

# **2001 FEMP Customer Survey**

## **Summary Report**

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By

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# 1. Participant and Nonparticipant Profiles

The 2001 FEMP customer survey interviewed 811 individuals consisting of 413 of FEMP customers who have participated in one or more of FEMP programs. In addition, the survey interviewed 398 individuals who are nonparticipants. The study was targeted to collect information from the average FEMP customer. As a result, the respondents in this survey represent 27 different federal agencies and a group of private contractors who have contracts with one or more federal agencies, which we refer to as federal contractors.

Table 1 Agency distribution

Agencies Surveyed	FEMP Services Participants N=413	FEMP Service Nonparticipants N=398
Department of Defense (DOD)	32.0	27.4
Veterans Administration (VA)	8.0	5.0
Department of the Interior (DOI)	7.7	7.8
General Services Administration (GSA)	6.5	9.3
Department of Transportation (DOT)	3.9	7.3
United States Postal Service (USPS)	3.9	3.0
Department of Health and Human Services (DHHS)	3.6	1.5
Department of Energy (DOE)	3.6	1.0
Department of Agriculture (USDA)	2.9	15.1
National Aeronautics and Space Administration (NASA)	2.9	0.3
Department of Commerce (DOC)	2.4	0.5
Environmental Protection Agency (EPA)	1.5	0.8
Department of Justice (DOJ)	1.2	3.8
Department of the Treasury (TRSY)	1.2	0.5
Social Security Administration (SSA)	1.0	0.5
Department of State (DOS)	0.5	0.3
Government Printing Office (GPO)	0.5	0.3
Department of Labor (DOL)	0.2	1.8
Department of Housing and Urban Development (DHUD)	0.2	1.0
Architect of the Capitol (AOC)	0.2	0.0
Broadcasting Board of Governors (BBG)	0.2	0.0
Federal Deposit Insurance Corporation (FDIC)	0.2	0.0
Smithsonian Institution (SI)	0.2	0.0
Central Intelligence Agency (CIA)	0.0	0.3
Consumer Product Safety Commission (CPSC)	0.0	0.3
Federal Emergency Management Agency (FEMA)	0.0	0.3
General Accounting Office (GAO)	0.0	0.3
Federal Contractors	15.3	12.1

Although respondents who are federal contractors work directly with federal agencies, we did not group them with the agencies they serve because the survey results show that they are different from respondents employed directly by federal agencies. Table 1 presents

the distribution of survey completions with participants and nonparticipants by agency and federal contractors.

Thirty-two percent of the surveyed participants are from the Department of Defense (DOD). This is reasonable because DOD is the largest user of energy in the federal government. The Veterans Administration (VA), the Department of the Interior (DOI), and the General Services Administration (GSA) each represent between 6 and 8 percent of surveyed participants. Nineteen agencies have 3 percent or fewer respondents represented in the study. Fifteen percent of the surveyed participants are federal contractors who have energy related responsibilities in federal facilities.

## General job responsibilities

The survey asked each of the respondents to provide their title and to rate how much of their job involved a set of 7 energy project responsibilities. The ratings were on a 1 to 10 scale, where 1 meant no responsibility and 10 meant significant responsibility. The responsibilities and mean ratings are shown in Figure 1.

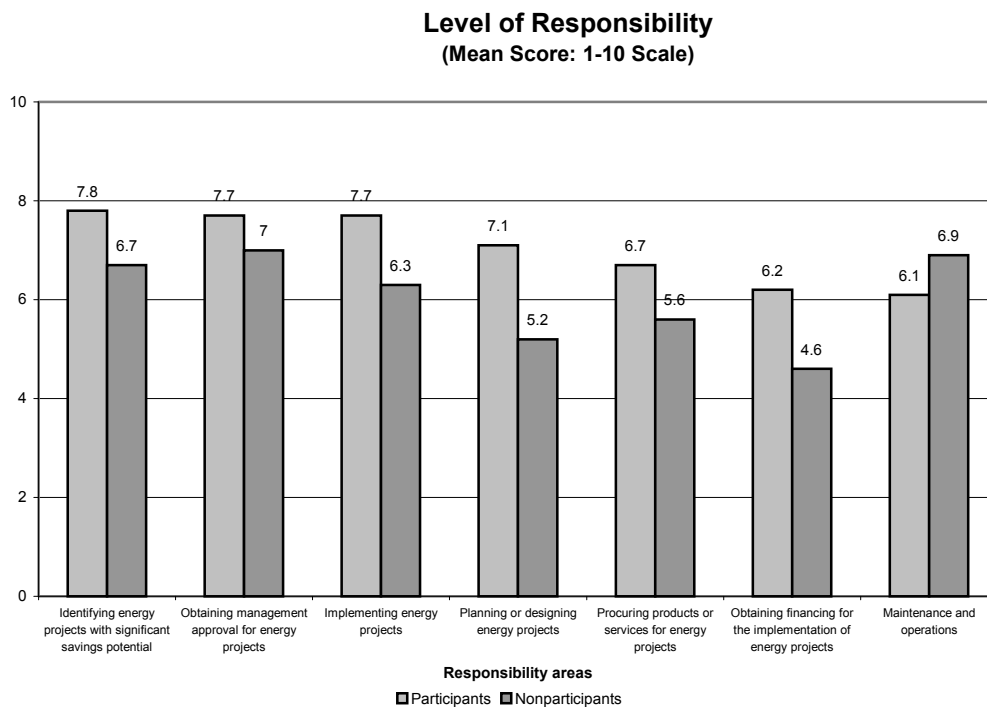


Figure 1 Responsibilities of participants and nonparticipants

FEMP participants are more likely to be involved in identifying, obtaining approval for, and implementing energy projects. The mean ratings for these responsibilities are between 7.7 and 7.8. FEMP participants are less likely to be involved in procuring, financing, and building maintenance and operations. The mean ratings for these responsibilities are below 7.0.

Nonparticipants are quite different than participants. Nonparticipants report less responsibility than participants in all areas, except maintenance and operations. On average, the highest rated responsibility for nonparticipants is 7.0, compared to 7.8 for participants. In every instance, the differences are statistically significant. This suggests that nonparticipants are in somewhat lower level positions than participants.

Nonparticipants give the highest average responsibility rating to obtaining the approval for energy projects (7.0), which is the second highest ranked responsibility for participants (7.7). The second highest ranked responsibility among nonparticipants is building maintenance and operations (6.9), which is the lowest rated responsibility for participants (6.1). Thus, it would appear that nonparticipants are somewhat more likely to be responsible for facility operations and maintenance at their facilities, but less responsible for general management.

### Number of facilities directly affected by decisions

We also examined the number of buildings over which participants and nonparticipants have some type of decision-making influence. On average, FEMP participants influence 3 times as many buildings as nonparticipants (144 vs. 42 buildings, respectively). These results indicate that FEMP is reaching customers that have influence over a large number of buildings.

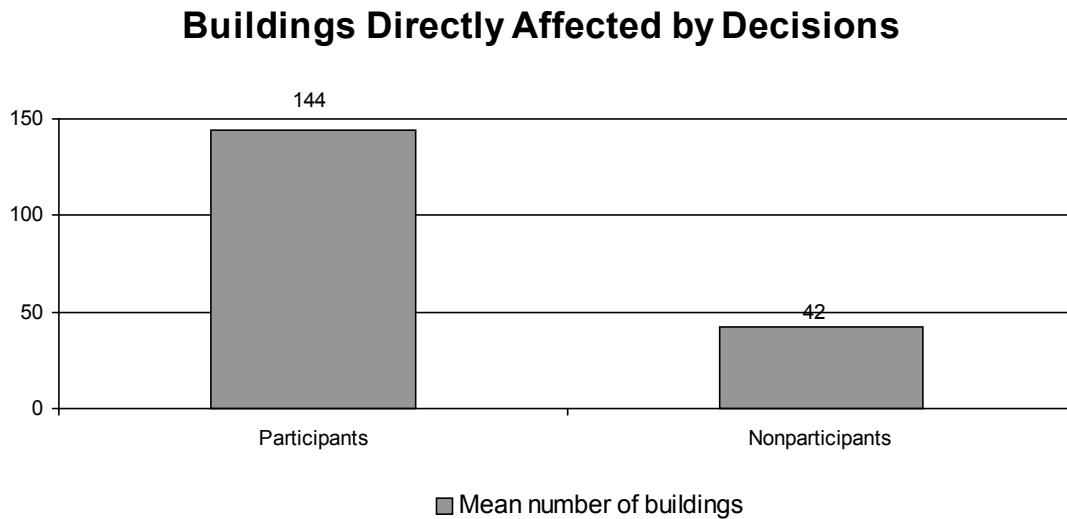


Figure 2 Number of buildings affected by decisions

## Recommendations

- Build and maintain good customer contact lists for both program marketing and evaluation. FEMP is essentially in the business of selling energy efficiency services to the federal market. Accordingly, FEMP needs easily accessible information on the federal market in order to serve it effectively. FEMP should consider developing and maintaining a market tracking database similar to those used in the private sector. This database can be used to track customer contact information, marketing contacts made, customer interest and intent to use services, types of services used, and types of technologies installed as a result of using FEMP services.
- Continue successful efforts to target customers responsible for project planning, implementation, and large numbers of facilities.
- Market FEMP services to personnel with operations and maintenance responsibilities to involve more nonparticipants.



## 2. Awareness and Use of FEMP Services

### Awareness of FEMP services

FEMP survey respondents were asked about their awareness of five types of FEMP services: financing services, project-specific technical assistance, technical information, general awareness and outreach, and the FEMP website.

The percent of participants who are aware of the different FEMP programs ranges from 62 to 89 percent (Figure 3). FEMP participants are most aware of FEMP technical information services (89 %). Participants are almost as aware of financing services, the FEMP website, FEMP general awareness and outreach services and project-specific technical assistance as technical information services. Participant awareness for Energy Service Performance Contracting (ESPC) / Super ESPC services (73%) and SAVEnergy Audits (62%) is a bit less but still high. Most participants are aware of FEMP in all of its facets, although there are small percentages of participants who are not aware of one or another of the services.

**Awareness of FEMP Services**

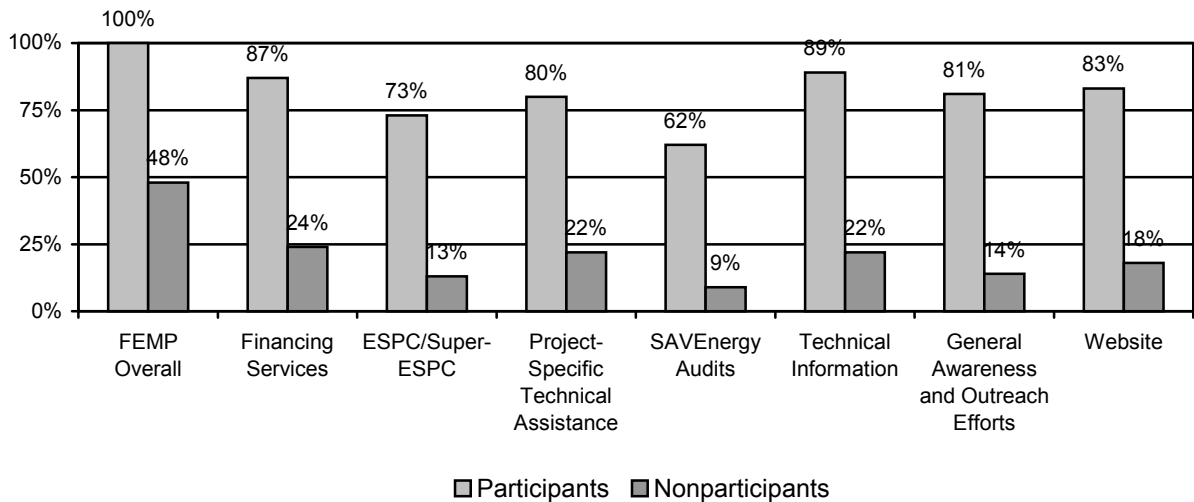


Figure 3 Awareness of FEMP services

While awareness of FEMP services is high among participants, lack of awareness of FEMP programs is an issue with most nonparticipants. Of the nonparticipants who have indicated that they have had no program-associated interaction with FEMP, 34 percent indicated that they are aware of FEMP. Further, fewer of these nonparticipants are aware of specific FEMP programs or services. Only 15 percent of these nonparticipants are aware of FEMP financing services or FEMP project-specific technical assistance. Twelve percent are aware of FEMP technical information services, 10 percent are aware

of FEMP general information and outreach efforts, nine percent are aware of FEMP performance contracting programs, eight percent are aware of the website, and seven percent are aware of SAVEnergy Audit services. These data indicate that not only are most nonparticipants unaware of FEMP services, but they are also unaware of FEMP as an organization.

## Use of FEMP services

FEMP participants were also asked about their use of five types of FEMP services: financing services (including ESPC), project-specific technical assistance (including SAVEnergy Audits), technical information, general awareness and outreach efforts, and the FEMP website. Results for each of the five types of FEMP services is presented in below in Figure 4 . The FEMP website and FEMP technical information services are used most frequently with 71 percent of participants using these services. FEMP general awareness and outreach efforts are used by 65 percent of participants. The remaining more project-focused assistance is used by fewer participants. FEMP financing services are used by about 36 percent of the participants with 29 percent reporting they use performance contracting services. Thirty-two percent indicate they use project-specific technical assistance and 22 say they use SAVEnergy Audit services.

### Use of FEMP Services

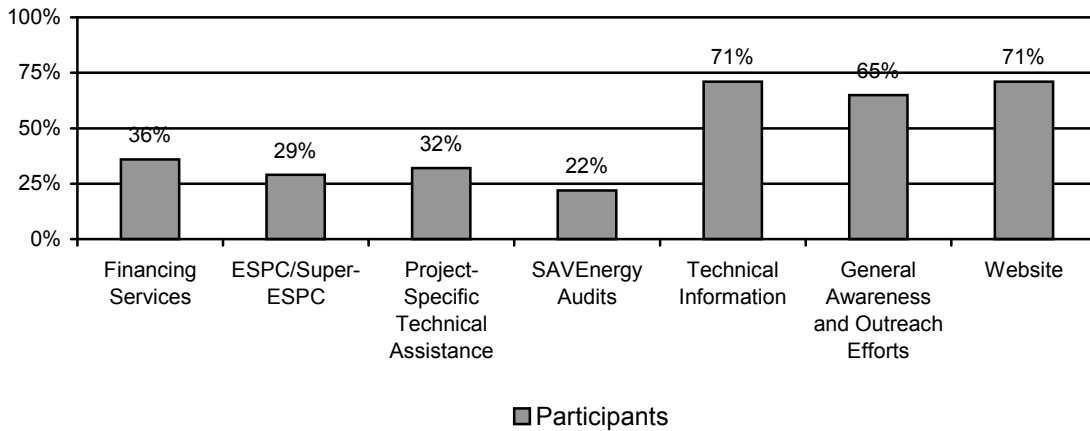


Figure 4 Use of FEMP services

## How participants use FEMP services

An important issue is how people use FEMP services. The question is one of whether many participants use a few services or a few participants use many services. Figure 5 is a “tree” diagram showing how participants use the following five FEMP services: the website, technical information, general awareness and outreach efforts, financing services, and project-specific technical assistance. The tree traces usage from the most

commonly used services to the least commonly used. If most customers use a few services and there is no relationship between using one service and another, the branches of the tree will appear thin and spread out. If a few people use many services and there is a linkage between the services that are used, then the tree will have a few thick branches and the rest are likely to be thin. By following the thickness of the branches through the tree structure, one can see how participants use multiple FEMP services.

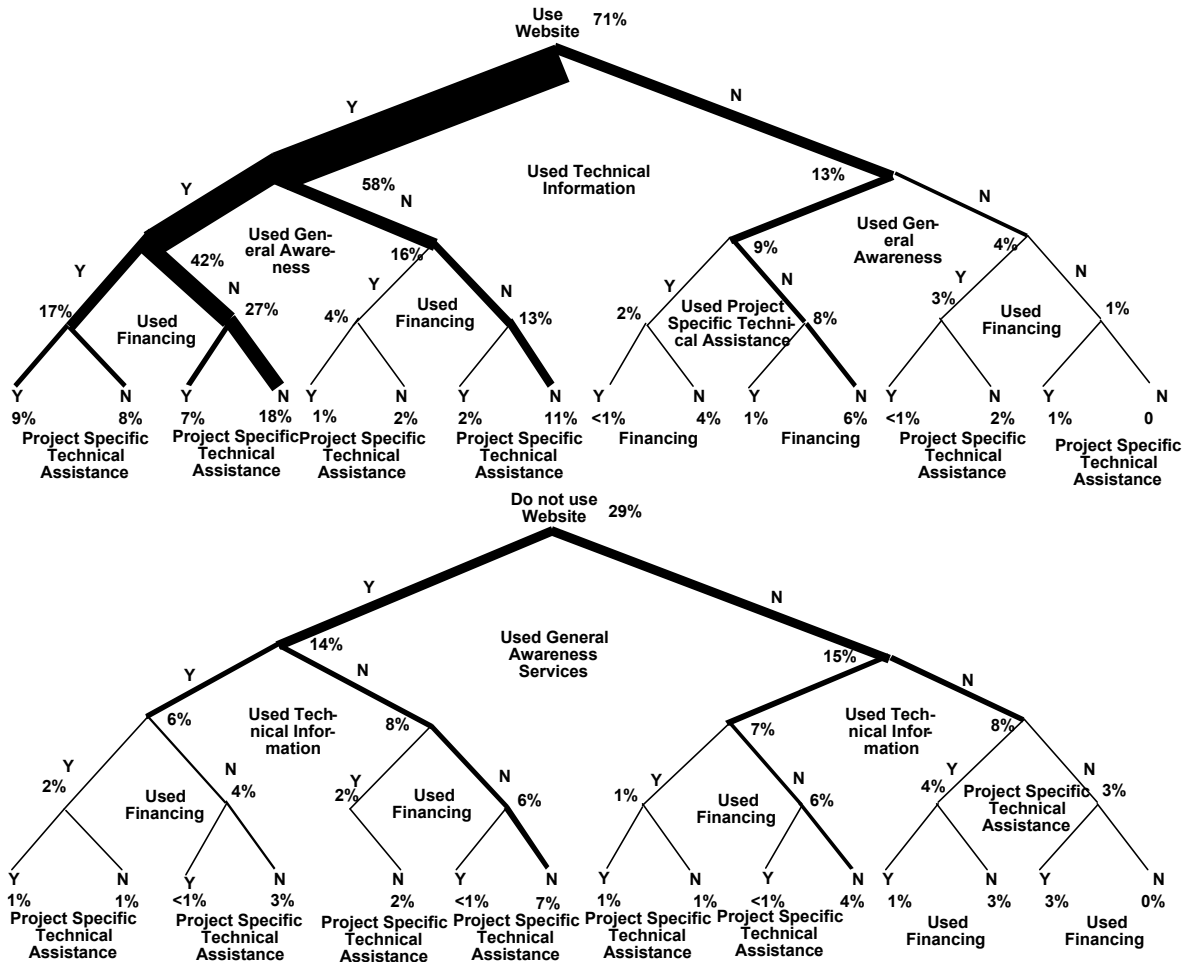


Figure 5 Tree diagram of use of FEMP services

The most commonly used combination of services is the website, technical information, and general awareness and outreach efforts. Fifty-eight percent of participants use the website and technical information. Forty-two percent use the website, technical information, and general awareness services.

If we continue down the left-hand side of the participant tree, we find that more than half of those who use project-specific technical assistance and / or financing services also use the website, technical information, and general awareness and outreach efforts. If we examine the remainder of the tree, we see only small percentages of participants (1 – 3%) use financing services and project-specific technical assistance in combination with other

services. What these data demonstrate is that the various FEMP services reinforce each other and that FEMP customers, are on average, strong multiple service users.

The tree diagram demonstrates that most FEMP participants use multiple services. Sixteen percent of participants report using only one service, 53 percent report using three or more services. Table 2 below provides the distribution of how many FEMP services are used by participants.

**Table 2 Participant use of FEMP services**

Number of services used	Percent of participants (N=413)
5	8
4	16
3	29
2	31
1	16

## Likelihood of continued/potential use of FEMP services

In addition to analyzing how FEMP services are used, we also assessed future interest and use in the following FEMP services: financing services, project-specific technical assistance, technical information, and general awareness and outreach efforts. For each of the services, we asked those who have used the service to rate their likelihood of continued use, and we asked those who have not used the service to rate their likelihood of potential use. The ratings are on a 1 to 10 scale, where 1 means very unlikely and 10 means very likely. Results for each of these program areas are presented below.

### Financing services

Eighty-one percent of participants who have used FEMP financing services rate their likelihood to continue using at 8 or higher, with 44 percent giving a rating of 10. On average, financing service participants rate their likelihood to continue participation at 8.3. The results for financing service nonparticipants are much different. For example, only 24 percent of the nonparticipants who are aware of FEMP financial services and 22 percent of the nonparticipants who are unaware of these services rate their likelihood of potential use at 8 or higher. On average, the aware and unaware financing service nonparticipants, rate their likelihood of potential use of these services at 4.4 and 4.2, respectively (see Figure 6). These results suggest that once a customer uses FEMP financing services, the likelihood of continued use is relatively high.

### Project-specific technical assistance

Seventy-six percent of participants who have used FEMP project-specific technical assistance rate their likelihood to continue using at 8 or higher, with 38 percent giving a rating of 10. On average, project-specific technical assistance participants rate their likelihood to continue participation at 8.1 (Figure 6). The results for nonparticipants are

much different. For example, only 30 percent of the project-specific technical assistance nonparticipants who are aware of FEMP services, and 39 percent of the unaware nonparticipants rate their likelihood of potential use at 8 or higher, and the aware and unaware nonparticipants, on average, rate their likelihood of potential use at 5.1 and 5.5, respectively. As with FEMP financing, these results suggest that once a customer uses FEMP project-specific technical assistance, the likelihood of continued use is relatively high.

### **Technical information**

Ninety-two percent of participants who have used FEMP technical information rate their likelihood to continue using at 8 or higher, with 53 percent giving a rating of 10. On average, technical information participants rate their likelihood to continue participation at 9.0. The results for technical information nonparticipants are somewhat different. For example, 43 percent of technical information nonparticipants who are aware of FEMP technical assistance programs and 52 percent of the unaware nonparticipants rate their likelihood of potential use at 8 or higher, and the aware and unaware technical information nonparticipants, on average, rate their likelihood of potential use at 5.9 and 6.3, respectively. Compared to the ratings for FEMP financing and FEMP project-specific technical assistance, the ratings given by technical information participants and nonparticipants are higher. This indicates the potential for use of this information among current and potential FEMP participants.

### **General awareness and outreach efforts**

Ninety-four percent of participants who have used FEMP general awareness and outreach efforts rate their likelihood to continue using at 8 or higher, with 55 percent giving a rating of 10. On average, general awareness and outreach effort participants rate their likelihood to continue participation at 9.1 (Figure 6). The results for general awareness and outreach effort nonparticipants are somewhat different. For example, only 39 percent of the aware nonparticipants and 46 percent of the unaware nonparticipants rate their likelihood of potential use at 8 or higher. Aware and unaware general awareness and outreach effort nonparticipants, on average, rate their likelihood of potential use at 5.9 and 6.0, respectively. Compared to the ratings for FEMP financing and project-specific technical assistance, the ratings given by general awareness and outreach effort participants and nonparticipants are higher. This indicates the potential for use of these efforts among current and potential FEMP participants.

## Continued/Potential Use of FEMP Services

(Mean Score: 1-10 Scale)

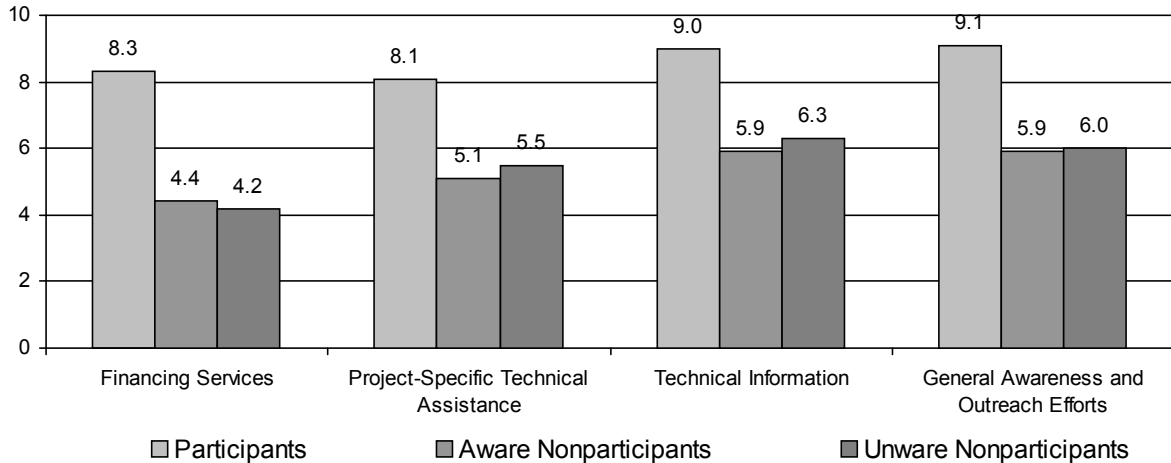


Figure 6 Continued and potential use of FEMP services

## Recommendations

- Continue successful efforts to maintain awareness and use of FEMP services. Because most participants use multiple FEMP services, these efforts should focus on the use of cross-program marketing to increase awareness and use of FEMP services, particularly the ESPC and the SAVEnergy Audit programs. In addition, these efforts should include more extensive customer follow-up contact, as this contact will yield positive results given that once a customer uses FEMP services the likelihood of continued use is relatively high.
- Develop a strategy to target the sizable audience of nonparticipants that are interested in participation. Nonparticipants have a higher interest in the use of FEMP technical information services and FEMP general awareness and outreach efforts than in the use of FEMP financing and FEMP project-specific technical assistance. Therefore, the strategy should emphasize the use of technical information services and general awareness and outreach efforts as an entrée into the use of more project-focused FEMP services among nonparticipants.

### 3. Contact and Satisfaction with FEMP

#### Contacts with the greatest influence on decision to use FEMP services

FEMP participants are influenced to use FEMP services in a variety of ways. These include contacts with FEMP staff (headquarters, regional offices, and national laboratories), contacts associated with but not part of FEMP (ESPC/SAVEnergy Audit contractors), and contacts not associated with FEMP (colleagues/peers and other personal contacts). To assess the influence of these various types of contacts, participants were asked to identify the type of contact that had the greatest influence on their decision to use FEMP services (Figure 7). Colleagues and peers have the greatest influence on the decision to use FEMP services (24%). The next greatest influence on customer decisions is ESPC / SAVEnergy Audit contractors (19%). Seventeen percent of FEMP participants said that the national laboratories have the greatest influence, while FEMP headquarters, regional offices, and other personal contacts each were cited as the greatest influence by 12 percent of participants.

These results indicate that contacts not associated with FEMP have a strong influence on the decision to use FEMP services (the greatest influence among 36 percent of participants when combining colleagues / peers and other personal contacts). This provides FEMP an opportunity to increase awareness and use of its services through referral efforts. These efforts have the potential to be successful given the high levels of satisfaction that participants have with FEMP. Satisfaction results are presented later in this chapter.

#### Contact with Greatest Impact on FEMP Use

(Percent of Participants)

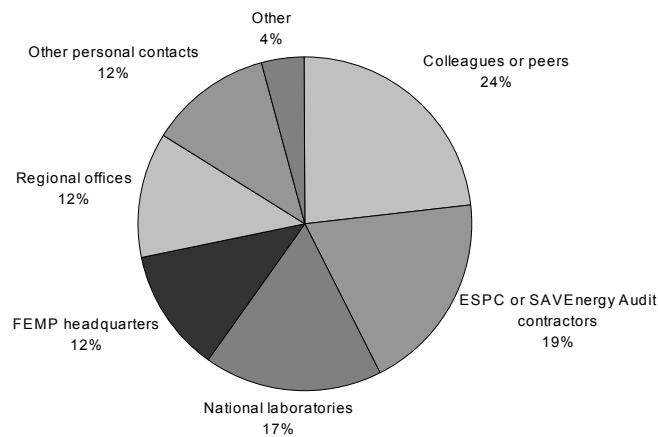


Figure 7 Contact with the greatest impact on FEMP use

## Type of contact with whom customers communicate

In addition to assessing the influence that various types of contacts have in the participation decision, we assessed the types of contacts that participants communicate with most often when dealing with FEMP. These results are presented in Figure 8.

Twenty-six percent of participants communicate most with national laboratories when dealing with FEMP, 23 percent communicate most with FEMP headquarters, 22 percent communicate most with FEMP regional offices, 20 percent communicate most with ESPC or SAVEnergy Audit contractors, and 9 percent communicate most with other contacts.

### Office with which Customers Have the Most Contact

(Percent of Participants)

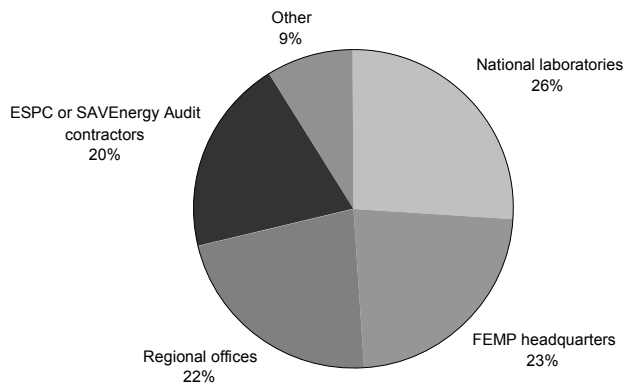


Figure 8 Office with the most contacts from customers

## Satisfaction with FEMP contact

To assess satisfaction with FEMP contact, we asked participants to rate their satisfaction with various aspects of the contact that they have had with FEMP. The ratings were on a 1 to 10 scale, where 1 meant very dissatisfied and 10 meant very satisfied. The results are presented in Figure 9.

Satisfaction with all aspects of participant contact with FEMP is consistently high, with an absence of a cluster of dissatisfied participants with any aspect of their FEMP contact. The percent of participants who give a rating of 8 or higher range from 87 to 90 percent, with the percent giving a rating of 10 ranging from 30 to 35 percent. On average, satisfaction ratings with aspects of FEMP contact range from a 8.5 to 8.8. These are very



good satisfaction ratings. Participants rate satisfaction with the knowledge of FEMP staff the highest. Ninety percent of participants rate the level of satisfaction with this aspect at 8 or higher, with 35 percent giving a rating of 10. On average, participants rate the level of satisfaction with this aspect at 8.8. This indicates that participants are satisfied with the knowledge of the people with whom they come in contact.

### Satisfaction with Aspects of FEMP Contact

(Mean Score: 1-10 Scale)

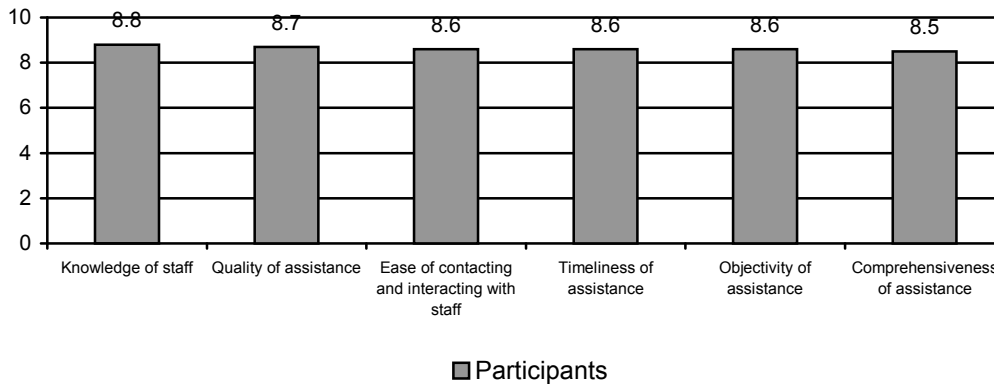


Figure 9 Satisfaction with aspects of FEMP contact

### Overall satisfaction with specific FEMP services

In addition to assessing satisfaction with various aspects of the FEMP contact, we assessed satisfaction with FEMP overall and for 5 FEMP services: financing services, project-specific technical assistance, technical information, general awareness and outreach efforts, and the FEMP website. We asked participants to rate their satisfaction on a 1 to 10 scale, where 1 meant very dissatisfied and 10 meant very satisfied. The results are presented in Figure 10.

Participant satisfaction with FEMP overall and FEMP services is also high, again with an absence of a cluster of dissatisfied participants. Seventy-nine percent of participants rate the level of satisfaction with FEMP overall at 8 or higher, with 17 percent giving a rating of 10. On average, participants rate the level of satisfaction with FEMP at 8.1. This rating is comparable to ratings given by technical assistance participants surveyed in 1997 (8.3), 1998 (8.2), and in 1999 (8.0). For the five FEMP services addressed by the survey, the percent of participants who give a rating of 8 or higher range from 74 to 83 percent, with the percent giving a rating of 10 ranging from 17 to 30 percent. On average, satisfaction ratings for the five FEMP services range from a 8.0 to 8.3. These are good satisfaction ratings and indicate that participants are satisfied with their use of FEMP services.

### Satisfaction with FEMP Services

(Mean Score: 1-10 Scale)

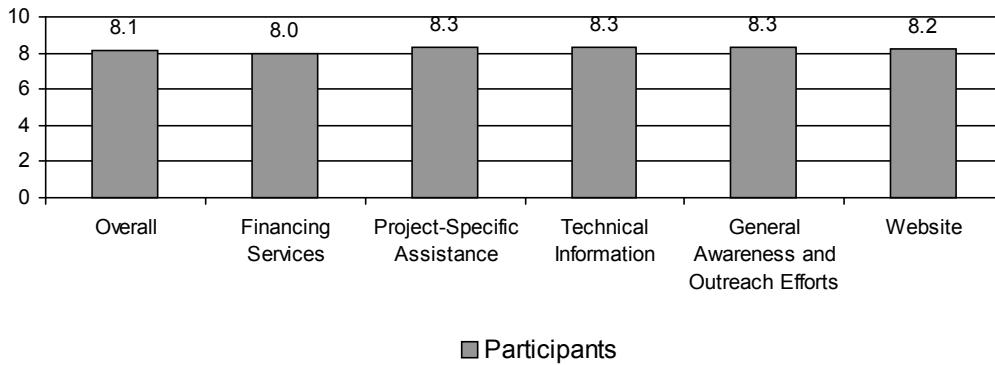


Figure 10 Satisfaction with FEMP services

### Benefits vs cost of FEMP services

In addition to assessing satisfaction with FEMP and its services, we assessed how participants perceive the benefits of FEMP services in relation to their costs. We asked participants if they think the benefits they receive from FEMP services are greater than, the same as, or less than the costs of using FEMP services in terms of the time and money expended. The results are presented in Figure 11.

#### Benefits vs Cost of FEMP Services

(Percent of Participants)

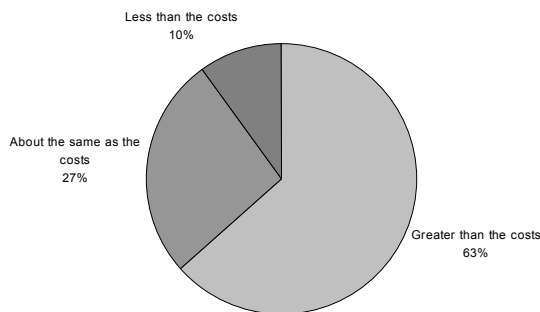


Figure 11 Benefits vs cost of FEMP services

In all, over 90 percent of FEMP participants think that the benefits of FEMP services are equal to or greater than the costs associated with obtaining those services. Sixty-four percent of FEMP participants think that the benefits of FEMP services are greater than the costs, while only 10 percent think that the benefits are less than the costs. The remaining 27 percent think that the benefits are about the same as the costs.

## Recommendations

- Continue successful efforts to maintain customer satisfaction through the effective delivery of high quality, value-added services.
- Develop marketing strategies that emphasize and take advantage of customer referrals and networking. These strategies will be effective at increasing awareness and use of FEMP services due to the high satisfaction levels among FEMP customers and the fact that colleagues, peers and other personal contacts have a strong influence on the decision to use FEMP services.
- Provide customers with contact information for the key FEMP contacts responsible for each of the major FEMP services so that customers know whom to call when they need information or assistance.
- Maintain timely and ongoing communications with participants in key FEMP services.



## 4. Project Implementation and FEMP Influence

### Energy efficiency, renewable energy, and water conservation projects

To assess the level of project implementation among participants and nonparticipants, we asked participants and nonparticipants how many energy efficiency, renewable energy, and water conservation projects they have implemented in the last 2 years. We then asked participants for the percent of these projects where they have used FEMP information or assistance. The results are presented in Figure 12.

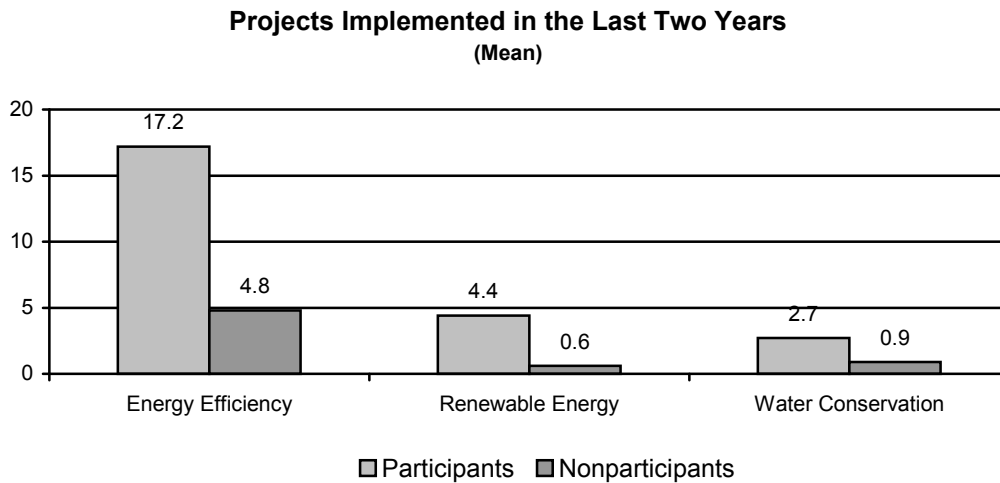


Figure 12 Number of projects implemented in the last 2 years

Over the last 2 years, FEMP participants have been involved with implementing significantly more energy efficiency, renewable energy, and water conservation projects than nonparticipants. Participants have implemented 3.6 times as many energy efficiency, 7.6 times as many renewable energy, and 3.2 times as many water conservation projects as nonparticipants.

FEMP information or assistance has been used by participants on 33 percent of their energy efficiency projects, 49 percent of their renewable energy projects, and 42 percent of their water conservation projects.

**Projects Using FEMP Information / Assistance**  
 (Percent of Projects Implemented in the Last Two Years)

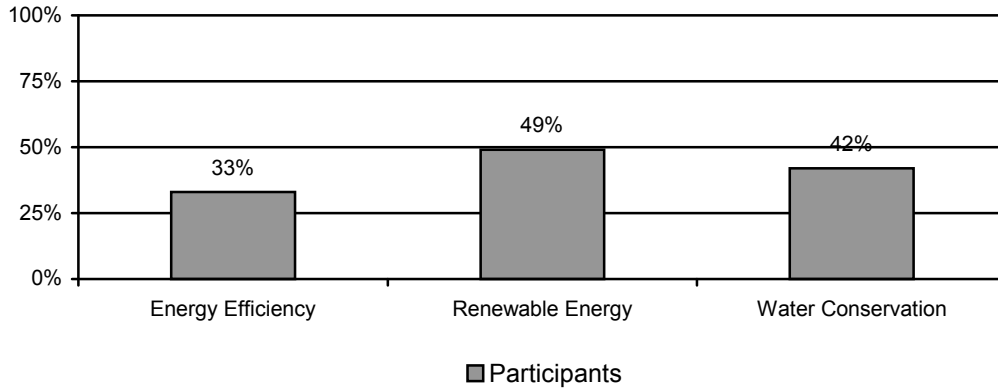


Figure 13 Projects using FEMP information or assistance

These results indicate that FEMP participants are doing more projects than nonparticipants, and that FEMP assistance is used on a number of these projects.

**General level of support received from senior management**

To assess the level of support that senior management gives for implementing energy projects, we asked participants and nonparticipants to rate the level of support they receive from senior management. The ratings were on a 1 to 10 scale, where 1 meant a very low level of support and 10 meant a very high level of support. The results are presented in Table 3.

Table 3 Level of senior management support for implementing energy projects

Level of support	Percent of participants (N=396)	Percent of nonparticipants (N=370)
10	25	26
9	12	9
8	23	27
7	8	7
6	5	5
5	11	9
4	4	3
3	4	4
2	5	2
1	4	6
Mean	7.2	7.3

The general level of support that respondents receive from senior management for energy projects is comparable across participants and nonparticipants. The percent of respondents who give a rating of 8 or higher range from 60 to 63 percent, with the percent giving a rating of 10 ranging from 25 to 31 percent. On average, ratings for the level of support range from 7.2 to 7.5. These results indicate that lack of support from senior management is not a barrier to the use of FEMP services.

## Influence of Executive Orders

In addition to assessing the level of support that senior management gives for implementing energy projects, we assessed the influence of Executive Orders as a driver for the implementation of energy projects. We asked participants and nonparticipants to rate the influence of Executive Orders on a 1 to 10 scale, where 1 meant not at all a driver and 10 meant a very influential driver. The results are presented in Figure 14.

The level of influence that Executive Orders have as a driver to implement energy projects is comparable among participants and nonparticipant groups. Executive Orders appear to have the same level of influence for participants and nonparticipants.

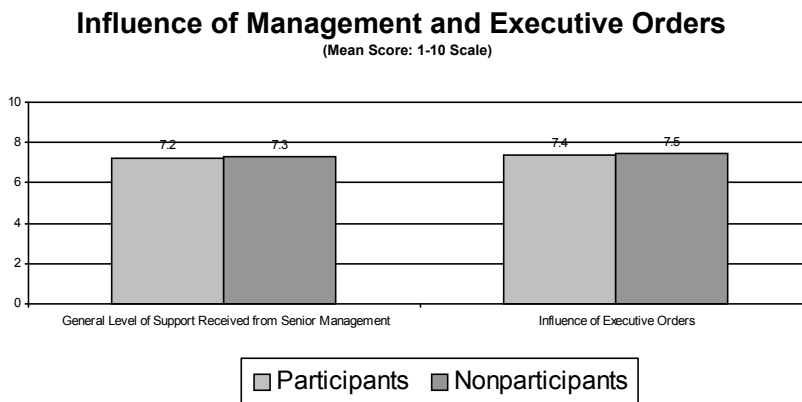


Figure 14 Influence of Executive Orders

## Documentation of energy or cost savings and receptivity to FEMP using documentation

To assess the level of documentation of energy or cost savings and the receptivity to FEMP having access to these documentation, we first asked participants if they have written any reports, evaluation studies, or press releases about the energy or cost savings from any of their energy projects. If they have, we then asked them if they would be receptive to FEMP contacting them to discuss using this information in FEMP newsletters and case studies. These results are presented in Figure 15.

Forty-six percent of FEMP participants document the energy and cost savings for their energy projects, and 80 percent of the participants that document energy savings are receptive to FEMP staff contacting them to discuss the use of this documentation. This type of information has the potential to be used by FEMP to improve the technical information services they offer, to give real world examples of project successes for the website, and to create testimonials for a word-of-mouth referral marketing campaign.

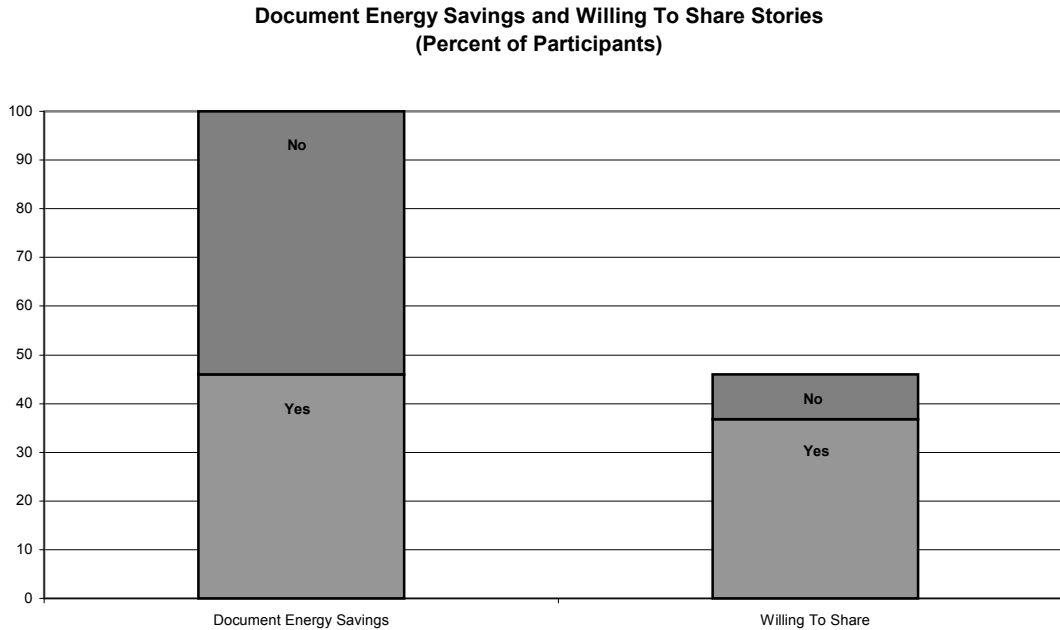


Figure 15 Documenting energy savings and sharing this data with FEMP

## Recommendations

- Continue successful efforts to work with customers in the implementation of energy efficiency, renewable energy, and water conservation projects.
- Fully utilize the information that participants are willing to share on the energy and cost savings from projects implemented through FEMP to demonstrate the energy impacts generated by FEMP. Also, consider developing easy-to-use methods for participants to document the energy and cost savings for projects, and make these methods readily available to participants. These methods can be based on methods that are currently being used by participants.



## 5. Project Needs and Possible FEMP Roles

### Need for assistance with technologies and services

Survey respondents were asked to rate the level of need that exists within their organization for assistance from FEMP in nine different technology and service areas. The nine items included renewable technologies, distributed generation, load management, green power purchasing, commissioning service and others. The items are rated on a 1 to 10 scale with 10 representing a high need.

Figure 16 shows the average need by type of service. In all areas, the level of need is higher among participants than it is among nonparticipants.

There is no strong consensus among participants about need. All nine items were rated between 4.9 and 6.3. Participant expressed the highest level of need for renewables followed somewhat closely by whole-building design. The ratings 6.3 and 5.9 and just slightly above a rating of 5.0 which is the middle of the scale. Combined heat and power, purchasing, green power, and commissioning and training services were at the bottom of the ratings, at 5.0.

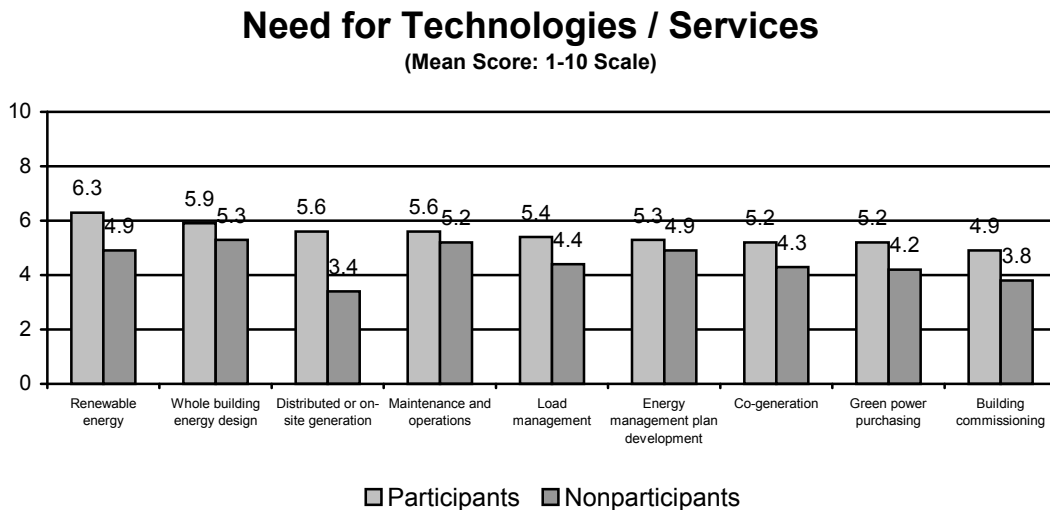


Figure 16 Customer expressed needs for FEMP assistance

In general, nonparticipants generally saw less need for services. Nonparticipants most needed services are whole-building design and maintenance and operations services. Whereas participants had rated the need for distributed generation in their top three picks, nonparticipants rated it lowest assigning an average rating of 3.4. Although nonparticipants placed renewables in their top four needs, the average rating was 4.9, a full 1.3 rating points below the rating given by participants.

## Recommendations

- Continue to develop and provide information pertaining to renewables, whole-building design services, maintenance and operations associated services, and energy generation and storage as these are mentioned most frequently as the types of technologies and services in which customers are most interested. Also, inform customers that these services and information are available through FEMP.

## 6. ESPC Impact Issues

The impact of FEMP Energy Savings Performance Contracts (ESPCs) and Super-ESPC programs (referred to collectively as ESPC programs in the remainder of this chapter) is measured by customer adoption of energy project financing using contracts where the project costs are paid back over time from the savings. Other measures of impact include the number of projects implemented that are influenced by ESPC, the influence of ESPC on how financing for major energy projects is obtained, and the extent to which FEMP customers share ESPC information with colleagues.

### Stages of ESPC adoption

Technology diffusion and adoption theory suggests that customers move through a systematic series of events before they adopt a new method of operation or technology. The diffusion literature includes the following six stages:

1. Unaware stage
2. Awareness stage
3. Persuasion stage (information gathering)
4. Decision stage (yes or no)
5. Implementation stage
6. Confirmation stage (behavior is reinforced or repeated).

### Movement of participants through the adoption cycle

Figure 17 illustrates the position of ESPC participants in the performance contracting adoption cycle. In this case a participant is a customer who has indicated that they are in some way involved with the FEMP ESPC program. This can be as little involvement as just becoming aware of the FEMP ESPC program to working with FEMP to obtain an ESPC delivery order. The analysis includes the period before participants heard about FEMP ESPC programs and the period since they became involved with FEMP ESPC programs.

Before hearing about FEMP ESPC programs, 24 percent of participants were unaware of the existence of these type of contracts (unaware stage), 27 percent had just become aware of these contracts (awareness stage), 12 percent had already begun collecting information about these type of contracts (persuasion stage), 10 percent had decided to not use these contracts (decision stage), 3 percent had decided to use these contracts but had not implemented them yet (decision stage), 7 percent had implemented these type of contracts one time (implementation stage), and 18 percent had implemented these contracts repeatedly (confirmation).

Since involvement with FEMP ESPC programs, no participants remain unaware of these contracts (unaware stage) and only 10 percent indicate that they have just become aware of these contracts (awareness stage). These results indicate that FEMP ESPC programs

have moved about 45 percent of participants at least through the first two stages of the adoption cycle, a significant market transformation accomplishment. More importantly perhaps, the same type of movement has also occurred on the top end of the adoption path. Since involvement with FEMP ESPC programs, 56 percent of participants are in either the implementation or confirmation stage, compared to 25 percent before hearing about FEMP ESPC programs. This means that an additional 31 percent of participants moved into either the implementation or confirmation stage as a result of FEMP ESPC programs. In addition, 21 percent have decided to implement ESPC but have not yet done so. This provides an opportunity for FEMP to work with these customers to ensure that they follow-through with their decision.

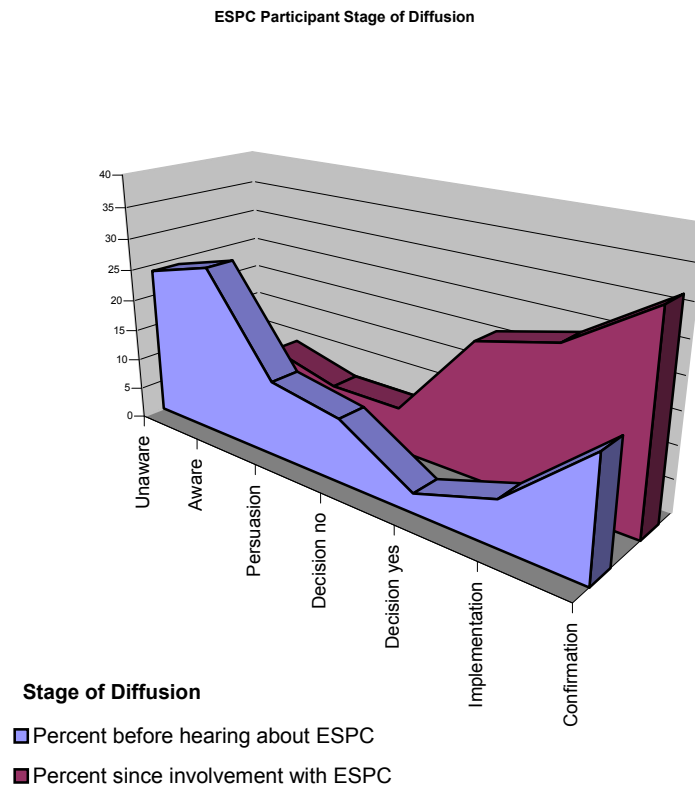


Figure 17 Participant movements through the ESPC adoption process

We also examined the 10 percent of participants who had already decided not to use performance contracting prior to their exposure to FEMP. Following their exposure to FEMP and FEMP ESPCs, 70 percent of this group have changed their decisions and have decided to give performance contracting a try. While the number of participants in this group is small (N=10), the data indicates that FEMP ESPC programs have allowed

customers who have said no to the use of performance contracts before their exposure to FEMP to change their minds after learning about FEMP ESPCs.

FEMP appears to be substantially transforming the market for performance contracting services in federal facilities. As can be seen in Figure 17, most of FEMP program participants have moved down the adoption path since their involvement with FEMP.

## Implementation of delivery orders or contracts through FEMP ESPCs

The number of delivery orders or contracts implemented through FEMP ESPC programs is presented in Table 4. Among ESPC participants who have implemented ESPC delivery orders or contracts, an average of 4.9 delivery orders or contracts have been implemented. In a typical year, these ESPC participants implement an average of 2.9 delivery orders or contracts through the program.

Table 4 Number of delivery orders or contracts implemented through ESPC

	Mean	N
Overall number of delivery orders or contracts implemented through ESPC	4.9	43
Number of delivery orders or contracts implemented through ESPC in a typical year	2.9	38

## Provided colleagues with information about ESPC

The extent to which ESPC participants and the program aware nonparticipants provide colleagues with information about ESPC is presented in Figure 18. Eighty-one percent of ESPC participants and 45 percent of the aware ESPC nonparticipants provide colleagues with information about FEMP ESPC programs. Of those who provide colleagues with information, 88 percent of ESPC participants and 100 percent of the aware ESPC nonparticipants provide information to colleagues within their organization, and 59 percent of ESPC participants and 38 percent of aware ESPC nonparticipants provide information to colleagues outside of their organization.

On average, ESPC participants provide information to about 47 colleagues within their organization and 43 colleagues outside of their organization, while aware ESPC nonparticipants provide information to about 33 colleagues within their organization and 12 colleagues outside of their organization.

This data indicates that participants and non-participants share ESPC information both inside and outside of their organization. Both users and nonusers who are aware of ESPC are networking ESPC materials and information in the federal market.

## Sharing of Information about ESPC

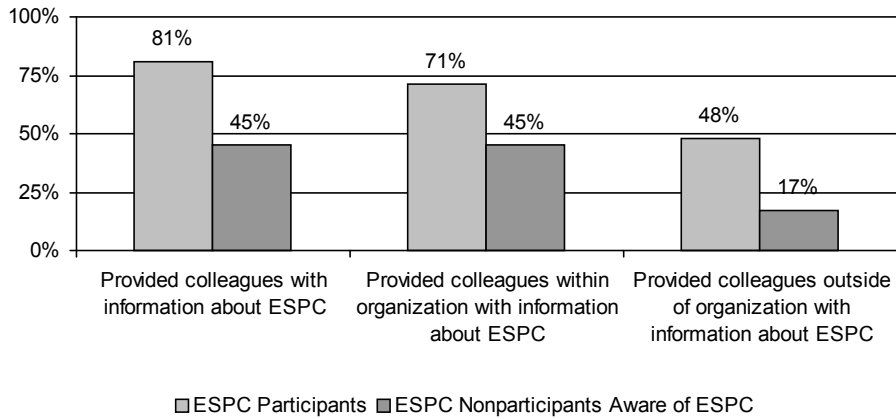


Figure 18 How ESPC program information is shared

## Recommendations

- Continue successful efforts to accelerate the federal market toward the use of performance contracts to achieve energy savings in federal facilities.
- Develop marketing strategies that emphasize customer referrals and networking. These strategies will be effective at increasing awareness and use of FEMP ESPCs due to the high satisfaction levels among FEMP customers and the fact that both ESPC participants and nonparticipants share information with their peers, substantially increasing visibility of FEMP ESPC programs in the federal market.

## 7. ESPC Market Issues

Market issues pertaining to FEMP ESPC and Super-ESPC programs are presented in this chapter. These issues include continued and potential use of ESPC, reasons for using ESPC, ease in using financing through ESPC, barriers to using ESPC, and the types of people FEMP should approach when promoting ESPC.

### Continued and potential use of ESPC

To assess future interest and use in ESPC, we asked ESPC participants to rate their likelihood of continued use of ESPCs, and we asked ESPC nonparticipants to rate their likelihood of potential use of ESPCs. The ratings were on a 1 to 10 scale, where 1 meant very unlikely and 10 meant very likely to continue using or to use. The results are presented in Figure 19.

Seventy-four percent of participants rate their likelihood to continue using FEMP ESPCs at 8 or higher, a strong rating reflective of a market that wants to continue doing what it is doing. Forty-four percent of these customers rated their likelihood to continue using FEMP the highest possible score of 10. On average, participants rate their likelihood to continue participation at 7.8. The results for nonparticipants are much different. For example, only 24 percent of aware nonparticipants and 23 percent of unaware nonparticipants rate their likelihood of potential use at 8 or higher, and aware nonparticipants and unaware nonparticipants, on average, rate their likelihood of potential at 4.2 and 4.0, respectively. These results suggest that once a customer uses FEMP ESPC program, the likelihood they will continue using it is relatively high. However, there are challenges facing FEMP to get nonparticipants to participate in ESPC.

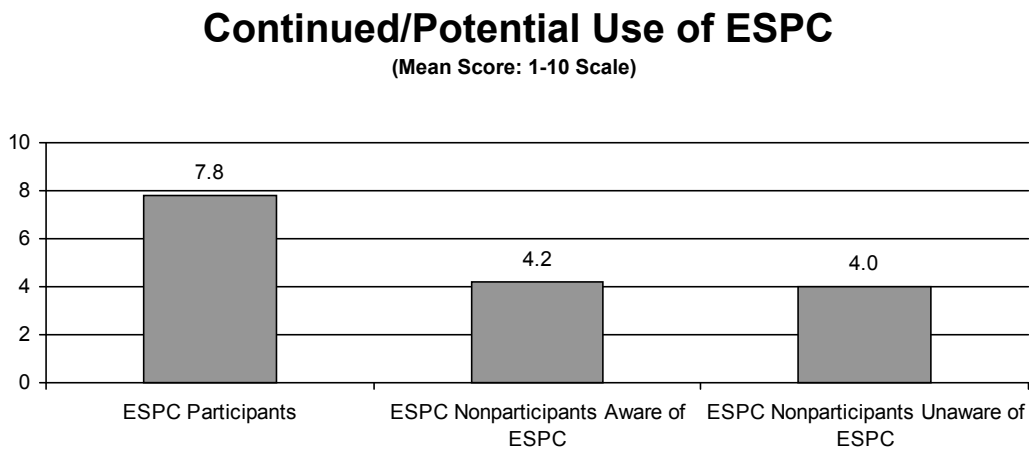


Figure 19 Continued or projected use of ESPC

## Reasons for using ESPC

To assess the reasons for using FEMP ESPCs, we asked ESPC participants and aware ESPC nonparticipants to rate the level of influence that various reasons have in the decision to use or not use FEMP ESPCs. The ratings were on a 1 to 10 scale, where 1 meant not at all a reason and 10 meant a very influential reason. The results for participants and nonparticipants are presented in Figure 20.

Participants rate the ability of ESPCs to allow energy improvements to be made (that would not have been possible without ESPCs) as the most influential reason. Eighty-two percent of participants rate the influence of this reason at 8 or higher, with 49 percent giving a rating of 10. On average, participants rate the influence of this reason at 8.5. Participants rate using ESPCs to obtain expert assistance in selecting and installing energy equipment as the least influential reason. Fifty-eight percent of participants rate the influence of this reason at 8 or higher, with 24 percent giving a rating of 10. On average, participants rate the influence of this reason at 7.1.

For all five reasons addressed in the survey, the average ratings given by aware nonparticipants are lower in magnitude than the average ratings given by participants. However, aware nonparticipants are similar to participants in that they also rate the ability of ESPCs to allow energy improvements to be made (that would not have been possible without ESPCs) as the most influential reason. Sixty-two percent of aware nonparticipants rate the influence of this reason at 8 or higher, with 34 percent giving a rating of 10. On average, aware nonparticipants rate the influence of this reason at 7.1. Aware nonparticipants rate using ESPCs to avoid the hassle of obtaining their own financing as the least influential reason. Forty-four percent of aware nonparticipants rate the influence of this reason at 8 or higher, with 23 percent giving a rating of 10. On average, aware nonparticipants rate the influence of this reason at 5.8.

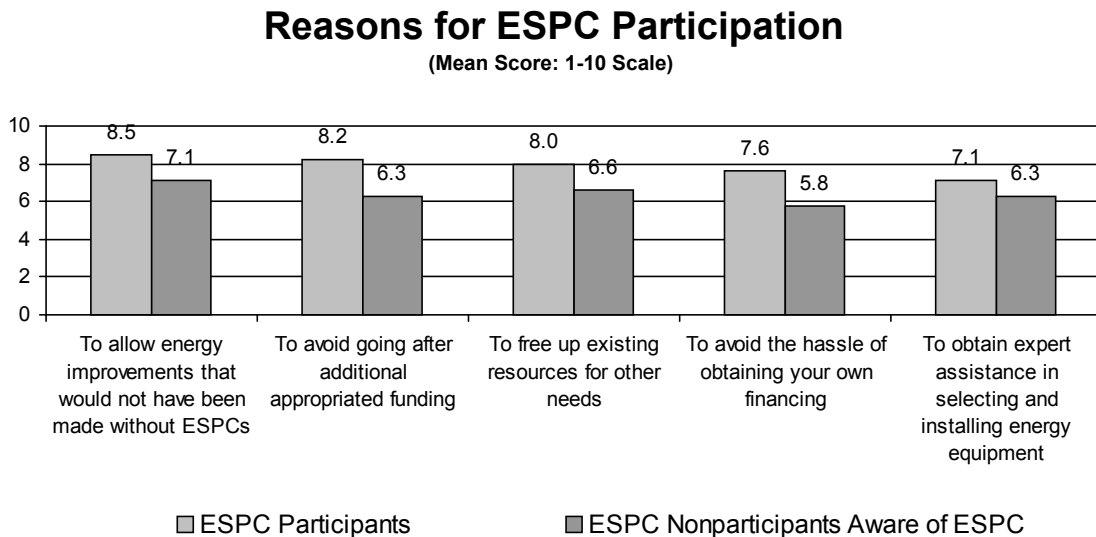


Figure 20 Reasons for using ESPC



## Ease in using financing through ESPC

To assess the ease of using ESPCs, we asked ESPC participants and aware ESPC nonparticipants to rate how difficult or easy they think it is to use financing through FEMP ESPCs. Respondents could give the following five ratings: very difficult, somewhat difficult, neither easy nor difficult, somewhat easy, or very easy. The results are presented in Figure 21.

Sixty-one percent of aware ESPC nonparticipants think that it is somewhat difficult (29%) or very difficult (32%) to use financing through FEMP ESPCs. While the level of difficulty expressed by participants is lower (as one would expect given their experience with the program) however, the levels are higher than expected. Forty-six percent of ESPC participants think that it is somewhat difficult (36%) or very difficult (7%) to use financing thorough FEMP ESPCs. These results indicate that the difficulties associated with using FEMP ESPCs are a significant barrier for federal agencies.

### Ease of ESPC Participation

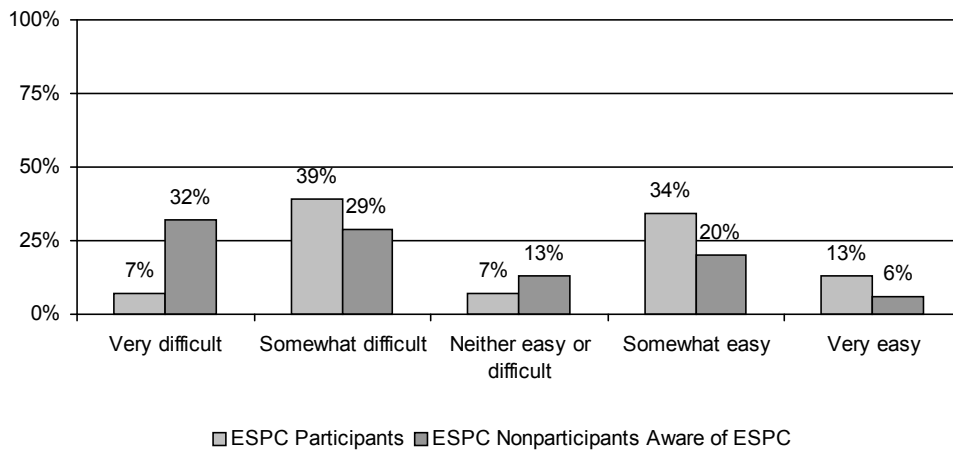


Figure 21 Ease of using ESPC

## Barriers to using ESPC

To assess the barriers to using FEMP ESPCs, we asked ESPC participants and aware ESPC nonparticipants to rate the level of influence that various barriers have to the use of FEMP ESPCs. The ratings were on a 1 to 10 scale, where 1 meant not at all a barrier and 10 meant a very substantial barrier. The results for participants and nonparticipants are presented in Figure 22.

The average ratings given by participants were less than 6 for all 8 of the barriers addressed by the survey. Participants rate the length of the term for delivery orders /

contracts being too long as the most substantial barrier. Thirty percent of participants rate the influence of this barrier at 8 or higher, with 11 percent giving a rating of 10. On average, participants rate the influence of this barrier at 5.2. Participants rate the possibility of their organization moving from the building as the least substantial barrier. Sixty-four percent of participants rate the influence of this barrier at 3 or lower, with 50 percent giving a rating of 1. On average, participants rate the influence of this barrier at 3.4.

As with participants, the average rating given by aware nonparticipants was less than 6 for all 8 of the barriers addressed by the survey. Aware nonparticipants rate the complexity of the ESPC process and FEMP up-front fees being too high as the two most substantial barriers. Twenty-six percent of aware nonparticipants rate the influence of the complexity of the ESPC process at 8 or higher, with 12 percent giving a rating of 10, indicating a very strong barrier for a significant portion of this group. On average, aware nonparticipants rate the influence of this barrier at 5.5. Twenty-six percent of aware nonparticipants rate the influence of FEMP up-front fees being too high at 8 or higher, with 15 percent giving a rating of 10, again, a strong barrier for a portion of this group. On average, aware nonparticipants rate the influence of this barrier at 5.4. Aware nonparticipants rate the possibility of their organization moving from the building as the least substantial barrier. Seventy-six percent of aware nonparticipants rate the influence of this barrier at 3 or lower, with 60 percent giving a rating of 1. On average, aware nonparticipants rate the influence of this barrier at 2.7.

### Barriers to ESPC Participation

(Mean Score: 1-10 Scale)

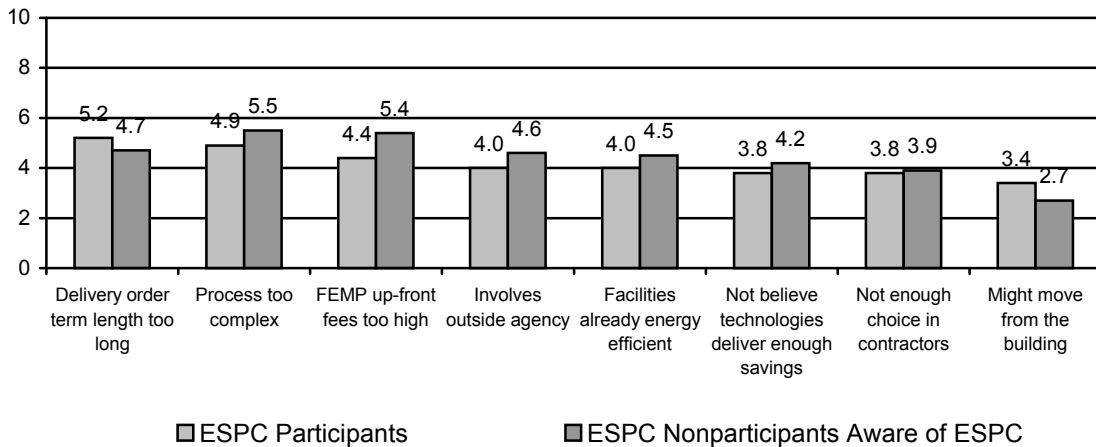


Figure 22 Barriers to using ESPC

## Recommendations

- Continue successful efforts to maintain awareness and use of FEMP ESPCs. These efforts should utilize more extensive customer follow-up because once a federal agency becomes an ESPC participant, the probability that they will continue to participate is very high.
- The ESPC participation process needs to be streamlined. The streamlining needs to focus on the ease of participation and faster, less time-consuming procedures. Participants and potential participants need to view the ESPC process as fast, easy and efficient, consuming as little of their time and effort as possible.
- Marketing for the ESPC program should highlight the program's ability to (1) obtain energy efficiency improvements and equipment that could not be made without ESPC, (2) avoid going after additional federal appropriations, and (3) free up existing resources.
- Target program marketing materials at facility-related managers, administrators, and supervisors; engineers; and energy or environmental managers and coordinators.
- Conduct more in-depth customer evaluations that focus specifically on obtaining more detailed information on the barriers to using ESPCs and the ways that these barriers can be overcome. This information can then be used by FEMP to develop and test operational designs and procedures to help eliminate these barriers. This can be accomplished through the use of focus groups or in-depth interviews with key participants and nonparticipants.



## 8. ESPC Process Issues

Process issues pertaining to FEMP ESPC and Super-ESPC programs are presented in this chapter. These issues include ESPC delivery order/contract term length, satisfaction with specific aspects of ESPC, and suggestions for FEMP to improve ESPC.

### ESPC delivery order/contract term length

To assess the term lengths of ESPC delivery orders/contracts, we asked ESPC participants what they think the ideal term length is and what is the maximum term length they would be willing to accept. These results are presented in Figure 23.

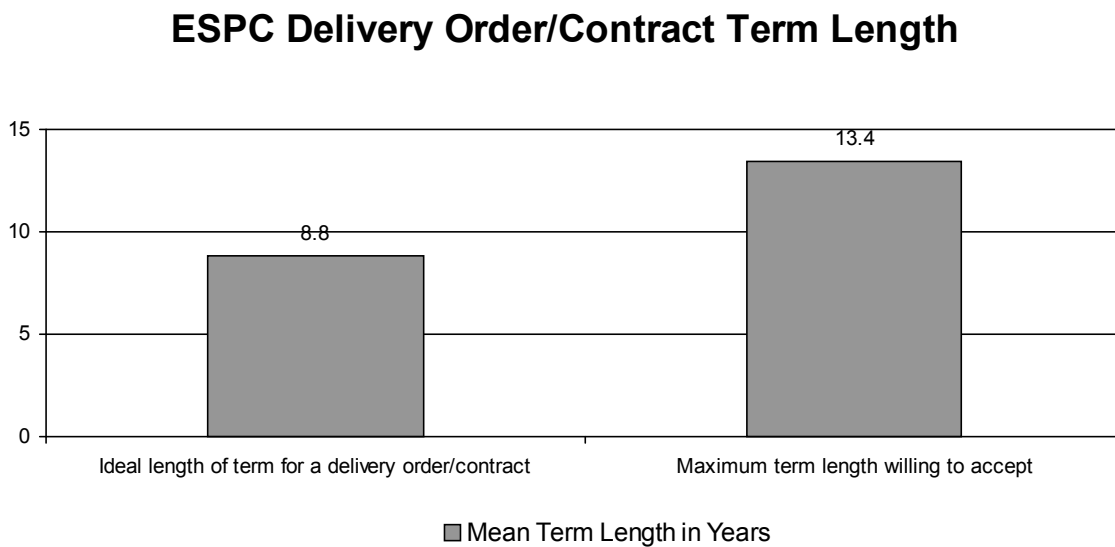


Figure 23 Ideal length and maximum length for ESPC delivery orders

Seventy-one percent of all participants report an ideal contract length of 10 years or less. On average, participants report about 9 years as the ideal term length and 13 years as the maximum term length that they are willing to accept. The most common response given for the ideal term length is 10 years while the most common response given for the maximum term length is 15 years.

Current contract periods for FEMP ESPCs average about 15 years in length, about 6 years longer than what the average participant wants. This indicates that FEMP contract periods are inconsistent with the administrative and management needs of the agencies they serve. These findings are also consistent with the verbal comments provided by participants that focused on the rigidity or the participation requirements associated with the ESPC program. FEMP should consider the impacts of structuring contract periods to allow for more flexible contract lengths. This will allow agencies to tailor their contract terms to their individual agency needs. Having this option will require technology mixes

that support shorter contract periods and may act to reduce the energy savings associated with the current ESPC contracts. However, it will make the contract periods more consistent with the needs of the customer and will act to reduce a key program participation barrier.

### Satisfaction with aspects of ESPC

To assess satisfaction with ESPC, we asked participants to rate their satisfaction with program follow-up and support, the amount of energy savings, and the time it takes to establish a delivery order/contract. The ratings were on a 1 to 10 scale, where 1 meant very dissatisfied and 10 meant very satisfied. The results are presented in Figure 24.

ESPC participants rate satisfaction the highest for project follow-up or support from FEMP after the delivery order/contract is established. Sixty-three percent of ESPC participants rate their satisfaction with this aspect of ESPC at 8 or higher, with 15 percent giving a rating of 10. On average, participants rate their satisfaction with this aspect at 7.2. ESPC participants rate satisfaction the lowest for the period of time to establish the delivery order/contract. Forty percent of ESPC participants rate their satisfaction with this aspect of ESPC at 8 or higher, with 16 percent giving a rating of 10. On average, participants rate their satisfaction with this aspect at 6.4. Because the average satisfaction ratings are less than 8 for these aspects, FEMP managers may want to identify program design changes that can help increase agency satisfaction ratings among ESPC participants.

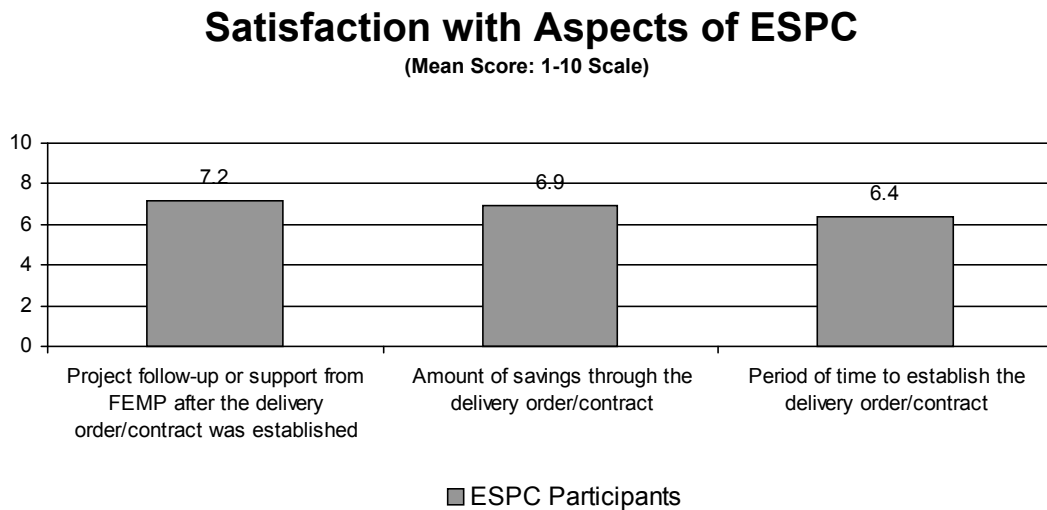


Figure 24 Satisfaction with aspects of ESPC

## Recommendations

- Federal agencies need the ability to enter into short-term delivery orders. FEMP should consider allowing flexible obligation periods consistent with agency needs, allowing agencies to adopt projects that provide for more rapid cost recovery and reduced periods of agency obligation.
- Agencies want ESPC project support that is fast, efficient, and customized to their individual needs. However, not all customers want or need FEMP support. FEMP should consider designing an adaptive project follow-up effort to cover additional technical assistance that includes project and process advice to agencies, working with agencies to identify high energy savings technologies, providing examples of projects that work well and save substantial amounts of energy, and other services consistent with a broad array of agency-specific or office-specific needs.
- ESPC customers are somewhat satisfied with their level of energy savings. This needs to be addressed. FEMP customers (who perceive their savings to be lower than expected) can network with other agencies and potentially harm the ESPC program. FEMP should consider efforts to help participants understand the level of savings they are getting in a way that participants view the savings as significant.
- The ESPC participation process needs to be streamlined. The streamlining needs to focus on the ease of participation and faster, less time-consuming procedures. Participants and potential participants need to view the ESPC process as fast, easy and efficient, consuming as little of their time and effort as possible. Currently the process required to establish a delivery order is a barrier to participation.





## 9. SAVEnergy Audit Impact Issues

The impact of the FEMP SAVEnergy program is measured by customer adoption of energy audits to identify energy improvements. Other measures of impact include the number of projects implemented that are influenced by SAVEnergy Audits, the influence of SAVEnergy Audits on how energy improvements are identified, and the extent to which FEMP customers share SAVEnergy Audit information with colleagues.

### Stages of SAVEnergy Audit adoption

Technology diffusion and adoption theory suggests that customers move through a systematic series of events before they adopt a new method of operation or technology. The diffusion literature includes the following six stages:

1. Unaware stage
2. Awareness stage
3. Persuasion stage (information gathering)
4. Decision stage (yes or no)
5. Implementation stage
6. Confirmation stage (behavior is reinforced or repeated).

### Movement of participants through the adoption cycle

Figure 25 illustrates the position of SAVEnergy Audit participants in the adoption cycle for using audits to identify energy improvements. The analysis includes the period before participants heard about the FEMP SAVEnergy Audit program and the period since they became involved with the FEMP SAVEnergy Audit program.

Before hearing about FEMP SAVEnergy Audits, 14 percent of participants were unaware of energy audits (unaware stage), 29 percent had just become aware of energy audits (awareness stage), 10 percent had already begun collecting information about these type of audits (persuasion stage), 4 percent had decided to not use energy audits (decision stage), 4 percent had decided to use energy audits but had not yet done so (decision stage), 8 percent had implemented energy audits one time (implementation stage), and 31 percent had implemented audits repeatedly (confirmation).

Since involvement with FEMP SAVEnergy Audits, no participants were in the unaware or aware stage. These results indicate that FEMP SAVEnergy Audits have moved about 43 percent of participants at least through the first two stages of the adoption cycle, a significant accomplishment. Moreover, the same type of movement also occurred on the top end of the diffusion scale. Since involvement with FEMP SAVEnergy Audits, 99 percent of participants were in either the implementation or confirmation stage, compared to 39 percent before hearing about FEMP SAVEnergy Audits. This means that an additional 60 percent of participants moved into either the implementation or confirmation stage as a result of FEMP SAVEnergy Audits. FEMP appears to be

substantially transforming the market for the use of energy audits as a way to identify energy saving opportunities in federal buildings.

We also examined the 4 percent of federal customers who had already decided not to use energy audits prior to their exposure to FEMP. Following their exposure to FEMP and the FEMP SAVEnergy Audit program 100 percent of these customers have changed their decisions and have decided to give SAVEnergy Audits a try. In fact, all of the customers who said that they had decided not to use audits as a tool prior to their exposure to FEMP, have implemented one or more SAVEnergy Audits since their exposure to FEMP SAVEnergy Audits. While the number of customers in this condition is very small (N=3) the data indicates that FEMP programs have allowed customers who said no to the use of audits as a tool, to change their minds after learning about FEMP programs.

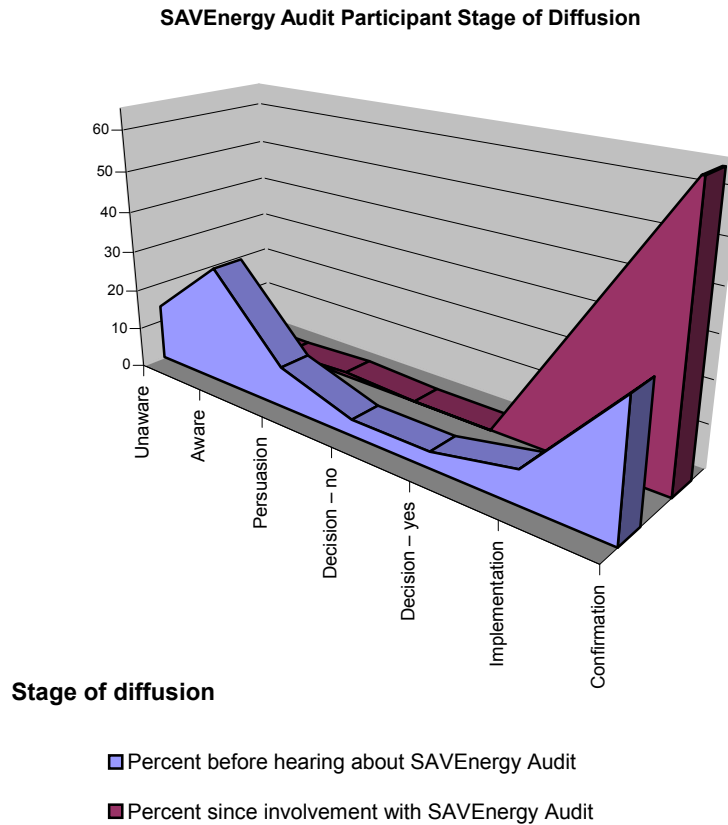


Figure 25 Participant movements through the Audit adoption process

## Implementation of energy improvements based on SAVEnergy Audits

The number of SAVEnergy Audits conducted and projects implemented based on SAVEnergy Audit recommendations are presented in Table 5. SAVEnergy Audit participants have conducted an average of 7.5 SAVEnergy Audits, indicating that these participants are repeat customers or have conducted SAVEnergy Audits in multiple facilities. In addition, in a typical year, these participants implement an average of 4.3 projects based on the recommendations presented in their SAVEnergy Audit.

Table 5 Number of SAVEnergy Audits conducted and projects implemented based on recommendations

	Mean	N
Overall number of SAVEnergy Audits conducted	7.5	70
Overall number of projects implemented using SAVEnergy Audit recommendations	7.7	48
Number of projects implemented using SAVEnergy Audit recommendations in a typical year	4.3	46

## Provided colleagues with information about SAVEnergy Audits

The extent to which SAVEnergy Audit participants and aware SAVEnergy Audit nonparticipants provide colleagues with information about SAVEnergy Audits is presented in Figure 26. Seventy percent of SAVEnergy Audit participants and 38 percent of aware SAVEnergy Audit nonparticipants provide colleagues with information about FEMP SAVEnergy Audits. Of those who provide colleagues with information, 97 percent of SAVEnergy Audit participants and 95 percent of aware SAVEnergy Audit nonparticipants provide information to colleagues within their organization, and 40 percent of SAVEnergy Audit participants and 50 percent of aware SAVEnergy Audit nonparticipants provide information to colleagues outside of their organization. On average, SAVEnergy Audit participants provide information to 41 colleagues within their organization and 18 colleagues outside of their organization, while aware SAVEnergy Audit nonparticipants provide information to about 15 colleagues within their organization and 15 colleagues outside of their organization. This data indicates that participants and nonparticipants share SAVEnergy Audit information both inside and outside of their organizations. Both program users and nonusers who are aware of the SAVEnergy Audit program are networking SAVEnergy Audit materials and information in the federal market.

### Sharing of Information about SAVEnergy Audits

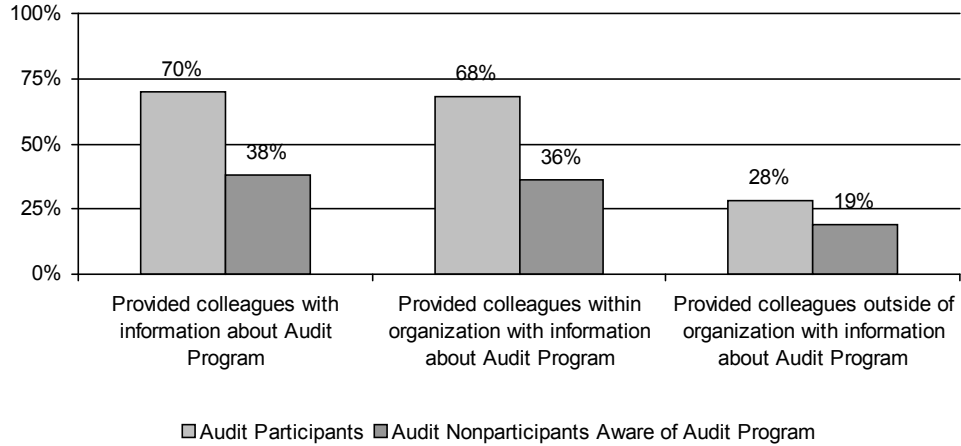


Figure 26 Sharing of SAVEnergy Audit information

### Recommendations

- Continue successful efforts to accelerate the federal market toward the use of energy audits to achieve energy savings in federal facilities.
- Develop marketing strategies that emphasize customer referrals and networking. These strategies will be effective at increasing awareness and use of FEMP SAVEnergy Audits due to the high satisfaction levels among FEMP customers and the fact that both SAVEnergy Audit participants and nonparticipants share information with their peers, substantially increasing visibility of FEMP SAVEnergy Audits in the federal market.

## 10. SAVEnergy Market Issues

Market issues pertaining to FEMP SAVEnergy Audits are presented in this chapter. These issues include continued and potential use of SAVEnergy Audits, reasons for using SAVEnergy Audits, ease in using financing through SAVEnergy Audits, barriers to using SAVEnergy Audits, and the types of people FEMP should approach when promoting SAVEnergy Audits.

### Continued and potential use of SAVEnergy Audits

To assess future interest and use in SAVEnergy Audits, we asked SAVEnergy Audit participants to rate their likelihood of continued use of SAVEnergy Audits and we asked nonparticipants to rate their likelihood of potential use of SAVEnergy Audits. The ratings were on a 1 to 10 scale, where 1 meant very unlikely and 10 meant very likely. The results are presented in Figure 27.

Seventy-six percent of participants rate their likelihood to continue using at 8 or higher, with 42 percent giving a rating of 10. On average, participants rate their likelihood to continue participation at 8.1. The results for nonparticipants are much different. For example, only 34 percent of aware nonparticipants and 35 percent of unaware nonparticipants rate their likelihood of potential use at 8 or higher, and aware nonparticipants and unaware nonparticipants, on average, rate their likelihood of potential at 5.3 and 5.2, respectively. These results suggest that once a customer uses SAVEnergy Audits, the likelihood of continued use is relatively high.

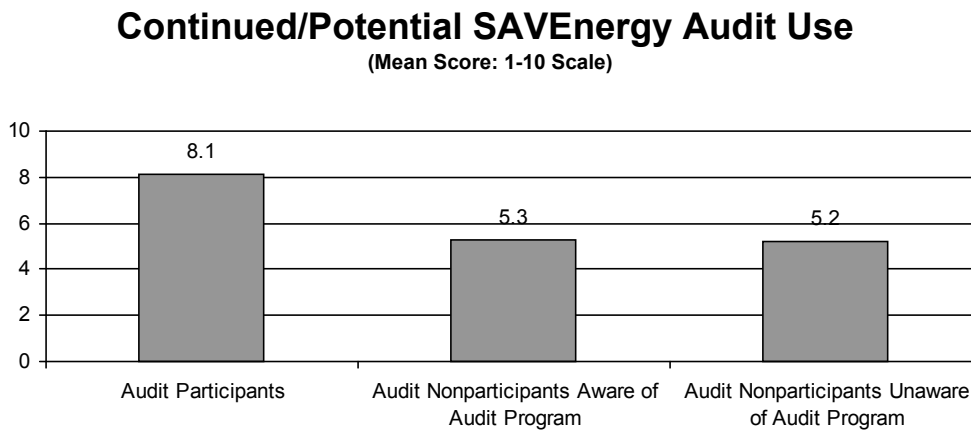


Figure 27 Continued and potential use of SAVEnergy Audits

## Reasons for using SAVEnergy Audits

To assess the reasons for using FEMP SAVEnergy Audits, we asked SAVEnergy Audit participants and aware SAVEnergy Audit nonparticipants to rate the level of influence that various reasons have in the decision to use SAVEnergy Audits. The ratings were on a 1 to 10 scale, where 1 meant not at all a reason and 10 meant a very influential reason. The results for participants and nonparticipants are presented in Figure 28.

Participants rate reducing energy use as the most influential reason. Eighty-nine percent of participants rate the influence of this reason at 8 or higher, with 52 percent giving a rating of 10. On average, participants rate the influence of this reason at 8.8. Participants rate increasing productivity as the least influential reason. Forty-one percent of participants rate the influence of this reason at 8 or higher, with 15 percent giving a rating of 10. On average, participants rate the influence of this reason at 6.4.

Aware nonparticipants are similar to participants in that they also rate reducing energy use as the most influential reason and increasing productivity as the least influential reason. Eighty-three percent of aware nonparticipants rate the influence of reducing energy use at 8 or higher, with 56 percent giving a rating of 10. On average, aware nonparticipants rate the influence of this reason at 8.8. Forty-six percent of aware nonparticipants rate the influence of increasing productivity at 8 or higher, with 25 percent giving a rating of 10. On average, aware nonparticipants rate the influence of this reason at 6.7.

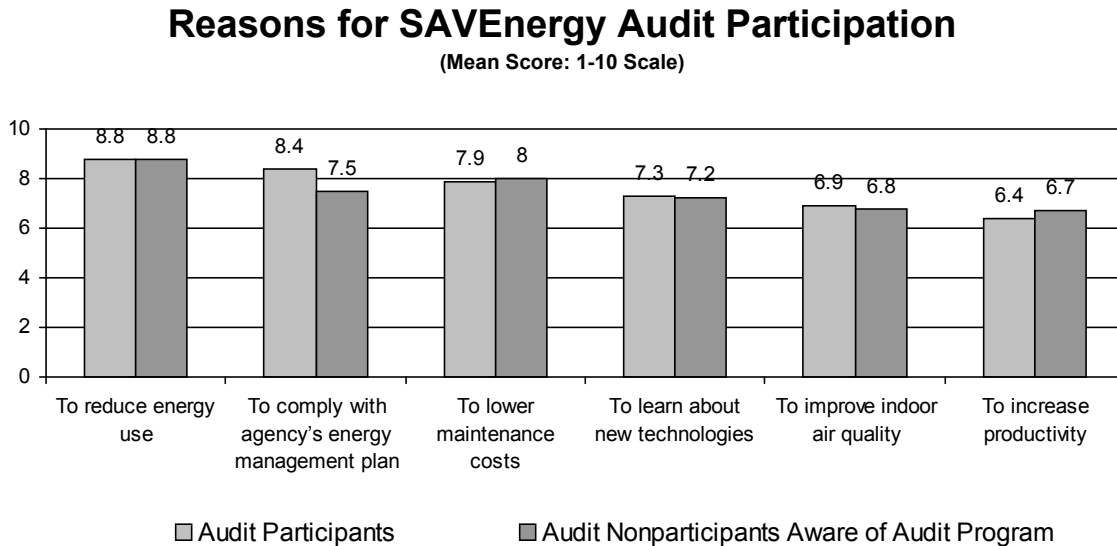


Figure 28 Reasons for using SAVEnergy Audits

## Ease in having a SAVEnergy Audit performed

To assess the ease of using SAVEnergy Audits, we asked SAVEnergy Audit participants and aware SAVEnergy Audit nonparticipants to rate how difficult or easy they think it is to have a SAVEnergy Audit performed. Respondents could give the following five ratings: very difficult, somewhat difficult, neither easy nor difficult, somewhat easy, or very easy. The results are presented in Figure 29.

Forty-four percent of aware SAVEnergy Audit nonparticipants think that it is somewhat difficult (36%) or very difficult (8%) to have a SAVEnergy Audit performed. The level of difficulty expressed by participants is lower (as one would expect given their experience with the program). Only 19 percent of SAVEnergy Audit participants think that it is somewhat difficult (18%) or very difficult (1%) to have a SAVEnergy Audit performed.

### Ease of Audit Participation

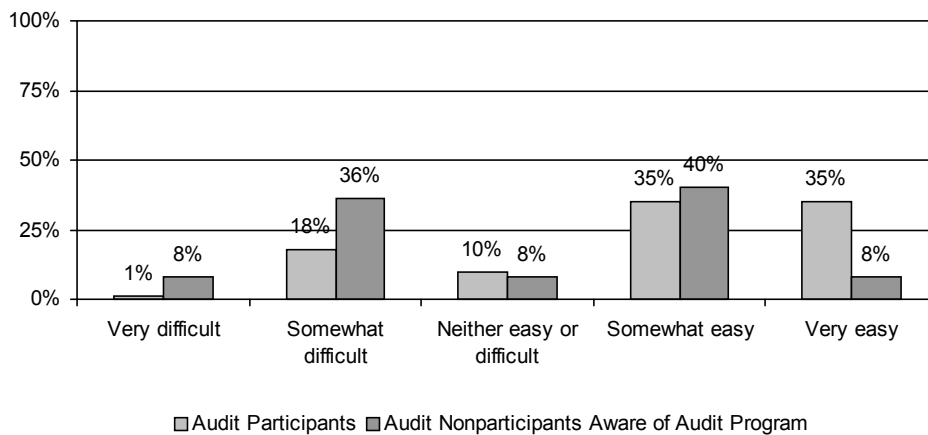


Figure 29 Ease of using the SAVEnergy Audit program

## Barriers to using SAVEnergy Audits

To assess the barriers to using FEMP SAVEnergy Audits, we asked participants and aware nonparticipants to rate the level of influence that various barriers have to the use of FEMP SAVEnergy Audits. The ratings were on a 1 to 10 scale, where 1 meant not at all a barrier and 10 meant a very substantial reason. The results for participants and nonparticipants are presented in Figure 30.

The average rating given by participants was less than 5 for 9 of the 10 barriers addressed by the survey. Participants rate lack of funding to implement any audit recommendations as the most substantial barrier. Fifty-seven percent of participants rate the influence of this barrier at 8 or higher, with 32 percent giving a rating of 10. On average, participants rate the influence of this barrier at 7.2. Participants rate dealing with the audit process as

the least substantial barrier. Sixty-three percent of participants rate the influence of this barrier at 3 or lower, with 36 percent giving a rating of 1. On average, participants rate the influence of this barrier at 3.2.

The average rating given by aware nonparticipants was less than 6 for 9 of the 10 barriers addressed by the survey. Aware nonparticipants rate lack of funding to implement any audit recommendations as the most substantial barrier. Sixty-two percent of aware nonparticipants rate this barrier at 8 or higher, with 42 percent giving a rating of 10. On average, aware nonparticipants rate the influence of this barrier at 7.5. Aware nonparticipants rate the possibility that their organization might move from the building as the least substantial barrier. Seventy-one percent of aware nonparticipants rate the influence of this barrier at 3 or lower, with 56 percent giving a rating of 1. On average, aware nonparticipants rate the influence of this barrier at 3.1.

### Barriers to SAVEnergy Audit Participation

(Mean Score: 1-10 Scale)

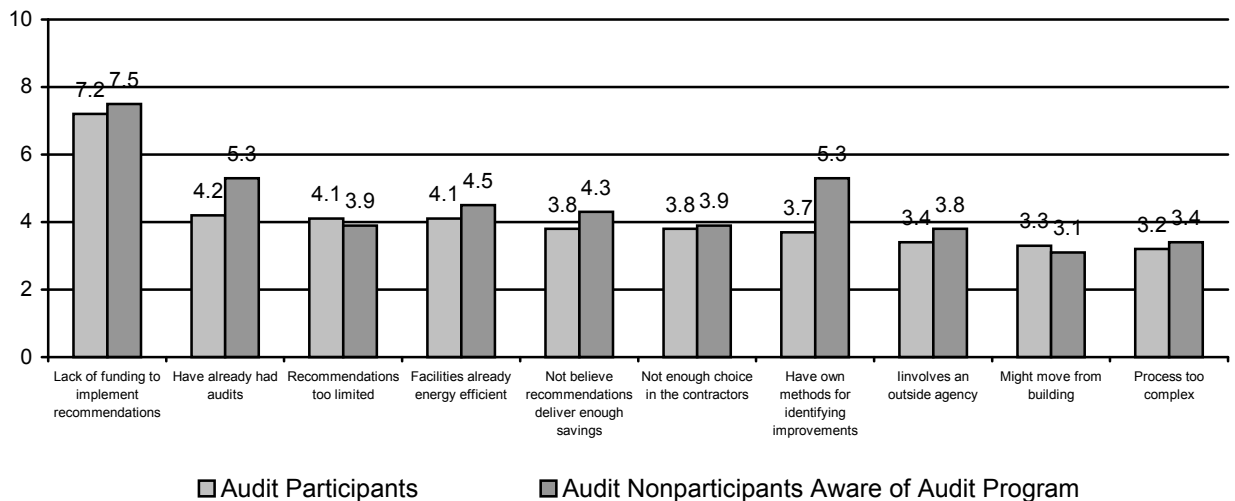


Figure 30 Barriers to using SAVEnergy Audits



## Recommendations

- Continue successful efforts to maintain awareness and use of FEMP SAVEnergy Audits. These efforts should utilize more extensive, ongoing customer follow-up contact because once a federal agency becomes a SAVEnergy Audits participant, the probability that they will continue to participate is very high. This contact can help maintain the use of SAVEnergy Audits as part of the agency planning process.
- Continue successful efforts at ensuring that the SAVEnergy Audit program is easy to use. Reduce the impact of hassle and cost barriers, where possible.
- Work with agencies to increase awareness of FEMP funding programs and services, as lack of funding to take the recommended actions is the most substantial barrier to using FEMP SAVEnergy Audit program.
- Marketing for the SAVEnergy Audit program should highlight the program's ability to (1) identify ways to reduce energy consumption and (2) comply with agency energy management plans.
- Target program marketing materials at energy or environmental staff and specialists; facility-related managers, administrators, supervisors; and engineers.
- Conduct more in-depth customer evaluations that focus specifically on obtaining more detailed information on the barriers to using SAVEnergy Audits and the ways that these barriers can be overcome. This information can then be used by FEMP to develop and test operational designs and procedures to help eliminate these barriers. This can be accomplished through the use of focus groups or in-depth interviews with key participants and nonparticipants.



# 11. SAVEnergy Audit Process Issues

## Satisfaction with specific aspects of SAVEnergy Audit

Participants rated their level of satisfaction on a 1-10 scale with 6 different aspects of the SAVEnergy Audit service. Satisfaction with the knowledge and skill of the FEMP auditing team and the ease of understanding the written audit report both average 8.4. The practicality of the audit recommendations averages 8.1. These scores indicate significant levels of satisfaction with these aspects of the audit service.

Project follow-up and support from FEMP after the audit averages 7.1 and the amount of time from the audit request to the time when audit recommendations are finally delivered averages 6.8. Here respondents indicate that obtaining follow-up is often difficult and that the audit process simply takes too long. The way the audit addressed indoor air quality averages 6.5. It is important to note, however, that assessing indoor air quality is not a requirement of the current audit process.

### Satisfaction with Aspects of SAVEnergy Audits

(Mean Score: 1-10 Scale)

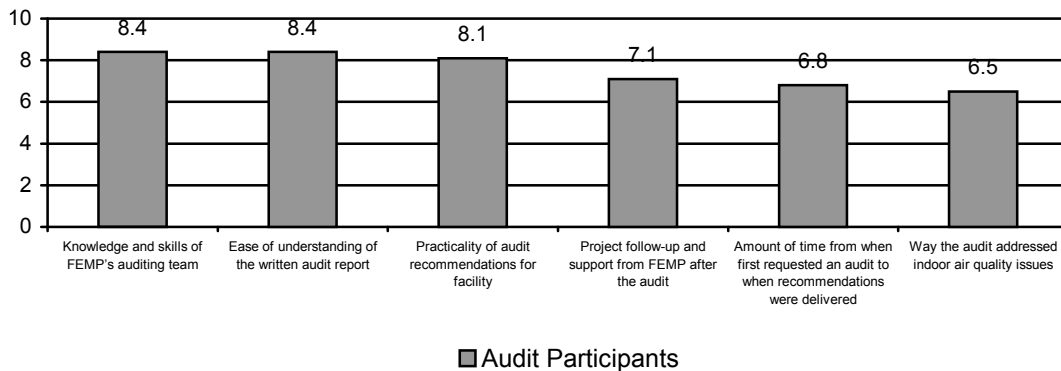


Figure 31 Satisfaction with aspects of the SAVEnergy Audit

## Recommendations

- Continue to capitalize on the opportunities that the SAVEnergy Audit program provides for marketing other FEMP services.
- Improve follow-up and ongoing support to customers after the audit is complete. Agencies want project support that is fast, efficient, and customized to their needs. FEMP should consider designing adaptive project follow-up support for (1) optional customized follow-up technical advice, analysis, and assistance and (2) a system for helping customers identify additional opportunities for savings that is linked to the audit service.
- Shorten the period of time that elapses between the time the audit is requested and the delivery of recommendations.
- If not currently implemented in each regional office, have SAVEnergy Audit participant data forwarded to regional ESPC managers. Regional ESPC managers can then review the SAVEnergy Audit report and recommendations for each participant to more effectively market ESPC services to SAVEnergy Audit participants.