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Energy Advisors:

Improving Customer Experience and Efficiency Program Outcomes

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Many comprehensive home energy upgrade programs have found that, to convert a high percentage of inquiries into completed upgrades, homeowners need more than just financial incentives. To provide additional support, streamline the home upgrade process, and increase the number, depth, and breadth of energy-saving measures installed, several home energy upgrade programs offer energy advisor services to guide the customer through the home energy upgrade process. These services range from intensive coordination with homeowners to answering questions as needed. In the most involved cases, the energy advisor might provide a full suite of services, including scheduling the initial energy assessment, completing a walkthrough of the home, directly installing simple energy-saving measures, reviewing contractor bids, and performing quality assurance tests after the upgrade has been completed.

Providing these services offers an opportunity to gain homeowners' trust, build program credibility, and more actively encourage participants to complete recommended upgrades. These benefits are tempered by the cost of offering advisors' services. While many of the programs highlighted in this program brief are fairly new, the services provided by energy advisors have already played an important role in facilitating comprehensive home energy upgrades.

Helping Homeowners Overcome Obstacles to Energy Efficiency

Homeowners face multiple barriers that can significantly hinder completion of a home energy upgrade. The benefits of lower energy bills, increased comfort, and a healthier indoor environment can be overshadowed by the upfront costs, uncertainty about who to trust with the project, and life's other priorities. Factor in concerns about the time required to understand and manage an upgrade project, and these obstacles often prevail. Barriers can be broadly categorized as informational (e.g., homeowners are not familiar with the concept of home energy upgrades, the benefits of an upgrade, or how to participate in the program), decision-making (e.g., uncertainty about how to select a contractor or understand a contractor's scope of work), and transactional (e.g., selecting and scheduling a contractor, filling out program paperwork).

To help homeowners overcome these challenges, some energy efficiency program administrators have created an energy advisor (EA), or energy coach, role to guide homeowners through the upgrade process. The EA's primary function is to streamline the upgrade experience for homeowners. EAs are commonly available to answer homeowners' questions over the phone or in person, review contractor bids, and ensure the quality of work performed. Additionally, some EAs provide outreach service, becoming the face of energy efficiency in the areas they serve and attending community events to present an overview of the home upgrade process and recruit participants. Some programs have also used the EA position to generate leads, provide quality assurance and quality control (QA/QC) on completed work, and develop relationships with the local contractor workforce. Table 1 summarizes common barriers that can impede home upgrade activity and effective strategies that programs employing EAs have utilized to overcome them.

The level of service provided by an EA varies depending on factors such as program goals and budget, locally identified barriers, and the characteristics of the existing contractor pool. Every program discussed here carefully weighed their local circumstances as they designed the EA role, and the unique set of services offered by the EA reflects the programs' goals and constraints.

This program brief summarizes the experiences of six residential energy efficiency programs that incorporated EAs, surveys the services that EAs provided and the barriers they sought to overcome, and offers best practice guidance on how a program might incorporate EA services.

Table 1. Common Barriers to Home Energy Upgrades and EA Services Offered in Response

Barrier and Examples	Range of Energy Advisor Services Offered to Address Barrier		
	• Program orientation: Provide information to homeowners about the		
	program, energy assessments, and the upgrade process.		
Informational Barriers	• Perform energy assessment: Perform an energy assessment of the home.		
Homeowners are unfamiliar with the	• Install basic measures: Install basic energy-saving measures like compact		
concept of a home energy upgrade.	fluorescent light bulbs.		
Homeowners don't know how to	• Suggest general work scope: EAs who perform an initial assessment may		
participate in the program.	suggest a general work scope for the homeowner to take to a contractor.		
	Outreach at public events: Present information about the program to		
	prospective customers at public events (e.g., community fairs, neighborhood		
	meetings).		
Decision-Making Barriers	• Contractor selection assistance: Help the homeowner select a contractor by		
Homeowners are asked to make decisions	providing an abbreviated list of contractors or discussing questions a		
that they aren't or don't feel equipped to	homeowner may want to ask contractors.		
make.	• Assessment report review: Discuss the energy assessment report with the		
Homeowners may not trust contractors or	homeowner.		
know how to evaluate their work.	• Work scope review: Review the scope of work with the homeowner.		
Homeowners can by deterred by the	• Financing assistance: Advise the homeowner on options available to pay for		
upfront costs, uncertainty on payment	the upgrade.		
options, and timing of rebates.	• QA/QC of completed upgrade: Inspect completed work or review the		
	paperwork provided by contractors to ensure work was done properly.		
	Project management: Assist homeowners with project management,		
	including coordinating with contractors, sending reminders to homeowners		
Transactional Barriers	and contractors to follow up on next steps, and generally keeping the		
• The upgrade process can be complicated,	process moving.		
with many opportunities for a	Paperwork assistance: Help homeowners fill out rebate forms and financing		
homeowner to drop out of the process.	paperwork to ensure it is done properly and to avoid delays due to incorrect		
Paperwork can be a hassle to fill out.	filings.		
	Scheduling assistance: Schedule assessment or upgrade appointments for		
	homeowners.		

Profiles of Home Upgrade Programs Using Energy Advisor Services

In 2010, the U.S. Department of Energy's Better Buildings Neighborhood Program (BBNP) charged state and local governments, nonprofit organizations, and utilities with testing innovative approaches to boost energy efficiency adoption. Many programs leveraged existing utility rebate programs and, depending on the needs of the community and the program's goals, some added additional services. Some programs created new marketing and outreach strategies to engage homeowners, while others offered additional rebates, financing options, and workforce development programs to support



contractors. Some BBNP programs added EA services to help homeowners navigate the upgrade process to improve assessment-to-upgrade conversion rates.

Table 2 summarizes the EA services offered by six such programs and presents performance metrics and a characterization of the communities served.² In reviewing these metrics, note that the EA is one component of a larger program design. While all program managers interviewed consider EA services critical to their program's success, a number of other factors can impact program effectiveness.

Each of the profiled programs developed the EA position to meet their specific needs and goals; however, two commonalities emerge:

- All EAs worked with homeowners to review their home energy assessment reports, and
- Almost all EAs reviewed the final scope of work prior to completion of the upgrade.

Other services—including assisting homeowners with scheduling assessments and upgrades, selecting contractors, conducting QA/QC of completed projects, and providing outreach at public events—varied by program needs.

The program metrics in Table 2 include the number of Full Time Equivalent (FTE) staff in the EA role and the total program staff, as well as the average number of hours an EA spent on each completed upgrade. These metrics are a proxy for the size of the program and the magnitude of the EA role in the overall program design. The six programs invested in a wide range of EA hours per upgrade completed, from five to twentyperson-hours on average. This metric is affected by multiple factors, including the community's receptiveness to home energy upgrades, local government policies, and the services offered by the EA. Note that programs with larger grant awards (i.e., Enhabit³ and EnergySmart) had lower average EA person-hours per upgrade, nine hours and five hours respectively, suggesting that there may be economies of scale.

¹ For information about other lessons learned on program design, including rebate levels, financing, contractor engagement, and other programmatic elements, please visit the Better Buildings Residential Program Solutions Center https://energy.gov/rpsc.

² For the purposes of this brief, six programs that used energy advisors were contacted, and the programmatic results from the 2010-2014 period were examined. These programs do not represent all programs utilizing an EA; however, they do show a range of program design and EA service options and were considered successful.

³ Enhabit, formerly Clean Energy Works, is based in Oregon.



 Table 2. Energy Advisor Services Provided by Selected Residential Energy Efficiency Programs (2010-2014)

Organization Name, EA Title, Target Location, Grant Award (Total Assessments/Total Upgrades)	Notable Target Audience Characteristics	Energy Advisor Services	No. of FTE ⁴ EAs (total staff)	Avg. EA person- hours/Upgrade (Avg. Upgrades/Month)
Enhabit Home Performance Advisor Oregon \$20M (7,770 assessments/3,455 upgrades)	 Urban Single family homes Owner-occupied All income levels 	 Review assessment report Review work scope Assist with paperwork QA/QC of completed upgrade Post-upgrade customer survey 	5 EAs (14 total staff)	9 person- hours/upgrade (90 upgrades/month)
Energize Bedford Energy Coach & Homeowner Helper Bedford, NY \$1.3M (1,536 assessments/246 upgrades)	 Suburban Single family homes Owner-occupied Older population Moderate income to affluent 	 Outreach at public events Assist with contractor selection Review assessment report Review work scope Assist with scheduling Assist with paperwork 	1 EA (3 total staff)	10 person- hours/upgrade (17 upgrades/month)
EnergySmart Energy Advisor Boulder County, CO \$25M (7,530 assessments/3,914 upgrades)	 Urban Single family homes Owner-occupied & rental Moderate income to affluent 	 Install basic measures Review assessment report Review work scope Assist with contractor selection Assist with paperwork 	7 EAs (14 total staff)	5 person- hours/upgrade (250 upgrades/month)
NeighborWorks of Western Vermont Home Energy Assistance Team (H.E.A.T.) Squad Energy Advisor Rutland County, VT \$4.5M (1,712 assessments/730 upgrades)	 Rural & small town Single family homes Owner-occupied Low to moderate income 	 Provide program orientation Assist with contractor selection Assist with scheduling Review assessment report Manage project progress 	2 EAs (10 total staff)	11 person- hours/upgrade (31 upgrades/month)
RePower Bainbridge Island & RePower Kitsap Energy Advisor Bainbridge Island & Kitsap County, WA \$4.9M (2,825 assessments/974 upgrades)	 Suburban Single family homes Owner-occupied Moderate income to affluent (Bainbridge), low to moderate income (Kitsap County) 	 Provide program orientation Perform energy assessment Suggest general work scope Assist with contractor selection Review assessment report Assist with paperwork 	2 EAs (5 total staff)	20 person- hours/upgrade (17 upgrades/month)
Small Town Energy Program (STEP) Energy Coach & Technical Consultant University Park, MD \$1.4M (268 assessments/204 upgrades)	 Small-town Single family homes Owner-occupied Affluent 	 Assist with contractor selection Review assessment report Review work scope QA/QC of completed upgrade (with technical consultant) Outreach at public events Post-upgrade customer survey 	0.9 EAs (1.7 total staff)	17 person- hours/upgrade (8 upgrades/month)

⁴Full-time equivalent

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Using Energy Advisor Services to Overcome Barriers

The final evaluation of BBNP found that programs which provided multiple assessment pathways and did some direct installation of measures were typically more successful at completing upgrades. While the presence of the EA position itself did not necessarily stand out, the programs that offered the services provided by EAs were typically very successful. Given that these services were particularly influential with customers, it is worth examining the specific services the EA provides relative to the barriers these services are designed to overcome.

Overcoming Informational Barriers

Many programs have used EAs to explain the benefits of a home energy upgrade through outreach events and to provide a personalized, compelling description of how the customer could benefit from improved comfort, better health, and energy cost savings. While these one-on-one conversations help acclimate customers to the value of upgrades, homeowners may still be overwhelmed by the home upgrade process.

Program Orientation

The primary service that EAs provide to address the lack of knowledge around home energy upgrades and the program is offering a program orientation to the customer, including an overview of the upgrade process, clearly defined next steps, and a description of how the EA provides support throughout the process. This orientation not only provides homeowners with the information they need to feel comfortable, but can also help to allay concerns over the complexity of completing an upgrade.

The Energy Advisors have been "absolutely critical to our success."

Dave Hatchimonji EnergySmart, Boulder, CO

Energize Bedford recognized that their community was not familiar with home energy upgrades. To address this issue, the program engaged an experienced home performance professional to lend credibility and create trust in the nascent program. This energy coach served as the ambassador to the community for both the organization and the energy efficiency industry.

In Boulder, EnergySmart found that many homeowners didn't feel like they knew where to start, so the program's EAs stepped in to answer questions and schedule energy assessments. The program also developed online tools that allowed homeowners to learn about the steps involved in an energy upgrade and estimate the potential energy savings in their home. EnergySmart found that these tools lessened the customer education burden on the EAs, allowing them to focus instead on guiding homeowners through the upgrade process.

Conduct Energy Assessments

While some programs chose to work with private energy assessors, others trained the EAs to perform energy assessments themselves, acting on the idea that EAs may be seen as more trustworthy by homeowners. RePower Bainbridge & Kitsap's EAs performed some or all home energy assessments themselves, rather than referring the homeowner to an outside contractor for the assessment. RePower took this approach in part because they had qualified staff already on board with the needed technical expertise. RePower's EAs also installed basic measures, for example, swapping incandescent lightbulbs for CFLs or LEDs and installing hot water heater wraps. Finally, and perhaps most importantly for overcoming homeowner transactional barriers, it was easier to directly schedule the visit with the EA without also coordinating with an independent contractor's schedule.

⁵ Evaluation of the Better Buildings Neighborhood Program (Final Synthesis Report, Volume 1), Research Into Action Inc. Evergreen Economics Nexant Inc. NMR Group Inc., June 2015



During the assessment, EAs would typically propose a general statement of work which would give the homeowner a better understanding of what measures would be recommended. While this was beneficial to homeowners in terms of education and peace of mind, most contractors prefer to conduct their own assessment before developing a scope of work. Overall, this strategy has been successful when the division of responsibility between EA and contractor is clear.⁶

Overcoming Decision-Making Barriers

Select a Contractor

Homeowners often do not feel equipped to find a knowledgeable, trustworthy person to perform a home energy assessment or install upgrades. EAs can help homeowners select from a short list of participating contractors based on the program's qualification criteria. This helps build trust with the homeowner and avoid decision paralysis at this critical juncture. Providing information about contractors that helps homeowners differentiate their qualifications enables them to decide on a contractor and proceed with an upgrade.⁷

Review Assessment Results

One of the crucial decision-making points in the upgrade process is receiving and reviewing the energy assessment report and work scope and deciding to act on this information. Approximately 60 percent of homeowners in BBNP dropped out at

this stage. By reviewing the assessment report and work scope with the homeowner, EAs can reduce this attrition and make the prospect of pursuing an upgrade less intimidating. During this crucial deliberation and especially when EAs do not conduct the assessments themselves, the EA serves as an objective, knowledgeable, and trusted ally for the homeowner. All six programs' EAs assisted homeowners in reviewing the energy assessment report.

The specific type of support varied among programs; however, most EAs sat down with the homeowner and explained each item on the scope, described the rationale for including that item, and answered any questions the homeowner had about the scope of work.

In Bedford, NY, the Energy Coach has become a local celebrity. As Energize Bedford program manager Tom Bregman put it, "HE'S LIKE A ROCK STAR!" and has spurred interest in the program through word of mouth buzz from homeowners who have worked with him.

Energize Bedford and STEP offered office hours when homeowners could bring their assessment to the EA and discuss the report. Both programs also offered telephone and email support for homeowners who could not make it to the office. The other four programs customized the process further and sent the EA to visit homeowners, in addition to providing phone and email support. The HEAT Squad regularly sent EAs to the homes of program participants for a kitchen table conversation. For all six programs, the EAs' main focus during this period was helping homeowners understand upgrade opportunities and encouraging them to pursue a comprehensive upgrade that generates larger utility bill savings rather than installing single measures.

Explain Financing Options

EAs can also discuss program-supported and other financing options with homeowners during the review of the assessment report and, depending on the program, the scope of work. Enhabit prequalified homeowners for loans when they signed up for the program, so when the EAs discussed next steps with homeowners after the assessment, they could also explain the financing options and incentives available without scheduling a separate meeting. Prequalifying homeowners for financing removed uncertainty around how to pay for the upgrade, which is a common barrier.

⁶ Some contractors do not like this approach as it can interfere with relationship development and the trust they are trying to build with their customers.

⁷ For more information on providing information that helps homeowners select a contractor, see the Better Buildings Residential Program Solution Center's Program Design and Contractor Engagement & Workforce Development components: https://energy.gov/rpsc.

Conduct Quality Assurance

Quality assurance is critical to a program's continued success. Using the EA to provide QA/QC services is one way to ensure that the upgrade is completed properly and to provide customers with confidence in their upgrade. Programs with limited budgets or not enough work to keep EA staff occupied full time have added QA/QC responsibilities to the EA role. STEP, Enhabit, and Energize Bedford tasked their EAs with QA/QC; EAs reviewed post-upgrade results and verified that the home met the program's quality standards. In each of these cases, the EAs were familiar with the scope of work, having already reviewed it either with the customer or to ensure that the work qualified for program participation. If EAs offer quality assurance, they must have a degree of technical training and knowledge, which most programs required when hiring EAs.

Overcoming Transactional Barriers

Project Management & Paperwork Assistance

The upgrade process can be complex and time-consuming. There are many opportunities for the homeowner to become discouraged along the way. EAs can assist homeowners, contractors, and other program partners with the steps of the upgrade process, monitor progress, and intervene when a customer or program partner gets stuck at a particular point. This monitoring can increase the number of assessments that become completed upgrades. EAs can also help to address other transaction barriers, such as sending reminders of important next steps and helping with paperwork so that loan applications and incentive forms or other documents are completed properly the first time.

All of the programs discussed here offer these process support services, though the sophistication of the support varies depending on budget and program size. Enhabit, a state-wide program in Oregon, found it beneficial to use a customer relationship management (CRM) system. Leveraging the detailed information in the system, program administrators developed automated reminders for an EA to check in with homeowners after a set period of time. In University Park, MD, the much smaller STEP was able to track program participants manually on a single spreadsheet given its small-town scope.

Scheduling

Some EAs facilitate the relationship between the homeowner and contractor even further by making introductions and scheduling contractor visits. EnergySmart's EAs provided homeowners a list of three contractors (from the program's larger database) to simplify the selection process. The EAs also offered to schedule the initial energy assessment on the homeowner's behalf. Understanding that homeowners often have other priorities, the HEAT Squad in Rutland, VT helped homeowners schedule assessments and upgrade work with contractors, at times even arranging to be at the house during the assessment in the homeowner's absence.

Key Issues When Considering Energy Advisors

These six programs have found EA services to be a highly effective way to overcome some of the more intractable barriers in the home energy upgrade process. When considering which EA services to offer, program administrators must determine:

- Which barriers are most problematic in their community?
- What subset of these barriers does the program plan to address with EA services?

The following tips for success can help program administrators use energy advising services strategically. Program budgets, community characteristics, and other local conditions are important issues to take into account.

Define Responsibilities and Necessary Skills and Hire Accordingly

EAs often perform a range of tasks, and they must have a flexible skillset. Technical knowledge is critical, but customer service and a personable nature can be equally important. Some programs have stated that hiring for personality and a customer service mindset was even more important, as technical knowledge can be taught. Common backgrounds for EAs include teaching, building science, design, sales, environmental studies, social services, and the building trades. Some



programs require professional technical credentials from regional or national trade agencies such as the Residential Energy Services Network (RESNET) or the Building Performance Institute (BPI). Programs considering an EA role should have a clear sense of what duties their EA will perform and what skills are most important to those duties.

Invest in Well-Defined Contractor-EA Relationships

All six programs observed that the upgrade process is smoother when contractors and EAs have a consistent understanding of the division of roles and responsibilities. A clearly defined relationship also limits customer confusion during the upgrade process. Furthermore, when all parties present consistent, coordinated information, customers' trust in both the contractors and the program is significantly increased.

Developing working relationships between contractors and EAs also saves time during the upgrade process. For example, EAs with the HEAT Squad were initially heavily engaged as intermediaries between customers and contractors. As the demand for upgrades increased, the program found that developing relationships with, and even providing sales training for, contractors helped them improve their business practices and customer relations. The need for EAs to intervene in the upgrade process lessened as the contractor community developed their capacity. Setting clear expectations for scopes of work, bids, and test-out performance levels can also save time and hassle for all parties involved, particularly homeowners.

Minimize EA Activities that Do Not Translate into Upgrades

For every program, the person-hours per upgrade was high initially and decreased over time as the program matured. Each program sought to balance quality and homeowner satisfaction with using the program's labor and financial resources efficiently. All six programs found this balance through a continuous improvement approach. As data accumulated and programs gained experience, program administrators cut back on activities that did not make an upgrade more likely, such as unlimited phone consultations and multiple home visits. To address these time sinks and limit customer demands on advising staff, programs created additional tools that directly or indirectly provided the help that homeowners needed.

- Invest in Effective Websites. Many programs emphasize the importance of investing in an effective website early because of its time-saving potential. Homeowners can use a well-designed website to:
 - Educate themselves about the upgrade process and about the program and its services, lessening the reliance on advisors for education.
 - Determine if they are eligible for the program services, allowing the advisors to focus on those most likely to undergo an upgrade.
 - Sign up for the program, which can generate a record in the program's tracking and customer management database and trigger a follow-up by an EA.

Enhabit reduced the marketing, education, and outreach burden on their EAs by building an accessible, engaging website that enables homeowners to determine their own eligibility for the program, learn about the upgrade process, and run a simple asset rating tool that estimates their home's savings potential. The program also reduced the time EAs spend monitoring projects by assigning all upgrades associated with one contractor to the same EA. This allowed the EA and contractor to discuss multiple projects during each correspondence and develop a more consistent and personal relationship.

• Document Frequently Asked Questions to Minimize Bottle Necks. Energize Bedford's approach of promoting a single, prominent, expert energy coach came with a down side: homeowners participating in the program were hesitant to have any work done on their home without first consulting the energy coach. This demanded significant EA time and often unnecessarily slowed down the upgrade process. To reduce these consultations, the Energize Bedford's EA created a series of short, publicly-available videos addressing common questions. To further manage time spent on individual customer consultations, Energize Bedford and other programs instituted weekly office hours when homeowners can ask for advice. This structure gave the homeowner access to the EA while putting reasonable and clear constraints on that access.

Use Data to your Advantage

Customer relationship management software can help EAs track the progress of upgrades and review past correspondence with homeowners and contractors. By consolidating this information into one database, program staff can identify inefficiencies and areas for process improvement. Before they had developed their excel-based tracking system, STEP cited the absence of a systematized customer database as one of the program's biggest stumbling blocks. Good information and customer management systems are critical to ensure that EAs can manage upgrades efficiently and effectively.

Key Takeaways: Incorporating EA Services into Your Program

All six programs cited their EA services as a key factor in the program's success; however, an EA position can also increase the costs of program delivery. Before launching the EA role, a number of considerations need to be determined, such as how the EA will interact with contractors and whether there are sufficient information technology resources in place (e.g., FAQ section of program website, customer tracking system) to enable the success of these services. These costs and considerations should be weighed against your specific program's situation and target population.

When incorporating energy advisor services into your program design, ensure that you:

- 1) Understand the market barriers for your program.
- 2) Identify the barriers the EA position and services will be used to overcome.
- 3) Define the role and specific responsibilities of the EA position relative to other program staff, contractors, and any program partners. Integrate the EA position into the overall program design.
- 4) Continually examine, evaluate, and adapt the role as your program and the market grow, and change over time.

The six profiled programs used EAs to provide services that address specific barriers hindering completion of home energy upgrades. The barriers include informational barriers, decision-making barriers, and transactional barriers. While an EA is only one component that influences program outcomes, all six programs cited the EAs as a critical component to their program's success.

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