process, how to sell it using non-technical communications with customers, and other techniques for transforming assessments into upgrades. Programs saw benefits from offering free or reduced-cost sales training as a partnership benefit for contractors. Taking the resources to offer this training to contractor staff helped programs ensure that technicians understood and could promote program benefits, rebates, and other incentives available to customers. For many programs, contractor sales training resulted in more effective sales approaches, increased rates of conversion from assessment to upgrade, and increased revenues for contractor businesses.
employers want and the community needs. Through monthly webinars and professional development courses, the program has helped contractors improve their skills in targeted communication and selling program options, thereby increasing home energy upgrade conversions. After conducting a two-day sales training course for contractors, coinciding with additional homeowner incentives and a filing deadline, Efficiency Maine’s average monthly rate of energy upgrade conversions increased from 10% before the training to 60% a few months afterward.

Energy Upgrade California in Los Angeles County provided marketing materials and sales training to contractors. Having learned that contractors often do not have the time or experience to create marketing tools, the program developed an online resource center with customizable marketing kits for contractors. Frequent networking events for contractors also provided training on specific aspects of marketing. Because contractors had limited budgets, Energy Upgrade California established an online, on-demand print center that contractors can use to print and deliver program marketing materials. The marketing materials raised the visibility of home performance professionals, helped homeowners find qualified contractors, and ensured a consistent message about the program.

Connect home performance professionals to trainings focused on the skills that employers want and the community needs

Effective home performance contractors require many types of skills and expertise. To help individuals develop those skills, programs can target training on the specific topics and skills needed for successful home performance work. Many Better Buildings Neighborhood Program partners found that they could cost-effectively increase their contractors’ access to training by engaging with expert partners to provide training, mentoring, and apprenticeship opportunities. A comprehensive evaluation of over 140 programs across the United States found that the more successful programs offered more training opportunities to contractors, either by delivering training or engaging partners to deliver training. By providing access to training, programs saw enhanced assessment quality, more effective sales approaches, increased rates of conversion from assessment to upgrade, more comprehensive upgrades, more effective and efficient installation processes, improved quality control, and increased revenues for contractors.

Training alone does not create jobs in the community, but you can increase the relevance of your training by using contractor input to select training topics. Several Better Buildings Neighborhood Program partners found that asking contractors what topics would be valuable also helped the program build an engaged and capable workforce. By providing access to the specific training that contractors want, programs can increase their chances of success by ensuring that they have a strong pool of contractors with a deep understanding of building sciences and the ability to install or subcontract a variety of energy-saving measures.

Some programs found success in working with education and training providers, such as community colleges, universities, and weatherization training centers, to offer valuable and appropriate training to their contractors. Apprenticeships, which can be a bridge between classroom training and being hired by contractors, helped some programs ensure that students acquired the skills that employers want. These programs also found that accredited, on-the-job training can be a relevant, less expensive, and more motivating supplement to classroom training.

Community Power Works in Seattle piloted a new training approach to meet contractor needs and the requirements of the city’s high-road workforce agreement. The program’s original training programs relied on an outdated model of training, failed to prepare technicians properly to be hired, and lacked adequate mentorship and job-finding support for training graduates. The new approach included partnering with South Seattle Community College and the nonprofit Northwest EcoBuilding Guild, which offered classes and workshops, as well as participation by contractors to gather their feedback on training options. Training was available to both entry-level and experienced home performance professionals, and contractors were given the flexibility to hire first and train second (e.g., hire a technician who is not fully trained or certified but can begin or is in the process of completing certifications). In this way, the contractor could select from a wider pool of candidates and then provide supplemental training to those who need it. The training was fully subsidized by the program. By establishing these ongoing collaborative partnerships with contractors, Community Power Works helped to ensure that it has a robust workforce of trained professionals for the future. As a result of these partnerships, about 40 training graduates have worked around 23,000 hours on Community Power Works projects between April 2011 and December 2013.
Establish a clear system and process for ensuring quality work

A residential energy efficiency program’s success is dependent on the quality of work that contractors conduct in customers’ homes. Indeed, an in-depth examination of selected program strategies found that effective quality assurance and quality control programs provided a foundation for quality upgrades and were achieved through numerous program design and implementation decisions and follow-through. Many Better Buildings Neighborhood Program partners and Home Performance with ENERGY STAR Sponsors found that tiered and onsite quality assurance strategies, in addition to file reviews of upgrades reported to the program, worked well. Most programs use a tiered approach, in which a program inspects the first several upgrades completed by a new contractor and then inspects a specified percentage of subsequent projects. Onsite quality assurance is a useful strategy, both as a way of gathering feedback and as a training opportunity.

Programs conduct a broad range of verifications, including checking contractors’ certifications regularly, implementing a mechanism to re-check certifications, and verifying home performance professional safety skills (e.g., combustion training). In addition to inspections and feedback, some program also identified standards for ensuring quality work, including standards for technical work, for diagnostic tools and installed equipment, and for professionalism and customer service. Setting those expectations helped allow contractors to understand what was specific to their geographic area and most pertinent to the local community in which they work.

In New York, NYSERDA uses a tiered approach for quality assurance. Inspection rates vary based on the contractor’s status in the program (see NYSERDA’s QA Procedures). The program inspects the first three projects that all contractors complete. After these initial projects, the program inspects 15% of a contractor’s completed projects, and at least one project annually. Customers may also request that field inspections be conducted within one year of the contractor’s work. If contractors have repeated QA/QC issues, NYSERDA increases the field inspection sampling rate, generally to 50% or more. If problems persist and are not resolved, NYSERDA sometimes suspends contractors from the program according to its QA procedures.

The RePower program on Bainbridge Island, Washington, created a standardized process for quality control inspections. Energy upgrades completed under the RePower program could be randomly selected for quality control inspections, and were rated “Pass,” “Needs Minor Corrective Action,” or “Needs Major Corrective Action” based on the current RePower Weatherization Specifications Manual. If problems were found to require corrective action, contractors were required to perform the corrective actions at no additional cost to the customer. Repeated occurrences of an individual problem or serious problems resulted in a performance improvement plan or suspension from the RePower program. The program randomly selected 10% of their rebate applications for quality control inspection, and RePower staff worked to schedule an appointment with the homeowner within one week of selection.

- Philadelphia’s Energy Coordinating Agency collaborated with the Community College of Philadelphia to design an apprenticeship program for energy efficiency and building science. Two one-year programs—"Building Energy Analyst" and "Weatherization Installer and Technician"—led to journeyman credentials and BPI certification. These programs trained home performance professionals with the technical building science skills they needed, while also providing hands-on experience with energy efficiency analysis and installation of energy efficiency measures. Program trainees helped residents save an average of 20% to 30% on utility bills through weatherization and energy conservation services.

- Austin Energy emphasized making its contractor training locally relevant. The program encouraged trainers to highlight issues that were particularly applicable to the local climate and housing stock, and to focus on regionally-appropriate amendments to energy code. For example, basements are uncommon in Austin houses, so training should avoid seeming out of touch and refrain from discussing basement upgrades. The program also learned that trainers should allow time for participating contractors to raise issues and questions that are specific to their geographic area and most pertinent to the local community in which they work.

- EnergyWorks Kansas City’s program implementer, Metropolitan Energy Center (MEC), provided training and mentoring for home energy professionals, including training for BPI certification. Training courses included residential and commercial energy assessment, healthy homes, and deconstruction. One training session focused specifically on small and women-owned businesses. To follow up on the training, MEC instituted a mentored practicum experience in which each student was required to complete a full complement of diagnostic tests with the instructor in a dummy house. EnergyWorks Kansas City and MEC also worked with seasoned contractors to provide mentoring to newer contractors in the program. From 2011 to 2014, 90 individuals participated in MEC’s introductory home performance training program. The training and mentoring program allowed new technicians to enter the home performance market: from 2009 to 2014, the number of certified residential auditors in Kansas City increased from six to over fifty, almost all of whom have received training from MEC.
• The NeighborWorks of Western Vermont program in Rutland County, Vermont, designed a quality assurance approach as a means to gather feedback and incentivize improvement. The program produced monthly contractor performance reports that compared contractor conversion rates, and then provided incentives to top performers. This approach was a productivity driver that encouraged contractors to make improvements to their business practices. During monthly one-on-one meetings, the program checked on each contractor’s client status list, made sure that no customers fell through the cracks, and gathered contractor feedback during the conversation. The program also set a timeline by which contractors must submit assessment reports to homeowners, with penalties in place for late reports. Using this approach, wait times dropped from four months to three weeks. See the Concierge Programs for Contractors webinar for more information. This approach has given contractors and the program the opportunity to improve over time.

• The Town of University Park, Maryland’s STEP-UP program worked to address variability in the quality of work that its contractors provided. The program approached this problem in two ways. First, STEP-UP issued a request for proposals for contractors that met specific performance benchmarks. From those proposals, the program then selected contractors with whom they had worked well in the past and began listing them as “preferred” contractors on their website. Ninety-nine percent of customers began selecting contractors from this list. Second, the program employed an energy coach for participating homeowners, to provide regular quality assurance of contractors’ work. The coach provided intermittent inspections at customers’ request, when they had concerns or when they chose to assist the program by allowing them to check on the contractors’ performance. The energy coach reviewed work proposals for scope and price; as a result, customers were reassured that they were getting the work they needed at a reasonable market price and therefore were getting fair value. By playing these roles, the coach gave customers assurance that they were receiving high value work from contractors and incentivized contractors to do quality work.

Recognize and reward good contractor performance

Many programs used the information they gathered through their quality assurance efforts to recognize contractors that deliver consistent, high-quality work. Rewarding good contractor performance can help you build trust, strengthen partnerships, and boost workforce morale. You can incentivize contractors to work for these awards by posting them on your website, announcing them at awards ceremonies or other events, recognizing them in newsletters, and encouraging contractors to post the awards on their websites.

• To improve contractor morale and work quality, electric utility Arizona Public Service (APS) and Home Performance with ENERGY STAR program sponsor FSL Home Improvements developed annual Contractor of the Year awards to recognize their top five participating contractors, given for the first time in early 2017. These contractors receive marketing benefits including a Contractor of the Year program logo for their website and additional marketing support. The program had been monitoring contractors’ work through quantitative metrics since 2012 and developed the quarterly scorecard as a tool to communicate contractor performance in 2016. These scorecards show how contractors compare to anonymized top and bottom scoring companies, based on their quality of measure installation, scope of work, customer satisfaction, and energy savings achieved. The program calculates each score based on performance over the past four quarters in an effort to avoid overly penalizing a contractor for any one isolated issue that they subsequently address. Not only do these scores enable annual contractor recognition, they also allow the program to give contractors regular feedback and increase contractor accountability. This comparative scoring has fostered friendly competition among contractors. The program has seen increased interest from contractors on how to improve their scores.

• Enhabit, formerly Clean Energy Works Oregon, singled out its contractors quarterly with honors such as the “James Brown Award” for the contractor with the most completed upgrades and the “Promoter Award” for showing the greatest job growth from one quarter to the next.

• The annual Charlottesville, Virginia, Local Energy Alliance Program (LEAP) “Blower Door Boss” award went to the contractor completing the most energy assessments while scoring the highest on customer surveys. The “Ruler of the Retrofits” title was bestowed on the company that scored the highest on customer feedback surveys and quality assurance reviews on home performance upgrades in Central Virginia.

• Maryland’s Be SMART program used awards and public recognition of accomplishments to help motivate home performance contractors that worked hard to realize significant energy savings. Be SMART gave awards to top performers that completed the most upgrades. The program presented awards for the greatest number of HVAC and home performance upgrades, the highest assessment-to-upgrade conversion rate, and the “Accuracy Award” for best rebate paperwork submission.

Provide information to help customers pick the right contractor
Early on, many Better Buildings Neighborhood Program partners focused on providing customers with a range of contractors to choose from, while providing contractors with access to customers. Customer feedback received by some programs, however, indicated that customers were confused or overwhelmed by the choices. A comprehensive evaluation of selected program strategies implemented by Better Buildings Neighborhood Program partners found that programs were more successful when they provided customers with lists of pre-approved contractors; however, offering long lists of contractors without differentiating their products and services often led to inaction. To help customers distinguish between contractors and choose a qualified one, many programs provide customers with information about contractor skills, quality of past performance, proximity, and other factors. Some programs matched individual contractors directly with individual customers.

Customers can provide valuable information about the quality of contractors’ performance, and this feedback can supplement other information, such as field inspections, used to differentiate contractors based on their performance. Many Better Buildings Neighborhood Program partners incorporated customer ratings into the order in which they list contractors online, to help future customers select a contractor. Some programs also used rankings to evaluate contractors, support disciplinary actions, allocate benefits, and identify retraining needs. Through this approach, contractors had the opportunity to improve their standing and reap the rewards when customers saw that they could be relied on to do high-quality work.

- On Maryland’s Home Performance with ENERGY STAR website, homeowners can rate and review their contractors. Some contractors choose to reach out to their customers to encourage them to provide reviews. These customer reviews, along with contractors’ accreditations and services, are published on the website as part of each contractor’s information page. Users of the website can search for contractors and sort the results based on homeowner ratings and by geographical location. Users can also narrow their results according to which contractors participate in the customer’s local utility rebate program.

- Efficiency Maine provided customers with a “Find a Residential Registered Vendor” locator on its website. This locator listed the services each contractor offered, sorted the list by distance from the homeowner, and differentiated contractors based on number of projects completed and customer satisfaction. All contractors were added to the list when they met the program’s requirements. The list was sorted by location closest to the customer and number of completed projects, and also noted what services the contractor provides. The website also listed questions a homeowner could use to interview and evaluate contractors, such as “How soon can you begin?” and “How quickly will my work be completed?”

- The Town of Bedford’s Energize New York program learned that selecting a contractor was the primary barrier for homeowners interested in home performance upgrades. The program addressed this challenge by developing a rating system to differentiate high- and low-performing contractors. Contractors’ ratings were calculated using a combination of customer survey results, the number of BPI certifications held by their technicians, and their number of completed upgrade projects. Some contractors were dissatisfied when they received low ratings, and in follow-up discussions, program staff reminded contractors that they would have an opportunity for their score to be updated quarterly and reviewed the scoring criteria. As a result, many of those contractors decided to improve their overall score. The program also set a minimum standard of completed projects (i.e., six completed projects over the last four quarters) for contractors to be included in the program. This narrowing of available contractors made it much easier for customers to select one without being overwhelmed.

- Seattle’s Community Power Works began matching homeowners one-on-one with certified contractors to create the best fit based on homeowner needs, contractor skills, and contractor availability. The program found that its past approach of suggesting two or three contractors led to indecision and that the potential price advantage of competition among these contractors was not an important factor in homeowner satisfaction.
  - Programs should be transparent about the process of matching individual contractors to customers and ensure that all qualified contractors have the chance to participate in the program by competing for upgrade projects.
  - While Community Power Works did not encounter any issues, programs should recognize that this approach can limit competition among contractors and discourage the growth of new contractors in the market. Most programs, including Enhabit, Austin Energy, Energy Impact Illinois, and many others, mitigate this by allowing contractors who bring their own customers to the program to keep them, providing an incentive for the contractor to market themselves instead of relying on the program to generate demand.

Have clear rules and systems for identifying and remedying contractor problems
Even with the best contractor partners, a program may sometimes encounter difficulties that require remediation. Consistent with Home Performance with ENERGY STAR program principles, many Better Buildings Neighborhood Program partners discovered that they could address these difficulties by establishing contractor requirements to set standards for quality work, a transparent remediation process, and measures for dismissing underperforming contractors. They found that the key is to make contractor requirements clear from the beginning of your program. Contractor participation agreements and codes of conduct for interactions with customers can help ensure understanding of standards and provide a rule of thumb for when issues needed to be addressed. Not all contractors are equally skilled or customer-service oriented. These programs learned that, in order to preserve their reputation, they needed to be able to confidently recommend any contractor on their list. It is important to apply corrective actions as needed in response to problems and deficiencies, as well as a procedure to respond to serious or recurring problems such as probation or dismissal from the program. By setting the bar high and dismissing contractors that failed to meet program requirements, these programs helped ensure consistent, quality customer service.

- **Efficiency Maine** developed a Contractor Code of Conduct that contractors sign, stating that they will respect the homeowner’s property, minimize disruption to the homeowner, and leave the home in as good or better condition as it was found. It lists 15 things that contractors will and will not do relating to communications, onsite behavior, and work practices. To assure quality in the program, a minimum of 15% of upgrade projects are subject to random and/or targeted onsite inspections, covering the pre-installation, installation, and post-installation phases. **Efficiency Maine’s Program Manual** outlines clear procedures that program staff will follow in the event that the inspections reveal errors, omissions, or inconsistencies. The manual also outlines procedures for removing a contractor from the program’s registered vendor list for repeated failure to correct deficiencies.

- **Omaha and Lincoln, Nebraska’s reEnergize Program** furnished its contractors with an Energy Upgrade Contractor Protocol and General Scope of Work, which governs contractor work processes and customer interactions. This protocol was intended to serve as a supplement to contractors’ technical training. It provided rules that contractors were required to follow to achieve customer satisfaction throughout the upgrade process and also outlined basic safety requirements. Topics covered everything from how to greet the customer to cleanup steps once the upgrade was completed. The protocol was an important tool for ensuring that all homeowners had a pleasant experience with the program through their interactions with contractors. It helped the program achieve over 1,300 residential energy upgrades over a 3 year period that included program launch.

- The **Southeast Energy Efficiency Alliance** Better Buildings Chapel Hill WISE program in North Carolina discovered that even though contractors might have met the required program criteria and had qualifying credentials, the quality of their work and their understanding of building science varied substantially. To address these issues, Chapel Hill engaged an external training partner that worked with contractors on the quality of their work and the implementation of quality control mechanisms to improve future work. The program developed and implemented a contractor probationary and debarment policy and corrective action plan. Under that plan, contractors were subject to a corrective process that included a preliminary review of concerns, probation, specific requirements to return to the pre-qualified list after probation, and dismissal from the program. This policy helped the program systematically approach the issue of alerting contractors whose work fell short of the program’s quality standards, and to dismiss contractors who were unable to improve the quality and consistency of their work.
Examples

The following resources are examples from individual residential energy efficiency programs, which include case studies, program presentations and reports, and program materials. The U.S. Department of Energy does not endorse these materials.

Case Studies

**LaborWorks@NeighborWorks of Western Vermont Focus Series**
Author: U.S. Department of Energy  
Publication Date: 2012

LaborWorks@NeighborWorks is a nonprofit temporary labor pool developed by NeighborWorks of Western Vermont (NWWVT) to assist professional contractors involved with the NeighborWorks Home Energy Assistance Team (HEAT). In the first of this Focus Series, DOE interviews Melanie Paskevich, HEAT Squad coordinator, to get details on why NeighborWorks set up the temporary labor pool, how workers are recruited, and lessons learned for other programs to consider.

**Spotlight on Austin, Texas: Let Your Contractor Be Your Guide for Big Rewards**
Author: U.S. Department of Energy  
Publication Date: 2011

This case study discusses strategies that Austin Energy, a municipally owned utility, used to collaborate closely with building contractors to launch a new Best Offer Ever promotion quickly and effectively.

**Spotlight on Fayette County, Pennsylvania: Developing the Skills and Tools for Workforce Success**
Author: U.S. Department of Energy  
Publication Date: 2012

This case study discusses strategies that Fayette County, Pennsylvania used to provide Building Performance Institute (BPI) certification and business skills training to aspiring energy efficiency contractors.

**Spotlight on Maine: Contractor Sales Training Boosts Energy Upgrade Conversions**
Author: U.S. Department of Energy  
Publication Date: 2012

This case study explains how Efficiency Maine provided contractor sales training to boost upgrade conversions.

**Spotlight on Portland, Oregon: Making the Program Work for Contractors**
Author: U.S. Department of Energy  
Publication Date: 2011

This case study discusses the strategies Clean Energy Works Oregon's (now Enhabit's) used to actively engage contractors to make the program successful (e.g., balancing contractors' work priorities, enforcing quality standards).

Program Presentations & Reports

**Austin Energy Workforce Development and the Contractor**
Author: Jill Maness, Austin Energy  
Publication Date: 2011

An introduction to Austin Energy's workforce development program, which helps engage contractors in efforts to make homes more energy efficient.

**Building the Workforce for Energy Efficiency Programs** (116 KB)
Author: Steve Morgan, Clean Energy Solutions, Inc.  
Publication Date: 2010

Courtesy of Clean Energy Solutions. This presentation provides an overview of topics related to building the workforce for energy efficiency programs, including market characterization, stakeholder engagement, training and certification, and community workforce agreements. It includes information on the experience of Clean Energy Works Oregon (now Enhabit) in Portland, Oregon.

**Community Power Works Better Buildings Conference Presentation**
Author: Andrea Petzel, Community Power Works  
Publication Date: 2012

This presentation discusses the new approach to training that Seattle's Community Power Works program is using to support its high-road workforce agreement.
Contractors as Clients: Data Collection Made “Easy”
Author: Cynthia Adams, Local Energy Alliance Program
Publication Date: 2011
This presentation provides an overview of the process and tools the Local Energy Alliance Program (LEAP) of Charlottesville, Virginia uses to collect and report customer and contractor data on projects.

Contractor Recruitment Strategies (770 KB)
Author: Lee Butler, New York State Energy Research and Development Authority
Publication Date: 2010
This presentation provides information on strategies to successfully recruit contractors. Topics include setting goals, identifying contractors, contacting contractors, and following up with contractors.

Energy Efficiency Workforce Development in Maryland (447 KB)
Author: Lauren Swiston, Maryland Energy Administration
Publication Date: 2010
This presentation discusses workforce development experiences with residential energy efficiency programs in Maryland, including early successes, work with moderate-income populations, partnerships with utilities and colleges, challenges, and lessons learned.

The Leadership Academy: Motivating Contractors to Participate (463 KB)
Author: Gary R. Myers, Poudre Valley Rural Electric Association
Publication Date: 2011
This presentation explains how to engage and motivate contractors and utility companies through the use of commitments, creating a dynamic program that they can become involved with, and the setting of standards for contractors.

Market Transformation in Connecticut: Integrating Home Performance into Existing Trades
Author: Jane Bugbee, The United Illuminating Company
Publication Date: 2012
This presentation highlights the Connecticut Energy Efficiency Fund's efforts to integrate HVAC contractors, builders, and remodelers into its home performance program, which expanded its customer base and significantly scaled up the program. It includes lessons on outreach strategies for integrating these types of contractors into the program.

Philadelphia’s Energy Coordinating Agency Apprenticeship Programs
Author: Liz Robinson, Energy Coordinating Agency
Publication Date: 2012
This presentation discusses Philadelphia’s Energy Coordinating Agency Apprenticeship Program in energy conservation and building science, including programs for journeyman credentials and BPI certification.

Program Materials

Author: NYSERDA
Publication Date: 2017
This manual was developed for participating New York Home Performance with ENERGY STAR (HPwES) contractors. It contains information regarding program rules, incentives, and forms. The purpose of this manual is to help contractors understand and navigate the HPwES program.

Community High-Road Agreement for Seattle’s Residential Retrofit Programs
Author: Community Power Works
Publication Date: 2010
This agreement outlines the goals, contractor standards, hiring standards, training program standards, and procedures for contractor participation in Seattle's Community Power Works program. As a "high-road" agreement, the employment and contracting standards are designed to ensure broad access to economic opportunities for all types of businesses and workers, support training on sustainable career paths, and ensure high-quality work.

Contractor Operations Guide for Boulder County’s EnergySmart Service (2 MB)
Author: Populus Sustainable Design Consulting, LLC
Publication Date: 2011
This guide from Boulder County’s EnergySmart service is an example of expectations and guidelines for contractor operations.
Efficiency Maine Contractor Code of Conduct
Author: Efficiency Maine
Publication Date: 2012
Efficiency Maine created a code of conduct for contractors to follow when working in homes. The code is available for download on the Efficiency Maine website, and dictates guidelines for respecting homeowners' property and communicating with the homeowner about appropriate information. Users on the Efficiency Maine website can search a list of vendors that have agreed to follow the code.

EnergySmart Colorado Assessment Process: Analyst Flowchart (78 KB)
Author: EnergySmart Colorado
Publication Date: 2014
This contractor process flowchart from EnergySmart Colorado includes the phases of contractor qualifications review and preparation, site work, and follow up.

RePower Problem Response Procedure (441 KB)
Author: RePower Program
Publication Date: 2013
This document details the procedures for identifying, documenting, and responding to performance problems associated with contractors in the RePower Program of Kitsap County, Washington. It includes example forms and a draft letter to contractors.

Community Workforce Agreement Between the City of Milwaukee and the Wisconsin Energy Conservation Corporation (110 KB)
Author: City of Milwaukee, Wisconsin; Wisconsin Energy Conservation Corporation
Publication Date: 2010
This is a community workforce agreement between the City of Milwaukee and the Wisconsin Energy Conservation Corporation.

NYSERDA Quality Assurance Policies and Procedures
Author: New York State Energy Research and Development Authority (NYSERDA)
Publication Date: 2012
To deliver the most effective residential energy efficiency programs possible, NYSERDA implemented a quality assurance process to verify that projects meet all program requirements while maintaining healthy and safe conditions for the occupants.

RePower Weatherization Specifications Manual
Author: RePower Kitsap
Publication Date: 2013
RePower in Bainbridge Island and Bremerton, Washington developed this manual as a set of rules and requirements for acceptable materials and installation procedures for energy efficiency measures installed in existing homes.

Request for Proposals for Phase V (Neighborhood Phase) of Clean Energy Works Portland (now Enhabit) (226 KB)
Author: Clean Energy Works Oregon (now Enhabit)
Publication Date: 2010
This is an example of an RFP for workforce development and other program elements. The RFP covers recruitment, outreach and marketing oriented to homeowners and workers, and service delivery of energy assessments and upgrades.

Vermont Community Energy Mobilization Project Home Visit Guide (974 KB)
Author: Efficiency Vermont
Publication Date: 2014
Instructional step-by-step guide for visiting a home to discuss and install energy efficiency measures.
Toolbox

The following resources are available to help design, implement, and evaluate possible activities related to this handbook. These resources include templates and forms, as well as tools and calculators. The U.S. Department of Energy does not endorse these materials.

Templates & Forms

Better Building Residential Program Implementation Plan Template - Contractor Engagement & Workforce Development (2 MB)
Author: U.S. Department of Energy
Publication Date: 2015
The Contractor Engagement & Workforce Development Implementation Plan Template will help you develop a strategy for planning, operating, and evaluating your workforce activities.

Clean Energy Works Oregon (now Enhabit) Contractor Upgrade Template (145 KB)
Author: Clean Energy Works Oregon (now Enhabit)
Publication Date: 2011
This template, used by Clean Energy Works Oregon (now Enhabit), standardizes a number of forms that contractors fill out for the program.

Efficiency Maine Residential Registered Vendor Agreement Form
Author: Efficiency Maine
Publication Date: 2014
A short, checklist-style form that contractors complete to participate in Efficiency Maine. The form allows contractors to verify whether they meet basic program requirements, identify their specialized service offerings and qualifications, and describe other information about their businesses.

Energy Impact Illinois Reporting Packet for Whole Home Projects
Author: Energy Impact Illinois
Publication Date: 2014
This packet contains all the contractor reporting and verification forms required by Energy Impact Illinois.

Tools & Calculators

DOE Building America Solution Center
Author: U.S. Department of Energy
Publication Date: 2013
An interactive website that provides residential building professionals with access to expert information on hundreds of high-performance design and construction topics, including air sealing and insulation, HVAC components, windows, indoor air quality, and much more.

Green for All Energy Efficiency Toolkit
Author: Green For All
Publication Date: 2012
This practitioner-focused Toolkit for Residential Energy Efficiency Upgrade Programs was created by Green For All to assist new, established, and future energy efficiency programs launch and scale initiatives that can deliver the full promise of the green economy. It is intended as a practical resource that offers examples, tools, and templates that a program manager can deploy to implement a variety of aspects of their program including best practice briefs and summary documents, RFPs, contracts, and other program design and implementation templates that communities nationwide have used to create their own efficiency programs.

Home Energy Guide to Training Programs
Author: Home Energy Magazine
Publication Date: 2013
This web-based database, created by Home Energy home performance magazine, enables users to search for training programs nationwide. Users can filter training programs by weatherization training areas, BPI certifications, and more.
Topical Resources

The following resources provide additional topical information related to this handbook, which include presentations, publications, and webcasts. Visit Examples for materials from and about individual programs.

Topical Presentations

Making the Grade: Innovative Approaches to Improving Quality
Author: U.S. Department of Energy
Publication Date: 2017
This summary from a Better Buildings Residential Network peer exchange call focused on innovative approaches to increase contractors’ work quality through feedback reports and contractor ranking, decrease quality assurance costs through remote quality assurance, and improve contractor engagement. It features speakers from Consumers Energy, Enhabit, and DOE.

Generating Energy Efficiency Project Leads and Allocating Leads to Contractors
Author: U.S. Department of Energy
Publication Date: 2015
This summary from a Better Buildings Residential Network peer exchange call focused on how to generate energy upgrade customer leads and allocate those leads to contractors.

Training: How to get Results - What Matters, What Doesn’t
Author: U.S. Department of Energy
Publication Date: 2016
This summary from a Better Buildings Residential Network peer exchange call focused on strategies for contractor training.

Strengthening the Front Lines: Sales Training and Continuing Education for Contractors
Author: U.S. Department of Energy
Publication Date: 2015
This summary from a Better Buildings Residential Network peer exchange call focuses on how mentoring on sales skills and business management helped one contractor increase sales and become more profitable. The call also covered top tips for supporting contractors, such as helping contractors develop systems to be more efficient in completing projects and creating a service plan with customers for additional improvements in the future.

Building Science Academy Best Practices for Sales Support
Author: Sam Flanery, Building Science Academy
Publication Date: 2012
This presentation describes the qualities and skills of successful home performance sales people.

Contractor Outreach: Design & Implementation for Residential Retrofit Programs
Author: Jared Asch, Efficiency First
Publication Date: 2011
This presentation describes strategies for outreach to energy contractors and auditors, including contractor incentives.

The Contractor-Participation-Inducing Home Performance Program Design Recipe Part 1
Author: Mike Rogers, OmStout Consulting, LLC
Publication Date: 2012
Presentation summarizing the important elements needed to induce and sustain contractor participation in home performance programs.

Data Driven Quality Assurance & Quality Control
Author: Patrick Roche, Conservation Services Group
Publication Date: 2012
Presentation describing how Conservation Services Group uses data to monitor market transformation and for internal QA/QC purposes.
Five Steps to a Profitable Contractor Base
Author: Courtney Moriarta, SRA International, Inc.; Emily Levin, Vermont Energy Investment Corporation; Tiger Adolf, Building Performance Institute; Brad Geyer, Fayette County Better Buildings Initiative; Sammy Chu, Suffolk County Department of Labor; Sam Flanery, Building Science Academy
Publication Date: 2012
Presentation on five steps to building a profitable contractor base. The steps include sensible program design and administration, certification and credentialing, communicating with contractors, contractor requirements (business vs. trade), and training and sales support.

Residential Contracting Business Boot Camp
Author: Mike Rogers, OmStout Consulting, LLC
Publication Date: 2013
This presentation provides guidance to contractors on business fundamentals, marketing and lead generation, successful consultative selling and closing, and measuring and improving performance.

Why Add "Home Performance" to Your HVAC Business
Author: Mike Rogers, OmStout Consulting, LLC
Publication Date: 2012
This article and recruiting presentation highlights reasons why it makes sense for an HVAC contractor to move into home performance, and provides program staff with key touch points to consider in considering potential contractor partners.

Publications

Standard Work Specifications for Home Energy Upgrades
Author: National Renewable Energy Laboratory
Publication Date: 2012
These standard work specifications define minimum requirements for upgrade work and can be used as an industry guide for workers, training instructors, and program administrators involved in the home performance industry.

Better Buildings Neighborhood Program Business Models Guide
Author: U.S. Department of Energy
Publication Date: 2012
This report serves as a resource for program administrators and building contractors who are or may be interested in starting or expanding their services into the residential energy efficiency market.

Contractor Blueprint: Getting from HVAC to Home Performance
Author: California Center for Sustainable Energy; Home Performance Resource Center
Publication Date: 2012
This guide shows HVAC contractors how to get started in the home improvement market. It explains the approach of treating a house like a system and provides step-by-step instructions on setting up a home performance contracting business.

DOE Weatherization Assistance Program Technical Assistance Center Website
Author: U.S. Department of Energy
Publication Date: 2017
This website for DOE's Weatherization Assistance Program provides a virtual library of rules, regulations, policies, and procedures for helping low-income families reduce energy costs.

Energy Efficiency Job Creation: Real World Experiences
Author: American Council for an Energy-Efficient Economy
Publication Date: 2012
This report illustrates concrete ways in which energy efficiency has, in recent years, stimulated the creation of direct, indirect, and induced jobs. This report provides examples of job creation that have resulted from energy efficiency by profiling programs, policies, investments, partnerships, and business models that have catalyzed regional increases in employment.
Author: RePower Bainbridge; Conservation Services Group; U.S. Department of Energy
Publication Date: 2014
This guide is designed to serve as a “how-to” reference for island communities (or small, similarly sized, more isolated communities) that want to develop and implement a residential energy-efficiency and conservation program. The purpose of this guide is to help communities chart a course for successful program development based on the lessons learned during implementation and operation of RePower Bainbridge, an energy-efficiency program on Bainbridge Island, Washington.

Green For All Minimum Standards for Residential Energy Efficiency Contractors (104 KB)
Author: Green For All
Publication Date: 2014
This checklist of minimum standards for residential energy efficiency contractors draws from several existing high-performing energy efficiency programs.

Greener Skills - How Credentials Create Value in the Clean Energy Economy
Author: Center for Wisconsin Strategies
Publication Date: 2010
A report examining workforce certifications, skills benchmarks, and credentialing efforts in renewable energy and energy efficiency programs nationwide and offering recommendations.

DOE Guidelines for Home Energy Professionals
Author: U.S. Department of Energy
Publication Date: 2012
Guidelines for home performance professionals for quality work, effective training, and professional accreditation.

Healthy Indoor Environment Protocols for Home Energy Upgrades: Guidance for Achieving Safe and Healthy Indoor Environments During Home Energy Retrofits
Author: U.S. Environmental Protection Agency
Publication Date: 2011
These protocols provide recommended minimum specifications and best practices for protection of occupant health associated with home energy upgrades.

Home Performance Program Design Recap
Author: Mike Rogers, OmStout Consulting, LLC
Publication Date: 2013
This blog post summarizes key elements of program design that relate to encouraging contractor participation and facilitating contractor and program success.

Home Performance with ENERGY STAR Sponsor Guide and Reference Manual (v1.5)
Author: U.S. Department of Energy
Publication Date: 2014
This guide assists with developing an implementation plan for a Home Performance with ENERGY STAR program. It covers key elements of the plan, including the scope and objectives of the program and the policies and procedures that will ensure its success, including co-marketing and brand guidelines (section 1), workforce development and contractor engagement (section 3), assessment and report requirements (section 4), installation specifications and test-out procedures (section 5), and quality assurance (section 6).

Promising Approaches to Accelerate Workforce Development for Building Energy Upgrades (327 KB)
Author: U.S. Department of Energy
Publication Date: 2012
This fact sheet provides promising approaches for Better Buildings programs seeking to accelerate workforce development to support building energy upgrades. These approaches are organized by estimated level of effort and include rough estimates of cost ranges for implementation.

Ideas to Incentivize Contractors and Build a Strong Workforce (93 KB)
Author: U.S. Department of Energy
Publication Date: 2011
This publication provides tips from Better Buildings Neighborhood partners on incentivizing contractors.
Quality Assurance Best Practices: Home Energy Performance with ENERGY STAR Programs
Author: U.S. Department of Energy
Publication Date: 2011
This publication includes best practices for how to create a quality assurance plan and the key components that these plans should include.

Residential Retrofit Program Design Guide
Author: Oak Ridge National Laboratory
Publication Date: 2011
The Residential Retrofit Program Design Guide focuses on the key elements and design characteristics of building and maintaining a successful residential energy upgrade program. The material is presented as a guide for program design and planning from start to finish, laid out in chronological order of program development.

Incorporating Home Performance into HVAC
Author: Thomas Dolan, Home Performance Magazine
Publication Date: 2012
This article explores the opportunities for HVAC contractors to move into home performance and includes discussion from contractors and industry experts.

Reactions to the Residential Retrofit Roundtable Recommendations
Author: Richard Faesy and Chris Kramer, Energy Futures Group (Prepared for the Energy Foundation)
Publication Date: 2013
This report explores the approaches and research needs identified in the Building Retrofit Industry and Market (BRIM) Initiative through in-depth discussion with residential energy upgrade experts including a discussion of Marketing & Outreach and the program/contractor interface.

Why Add “Home Performance” to Your HVAC Business
Author: Mike Rogers, OmStout Consulting, LLC
Publication Date: 2012
This article and recruiting presentation highlights reasons why it makes sense for an HVAC contractor to move into home performance, and provides program staff with key touch points to consider in considering potential contractor partners.

Webcasts

Concierge Programs for Contractors - They're Not Just for Consumers Anymore
Author: Jonathan Cohen, U.S. Department of Energy; Ryan Clemmer, Clean Energy Works Oregon (now Enhabit); Melanie Paskevich, NeighborWorks; Jay Karwoski, ICF International
Publication Date: 2012
Presentation
This webcast includes slides and information on programs' use of concierge programs to support contractors. It highlights two program examples: Clean Energy Works Oregon (now Enhabit) and Vermont NeighborWorks.

Guidelines for Home Energy Professionals Project
Author: National Renewable Energy Laboratory
Publication Date: 2015
Presentation, Media
This webinar discusses the guidelines for home energy professionals project. The goal of the project is to collaborate with industry to develop the tools needed for a high-quality residential energy upgrade industry, supported by accredited training programs, and a skilled and credentialed workforce. It also discusses Standard Work Specifications (SWS) which define the minimum requirements for high-quality, safe, and durable installations.