

Market Progress Evaluation Report
Energy Ideas Clearinghouse

prepared by

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Final

Energy Ideas Clearinghouse

Market Progress Report

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Table of Contents

Executive Summary	ES-1
Staff Interviews.....	ES-1
Empirical Analysis of the Inverted Pyramid Approach.....	ES-3
Database Analysis.....	ES-4
Program Characterization	ES-5
Marketing Activities During 1999.....	ES-6
Current User Analysis.....	ES-6
Nonuser Analysis.....	ES-7
Online Survey	ES-8
Conclusions.....	ES-9
Recommendations.....	ES-10
I. Introduction	I-1
II. Staff Interviews.....	II-1
Web Page	II-2
Customer Service.....	II-4
Fact Sheets	II-5
Listservs	II-6
Library	II-7
Empirical Analysis of the Inverted Pyramid Approach.....	II-7
III. Database Analysis.....	III-1
IV. Program Characterization	IV-1
Current EIC Services	IV-1
Staffing and Funding	IV-3
Marketing Activities During 1999.....	IV-5
Planned Marketing Activities for 2000.....	IV-7
V. Current User Analysis.....	V-1
Who Is Using the EIC Services?	V-2
Which EIC Services Are Used?.....	V-4
Use of Information.....	V-7
Marketing the EIC	V-16
VI. Nonuser Analysis.....	VI-1
Comparison to Current Users	VI-2
Awareness of the Energy Ideas Clearinghouse.....	VI-2
Sources of Energy Information.....	VI-4

Decision Making.....	VI-6
Use of the Web	VI-7
VII. Online Survey	VII-1
Response Rate.....	VII-1
Findings	VII-3
VIII. Conclusions and Recommendations	VIII-1
Conclusions.....	VIII-1
Recommendations.....	VIII-3
Appendix A. Survey Instrument	A-1
Nonuser Survey.....	A-1
Current User Survey	A-8
Appendix B. Online Survey Results	B-1

Tables and Figures

Executive Summary	ES-1
Figure ES-1 EIC Tiered Service Structure	ES-2
Figure ES-2 Total Web Site User Sessions	ES-4
Figure ES-3 Did the Clearinghouse Provide the Information Respondent Was Seeking?.....	ES-7
I. Introduction	I-1
II. Staff Interviews.....	II-1
Figure II-1 EIC Tiered Service Structure	II-1
Figure II-2 Total Web Site User Sessions	II-8
Table II-1 Percentage of Single Access User Sessions for Home Page	II-9
Figure II-3 Web Site User Sessions Excluding Home Page.....	II-10
Figure II-4 Estimated Number of EIC Web Page Unique Users.....	II-11
Table II-2 Average Number of User Sessions per User (1999).....	II-11
Table II-3 Number of EIC Hotline Cases and Clients.....	II-12
Table II-4 Number of EIC Hotline Cases and Clients.....	II-13
Figure II-5 1998-1999 Staffing Requirements for Hotline Inquiries	II-14
Table II-5 1998-1999 Hotline Reply by Type	II-14
III. Database Analysis.....	III-1
Figure III-1 Business Sector of Hotline Request	III-1
Table III-1 Type of Company Using Hotline Services	III-2
Table III-2 Source of EIC Referral for Individual Callers	III-2
Table III-3 General Topic of Hotline Inquiry.....	III-3
IV. Program Characterization	IV-1
Figure IV-1 WSU Clearinghouse Services Funding, Fiscal Year 2000	IV-4
Table IV-1 Number of 1998-1999 Hotline Inquiries for all Clearinghouse Information Services	IV-5
V. Current User Analysis.....	V-1
Table V-1 State of Hotline User.....	V-1

Table V-2 Predominant Business Types for Survey and in Database.....	V-2
Figure V-1 Position in Company	V-2
Table V-3 Years in the Energy Field	V-3
Figure V-2 Influence on Company’s Decision to Implement Energy-Efficient Practices or Equipment.....	V-4
Figure V-3 Percent of Respondents Using EIC Services.....	V-5
Figure V-4 Overall Satisfaction with EIC Services.....	V-6
Figure V-5 Usefulness of EIC Services	V-6
Figure V-6 Did the Clearinghouse Provide the Information Respondent Was Seeking?.....	V-7
Figure V-7 Uses of the Clearinghouse Information.....	V-8
Figure V-8 Cost and Energy Savings Resulting from the Clearinghouse Services.....	V-9
Figure V-9 Importance of Factors for Energy Related Decisions.....	V-9
Figure V-10 How Often Have You Made Changes to Your Business Practices as a Result of Energy Efficiency Information?.....	V-10
Table V-4 Top Three Sources for Energy Information.....	V-11
Table V-5 Most Valuable Trade or Professional Magazine.....	V-12
Table V-6 Reasons for Not Accessing the EIC Web Page.....	V-13
Figure V-11 Frequency EIC Web Page is Accessed	V-14
Figure V-12 Web Pages that Were Accessed	V-14
Figure V-13 Usefulness of EIC Web Pages.....	V-15
Table V-7 How Could the EIC Best Market Itself?.....	V-17
VI. Nonuser Analysis	VI-1
Table VI-1 Position in Company	VI-2
Table VI-2 Years in the Energy Field.....	VI-2
Figure VI-1 Awareness of the Energy Ideas Clearinghouse among Nonusers	VI-3
Table VI-3 Type of Services or Information Clearinghouse Offers (Nonusers)	VI-4
Table VI-4 Reason for Not Contacting the Clearinghouse (Nonusers).....	VI-4
Table VI-5 Top Three Sources for Energy Information for Nonusers.....	VI-5
Figure VI-2 Importance of Factors for Energy Related Decisions.....	VI-6

Figure VI-3 How Often Have You Made Changes to Your Business Practices as a Result of Energy Efficiency Information (Nonusers)? VI-7

VII. Online SurveyVII-1

Table VII-1 Percent Opening and Completing Survey.... VII-3

Table VII-2 Predominant Business Types VII-4

Table VII-3 Position in Company..... VII-4

Table VII-4 Frequency of Web Pages Accessed VII-4

Table VII-5 Web Pages Accessed VII-5

Table VII-6 Percent Reporting Web Page as “Somewhat or Extremely” Useful VII-5

Table VII-7 Overall Value of EIC Web Page..... VII-5

Table VII-8 Used EIC Information Once or More VII-6

Executive Summary

Since 1990, the Energy Ideas Clearinghouse (EIC or Clearinghouse) has served energy professionals in the Pacific Northwest by providing fast, centralized access to comprehensive and objective information and technical assistance on energy-related topics.

The Clearinghouse was originally funded by Bonneville Power Administration (Bonneville), which saw the need for a centralized source of energy related information as it entered the commercial and industrial demand-side management arena.

In 1997 the Northwest Energy Efficiency Alliance (the Alliance) began funding the program in support of its market transformation efforts. The Alliance hoped that the Clearinghouse could target its informational services to decrease at least two market barriers that limit the adoption of energy-efficient practices:

- Lack of awareness of how energy is used and the associated energy/non-energy benefits
- Search and acquisition costs of energy efficiency information.

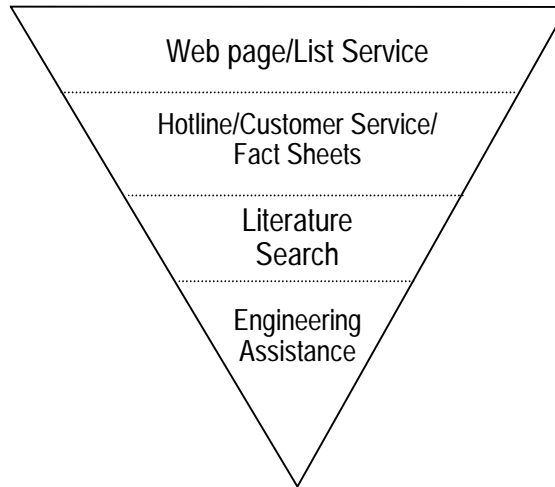
In our first Market Progress Report (September 1999), **quantec** completed a comprehensive analysis of the EIC, including interviews with program staff, an examination and analysis of the program database, surveys with current, prior, and nonusers of the Clearinghouse, and a Web site analysis. The purpose of this report is to take a closer examination of the “inverted pyramid approach” to information dissemination and to evaluate the changes that have occurred at the EIC during 1999.

Staff Interviews

One of the primary objectives of the EIC in 1999 was to streamline the task of information delivery so that the majority of clients could have their questions answered via low-cost electronic information, such as the Web page or listservice. Only the most technical and unique questions should be forwarded to the library or the engineers, the “deeper” tiers of the system. This “inverted

pyramid” or tiered service structure approach to information dissemination is illustrated in Figure ES-1.

Figure ES-1
EIC Tiered Service Structure



quantec conducted extensive interviews with EIC staff in December 1999 to evaluate the effectiveness of the tiered service structure. Participants in the interviews included the technical group, library staff, the Web team, customer service staff, and management.

Web Page. In the last year, an enormous amount of effort has gone into improving the EIC Web page to make it a more attractive, easy-to-use, comprehensive source of energy information. Most importantly, however, there have been significant improvements in the Energy Solutions Database (ESD). For example, substantial information about renewables, home energy efficiency, energy codes, and agricultural-energy issues have been added to the database. The ESD resources have also been expanded to include far more than “questions and answers” and now offer links to related resources. In addition, the EIC implemented the technology at the end of the year to capture and tabulate ESD queries to more easily determine what topics are receiving the most inquiries.

Customer Service. The customer service representatives felt that the improvements in the ESD provided them with a powerful tool to answer customer questions and allowed them to better

implement an inverted pyramid approach to information delivery. They did this by directing callers to the Web page and using the Web page as an initial resource. The Customer Service Representatives also pointed out that there was a “spillover” effect in that clients probably received information for more topic areas than they had anticipated, plus clients were also likely to continue to use the ESD as a future resource for energy information.

Fact Sheets. The EIC has only developed two new fact sheets during the last year. Customer Service Representatives reiterated their belief from last year that fact sheets provide a valuable tool for information dissemination.

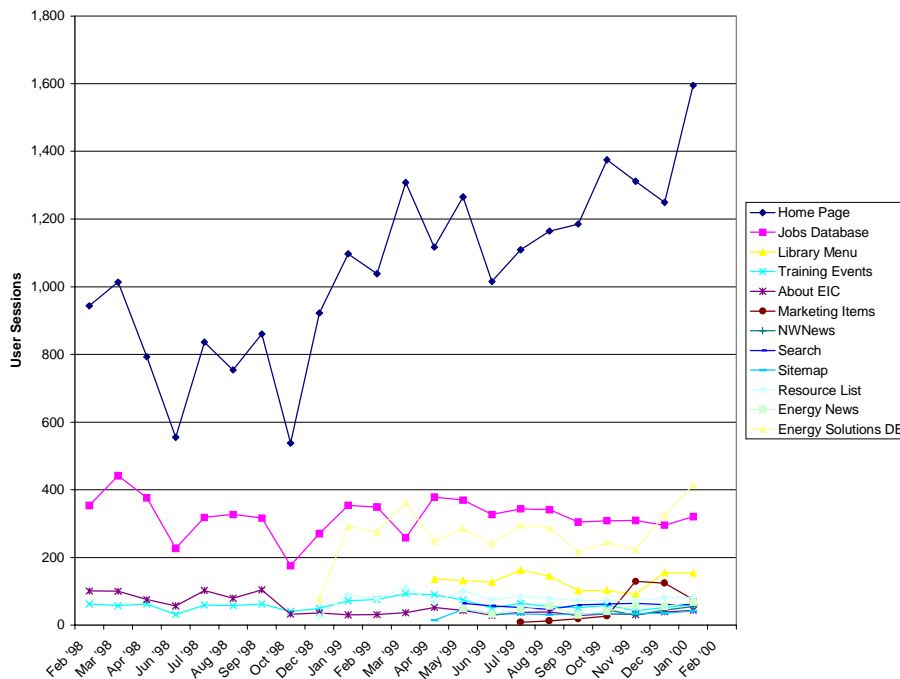
Listservs. The EIC currently manages five listservs targeted at agriculture specialists, local government, architects, general energy professionals, and employees/clients/contractors of the Northwest Energy Efficiency Alliance. The listservs have been aggressively marketed during the past year.

Library. The library staff reported that they had taken a significant step toward implementing the inverted pyramid approach by including URLs (Uniform Resource Locator, “Web addresses”) in the Energy Newsbriefs listservs. The library staff also reported that having the library catalog online has encouraged people to search electronically for information.

Empirical Analysis of the Inverted Pyramid Approach

Although the number of user sessions for the Home page increased dramatically from 1998 to 1999 (from an average of 910 per month to 1,186 per month), user sessions for the other pages remained flat between the two years. In addition, there remains a wide gap in user sessions between the Home page and the other pages (i.e., the Home page had many more user sessions than the other pages).

**Figure ES-2
Total Web Site User Sessions**



Although most users accessed the page only once a month, there was a group of users that were extremely loyal to the EIC page, returning four to seven times per month to look for new information.

The telephone hotline saw a substantial increase in use during 1999: hotline inquiries increased from 422 in 1009 to 657 in 1999, a **56% increase**. The number of clients also increased, from 297 in 1998 to 473 in 1999 (a **59% increase**).

In addition to attracting *more users*, the EIC was also extremely effective in attracting *new users* in 1999. For example, 390 (82%) of the 473 callers in 1999 were first time callers; this was the highest percentage of first time callers since 1992. This was also the greatest absolute number of new callers since 1995.

Database Analysis

quantec examined the EIC database to look for additional trends in telephone hotline use during the past few years. One significant trend that continued in 1999 was the increasing frequency of calls

concerning the residential sector. In 1996, only 3% of the hotline calls were residential inquiries; by 1999, this percentage had steadily increased to 34%.

Individual users appear to hear about the EIC primarily through their utilities (30%), the media (17%), WSU/EEP staff (10%), the Internet (6%), and government (6%). An increased effort to market to utilities and their publications may have contributed to this increase in awareness and use among residential callers (see the marketing activities section).

Callers contacted the Clearinghouse hotline for information on many different topics relating to energy use. The most common questions concerned Heating, Ventilation, and Cooling (HVAC) (15%) and codes/standards/laws (11%). Other common topics included building envelopes (7%), general energy use (7%), lighting (5%), renewable resources (5%), and appliances (5%).

Program Characterization

The Clearinghouse currently offers two primary services: a hotline and a Web site.

Customers served by utilities in the Pacific Northwest can call (toll-free), e-mail, or fax questions concerning energy use to the Clearinghouse hotline. Topics include (but are not limited to) motor systems, HVAC, industrial electrotechnologies, life cycle cost analysis, computer simulation, energy policy, agricultural energy issues, and cogeneration. Responses to questions, usually within eight hours, can take a number of forms, including a literature search, a publication or fact sheet, product or pricing information, engineering assistance or analysis, or referrals to other energy programs, services, or resources.

The Web site has incorporated many of the services that were previously on the BBS, and some new services as well, including energy-related job listings, a calendar to search for energy conferences, meetings, or upcoming events, links to energy software, publications, and tools for energy professionals, bulletins, newsgroups, and current news about energy efficiency nationwide, links to other Web sites with energy information, an Energy Solutions Database.

Marketing Activities During 1999

EIC conducted a number of marketing activities during the past year, including a media packet, presentations at conferences, Targeted Intervention Projects, posting EIC information on Listservs, direct marketing of listservs, reciprocal Web linking, search engine registration, and creating the energyideas.org URL.

The most visible impact was the inclusion of EIC materials in several utility publications. For example, Idaho Power, Montana Power, and several co-ops carried technical articles that were written by the EIC staff.

Current User Analysis

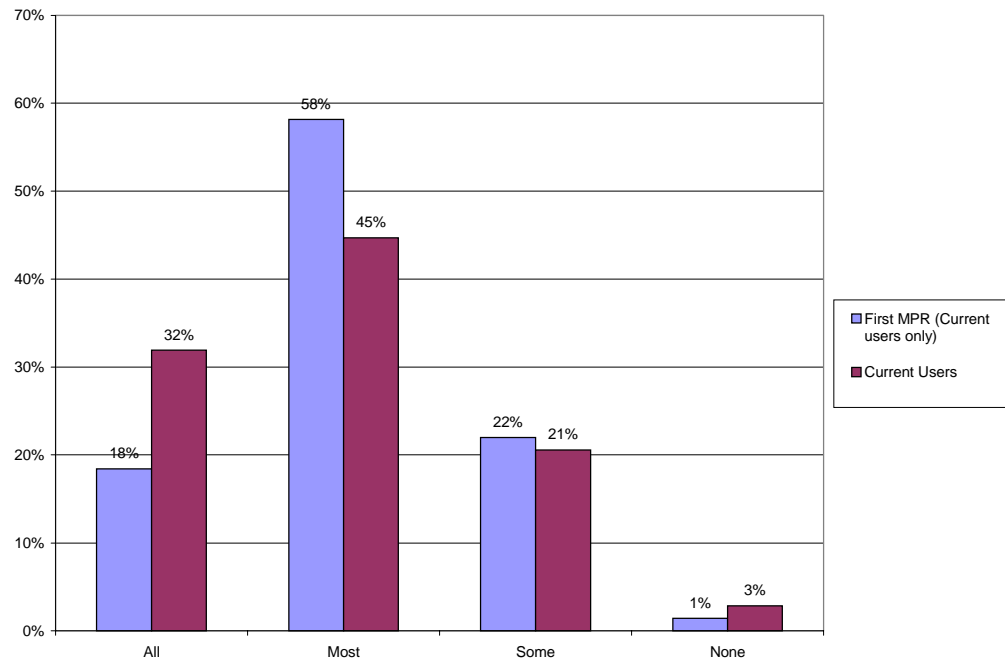
In order to better understand who is using the Clearinghouse services and how the information is being used, **quantec** conducted interviews with current (past year) users of the Clearinghouse.¹ A total of 150 surveys were conducted.

There were a number of findings from the surveys, including:

- The EIC users held a wide range of positions within their companies.
- Hotline users had a substantial amount of experience in the energy field
- Respondents had a substantial amount of influence on their companies' decisions to implement energy efficient practices or equipment.
- EIC users were satisfied with the Clearinghouse services. Overall, 82% of respondents were either "somewhat" or "extremely" satisfied with the EIC services.
- EIC users appeared satisfied that the EIC was answering their questions: 77% of the users said the Clearinghouse provided "all" or "most" of the information they were seeking (Figure ES-3).

¹ EIC callers from January 1, 1999, through February 7, 2000, were included in the analysis. Approximately 85 cases concerning a cooperative project with the Consortium for Energy Efficiency on the procurement tool kit were considered outside of the normal EIC case profile and are not included in the analysis.

Figure ES-3
Did the Clearinghouse Provide the Information
Respondent Was Seeking?



→ A majority of respondents reported that they made use of the information they received. Over half of the respondents reported to have used technical data to support a decision (66%) and have lent/copied materials for others (57%).

Nonuser Analysis

In order to better understand why more energy decision-makers aren't using the EIC services, **quantec** conducted a survey with 101 energy professionals from five quota groups: utilities, consulting/engineering firms/ESCOs, commercial building operators/energy decision makers, industrial plant managers/energy decision makers, institutional (government, schools, and research labs). The sample was selected by contacting professional organizations and magazine mailing lists.

There were a number of findings from the nonuser analysis, including:

→ Only 15% of the respondents were aware of the EIC.

- Nonusers tended to focus on the same sources of energy information as the users.
- Nonusers tended to be less “Web savvy” than the current users: only 13% of the nonusers mentioned the Internet as a top source of energy information, compared to 25% of the current users. This difference could be caused by the nature of the companies; the nonuser surveys contained a higher percentage of commercial and industrial energy decision-makers, and these people may be less dependent on the internet than utility, consulting, engineering, and institutional workers who comprised most of the user surveys.
- Nonusers of the Clearinghouse, like the current/prior users, reported that factors other than cost were important when making energy-related decisions. For example, nonusers reported that reliability (90%) and energy efficiency (86%) were more important than operating cost (78%), first cost (64%), and payback (63%).
- Like the current and prior users, a great majority (89%) of the nonusers had access to the Web either from their desk at work (75%) or from another desk at work or at home (14%).

Online Survey

A subset of questions from the online survey was developed as an online questionnaire and placed on the EIC Web page. As of April 1, 2000, 168 respondents, or approximately 3% of the visitors to the page, had completed the survey.

There were a number of interesting findings from the online survey, including:

- The EIC Web page is attracting users from the same business types as the hotline.
- The Web users, however, tended to have fewer managers (29%) than the hotline users (39%).
- The respondents to the Web survey, like the telephone survey, were most likely to visit the energy links pages (79%) or energy solutions database (68%) after visiting the Home page. In addition, these pages were identified

as the most useful pages, as approximately half reported that the links page (61%) and energy solutions database (58%) were “somewhat” or “extremely” useful.

- Web respondents reported that they made use of the information from the EIC. For example, 49% used technical data to support a decision, 37% demonstrated a technique to a client, and 35% included technical data in a report proposal.
- Respondents were generally satisfied with the speed (4.0 out of a possible 5.0), appearance (3.8), and overall value of the information (3.9) on the EIC Web page.

Conclusions

EIC Customers are satisfied with the EIC service. As in the first Market Progress Report and earlier evaluations, users of the EIC continued to be satisfied with the service they received.

EIC is Generally Reaching its Target Market. The EIC users tended to be senior energy decision-makers: 40% of the respondents reported that they were “program or department managers” and 60% of the respondents had over ten years of experience in the energy industry.

Respondents Put the EIC Information to Use. Respondents reported that they used the EIC information: 66% of the respondents reported to have used technical data to support a decision and *34% said the EIC services led to “a lot” or “some” energy savings.*

Hotline Calls Increased Substantially in 1999. The number of hotline cases increased from 422 inquiries in 1998 to 657 inquiries in 1999, a 56% increase. The number of clients also increased, from 297 in 1998 to 473 in 1999 (a 59% increase). In addition, 82% of the 1999 callers were first time callers, the highest percentage of first time callers since 1992.

Use of the Web Page Has Remained Flat in 1999. Although user sessions on the Home page increased from an average of 910/month in 1998 to 1,186/month in 1999, user sessions for the other pages (including the Energy Solutions Database) showed no increase in 1999.

Lack of Awareness Remains the Primary Reason Nonusers Don't Use the EIC Service. Awareness of the Energy Ideas Clearinghouse was, by far, the largest market barrier to increased use of the EIC services.

The Tiered Service Structure Is Generally Working. The statistics indicate that the tiered service structure is generally working and that many of the inquiries into the EIC are fielded by the “frontline” services, such as the Web page and the customer service representatives.

Recommendations

Maximize Energy Newsbriefs. Current users and nonusers of the EIC surveys all had a high interest in receiving Energy Newsbriefs. The EIC should continue to increase the number of recipients of Energy Newsbriefs by encouraging users to sign up on the Web page and by asking all EIC callers if they would like to be added to the service.

Remind Callers about the EIC Web Page. All callers should be reminded about the EIC Web page and encouraged to visit it. The new URL (energyideas.org) should also help increase user sessions.

Attempt to Populate the Database Based on Queried Topics. Now that the EIC has developed a system for capturing queries in the ESD, it is important to periodically summarize these into topic areas and to make efforts to adequately populate each area.

Attempt to Evaluate User Satisfaction with the ESD. While the number of cases may measure the quantity of responses to user inquiries, it does not capture the quality of these responses in the opinion of the user.

Make it Easy to Submit Cases (Queries) from the Web Page. Users should be able to check “have EIC do a custom search” either from the Home page or after an ESD query. The option of submitting cases (queries) from the ESD is most important, of course, for instances where the user finds “no matches” for the query.

Update all Web Link Resources. While the inclusion of links to Web resources has made the ESD far more comprehensive and

useful, a check revealed a number of either broken links or active links to publications that no longer carried the article of interest.

Save Formatted Hotline Responses for the ESD. If the customer service representatives could save all materials in a temporary folder for at least a month, then the formatted documents could be more easily loaded into MS Frontpage and prepared for Web publishing.

Consider Partnering with Other Web Pages. The EIC Web page contains a great deal of content that is valuable for users and reinforce the “stickiness” (return rate) of users. The EIC might want to consider partnering with other energy Web pages to exchange not only links, but content.

Keep the Energy Links Page. The Energy Links page was rated as “somewhat” or “extremely” useful by 75% of the telephone survey respondents that accessed it, higher than any of the other Web pages.

Continue to Review and Update Reciprocal Links. While maintaining the links page, the EIC should also continue to investigate and set up reciprocal links (crosslinks) with other Web pages.

Increase Awareness of the EIC to Continue Decreasing Market Barriers. For EIC users, the program has been extremely effective at increasing awareness of energy efficiency information and decreasing acquisition for this information. If the EIC could reach more people, it could further raise awareness about energy efficiency, thereby more effectively decreasing these market barriers.

Use Low Cost Marketing to Reach the Target Markets. The EIC should continue to use low cost marketing methods – such as press releases and “freebie” inserts in energy publications – as well as reasonably priced advertising in targeted publications.

Evaluate the Role for Fact Sheets. The customer service representatives believed that the fact sheets were extremely helpful in the implementation of the inverted pyramid structure.

Seek Additional Assistance for Projects. Additional staff time would allow management to delegate weekly tasks – such as

updating the Web page – and periodical administrative tasks, such as entering e-mail addresses into a database, freeing up time to focus on strategic marketing and implementation tasks.

I. Introduction

Since 1990, the Energy Ideas Clearinghouse (EIC or Clearinghouse) has served energy professionals in the Pacific Northwest by providing fast, centralized access to comprehensive and objective information and technical assistance on energy-related topics.

The Clearinghouse was originally funded by Bonneville Power Administration (Bonneville), which saw the need for a centralized source of energy related information as it entered the commercial and industrial demand-side management arena.

In 1997 the Northwest Energy Efficiency Alliance (the Alliance) began funding the program in support of its market transformation efforts. The Alliance hoped that the Clearinghouse could target its informational services to decrease at least two market barriers that limit the adoption of energy-efficient practices:

- Lack of awareness of how energy is used and the associated energy/non-energy benefits
- Search and acquisition costs of energy efficiency information

The Clearinghouse currently offers two primary services: a hotline and a Web site.²

Customers served by utilities in the Pacific Northwest can call (toll-free), e-mail, or fax questions concerning energy use into the Clearinghouse hotline. Topics include (but are not limited to) motor systems, HVAC, industrial electrotechnologies, life cycle cost analysis, computer simulation, energy policy, agricultural energy issues, and cogeneration. Responses to questions, usually within eight hours, can take a number of forms, including:

- A literature search

² The EIC staff has initiated a number of other projects, including a Targeted Intervention Program (TIP) to provide facility managers and residence hall administrators' with effective information about the safety and energy efficiency of halogen torchieres. This project, however, is not evaluated in this report.

- Publication or fact sheet
- Product or pricing information
- Engineering assistance or analysis
- Referrals to other energy programs, services, or resources

In our first Market Progress Report, completed in September 1999, **quantec** completed a comprehensive analysis of the EIC, including:

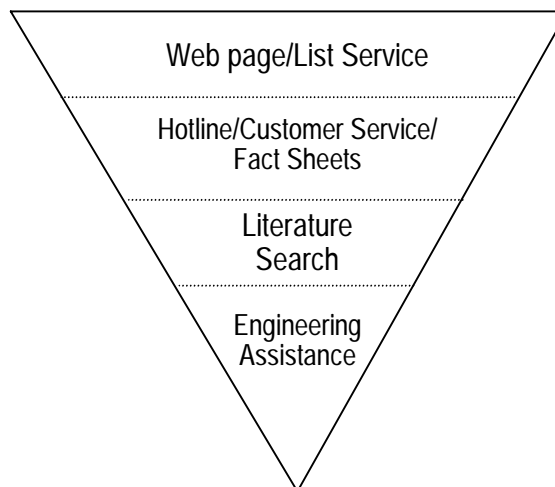
- Interviews with program staff
- An examination and analysis of the program database
- Surveys with 150 current users, 100 prior users, and 100 nonusers of the Clearinghouse
- A Web site benchmarking analysis
- An analysis of Web site statistics (Web trends reports)
- Three Web page focus groups

The purpose of this report is to take a closer examination of the “inverted pyramid approach” to information dissemination and to evaluate the changes that have occurred at the EIC during 1999. For this purpose, information from staff interviews, database analysis, Web statistics, and current and prior user surveys is examined.

II. Staff Interviews

One of the primary objectives of the EIC in 1999 was to streamline the task of information delivery so that the majority of clients could have their questions answered via low-cost electronic information, such as the Web page or listservice. Clients with more customized needs could then contact the customer service representatives, who would attempt to answer the query through either a fact sheet or search of the Energy Solutions Database (if the client had not already done so). Then, only the most technical and unique questions would be forwarded to the library or the engineers, the “deeper” tiers of the system. This “inverted pyramid” or tiered service structure approach to information dissemination is illustrated in Figure II-1.

Figure II-1
EIC Tiered Service Structure



quantec conducted extensive interviews with EIC staff in December 1999 to evaluate the effectiveness of the tiered service structure. Participants in the interviews included:

- Technical group (Rob Penney)
- Library staff (Angela Santamaria and Michaela Murphy)
- Web team (Mark Arntson)

- Customer service staff (Cindy Wills, Jennifer Carter, and Vicki Zarrell)
- Management (Linda Witham)

Interviewees were asked about how they and their department coworkers had implemented the “inverted pyramid” approach during the past year. In addition, each participant in the interview was asked for feedback on how the implementation of the approach could be improved.

Web Page

In the last year an enormous amount of effort has gone into improving the EIC Web page to make it a more attractive, easy-to-use, comprehensive source of energy information. There have been a number of improvements to the page during the past year, including:

- A simpler, less text-heavy home page to make it easier to learn about the EIC and navigate around the site
- The inclusion of updated local and national energy news on the home page to bring users back to the page (archives are also maintained)
- A new utility resources page with links to Northwest utilities and other utility resources (e.g., EPRI)
- A glossary page to allow users to look up definitions of energy words
- Downloadable text for bill stuffers and newsletter shorts (i.e., utilities could use the information in their newsletters and credit the EIC as the source)
- An EIC marketing packet with articles, ads and announcements about EIC have been added to the “About the EIC” page
- The Library page was expanded to include Energy News, Utility Resources, the EIC listservs list, Marketing, and links to the related resources pages
- A new EIC Publications page where users can see a list of publications and, if desired, send an e-mail to order them by mail or fax

- A new URL, energyideas.org, to help with the branding of the EIC page by making it easier to remember the address and tell others about.

Most importantly, however, there have been significant improvements in the Energy Solutions Database (ESD). For example, approximately 500 resources (63%) of the 791 ESD resources were added after September 1999.³ Many of these records included information about renewables, home energy efficiency, energy codes, and agricultural-energy issues. The ESD resources have also been expanded to include far more than “questions and answers” and now offer links to related resources such as articles and fact sheets, Northwest Energy Efficiency Alliance ventures, organizations, reports and documents, and general Web resources.

In addition, the EIC implemented the technology at the end of the year to capture and tabulate ESD queries. This will help the staff more easily determine what topics are receiving the most inquiries.

Capturing queries should also help the EIC determine which areas of the ESD could be better populated. Currently, there is no formal system in place to make this decision; instead, when an EIC employee believes they have good information for the ESD, he or she can check a radio button in the hotline database that “flags” the case and indicates the information should be added to the ESD.

A few times a month, EIC staff review the database to convert the material for the Web. This is normally a multi-step process:

1. Search the hotline database for cases with the ESD flag set to “on”
2. Evaluate if enough information is contained in the request to post on the ESD (i.e., is the information too client specific)
3. Copy information to MS Frontpage, edit for grammar and language, remove references to client, and format page
4. Create links to any resources that may appear on the Web
5. Send to technical staff to review

³ The ESD had a total of 791 resources as of January 21, 2000.

6. Upload to the Website and turn the flag to “off” in the hotline database.

A number of EIC staff review the “flagged” cases, including Vicki Zarrell, David Gaw, Linda Witham, and Lynn Carey. Normally staff perform these functions as they have time. In addition, topics to be uploaded are discussed and prioritized at the “10 at 10” staff meetings.

EIC staff will also periodically conduct research on a specific area that may be lacking or of specific interest. For example, after an article appeared in a major publication about radiant heating, the EIC placed information on this technology in the ESD.

Customer Service

The customer service representatives felt that the improvements in the Energy Solutions Database provided them with a powerful tool to answer customer questions and allowed them to better implement an inverted pyramid approach to information delivery. They did this in two ways:

- ***Directing callers to the Web page.*** Callers that had not searched the Web page would be led through the process of how to search for information on the ESD.
- ***Using the Web page as an initial resource.*** For customers without Web access, the customer service representatives would often use the ESD as an important initial resource, printing out pages and mailing or faxing them to the client.

The Customer Service Representatives also pointed out that many clients thought of additional questions when they saw the topic list and continued to search for information. Thus, there was a “spillover” effect in that clients probably received information for more topic areas than they had anticipated.

In addition, clients were also likely to continue to use the ESD as a future resource for energy information. EIC clients, in other words, were now more “self-reliant,” and future queries were more likely to be conducted electronically, in the inverted pyramid model. In the past, the EIC queries were nearly all submitted over the telephone and often passed through the deeper “tiers” of EIC staff.

For first time callers, however, customer service was less inclined to simply refer people to the Web. While they might point them in the direction of the Web, they might also submit a case to a technical lead in order to show good customer service. In a few cases, however, the ESD answered enough of the customers' questions and the case could be closed. In other cases only a small amount additional information was needed.

Fact Sheets

The EIC has only developed two new fact sheets in the last year, both as a result of the TIPS project on Torchieres. While these two fact sheets are available at the EIC Web site, the 52 other fact sheets have been saved in pdf format but have not been uploaded to the site.⁴

Customer Service Representatives reiterated their belief from last year that fact sheets provide a valuable tool for information dissemination. They mentioned, however, that the current set of fact sheets is in a state of "flux" and that they are evaluating which are current, which may need some "tweaking" to update, and which should simply be discarded. Part of this decision is also based on what other information is available; if other sources of information are readily available and the fact sheet requires major revisions, then it will most likely be discarded.

Although the EIC has not developed new fact sheets, the WSU Energy Program is currently developing 40 new fact sheets for the Pacific Northwest National Laboratory (PNNL) and 12 industrial TIP sheets for the Western Area Power Administration (WAPA). Research was conducted to evaluate what information is readily available (and free) elsewhere and which fact sheets could fill in the "gaps." A scoring system was then developed based on specific criterion, and the topics were ranked. Some of the fact sheets will be created through primary research, while others will be developed (and give credit to) existing sources of information. The EIC staff was uncertain if they had permission to distribute these fact sheets through the EIC program.

⁴ The site does still contain a list of available fact sheets and an order form, however. In addition, some of the fact sheets may be found on other sites (and be identified through links in the ESD).

Listservs

The EIC currently manages five listservs⁵:

- ***EnergyAG*** – Energy AG highlights selected articles just received in the WSU Energy Library and describes what is new and interesting in the fields related to energy efficiency and agriculture. The list includes links to each resource. (16 subscribers)
- ***LGEnergy*** – This listserv shares news and information on energy efficiency of interest to local governments in the Pacific Northwest. The EIC provides references to current articles, Web sites, and publications that relate to local government and energy efficiency. Messages are sent about twice a month. (50 subscribers)
- ***Energy Newsbriefs*** – Energy Newsbriefs are weekly profiles of new information that the WSU Energy Library received in energy-related professional journals. The Newsbriefs promote awareness of emerging trends of potential interest to energy professionals. (214 subscribers)
- ***Alliance*** – This listserv provides northwest utility staff, Northwest Energy Efficiency Alliance partners, and other interested parties with timely information about Alliance-sponsored activities. It is organized into three categories:
 - Alliance1 – general news about the Alliance, including information about new reports, evaluations, and publications (422 subscribers)
 - Alliance2 – venture activity news, information about events (135 subscribers, some overlap with Alliance1)
 - Alliance3 – a specialized list for communicators of market transformation organizations nationwide (37 subscribers)
- ***AIACOTE*** – This listserv serves the American Institute of Architects and Committee on the Environment, and functions mostly as a communication resource for

⁵ Subscriber counts are as of January 21, 2000.

committee members as opposed to a public listserv.
(18 subscribers)

The EIC has also made substantial efforts to promote their listservs. For example, the EIC typed in more than 250 e-mail addresses from an employee directory of an agricultural-related cooperative extension program and then did a direct mailing to the group announcing the EnergyAG listserv.

Library

The library staff reported that they had taken a significant step toward implementing the inverted pyramid approach by including URLs (Web addresses) in the Energy Newsbriefs listservs. Because approximately half of the articles are now accessible online, there had been a decrease in the number of newsbrief requests that the EIC library staff must handle. In addition, on-line availability eliminates the copyright issues that the library previously struggled with (i.e., now the library can simply e-mail the URL for the article of interest, as opposed to having to copy and mail the article, which raised copyright questions). Users are also more satisfied since they can immediately view an article of interest.

The library staff also reported that having the library catalog online has encouraged people to search electronically for information. They indicated that work is underway to develop a national catalog of library items so that far more many resources will be available through electronic searches and interlibrary loans.

Empirical Analysis of the Inverted Pyramid Approach

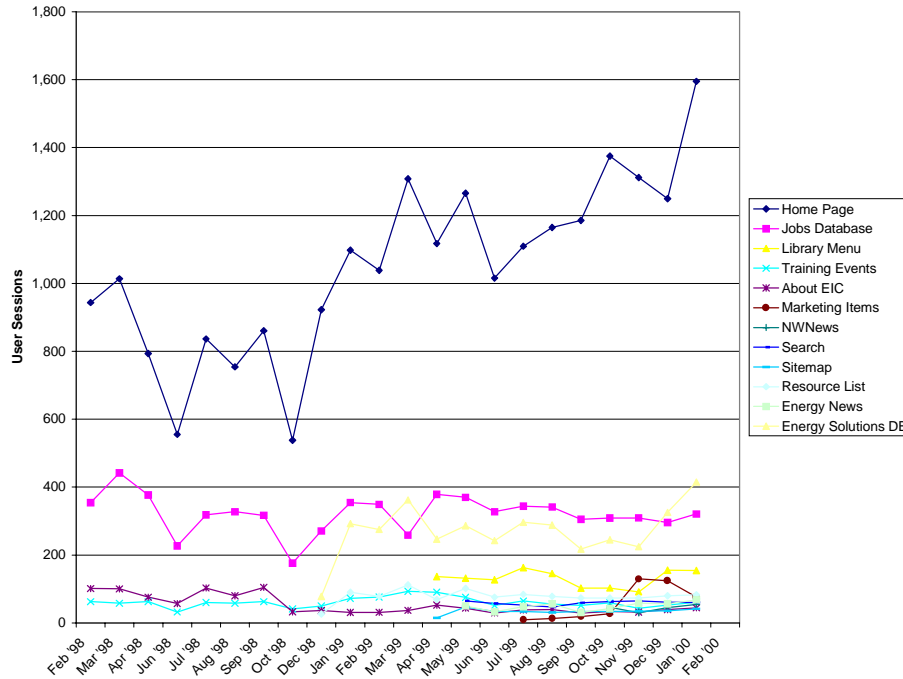
The statistics indicate that the tiered service structure continued to be effective in 1999 and that many of the inquiries into the EIC are fielded by the “frontline” services, such as the Web page and the customer service representatives.

Web Page Statistics

Although the number of user sessions for the Home page increased dramatically from 1998 to 1999 (from an average of 910 per month

to 1,186 per month), user sessions for the other pages remained flat between the two years.⁶ (Figure II-2.)

Figure II-2
Total Web Site User Sessions



In addition, there remains a wide gap in user sessions between the Home page and the other pages. Evidence of this is presented in Table II-1, which shows that many users of the Home page – up to 65% – did not access other EIC Web pages. In addition, the average user session length was between four and five minutes, indicating that many users may only spend one to two minutes on the Web site. This indicates that either the Home page is not drawing users further into the Web site, or that previous users are simply returning to the Home page to see if there are any changes or interesting news stories.

⁶ Results for missing months from the 1998 Web trends report were extrapolated. In addition, known international user sessions are not included in these figures.

Table II-1
Percentage of Single Access User Sessions for Home Page

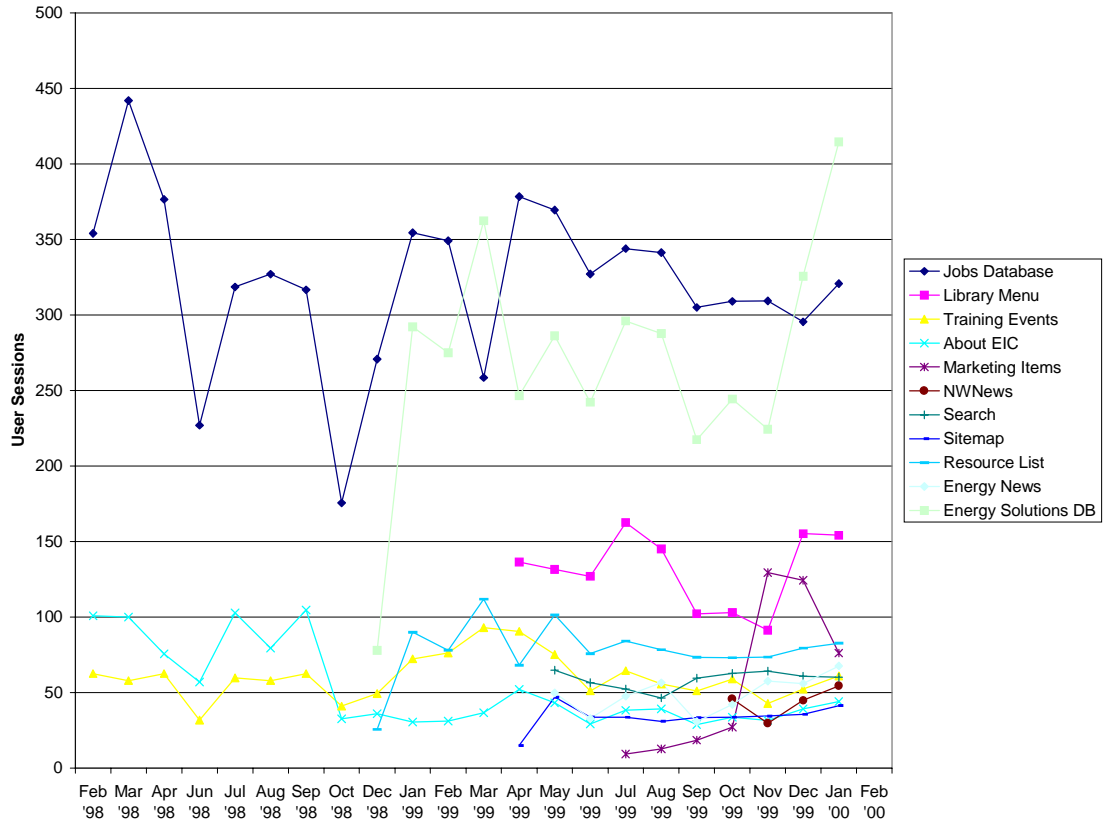
Month	Total Home Page User Sessions*	Percentage that did Not Access Other Pages
January	1,097	46%
February	1,038	34%
March	1,308	45%
April	1,117	48%
May	1,266	57%
June	1,015	48%
July	1,109	44%
August	1,165	49%
September	1,185	65%
October	1,375	64%
November	1,312	63%
December	1,249	57%

* International user sessions are not shown here.

As shown in Figure II-3, the most popular Web pages after the Home page continued to be the jobs database (average of 328 user sessions per month) and the Energy Solutions Database (average of 275 user sessions per month).⁷ The library menu, introduced in April 1999, was also popular, with an average of 120 users session per month.

⁷ The first Market Progress Report included the EIC resource list under the “umbrella” of the Energy Solutions Database, leading to nearly 400 user sessions per month. In this report it is shown separately.

Figure II-3
Web Site User Sessions Excluding Home Page



Starting in July 1999, the Web Trends reports began providing the number of unique users. As shown in Figure II-4, there were approximately 1,100-1,200 unique users each month.⁸ In addition, the number of users that accessed the page more than once in any given month stayed fairly level at about 15%-18%.

The users who accessed the page more than once, however, appeared to have been extremely loyal to the EIC page, returning many times every the month to look for new information. For example, in October 1999 there were 1,177 unique users, representing a total of 2,117 user sessions (or 1.8 user sessions per

⁸ The number of user sessions and the number of unique users is recorded through the use of cookies, or a file sent with the page requested from the server to the visitor. Cookies are stored on the visitor's system. The stored cookie is then included in the log file, enabling unique identification of visitors. A small number of users may have their "cookies" option turned off, thus inflating the number of unique users.

user). The multiple users, however, reflected a total of 199 users and 1,139 user sessions, or 5.7 user sessions per users (Table II-2).

Figure II-4
Estimated Number of EIC Web Page Unique Users

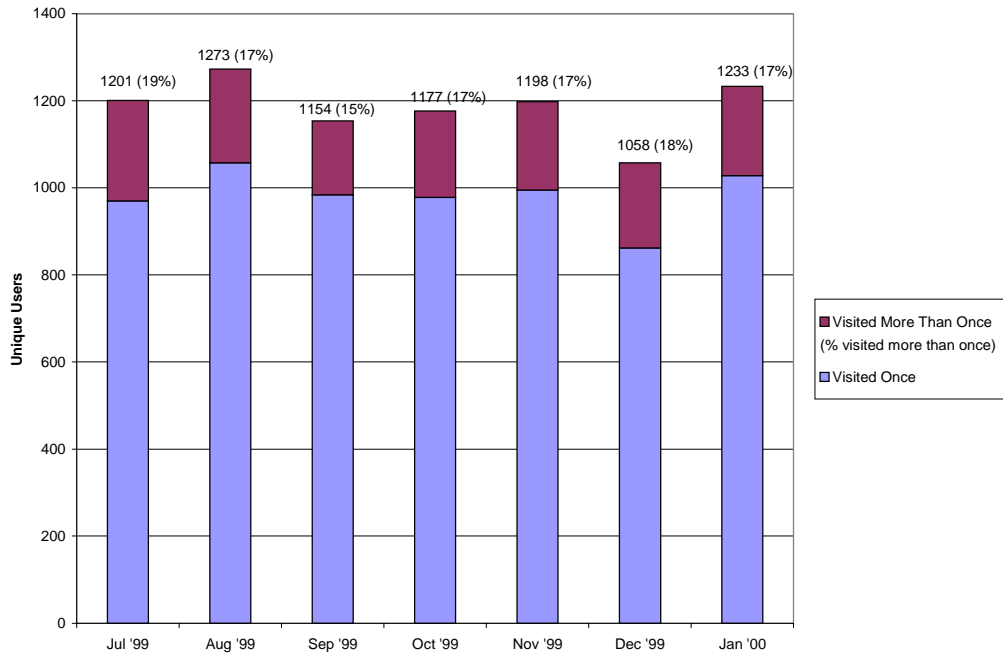


Table II-2
Average Number of User Sessions per User (1999)

	July	August	September	October	November	December	January
For All Users							
# of User Sessions	1930	1953	1788	2117	2097	2062	2473
Unique Users	1201	1273	1154	1177	1198	1058	1233
<i>Sessions per user</i>	<i>1.6</i>	<i>1.5</i>	<i>1.5</i>	<i>1.8</i>	<i>1.8</i>	<i>1.9</i>	<i>2.0</i>
For Users Accessing Page More than Once							
# of User Sessions less Single users	960	895	804	1139	1102	1200	1445
Unique users less single users	231	215	170	199	203	195	205
<i>Session per user</i>	<i>4.2</i>	<i>4.2</i>	<i>4.7</i>	<i>5.7</i>	<i>5.4</i>	<i>6.1</i>	<i>7.1</i>

Web Trends is still unable to report the actual location for many users. For example, the April 1999 Web Trends reported that 76% of the users were from the United States, 7% were from outside the U.S., and 17% were of unknown origin. In addition, more than one

third of the users (36%) came from Virginia, a number skewed by users logging in through America Online.⁹

Hotline Statistics

The telephone hotline saw a substantial increase in use during 1999. As shown in Table II-3, hotline inquiries increased from 422 in 1998 to 657 in 1999, a **56% increase**. The number of clients also increased, from 297 in 1998 to 473 in 1999 (a **59% increase**).

**Table II-3
Number of EIC Hotline Cases and Clients**

Year	Cases			Clients		
	Total	Total Northwest	Percent Northwest	Total	Total Northwest	Percent Northwest
1990	765	674	88%	546	464	85%
1991	1,690	1,337	79%	1,191	893	75%
1992	3,347	2,478	74%	2,385	1,660	70%
1993	2,217	1,683	76%	1,537	1,069	70%
1994	1,706	1,464	86%	1,260	1,045	83%
1995	971	906	93%	682	624	92%
1996	708	682	96%	488	463	95%
1997	440	429	98%	309	299	97%
1998	422	417	98%	297	292	98%
1999**	657	614	93%	473	432	91%
Total	12,923	10,684	83%	7,539*	5,721	76%

* Some clients called in multiple years, so the sum of the clients per year adds up to more than the total clients.

** Approximately 85 cases concerning a cooperative project with the Consortium for Energy Efficiency on the procurement tool kit are not included in this table or in the analysis.

In addition to attracting more users, the EIC was also extremely effective in attracting new users in 1999. For example, 390 (82%) of the 473 callers in 1999 were first time callers; this was the highest percentage of first time callers since 1992 (Table II-4). This was also the greatest absolute number of new callers since 1995.

⁹ Nearly all of them came in from the same city – Reston – where AOL is based.

**Table II-4
Number of EIC Hotline Cases and Clients**

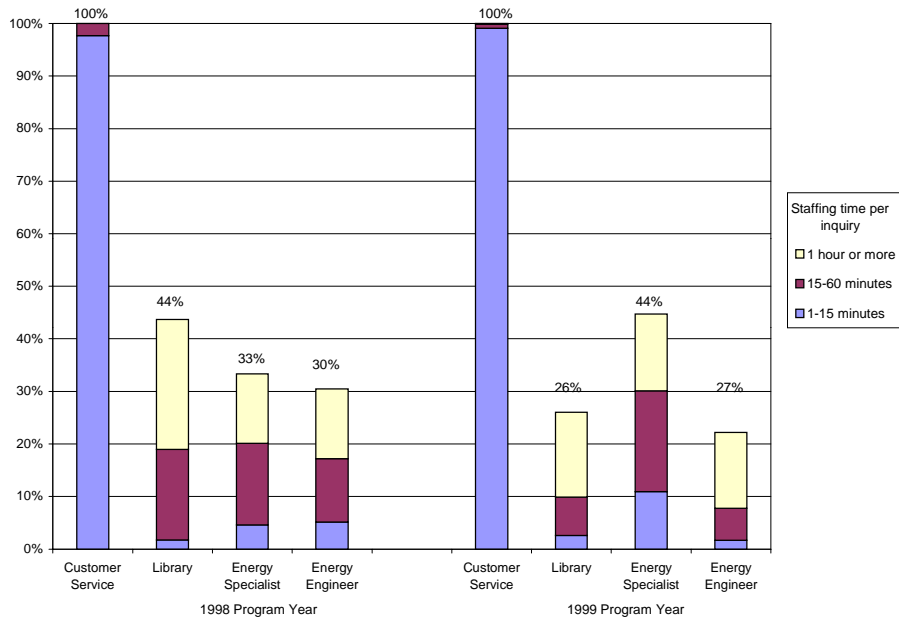
Year	Total Callers	Repeat Callers	First Time Callers	First Time Callers (%)
1990	546	0	546	100%
1991	1,191	119	1,072	90%
1992	2,385	254	2,131	89%
1993	1,537	320	1,217	79%
1994	1,260	299	961	76%
1995	682	220	462	68%
1996	488	173	315	65%
1997	309	84	225	73%
1998	297	77	220	74%
1999**	473	83	390	82%

** Approximately 85 cases concerning a cooperative project with the Consortium for Energy Efficiency on the procurement tool kit are not included in this table or in the analysis.

As in 1998, customer representatives were able to handle many of the calls: approximately 17% of the inquiries were handled by the customer service representatives with no additional assistance. Only 26% of the 1999 hotline inquiries required assistance from the library; 44% required energy specialists, and 27% required engineering assistance (Figure II-5).¹⁰ In addition, although the use of energy specialists increased from 1998 to 1999, inquiries for the library and the engineers decreased.

¹⁰ Energy specialists have practical experience in energy management and information but may not be fully certified professional engineers.

**Figure II-5
1998-1999 Staffing Requirements for Hotline Inquiries**



The EIC Clients, after contacting the hotline, normally receive an e-mail, fax, phone call, or postal mailing containing information that answers their questions. Analysis of the EIC database revealed that in 1999 the EIC was able to decrease the number of responses by postal mail (from 56% to 44%) and fax (from 15% to 10%) while increasing the number of e-mail responses (from 12% to 18%).

**Table II-5
1998-1999 Hotline Reply by Type**

Method of Reply	1998		1999	
	Frequency	Percent	Frequency	Percent
Postal Mail	236	56%	290	44%
Fax	65	15%	68	10%
E-mail	49	12%	118	18%
Telephone	154	36%	287	44%
Total*	422	100%	657	100%

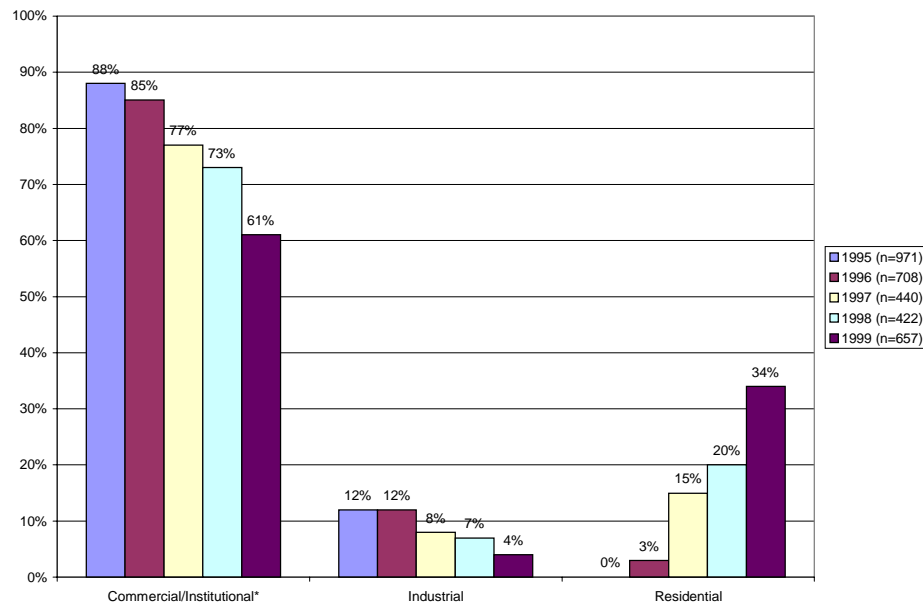
* Some clients received more than one method of reply

III. Database Analysis

quantec examined the EIC database to look for additional trends in telephone hotline use during the past few years.

One significant trend that continued in 1999 was the increasing frequency of calls concerning the residential sector. In 1996, only 3% of the hotline calls were residential inquiries; by 1999, this percentage had steadily increased to 34%. Calls concerning the commercial and institutional sectors, on the other hand, have been steadily dropping, from 85% in 1996 to only 61% in 1999. The majority (53%) of the calls concerning the residential sector came from individuals. Other user groups, such as utilities (14%), building officials (6%), building contractors (5%), and government (5%), also had residential requests. Individual inquiries accounted for 16% (Table III-1).

Figure III-1
Business Sector of Hotline Request



* Institutional was added in 1999, and included schools, government, and research institutions. Approximately 8% of the calls in 1999 came from institutions, but are included with commercial to be consistent with the previous years.

**Table III-1
Type of Company Using Hotline Services**

Company Type	1998		1999	
	Frequency	Percent	Frequency	Percent
Individual	68	16%	141	21%
Utility	100	24%	121	18%
Government (State/National)	71	17%	89	14%
Consulting Firm	34	8%	52	8%
NEEA (General or Venture)	6	1%	28	4%
School (K-12, Comm. Col)	16	4%	27	4%
Research/Ed (Univ or Lab)	7	2%	24	4%
Building Official	2	0%	23	3%
Commercial Business	9	2%	21	3%
Building Contractor	11	3%	16	2%
Engineer	10	2%	16	2%
Architect	1	0%	13	2%
Organization	11	3%	11	2%
Industrial/Manufacturing	20	5%	9	1%
Other	56	13%	66	8%
Total	422	100.0%	657	100%

**Table III-2
Source of EIC Referral for Individual Callers**

Source	Frequency	Percent
Utility	42	30%
Media	24	17%
WSU/EEP Staff	14	10%
Internet Resource	9	6%
Government	9	6%
Other	8	6%
Unknown	3	2%
Clearinghouse - General	2	1%
Individual	2	1%
Commercial Business	2	1%
NEEA (General or Venture)	1	1%
Consulting Firm	1	1%
Research/Ed (Univ or Lab)	1	1%
Repeat User	23	16%
Total	141	100%

Individual users appear to hear about the EIC primarily through their utilities (30%), the media (17%), WSU/EEP staff (10%), the Internet (6%), and government (6%). An increased effort to market to utilities and their publications may have contributed to this increase in awareness and use among residential callers (see the marketing activities section).

Callers contacted the Clearinghouse hotline for information on many different topics relating to energy use. As shown in Table III-3, the most common questions concerned Heating, Ventilation, and Cooling (HVAC) (15%) and codes/standards/laws (11%). Other common topics included building envelopes (7%), general energy use (7%), lighting (5%), renewable resources (5%), and appliances (5%).

Table III-3
General Topic of Hotline Inquiry

General Topic	1998		1999	
	Frequency	Percent	Frequency	Percent
HVAC	54	13%	101	15%
Codes/Standard/Laws	23	5%	74	11%
Energy Ideas Clearinghouse	42	10%	49	7%
Energy Use*	38	9%	48	7%
Building Envelopes	18	4%	47	7%
Lighting	27	6%	36	5%
Renewable Resources	25	6%	35	5%
Appliances	21	5%	30	5%
Utility	18	4%	28	4%
Motors	25	6%	21	3%
Water Heating	6	1%	18	3%
Economics	5	1%	15	2%
Organizations/Programs	7	2%	12	2%
Building Design	5	1%	11	2%
Education	8	2%	11	2%
Power Production	9	2%	10	2%
Environment	13	3%	10	2%
Other	78	18%	101	15%
Total	422	100%	657	100%

* Energy Use includes: auditing, accounting, fuel switching, peak load management, and plug load.

IV. Program Characterization

Current EIC Services

The Clearinghouse currently offers two primary services: a hotline and a Web site.

Customers served by utilities in the Pacific Northwest can call (toll-free), e-mail, or fax questions concerning energy use to the Clearinghouse hotline. Topics include (but are not limited to) motor systems, HVAC, industrial electrotechnologies, life cycle cost analysis, computer simulation, energy policy, agricultural energy issues, and cogeneration. Responses to questions, usually within eight hours, can take a number of forms, including:

- A literature search: The Clearinghouse library is the largest energy library in the Northwest when combined with WSU resources, and includes product literature, articles, product reviews, reports, and energy-related publications.
- Publication or fact sheet: The Clearinghouse has prepared 54 fact sheets on a range of energy topics, including building commissioning, energy-efficient motors, and geothermal heat pumps.
- Product or pricing information: The Clearinghouse will sometimes provide specific product or pricing information to callers.
- Engineering assistance or analysis: The Clearinghouse has nine engineers prepared to answer technical questions that cannot be answered by the Energy Solutions database, customer service representatives, the librarian, or the fact sheets.
- Referrals to other energy programs, services, or resources: The Clearinghouse maintains a comprehensive collection of information on other programs, services, and resources. In addition, the Clearinghouse is also now answering inquiries and referring callers to other Alliance programs.

The Web site has incorporated many of the services that were previously on the BBS, and some new services as well:

- Energy-related job listings
- A calendar to search for energy conferences, meetings, or upcoming events
- Links to energy software, publications, and tools for energy professionals.
- Bulletins, newsgroups, and current news about energy efficiency nationwide
- Links to other Web sites with energy information
- An Energy Solutions Database

The EIC staff has initiated a number of other projects, including a Targeted Intervention Program (TIP) to provide facility managers and residence hall administrators' with effective information about the safety and energy efficiency of halogen torchieres so they can take action to reduce fire hazard and energy use in residence housing and other facilities. In addition, the Clearinghouse staff is now maintaining a listservice called Energy Newsbriefs that alerts subscribers to new publications or articles in the WSU energy library.

The EIC staff also supports a number of other Clearinghouse information services. This allows synergies in terms of staffing and resources. These other programs include:

- **Western Area Power Administration (WAPA) and the Southeastern Power Administration (SEPA) Powerline program.** Utilities in the states served by WAPA and SEPA can use this service for direct access to professional engineers for fast technical assistance regarding planning, implementing, or evaluating the efficient use of energy in customer buildings, operations, or processes.
- **Department of Energy (DOE) Office of Industrial Technologies (OIT) Clearinghouse (formerly the Motor Challenge).** In June 1999 the OIT expanded the Motor Challenge hotline to include any energy related question concerning the nine energy-intensive "Industries of the Future:" agriculture, aluminum, chemicals, forest products, glass, metalcasting, mining, petroleum, and

steel. OIT partners with industry and government, and non-governmental organizations, with the goal of significantly improving the resource efficiency and competitiveness of materials and process industries. OIT is part of the Department of Energy's Office of Energy Efficiency and Renewable Energy.

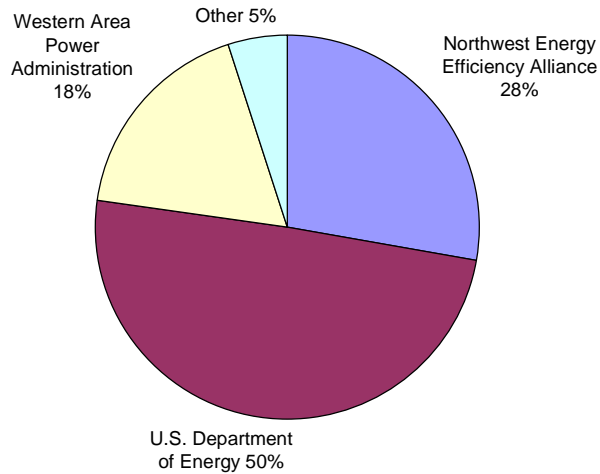
- **DOE Steam Challenge.** Helps industrial customers retrofit, maintain and operate their steam systems more efficiently and more profitably.
- **DOE Compressed Air Challenge.** A voluntary collaboration of industrial users, manufacturers, distributors and their associations, facility operating personnel and their associations, consultants, state research and development agencies, energy efficiency organizations, and utilities to help customers improve performance of their compressed air system.

Staffing and Funding

The Pacific Northwest regional Energy Ideas Clearinghouse comprises 28% (\$476,000) of the WSU Clearinghouse Services annual funding. (Figure IV-1). More than half of this funding (approximately \$350,000) is applied to staff positions (for 3.7 full-time equivalents, or FTEs).¹¹ There is no one staff member at the WSU Energy Program who spends 100% of their time working on the Energy Ideas Clearinghouse. Linda Witham, the EIC program manager, spends 65% of her time on the Clearinghouse, more than any other staff member. There is a total of five staff departments: Technical team (fifteen people), library (five people), customer service (four people), Webmasters (two people), and management (two people).

¹¹ The EIC was able to increase FTEs without a substantial increase in budget by employing part-time temporary employees. The remaining budget after salaries was used to fund a procurement market research project and EIC marketing activities.

Figure IV-1
WSU Clearinghouse Services Funding, Fiscal Year 2000¹²



As shown in Table IV-1, the WSU Clearinghouse services answered 8,254 inquiries in 1999, up from 5844 in 1998 (a 41% increase). The EIC, by comparison, experienced a 56% increase in hotline inquiries during the same period. Only 8% of all the WSU inquiries came from the Energy Ideas Clearinghouse; the rest of the inquiries were classified under the other WSU programs.¹³ In addition, there is no way to tell whether the popularity of the other programs may have led to “cannibalization” of potential EIC customers.

¹² Total 1999 funding is \$1,700,000. Provided by the Energy Ideas Clearinghouse (Pie for Linda 3-00.PPT).

¹³ Some calls that came in on the EIC hotline, however, may remain in the EIC database, even though callers may have been referred to other programs.

Table IV-1
Number of 1998-1999 Hotline Inquiries for all
Clearinghouse Information Services

Program	Frequency	Percent	Frequency	Percent
Energy Ideas Clearinghouse	657	8%	422	7%
Western Area Power Administration	219	3%	300	5%
Southeastern Power Administration	12	0.1%	36	1%
WSU Energy Program Software*	344	4%	537	9%
Total Efficiency Network**	15	0.2%	85	1%
Department of Energy (Net)	7,007	85%	4,464	76%
OIT Clearinghouse (From 6/23/99)	3,497	42%	NA	NA
DOE Motor Challenge (Through 6/22/99)	3,135	38%	4,312	74%
DOE Steam Challenge	156	2%	131	2%
DOE Compressed Air Challenge	219	3%	21	0.4%
Total*	8,254	100%	5844	100%

* Includes inquiries for energy efficiency software packages such as HEATMAP® and WATTSUN®.

** Provides information, training, and support to public and private facilities to help them save money and resources through efficient resource management

Marketing Activities During 1999

EIC conducted a number of marketing activities during the past year, including:

1. **Media Packet.** The EIC issued a media packet with ads and articles about the Clearinghouse. The packet included information on the Energy Solutions Database, general Web resources, several marketing pieces, etc. This was distributed to energy-related periodicals (e.g., Home Energy), utility marketing staff, state/local energy offices, and local energy organizations. A total of 250 packets have been sent so far, with plans to send another 550 in the next year.
2. **Presentations at conferences.** EIC staff presented information on the Clearinghouse at approximately 15 events in 1999, including the Northwest Public Power Association Conference, the Washington State Plant Managers Conference, and the Idaho Energy Conference.
3. **Targeted Intervention Project (TIP).** The 1999 TIP produced two fact sheets that focused on the inefficiency

and danger of torchieres. These reports were shared with technical university staff (e.g., engineers, facility managers) as well as university administration.

4. ***Posting EIC information on Listservs.*** EIC staff subscribe and respond to postings on other listservs, such as the Association of Physical Plant Administration (APPA), the “Big Green,” and the Green Purchasing listservs. Whenever posting a reply, information about the EIC is also included in the posting.
5. ***Direct marketing of listservs.*** The EIC typed in more than 250 e-mail addresses from an employee directory of an agricultural-related cooperative extension program and then did a direct mailing to the group announcing the EnergyAG listserv.
6. ***Reciprocal Web Linking.*** The EIC has identified other Web sites with energy information, and contacted their Web master to set up reciprocal Web links with the EIC page.
7. ***Search Engine Registration.*** The EIC continues to submit their URL to search engines.
8. ***Creating the Energyideas.org URL.*** This will hopefully create a branding impact that will make it easier for people to remember and tell others about the EIC services.

General Effectiveness of Marketing Activities

The most visible impact from the EIC marketing activities was the inclusion of EIC materials in several utility publications. For example, Idaho Power, Montana Power, and several co-ops carried technical articles that were written by the EIC. Seattle City Light carried an EIC technical article on its Web site about making Christmas lighting more energy efficient.

This increased exposure appears to have also led to the increase in the number of individual callers and the number of calls concerning residential energy use.

The effectiveness of the presentations was less tangible. There were not any noticeable spikes in hotline calls following presentations, although it is difficult to gage how many conference

attendees later visit the Web site or tell others about the EIC services.

In general, the steady increase in Web site users is also evidence that the marketing activities are leading to an increase in the use of EIC services.

Planned Marketing Activities for 2000

The EIC plans on a number of marketing activities for 2000, including:

- Publishing articles in energy magazines, including an article on daylighting that will appear in Home Energy in spring 2000.
- Continuing to set up reciprocal Web links.
- Continuing to make presentations at energy related events.
- Targeting an industrial audience through industrial listservs, professional associations, ads in industrial magazines, and “dovetailing” with marketing efforts from the Industries of the Future project.
- Contacting more local governments to encourage them to subscribe to the LGEnergy listserv; also, making this a two-way listserv to expedite the delivery of information.
- Sending the TIP fact sheets on torchieres to college newspapers for publication, plus conducting follow-up phone calls to facility managers and administrators.

V. Current User Analysis

In order to better understand who is using the Clearinghouse services and how the information is being used, **quantec** conducted interviews with current (past year) users of the Clearinghouse.¹⁴

The sample was drawn from the EIC program database. There was a total of 509 EIC Northwest clients from January 1, 1999, through February 7, 2000, although 85 of these were not included in the sample because they had participated in the first Market Progress Report Survey. Of the 424 remaining EIC users, a total of 150 interviews were completed (or 35% of the eligible sample of callers).¹⁵ Table V-1 shows that there was little difference between the distribution of the survey respondents and the EIC program database state. However, both differ substantially from the distribution of energy consumption by state, where Washington callers are more highly represented.

Table V-1
State of Hotline User

State	Current User Surveys (n=150)	1999-February 2000 Program Database (n=424)	Energy Use by State (% of kWh)*
Washington	74%	79%	52%
Oregon	15%	13%	28%
Idaho	7%	6%	12%
Montana	5%	3%	8%

* Provided by the Northwest Energy Efficiency Alliance for 1998.

¹⁴ EIC callers from January 1, 1999 through February 7, 2000 were included in the analysis. Approximately 85 cases concerning a cooperative project with the Consortium for Energy Efficiency on the procurement tool kit were considered outside of the normal EIC case profile and are not included in the analysis.

¹⁵ Individual callers (those calling about their own homes) are included in the sample, but were screened in the telephone survey and not included in the study. The true eligible sample, therefore, is lower than reported here. The final survey instrument is included in Appendix A.

Who Is Using the EIC Services?

The composition of the survey respondents consisted primarily of utilities, consulting firms, and government/schools/research institutions (Table V-2).

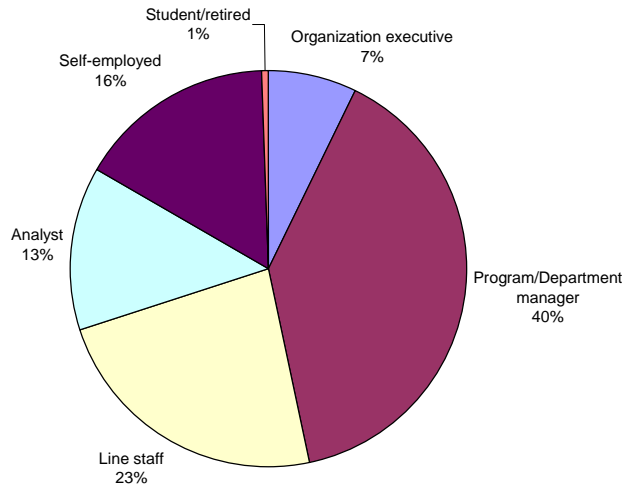
Table V-2
Predominant Business Types for Survey and in Database

Business Type	Current User Surveys	1999-February 2000 Program Database*
Utilities	26%	23%
Consulting/Engineers/ESCOs	27%	17%
Commercial Building Operators	4%	4%
Industrial	6%	2%
Government/School/lab	29%	27%
Other	9%	26%

* Does not include individual (non-business) callers. In addition, many business types could not be assigned to these specific categories.

The EIC users also held a wide range of positions within their companies. For example, 40% described themselves as a “program or department manager,” 13% were “analysts,” 16% were “self-employed,” 7% were executives, and 23% held other positions (“line staff”) (Figure V-1).

Figure V-1
Position in Company



Hotline users also had a substantial amount of experience in the energy field. For example, 61% reported that they had more than 10 years of experience doing “the same kind of work,” with an average of 14.2 years experience making energy-related decisions. (Table V-3)

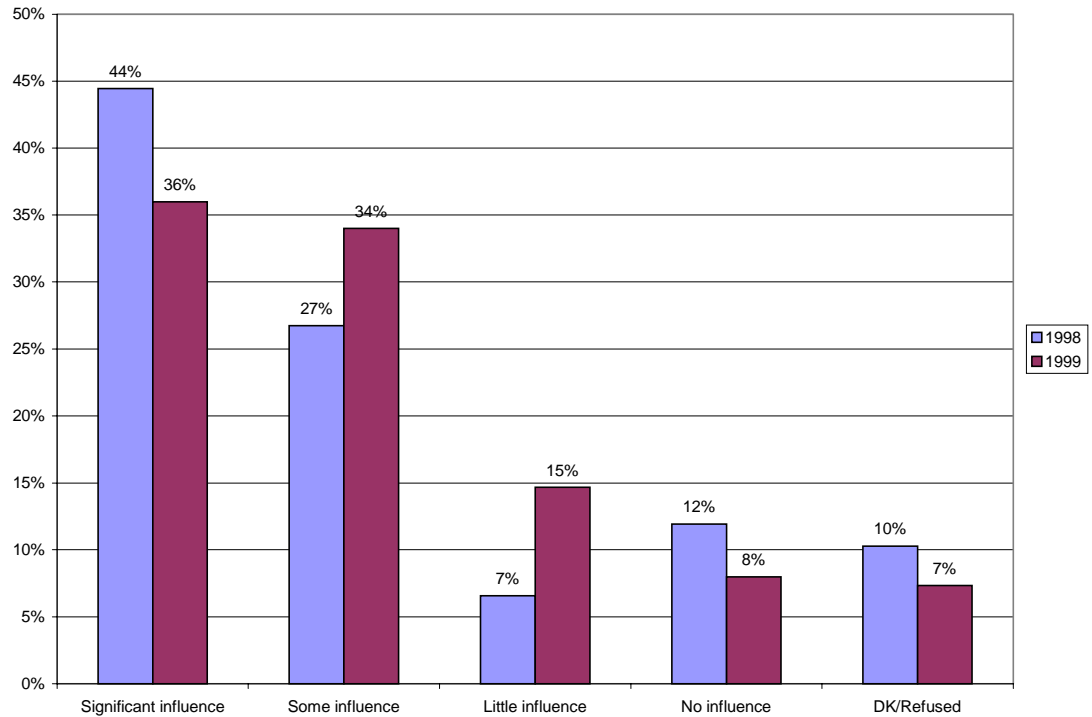
**Table V-3
Years in the Energy Field**

	1998 Results (n=244)		1999 Results (n=150)	
	Years in Current Position	Years Doing Same Kind of Work	Years in Current Position	Years Doing Same Kind of Work
1-5 Years	50%	14%	55%	17%
6-10 Years	29%	24%	25%	22%
Over 10 Years	21%	62%	20%	61%
Average	7.4 years	14.4 years	6.9 years	14.2 years

Respondents not only had many years of experience making energy related decisions, but also believed they had a substantial amount of influence on their companies’ decisions to implement energy efficient practices or equipment. For example, 36% of the respondents said they had significant influence, and 34% said they had some influence on their companies’ energy efficiency decisions (Figure V-2). A nearly equal percentage of current users (70%) as respondents in the first Market Progress Report (71%) reported that they had “significant” or “some” influence.¹⁶

¹⁶ Unless noted, the first Market Progress Report (MPR) included a total of 244 users: 101 from 1995-1997 and 143 from 1998.

Figure V-2
Influence on Company's Decision to Implement
Energy-Efficient Practices or Equipment



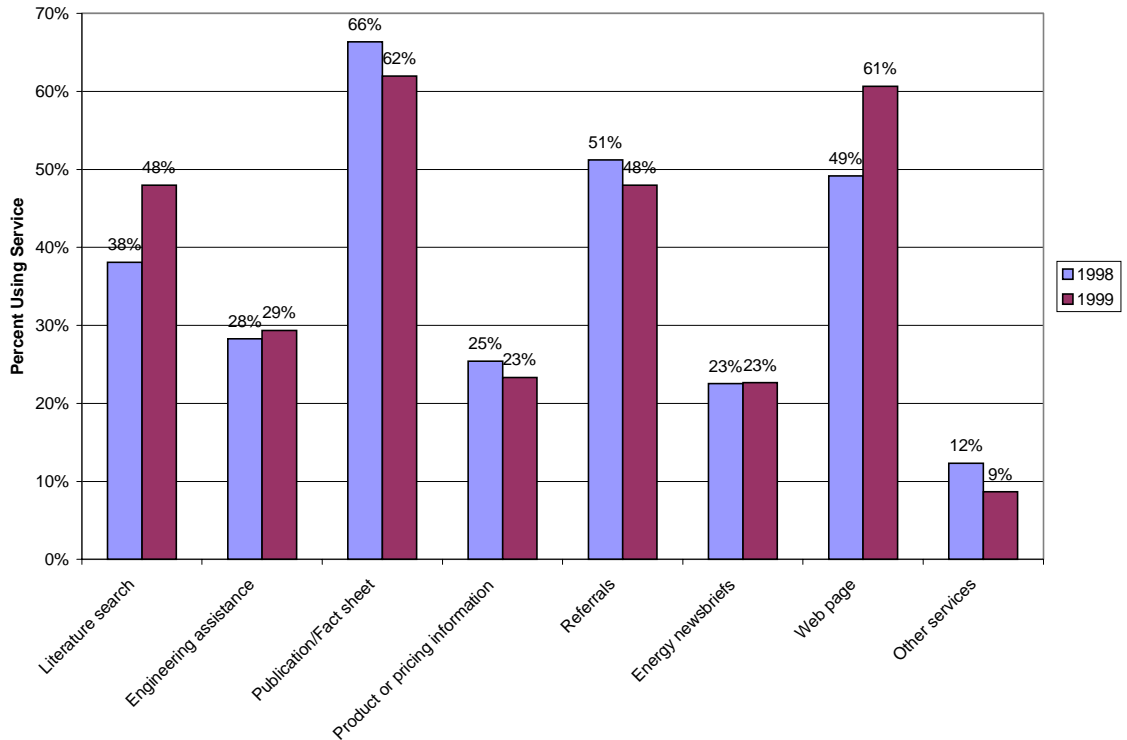
Which EIC Services Are Used?

Although most of the EIC services reported similar usage to the first Market Progress Report, one service – the EIC Web page – experienced a substantial increase between the two studies. In the first MPR 49% of respondents reported that they accessed the Web page; in the 1999 study 61% of respondents had accessed the Web page (Figure V-3). The publication and fact sheets (62%), literature search (48%), and referrals (48%) were also common EIC services.

Like the first MPR, there was a strong interest in the Energy Newsbriefs listserv among respondents that were not currently subscribing: 93 current users and 54 nonusers provided their e-mail addresses and asked to be added to the listserv.¹⁷ These names were provided to the Energy Ideas Clearinghouse.

¹⁷ Callers to the EIC are not automatically added to Energy Newsbriefs.

**Figure V-3
Percent of Respondents Using EIC Services**



Satisfaction with Services

As in previous evaluations, EIC users were overwhelmingly satisfied with the Clearinghouse services. Overall, 82% of respondents were either “somewhat” or “extremely” satisfied with the EIC services (Figure V-4). This figure was not statistically different than in the first Market Progress Report, where 85% were “somewhat” or “extremely” satisfied with the EIC. The few respondents who were dissatisfied felt that the Clearinghouse was unable to answer their question (3 respondents) or the service was too slow (2 respondents).

Current users of the EIC also reported that the individual services were extremely useful; at least 50% of the respondents said that each service was “somewhat” or “extremely” useful (Figure V-5).

Most valued were the product and pricing information (80%), the literature search (78%), engineering assistance (71%), and the publications/fact sheets (71%).

Figure V-4
Overall Satisfaction with EIC Services

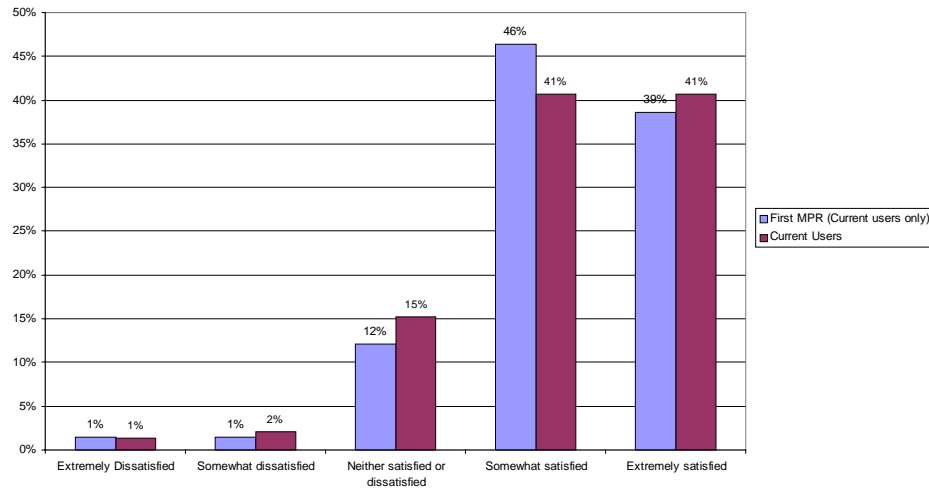
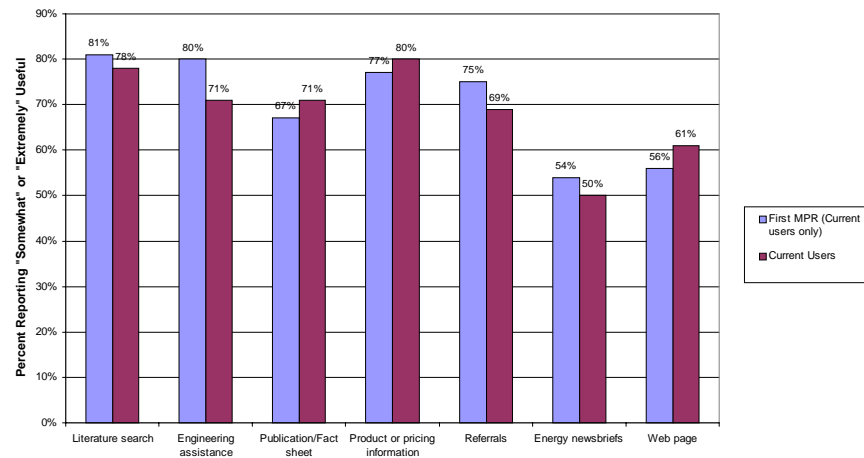


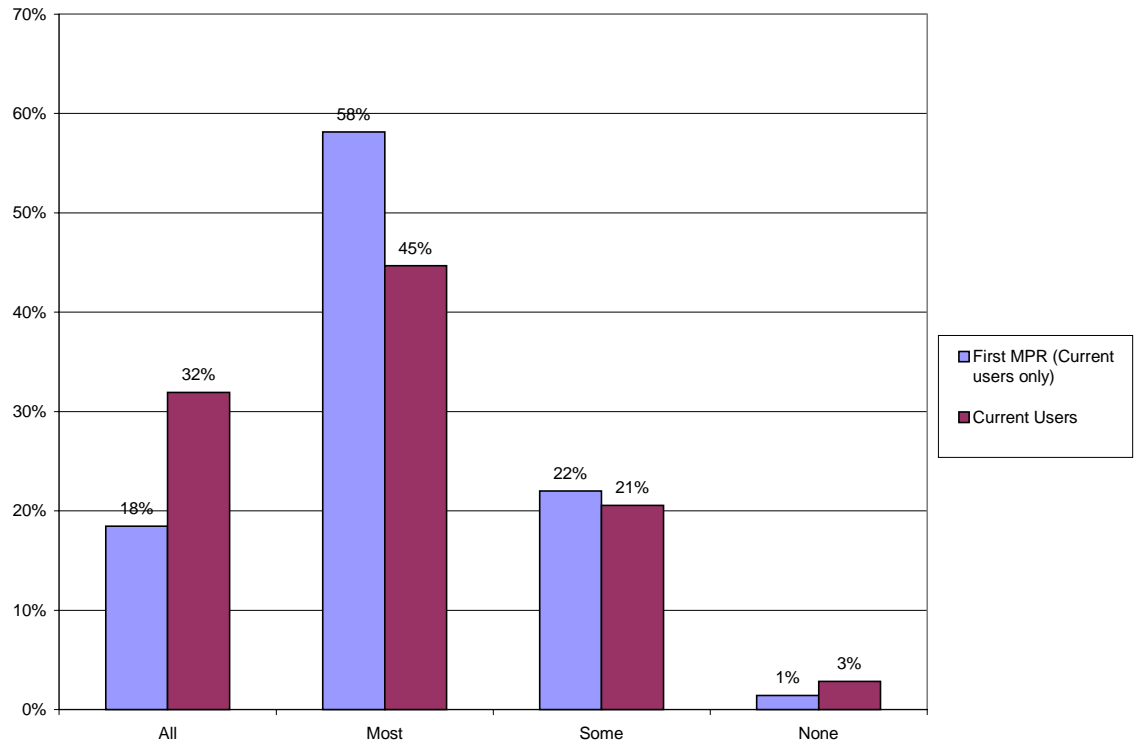
Figure V-5
Usefulness of EIC Services



In addition, EIC users appeared satisfied that the EIC was answering their questions: 77% of the users said the Clearinghouse provided “all” or “most” of the information they were seeking (Figure V-6). Only 3% of the current users, in fact, said the Clearinghouse provided “none” of the information they were seeking.

In terms of overall satisfaction, usefulness, and perceived comprehensiveness, current users were extremely satisfied with the EIC services.

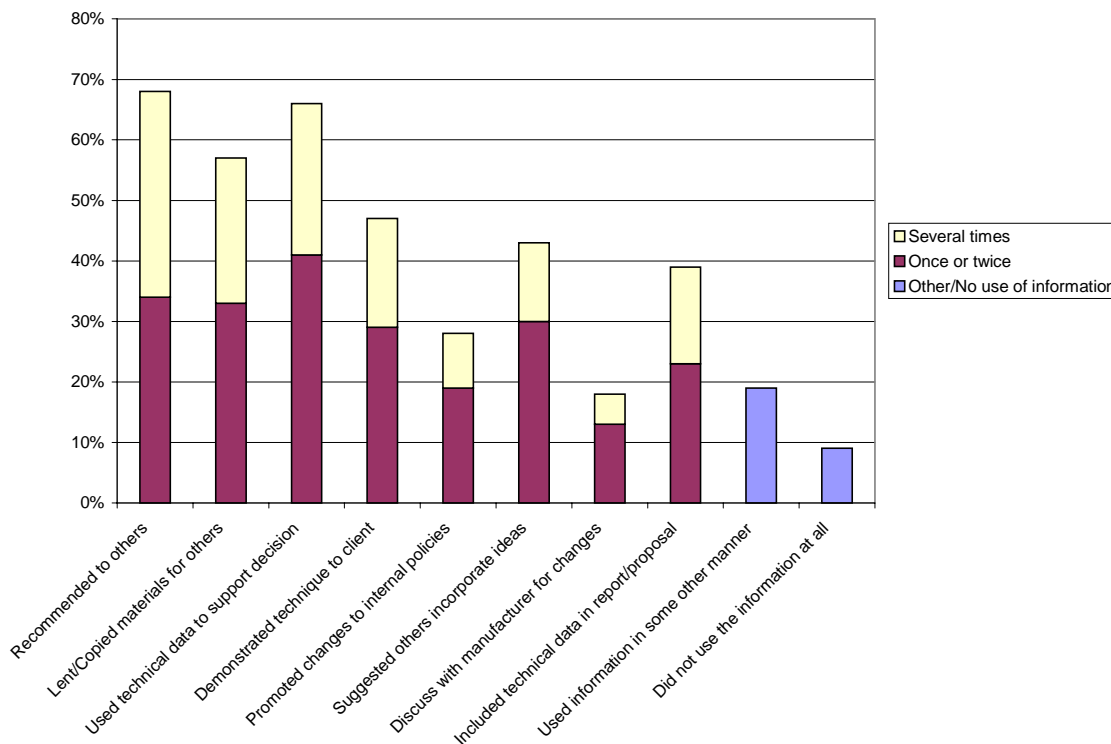
Figure V-6
Did the Clearinghouse Provide the Information Respondent Was Seeking?



Use of Information

Clients of the EIC were not only extremely satisfied with the service, but a majority also reported that they made use of the information they received. More than half of the respondents reported to have used technical data to support a decision (66%) and have lent/copied materials for others (57%) (Figure V-7). In addition, two-thirds of the respondents (68%) recommended the EIC to others. Respondents also reported other uses of the information, including using it for background research, education, and training. Only 9% of the respondents reported that they did not use the Clearinghouse information in any fashion.

Figure V-7
Uses of the Clearinghouse Information



In addition, 30% of the respondents said that the EIC services led to “a lot” or “some” cost savings, while 34% said the EIC services led to “a lot” or “some” energy savings (Figure V-8).¹⁸ Many of the respondents (25%) were unable to say if the information led to energy savings.¹⁹

Like the first MPR, respondents reported that, more than costs, they are concerned with energy efficiency (78%) and reliability (80%) when making energy-related decisions (Figure V-9). These results, however, may be skewed by the energy efficiency nature of the survey and the expectation of providing a “socially desirable” response.

¹⁸ It is important to note that the EIC is viewed by the Alliance as an infrastructure project that is not supposed to justify itself through direct energy savings.

¹⁹ **quantec** attempted to quantify the energy savings in the first MPR, but many respondents were unable to estimate energy savings resulting from the EIC services.

Respondents also reported that energy efficiency played an important role in their business practices. Almost half of the EIC users said they change their business practices as a result of energy efficiency information either often (28%) or very often (15%) (Figure V-10).

Figure V-8
Cost and Energy Savings Resulting from the Clearinghouse Services

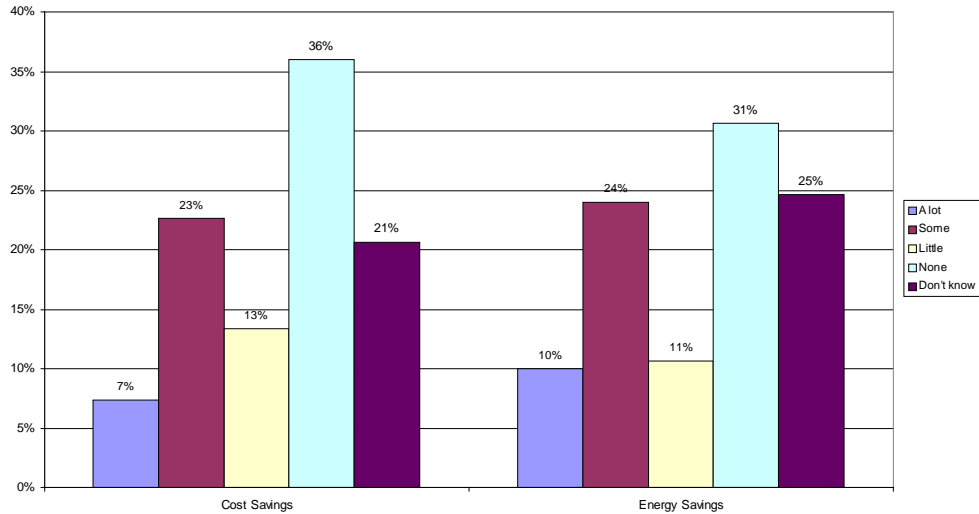


Figure V-9
Importance of Factors for Energy Related Decisions

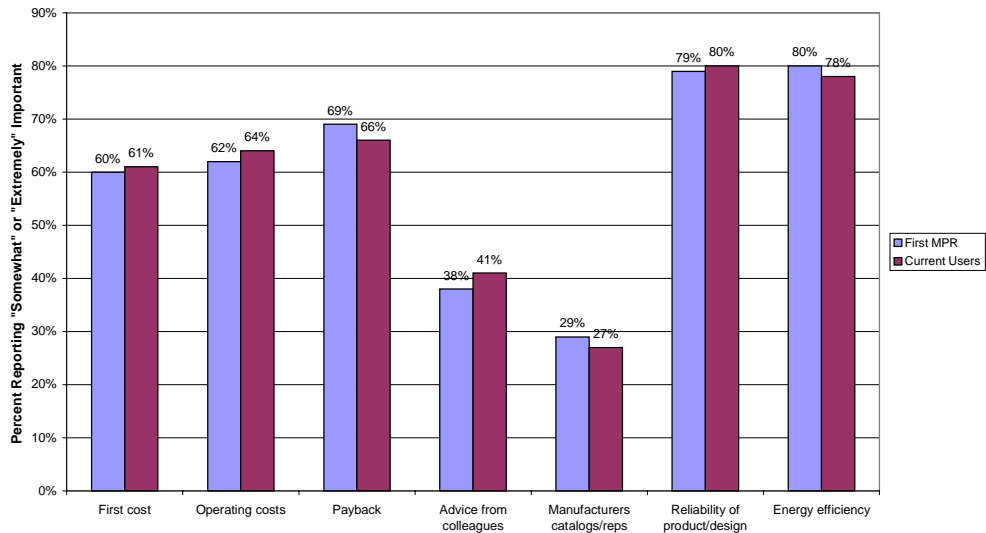
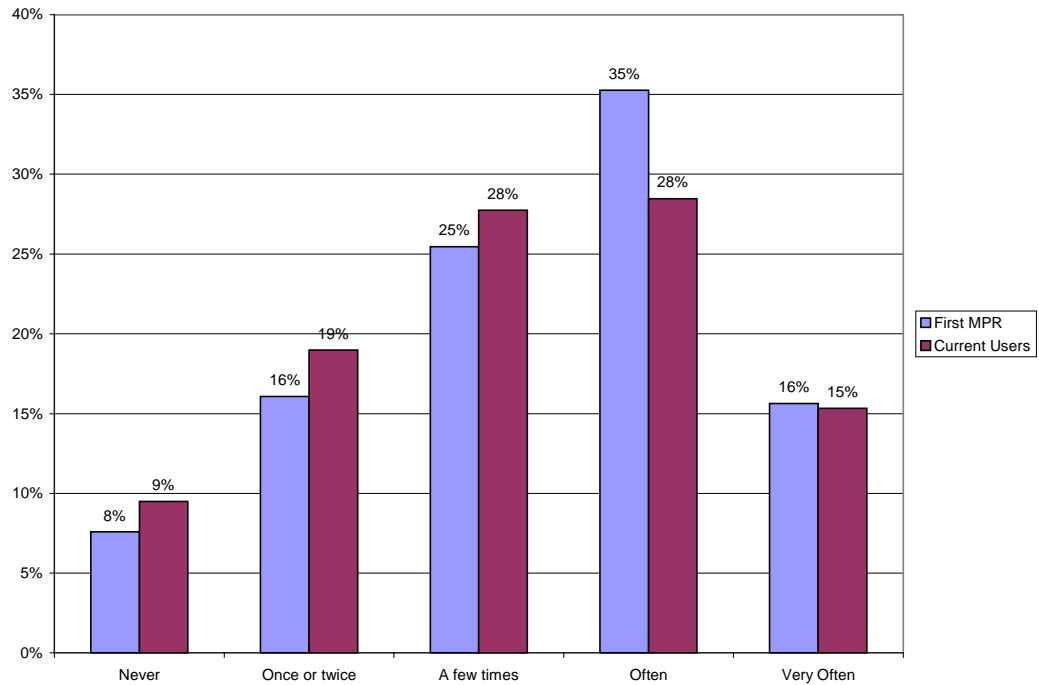


Figure V-10
How Often Have You Made Changes to Your Business Practices as a
Result of Energy Efficiency Information?



Other Sources of Energy Information

Respondents indicated that they collect energy and energy efficiency information from a variety of sources. The two most common were magazines/newsletters (28%) and the Internet (25%). The EIC was also reported to be an important source of information: 22% of respondents reported that the EIC was one of their top three sources for energy information.

Table V-4
Top Three Sources for Energy Information

Source	Frequency	Percent
Magazines/newsletters	42	28%
Internet	38	25%
EIC	33	22%
Colleagues/peers	27	18%
Federal Government (DOE, EPA, etc.)	24	16%
Trade journal/Technical pub.	22	15%
Utilities	21	14%
Books/library	14	9%
Energy Effic Resources (unspec)	14	9%
Internal sources	14	9%
Codes/Building codes	13	9%
NEEA	13	9%
State government	12	8%
Manufacturers/distributors	12	8%
Suppliers/vendors/ reps	9	6%
Meetings/Seminars/Conferences	9	6%
Universities	9	6%
Other	12	8%
DK/Refused	10	7%
Total Respondents	150	100%

Respondents were also asked to identify specific magazines or trade journals they value the most. More than 75 different publications were listed, including many niche publications that were only mentioned by one or two respondents.²⁰ The top publication was *Energy User News*, read by 26% of the respondents that used publications to collect energy information (Table V-5). Other publications included *Home Energy* (12%), *ASHRAE Journal* (10%), and the *Energy Design Update* (10%).

²⁰ The full list is contained in the current user data tabulations, question 30.

**Table V-5
Most Valuable Trade or Professional Magazine**

Publication	Frequency	Percent	Valid Percent*
Energy User News	23	15%	26%
Home Energy	11	7%	12%
ASHRAE Journal	9	6%	10%
Energy Design Update	9	6%	10%
Building Management	6	4%	7%
Clearing Up	6	4%	7%
Other	96	64%	107%
None	17	11%	NA
DK/Not Sure/Refused	43	28%	NA
All Respondents	150	100%	100%

* Based on the 90 respondents that were able to name a publication they use. Percentages can add up to more than 100% because respondents can name more than one publication.

Use of the Clearinghouse Web Page

A great majority of the respondents had access to the Web either from their desk at work (82%) or from another desk at work (9%). Sixty-one percent of the survey respondents had accessed the EIC Web page, nearly identical to the 59% of current user respondents in the first Market Progress Report that had accessed the Clearinghouse page (Table V-6).²¹

Nonusers of the Web page were asked to identify why they had not accessed the EIC Internet site. Many respondents (9%) didn't know it existed or couldn't find it (4%). Many nonusers of the page also simply didn't have the need to use it (7%) or used other sources (5%).

²¹ Although only about half of the survey respondents (hotline users) had accessed the Web page, the average number of monthly Web users sessions far outnumbered the average number of hotline users.

**Table V-6
Reasons for Not Accessing the EIC Web Page**

	First MPR (1998 Users Only)		Current Users	
	Frequency	Percent	Frequency	Percent
Accessed Web page	84	59%	91	61%
Did not have Web access/cost	10	7%	16	11%
Did not access Web page	49	34%	43	29%
Didn't know it existed	15	10%	14	9%
Didn't have the need	12	8%	11	7%
Use other sources	8	6%	8	5%
Didn't have time	10	7%	5	3%
Couldn't find it	7	5%	6	4%
Other	6	4%	2	1%
Don't know/Not sure	2	1%	1	1%
Total	143	100%	150	100%

Current users of the EIC Web page reported that they access the Web page infrequently: 50% have accessed the page more than once, but less than a few times a month (Figure V-11). The most popular pages were the energy site links (71%) and the Energy Solutions Database (59%). (Figure V-12). The “jobs” page, which was the most popular informational page according to the Web Trends report, was only accessed by 10% of the survey respondents.²²

²² Differences between the Web Trends report and the survey sample may be caused by the small sample of current users (90 respondents) that had accessed the Web page. Site statistics are best documented by the Web trends reports, not the telephone survey.

Figure V-11
Frequency EIC Web Page is Accessed

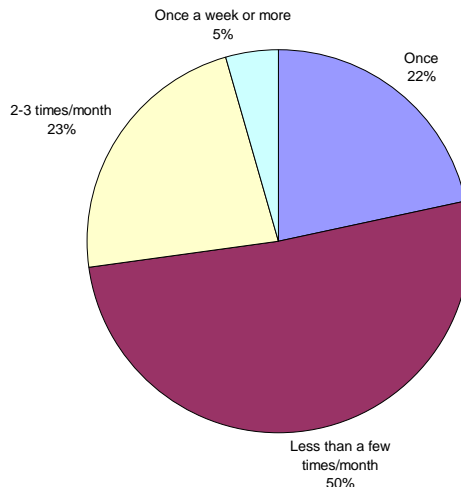
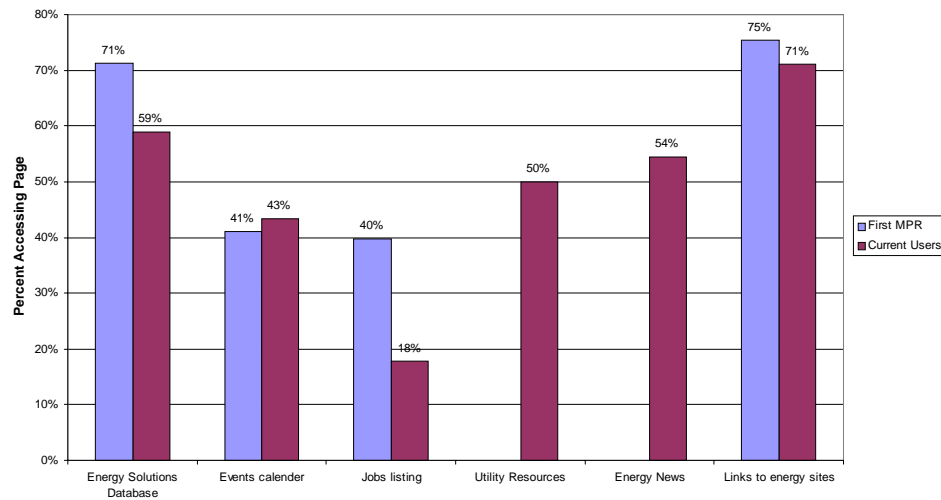


Figure V-12
Web Pages that Were Accessed*



* The utility resources and energy news pages were added in 1999

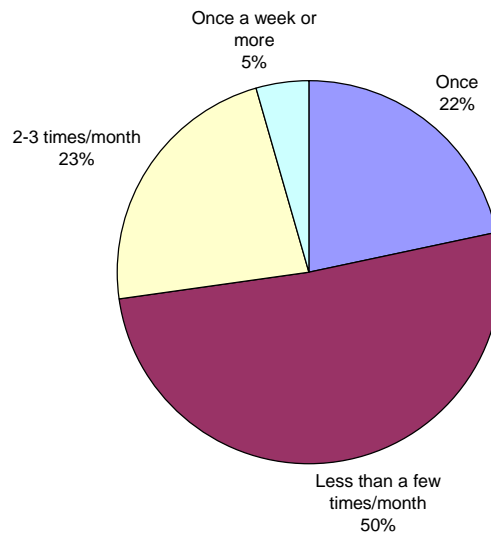
When asked to rate the usefulness of each of the Web pages accessed, respondents felt that the energy links page was the most useful (75% rated it as “somewhat” or “extremely” useful) (Figure V-13). The Energy News pages (63%) and Energy Solutions Database (62%) were also considered useful pages.

Respondents also provided a list of other features they would like to see on the Web page, including:²³

- An “ask the experts” feature/directory of experts
- Educational info/training
- Listing of utility and government efficiency programs
- Information in downloadable format
- Links to manufacturers of relevant technology
- Business case studies/success stories

One limitation to the Web “usefulness” questions is that we don’t know exactly when the users last accessed the specific Web page; we only know that they used EIC services in the past year. Thus, because the page is continually being improved, we may not capture respondents who have seen the latest versions.

Figure V-13
Usefulness of EIC Web Pages



²³ The full list of suggestions can be found with the detailed data tabulations (question 27D).

Respondents were also asked what other Web sites they used to collect information. They provided an extensive list of sites, only a few of which were mentioned by more five or more respondents:²⁴

- EREN/EREC <http://www.eren.doe.gov>
- DOE
- Manufacturers web sites
- Alliance to Save Energy - <http://www.ase.org/>
- EIA (Energy Information Administration) - <http://www.eia.doe.gov/>
- ORNL (Oak Ridge National Laboratory) - <http://www.ornl.gov/>
- Utility web sites
- Yahoo; Infoseek; Other search engines

Marketing the EIC

Respondents were also asked how the EIC could best market their services to “professions such as yours.” The two top responses – the Internet (21%) and e-mail (17%) – emphasizes the growing importance of the electronic medium to EIC users (Table V-7).

²⁴ The full list of sites is included in the data tabulations (question 28).

**Table V-7
How Could the EIC Best Market Itself?**

Publication	Frequency	Percent
Internet	31	21%
e-mail	26	17%
Direct mail	25	17%
Fliers/free publications/fax fliers	19	13%
Trade journals	17	11%
Advertising	14	9%
Conventions/seminars	9	6%
Word of mouth	8	5%
Association newsletter	5	3%
Tradeshows	4	3%
Direct/personal contact	3	2%
Inserts with power bill/promotions through utilities	3	2%
Other	8	5%
DK/Not Sure/Refused	31	20%
All Respondents	150	100%

VI. Nonuser Analysis

In order to better understand why more energy decision-makers aren't using the EIC services, **quantec** conducted a survey with 101 energy professionals.²⁵ The sample was selected from professional organizations and magazine mailing lists. **quantec** contacted the following organizations for samples of their membership lists or customers:²⁶

- American Consulting Engineers Council (ACEC)
- Association of Energy Service Professionals (AESP)
- Association of Professional Energy Managers (APEM)
- ASHRAE
- Construction Owners Association of America (COAA)
- Energy User News Subscribers (Cahners Direct Marketing)
- National Association of Energy Service Companies
- Northwest Energy Efficiency Coalition (NEEC)

Based on the profile of the prior users and the target “market” for the Clearinghouse (those most likely to make energy and energy efficiency decisions), five quota groups were established. Interviews were conducted with 20 respondents from each of the quota groups.

- Utilities
- Consulting/engineering firms/ESCOs
- Commercial building operators/energy decision makers
- Industrial plant managers/energy decision makers
- Institutional (government, schools, and research labs)

²⁵ The final survey instrument is included in Appendix A.

²⁶ Many of these organizations, such as *Energy User News* and ASHRAE, were selected because they were mentioned by current/prior users as influential sources of information.

Comparison to Current Users

The nonuser survey respondents tended to be more senior and have more years of experience than the current/prior respondents. For example, 62% of the nonusers (versus 46% of current users) were executives or program/department managers (Table VI-1). In addition, nonusers had an average of 19.5 years experience in their industry, while current users had an average of 14.2 years experience (Table VI-2).

Table VI-1
Position in Company

	Current Users	Nonusers
Organization executive	7%	13%
Program/Department manager	39%	49%
Line staff	23%	22%
Analyst	13%	5%
Self-employed	16%	11%
Student/Retired	1%	0%

Table VI-2
Years in the Energy Field

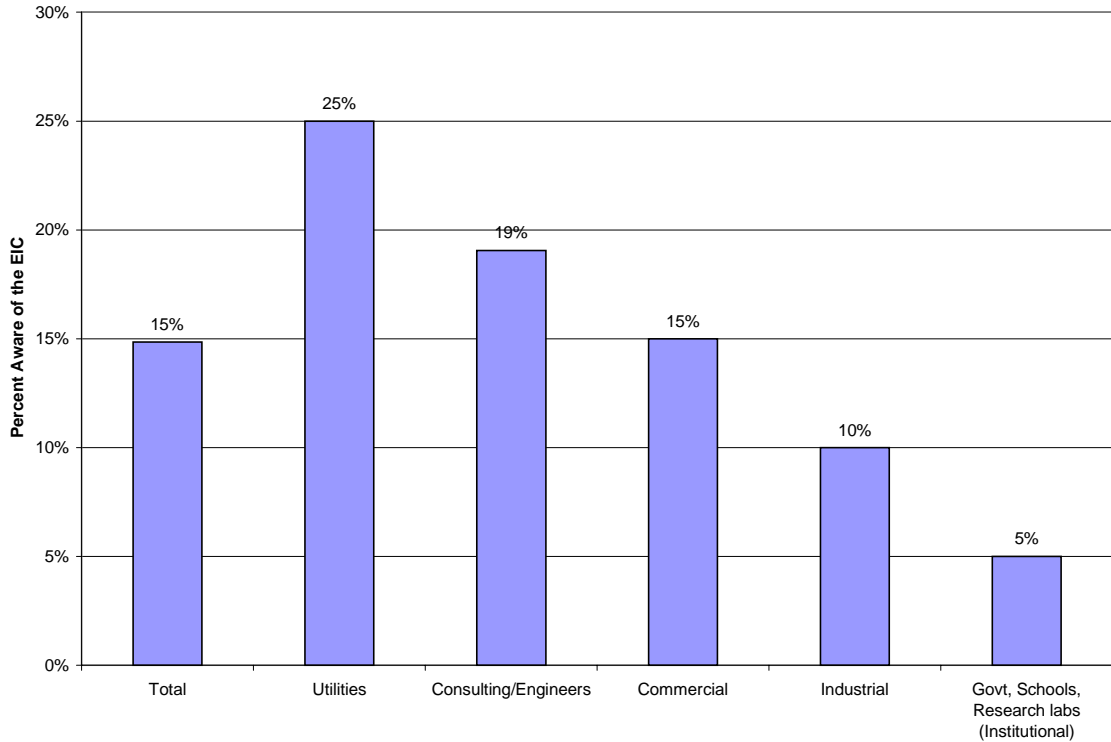
	Years in Current Position		Years Doing Same Kind of Work	
	Current Users	Nonusers	Current Users	Nonusers
1-5 Years	55%	35%	17%	7%
6-10 Years	25%	29%	22%	11%
Over 10 Years	20%	36%	61%	82%
Average	6.9 years	10.9 years	14.2 years	19.5 years

Awareness of the Energy Ideas Clearinghouse

As in the first Market Progress Report, lack of awareness continued to be the main market barrier to use of the EIC Web page. Although 19% of the nonusers reported that they were aware of the Energy Ideas Clearinghouse, 4% of the respondents were unable to identify any services offered by the Clearinghouse. Removing these respondents, a total of 15% of the respondents were aware of the EIC (Figure VI-1). Awareness was highest for respondents that worked at utilities (25%) followed by consultants

(19%). Respondents that worked at government/schools/research labs reported the lowest levels of awareness (5%).²⁷

Figure VI-1
Awareness of the Energy Ideas Clearinghouse among Nonusers



The 15% who were aware of the EIC provided various responses about what service or information they thought the Clearinghouse offered. All of the responses, however, correctly identified different segments of the EIC services, such as product information, energy information, and lighting information (Table VI-3).

²⁷ Small sample sizes within each of these categories, however, mean that there are large confidence intervals for these estimates (i.e., these estimates may vary by a large amount from the true level of awareness).

Table VI-3
Type of Services or Information Clearinghouse Offers (Nonusers)

Source	Frequency
Product information	6
Anything/everything energy related	5
Energy efficiency information/energy savings	4
Lighting information	3
Heating and Cooling/HVAC info	2
Links	1
Reports	1
Q & A info on energy issues	1
Total aware of Clearinghouse	15

The 15 respondents aware of the Clearinghouse also gave various reasons for not contacting the EIC, including no need (6 respondents) and not having the time/busy (5 respondents) (Table VI-4).

Table VI-4
Reason for Not Contacting the Clearinghouse (Nonusers)

Reason	Frequency
No need	6
Don't have the time/Too busy	5
Didn't think they could provide useful information	2
May have in the past, but not sure	1
Don't know/Not sure	1
Total aware of Clearinghouse	15

Sources of Energy Information

Nonusers of the EIC reported that they use a number of sources to collect energy and energy efficiency information. Nonusers tended to focus on similar resources as the users, including utilities (29%), suppliers (27%), trade magazines (22%), and internal sources (19%).

Nonusers tended to be less “Web savvy” than the current users: only 13% of the nonusers mentioned the Internet as a top source of energy information, compared to 25% of the current users. This difference could be caused by the nature of the companies; the nonuser surveys contained a higher percentage of commercial and industrial energy decision-makers, and these people may be less dependent on the internet than utility, consulting, engineering, and institutional workers who comprised most of the user surveys. In addition, the more senior stature of the nonusers may also contribute to their lower dependence on the internet (i.e., they may be less technologically “savvy” or have less time to search the internet).

Table VI-5
Top Three Sources for Energy Information for Nonusers

Source	Frequency	Percent
Utilities	29	29%
Suppliers/Vendors/Reps	27	27%
Trade magazines/publications	22	22%
Internal sources	19	19%
State/Government offices or departments	14	14%
Internet/websites	13	13%
Manufacturers/Catalogs/Product literature	12	12%
Networking/peers/colleagues	7	7%
Energy efficiency resources(e.g., Lighting Design Lab or PERC)	7	7%
Trade associations/professional groups	6	6%
Other	15	15%
Don't know/Can't Say	14	14%
Total Nonusers	101	100%

Nonusers were also asked to identify specific magazines or trade journals they value the most. The answers were skewed somewhat towards *Energy User News* (EUN), since much of the sample came from the EUN mailing list.²⁸

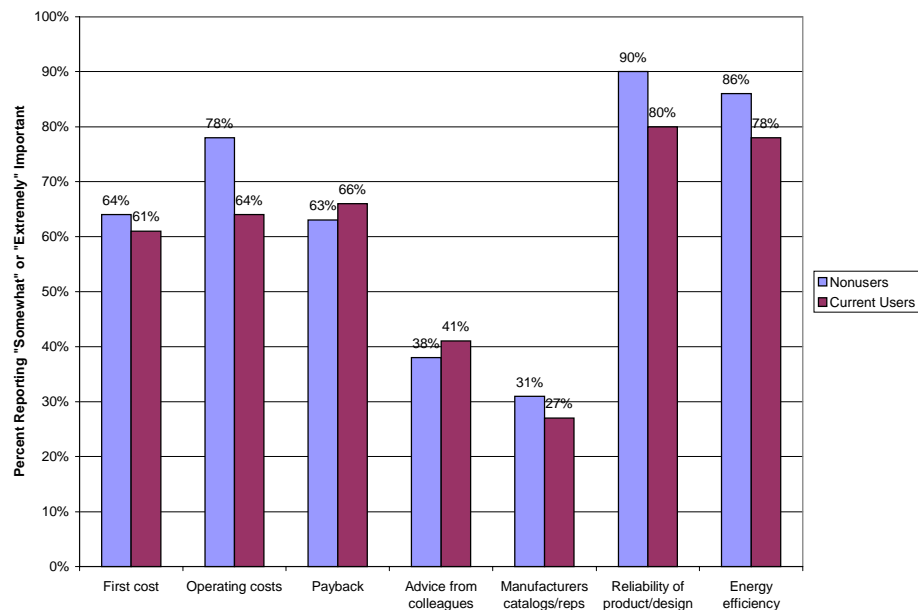
²⁸ The full list of publications is contained in the nonuser data tabulations, question 16.

Decision Making

Nonusers of the Clearinghouse, like the current/prior users, reported that factors other than cost were important when making energy-related decisions. For example, nonusers reported that reliability (90%) and energy efficiency (86%) were more important than operating cost (78%), first cost (64%), and payback (63%).

When asked what other factors influence energy-related decisions, nonusers reiterated cost concerns (“overall cost,” “budget,” and “life cycle costs”) and provided a long list of other factors, such as maintainability, client/customer demand, availability, warranties, ease of installation, and others.

Figure VI-2
Importance of Factors for Energy Related Decisions

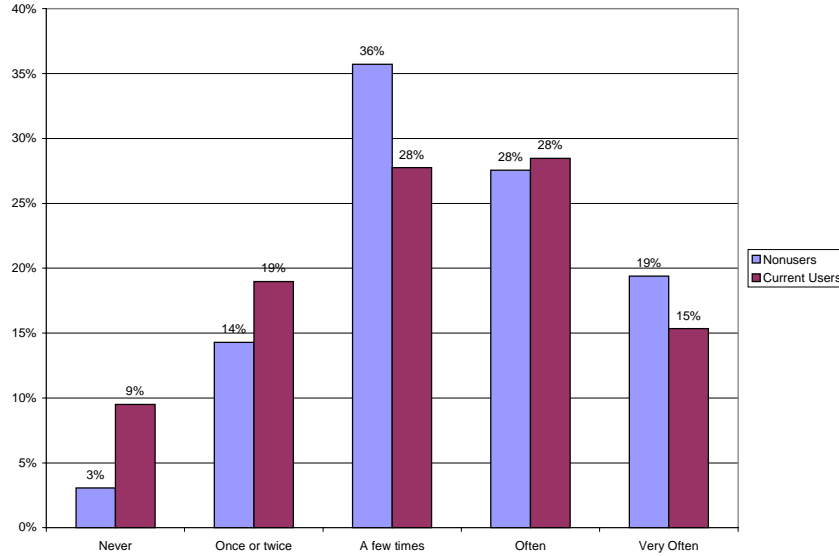


The importance of energy efficiency among nonusers was reiterated in a later question, when 19% of nonusers (vs. 15% of current users) said that they change their business practices as a result of energy efficiency information very often (Figure VI-3).

The fact that nonusers put slightly greater emphasis on energy efficiency than users indicates that they may have a similar level of interest in energy efficiency as current EIC users. The major

difference between the two groups, therefore, may simply be awareness of EIC services and knowledge of how to access them.

Figure VI-3
How Often Have You Made Changes to Your Business Practices as a Result of Energy Efficiency Information (Nonusers)?



Use of the Web

Like the current and prior users, a great majority (89%) of the nonusers had access to the Web either from their desk at work (75%) or from another desk at work or at home (14%). Less than half (44%) of the nonusers with Web access, however, could provide the name or type of Web page they use for energy information (versus 55% of the current users).

VII. Online Survey

A subset of questions from the online survey was developed as an online questionnaire and placed on the EIC Web page on March 30, 1999. The survey was removed from the page from July 1999 through October 1999 while revisions were being made to the Web page; otherwise, it has remained online since October 1999.

Response Rate

In order to encourage users to complete the survey, a number of incentives have been offered. First, survey participants were entered into a drawing for a free airline ticket.²⁹ Since February 2000, participants have been entered into a drawing for a digital camera and a palm pilot.³⁰

In addition to the prizes, efforts were made to optimize the response rate in the following ways:

- Posting a notice about the survey to the Alliance listserv
- Wording the link to say “Tell us how this Web site can be improved” instead of using the word “survey”
- Stating that there were only 12 questions and that it should only take five minutes
- Highlighting in the introduction and conclusion, in bold, that the answers “are confidential, and will be used for research purposes only”
- Adding an animated image of an airplane to the Home page (for the first prize)
- Linking to the survey from the Energy Solutions Database page
- Using a larger font size and brighter color to draw attention to the survey prizes

²⁹ The airline ticket winner was selected from a random drawing on August 5, 1999, from all the telephone and online survey respondents. Gary Nordeen from the City of Centralia conservation department was selected as the winner.

³⁰ The drawing for these prizes will take place in August 2000.

According to Web trends, the EIC Web page was receiving approximately 1,000 unique users a month in 1999, and about half of these ventured beyond the home page (Table II-1 and Figure II-4).³¹ Given these estimates, the maximum number of unique users that used the EIC page beyond the home page during the 12-month period was about 6,000. With 168 survey completions as of April 1, 2000, this is about a 3% response rate.³²

Despite this low response rate, a random sample of 168 respondents based on a population of about 6000 provides a precision level of $\pm 7.5\%$. The question is, of course, how random was the sample, i.e., was there any difference between those that took the survey and those that did not? This is commonly referred to as nonresponse bias.

One clue to nonresponse bias is the number of users that opened but did not complete the survey. As shown in Table VII-1, 32% of the users that opened the survey (i.e., visited the survey page), completed it. In most months, this percentage was above 40%.³³ This indicates that length was not a significant factor in causing people not to complete the survey.

Still, there is no way to accurately estimate nonresponse bias, and the survey results should be interpreted with caution.

³¹ Some of these unique users may return to the page in more than one month, but we have no way of tracking the number of unique users for the year.

³² This estimate is most likely lower than the true response rate, but (once again) there is no way to estimate the magnitude of this bias.

³³ Some months had low completion rates because the survey was not promoted with as much effort (e.g., no prize announcements appeared on the home page, the font was smaller and less colorful, etc.)

Table VII-1
Percent Opening and Completing Survey

Month	Survey User Sessions*	Completions**	% Complete Survey
May 1999	72	29	40%
June 1999	43	22	51%
July 1999	23	12	52%
Oct 1999	46	3	7%
Nov 1999	41	3	7%
Dec 1999	39	1	3%
Jan 2000	61	7	11%
Feb 2000	99	45	45%
Mar 2000	101	45	45%
Total	525	167	32%

* Based on domestic user sessions only

** One survey was missing a completion date

Findings

There were a number of interesting findings from the online survey, particularly when compared to the telephone survey.³⁴

First, the EIC Web page is attracting users from the same business types as the hotline. For example, as shown in Table VII-2, the majority of the users came from government/school/labs, utilities, or consulting/engineering firms.

The Web users, however, tended to have fewer managers (29%) than the hotline (39%) (Table VII-3). This may be due to the fact that senior management has less time to search the Internet for information. Surprisingly, however, the percentage of respondents that identified themselves as executives was nearly identical between the two media (7% vs. 9%).

³⁴ Complete results from the online survey are included in Appendix A.

**Table VII-2
Predominant Business Types**

Business Type	Current User Surveys	Web Survey Respondents
Utilities	26%	28%
Consulting/Engineers/ESCOs	27%	21%
Commercial Building Operators	4%	4%
Industrial	6%	4%
Government/School/lab	29%	27%
Other	9%	16%

**Table VII-3
Position in Company**

Position	Current User Surveys	Web Survey Respondents
Organization executive	7%	9%
Program/Department manager	39%	29%
Line staff/Other	23%	30%
Analyst	13%	15%
Self-employed	16%	15%
Student/retired	1%	3%

Many of the respondents to the Web survey also appeared to be new users of the EIC site. For example, nearly half of the survey respondents (49%) were visiting the EIC Web page for the first time (Table VII-4). Although a higher percentage of telephone survey respondents reported to have accessed the page more than once, more than half (51%) reported that they are infrequent users, accessing the page less than a few times a month.

**Table VII-4
Frequency of Web Pages Accessed**

Frequency	Current User Surveys	Web Survey Respondents
Once/First time	22%	49%
Less than a few times/month	51%	20%
2-3 times/month	23%	14%
Once a week or more	5%	16%

The respondents to the Web survey also were most likely to visit the energy links pages (79%) or energy solutions database (68%) after visiting the Home page (Table VII-5). In addition, these pages were identified as the most useful pages, as approximately half reported that the links page (61%) and energy solutions database (58%) were “somewhat” or “extremely” useful (Table VII-6).

**Table VII-5
Web Pages Accessed**

Web Page	Current User Surveys	Web Survey Respondents
Energy Solutions Database	59%	68%
Events Calendar	43%	49%
Jobs listing	18%	43%
Links to Energy Sites	71%	79%

**Table VII-6
Percent Reporting Web Page as “Somewhat or Extremely” Useful**

Web Page	Current User Surveys	Web Survey Respondents
Energy Solutions Database	62%	58%
Events Calendar	51%	47%
Jobs listing	38%	43%
Links to Energy Sites	75%	61%

**Table VII-7
Overall Value of EIC Web Page**

	Current User Surveys	Web Survey Respondents
Percent “somewhat” or “extremely” dissatisfied	4%	9%
Percent “somewhat” or “extremely” satisfied	70%	68%
Average Satisfaction	4.0	3.9

Web respondents reported that they made use of the information from the EIC. For example, 49% used technical data to support a decision, 37% demonstrated a technique to a client, and 35% included technical data in a report proposal. These figures are somewhat lower than the telephone surveys, but considering that

almost half of the Web survey respondents were new visitors to the EIC Web site (and possibly new users of any EIC services), the use of the information is impressive.

**Table VII-8
Used EIC Information Once or More**

Have you ever...	Current User Surveys	Web Survey Respondents
Recommended to others	68%	53%
Lent/Copied materials for others	57%	42%
Used technical data to support decision	66%	49%
Demonstrated technique to client	47%	37%
Promoted changes to internal policies	28%	26%
Suggested others incorporate ideas	43%	25%
Discuss with manufacturer for changes	18%	22%
Included technical data in report/proposal	39%	35%

Other findings from the Web survey included:

- Respondents were generally satisfied with the speed (4.0 out of a possible 5.0), appearance (3.8), and overall value of the information (3.9) on the EIC Web page.
- More than half of the respondents (68%) reported that they had the page bookmarked. This implies that many of the first-time visitors (49% of the respondents) decided to bookmark the page on their first visit.
- Those that completed the survey had a varied list of suggestions for information that should be included on the EIC Web page (see Question 6). Note that these varied by respondent, indicating that there is no one piece of information that should be added to the page. Many of the respondents also used this space to praise the EIC page or request specific research information.³⁵
- Survey respondents turned to the Internet for energy information, as 74% reported that this is one of their three top sources for information. Specific sites included many of the popular energy sites (EREN/EREC, Energy Star,

³⁵ This is consistent with the recommendation that the EIC make it easier for clients to submit research queries directly from the Web page via a form.

and EIA), as well as many less well known sites (see Question 7 for a complete list). Other sources of energy information included newspaper/magazines/trade journals (34%), electric/gas utilities (20%), and colleagues/peers (17%).

VIII. *Conclusions and Recommendations*

Conclusions

EIC Customers are overwhelmingly satisfied with the EIC service. As in the first Market Progress Report and earlier evaluations, users of the EIC continued to be extremely satisfied with the service they received:

- 82% of respondents were either “somewhat” or “extremely” satisfied with the EIC services.
- 77% of the users said the Clearinghouse provided “all” or “most” of the information they were seeking.
- At least half of the respondents reported to have recommended the EIC to others (68%), used technical data to support a decision (66%), and lent/copied materials for others (57%).
- Only 9% of the respondents reported that they did not use the information obtained through the Clearinghouse in any fashion.
- 22% of the respondents rated the EIC as one of their top three sources of energy information.

EIC is Generally Reaching its Target Market. The EIC users tended to be senior energy decision-makers: 40% of the respondents reported that they were “program or department managers” and 60% of the respondents had more than 10 years of experience in the energy industry. However, a strong marketing campaign to utilities led to the inclusion of EIC materials in several utility publications, including Idaho Power and Montana Power newsletters, and may have also led to an increase in calls from individuals (21%).

Respondents Put the EIC Information to Use. Respondents reported that they used the EIC information: 66% of the respondents reported to have used technical data to support a

decision and 34% said the EIC services led to “a lot” or “some” energy savings.

Hotline Calls Increased Substantially in 1999. The number of hotline cases increased from 422 inquiries in 1998 to 657 inquiries in 1999, a 56% increase. The number of clients also increased, from 297 in 1998 to 473 in 1999 (a 59% increase). In addition, 82% of the 1999 callers were first time callers, the highest percentage of first time callers since 1992.

Use of the Web Page has Remained Flat in 1999. Although user sessions on the Home page increased from an average of 910/month in 1998 to 1,186/month in 1999, user sessions for the other pages (including the Energy Solutions Database) showed no increase in 1999. In addition, the percentage of respondents that had accessed the Web page (61%) was only slightly higher than the percentage of current users accessing the Web page from the first Market Progress Report (59%).

Lack of Awareness Remains the Primary Reason Nonusers Don’t Use the EIC Service. Awareness of the Energy Ideas Clearinghouse was, by far, the largest market barrier to increased use of the EIC services. For example, only 15% of the nonusers were even aware of the EIC even though they had a similar if not higher level of concern with energy efficiency than the current users. In addition, of the current users with Internet access, 43% either didn’t know about the EIC page or didn’t know how to find it.

The Tiered Service Structure is Generally Working. The statistics indicate that the tiered service structure is generally working, and that many of the inquiries into the EIC are fielded by the “frontline” services, such as the Web page and the customer service representatives. For example:

- The Energy Solutions Database receives approximately 275 user sessions a month, far more than the number of hotline telephone calls (740, or 62 per month, in 1999).³⁶
- Only about 28% of the hot line inquiries require library assistance, and even less require engineering assistance

³⁶ Web page statistics are also based off of total user sessions – there is no way to identify callers from the northwest.

(27%). Approximately 17% of the calls require only customer service representatives, and no additional assistance.

- Customer service representatives were able to use the Energy Solutions database as a resource for answering inquiries, plus were able to introduce many clients to the ESD for future inquiries.
- The library staff began to include URLs to articles listed in Energy Newsbriefs, thus reducing publication requests and eliminating copyright concerns.

Recommendations

Maximize Energy Newsbriefs. Current, prior, and nonusers of the EIC surveys all had a high interest in receiving Energy Newsbriefs: 147 respondents provided e-mail addresses. However, of those receiving Energy Newsbriefs, only 50% rated it as “somewhat” or “extremely” useful (the lowest of all the EIC services). The EIC should continue to increase the number of recipients of Energy Newsbriefs by encouraging users to sign up on the Web page and by asking all EIC callers if they would like to be added to the service. In addition, the Energy Newsbriefs mailings can also be used as an opportunity to remind recipients about the EIC services (particularly the Web page) and provide fresh and interesting content for readers.

Remind Callers about the EIC Web Page. All callers should be reminded about the EIC Web page and encouraged to visit it. The new URL (energyideas.org) should also help increase user sessions.

Attempt to Populate the Database Based on Queried Topics. Now that the EIC has developed a system for capturing queries in the ESD, it is important to periodically summarize these into topic areas and to make efforts to adequately populate each area. The EIC may want to consider a quantitative analysis to compare the number of inquiries per area compared to the number of ESD database cases per area (i.e., the amount of information on this specific topic contained in the database).

Attempt to Evaluate User Satisfaction with the ESD. While the number of cases may measure the *quantity* of responses to user

inquiries, it does not capture the *quality* of these responses in the opinion of the user. In addition, the EIC has no formal system in place to determine how useful the ESD users are finding the answers to their queries; there is no feedback mechanism to capture value of the search information to the user.³⁷ The EIC should consider a simple pop-pop question that appears with the responses to evaluate how users are finding the information. Possibly a simple 5-point scale would work with something like:

Help us improve the database by telling us how useful you found the information:

1	2	3	4	5
<i>Not at all</i>				<i>Extremely</i>
<i>Useful</i>				<i>Useful</i>

Make it Easy to Submit Cases (Queries) from the Web page.

Users should be able to check “have EIC do a custom search” either from the Home page or after an ESD query. This button could bring up a form for the user to fill out and ask a specific question. The option of submitting cases (queries) from the ESD is most important, of course, for instances where the user finds “no matches” for the query. Another benefit of this capability is that it gives some indication of what percent of submissions to the ESD are providing adequate answers to client’s questions (e.g., more satisfied clients are less likely to also submit their queries as an EIC case). If inquiries increase too quickly this process can be modified so that a northwest clients get priority and/or the form only appears after users submit an ESD query.

Update all Web Link Resources. While the inclusion of links to Web resources has made the ESD far more comprehensive and useful, a check revealed a number of either broken links or active links to publications that no longer carried the article of interest. The EIC should consider either having staff periodically check these links or only place links to other resources that are least likely to be moved or removed from the Web.

³⁷ Only 61% of the current users that accessed the Energy Solutions Database rated it as “somewhat” or “extremely” useful, the lowest of any EIC service except Energy Newsbriefs.

Save Formatted Hotline Responses for the ESD. When converting the “flagged” cases from the hotline database into the ESD, it was often necessary to reformat letters or materials that may have been sent out to the customer. If the customer service representatives could save all materials in a temporary folder for at least a month then the formatted documents could be more easily loaded into MS Frontpage and prepared for Web publishing.

Consider Partnering with Other Web Pages. The EIC Web page contains a great deal of content that is valuable for users: the ESD, the jobs database, events list, and current events all reinforce the “stickiness” (return rate) of users. Some of these pages – particularly the current events – can be quite labor intensive, requiring staff time each week. The EIC might want to consider partnering with other energy Web pages to exchange not only links, but content. One possibly scenario is a “co-branded” page where the another energy Web site is responsible for current events, and in return the EIC allows them to post jobs from the EIC jobs database.

Keep the Energy Links Page. The Energy Links page was rated as “somewhat” or “extremely” useful by 75% of the telephone survey respondents that accessed it, higher than any of the other Web pages. The links page should also be easily assessable from the EIC Home page.

Continue to Review and Update Reciprocal Links. While maintaining the links page, the EIC should also continue to investigate and set up reciprocal links (crosslinks) with other Web pages.

Increase Awareness of the EIC to continue decreasing market barriers. For EIC users, the program has been extremely effective at increasing awareness of energy efficiency information and decreasing acquisition for this information. If the EIC could reach more people, it could further raise awareness about energy efficiency, thereby more effectively decreasing these market barriers. The fact that nonusers valued energy efficiency as much as current users demonstrates the enormous market potential for information services such as the EIC.

Use Low Cost Marketing to Reach the Target Markets. The EIC should continue to use low cost marketing methods – such as

press releases and “freebie” inserts in energy publications – as well as reasonably priced advertising in targeted publications. An emphasis should be made on moving away from individual callers with residential inquiries.

Evaluate the Role for Fact Sheets. The customer service representatives believed the fact sheets were extremely helpful in the implementation of the inverted pyramid structure. In addition, current users found the fact sheets very useful (71% rated them as “somewhat” or “extremely” useful). However, the development of new factsheets can take a great deal of staff time, thus being expensive. The EIC should evaluate the costs and benefits of new fact sheet development. In addition, efforts should be made to pool resources with organizations such as PNNL and WAPA for the development of new factsheets.

Seek Additional Assistance for Projects. EIC management would strongly benefit from having additional assistance. Currently, Linda Witham is not only responsible for managing the EIC, but is also “hands on” with many day-to-day tasks such as modifying the Web page, running the listservs, and preparing marketing materials. Additional staff time would allow her to delegate weekly tasks – such as updating the Web page – and periodical administrative tasks, such as entering e-mail addresses into a database. By freeing up more time, Linda could focus on more strategic marketing and implementation tasks for the EIC.

Appendix A. Survey Instrument

Nonuser Survey

Hello, can I please speak with _____?

My name is _____, and I am calling from Gilmore Research. We are not selling anything -- we are conducting a study of the Energy Ideas Clearinghouse. These questions will only take about ten minutes, and by participating you will be entered in a contest to win a free Palm Pilot.

[SCHEDULE CALLBACK IF NECESSARY]

1. Have you used any of the services of the Energy Ideas Clearinghouse, also known as the Clearinghouse, in the past 12 months?
 1. Yes (Includes Web page) (Ask current user survey)
 2. No (Terminate)
 9. Don't know (*Terminate*)
- 1b. Do you ever have a need to collect energy information for work-related decisions?
 1. Yes (*Continue*)
 2. No (*Thank and Terminate*)
 9. Don't know (*Thank and Terminate*)
- 1c. What sort of work does your organization do? [READ LIST IF NECESSARY; SELECT ONE RESPONSE ONLY]
 1. Architects
 2. Contractor
 3. Consulting firm (economics/program planning/evaluation)
 4. Engineering/Building design or construction
 5. Building management and operation
 6. Public Utility
 7. Private Utility
 8. Professional or trade organization [Terminate]
 9. Property owner/manager
 10. Government
 11. Research institute/University

- 12. Manufacturing/Production
- 13. Other [Specify: _____]

[IF Q1c=OTHER THEN ASK]

- 1d. Which of the following would you say best describes your company. Would you say your company is a... [READ LIST; SELECT ONE RESPONSE ONLY]
 - 1. Utility
 - 2. Consulting firm, engineering firm, ESCO (pronounced "S-COE")
 - 3. Commercial company
 - 4. Industrial company
 - 5. School, lab, government, or
 - 6. Some other type of company? [TERMINATE]

Quotas:

- 20 Utilities: Q1c=6 or 7 or Q1d=1
- 20 Consulting/Engineers/ESCOs (Energy Service Companies): Q1c=1, 2, 3, 4 or Q1d=2
- 20 Commercial building: Q1c=5 or 9 or Q1d=3
- 20 Industrial: Q1c=12 or Q1d=4
- 20 Institutional: Q1c=10 or 11 or Q1d=5

[IF POSSIBLE, WE MAY TRY TO INCREASE QUOTAS TO 25 OF EACH GROUP; THIS WILL BE DECIDED ONCE SURVEY IS IN THE FIELD]

Energy and Energy Efficiency Information

- 2. What are the three main places you get energy and energy and energy efficiency information?
 - 1. Associations
 - 2. Books/ Library
 - 3. Codes
 - 4. Colleagues/Peers
 - 5. Consultants
 - 6. EIC/Clearinghouse
 - 7. Energy Efficiency Resources
 - 8. Federal Government(DOE,EPA,FEMP,ETC)
 - 9. Internal Sources
 - 10. Internet
 - 12. Manufacturers/Distributors
 - 13. Meetings/Seminars/Conferences

- 14. Meter Reading
- 15. State Government
- 16. Trade Magazines/Publications/Newsletters/ Catalogues
- 17. Universities
- 18. Utilities
- 19. Vendors/ Suppliers
- 97. Other
- 98. Don't Know/ Not Sure
- 99. Refused

3. When making energy related decisions, how important are the following factors for you and your company? Using a scale of 1 to 5, where 1 means “not at all important” and 5 means “extremely important,” please tell me how important [READ ITEM] is for energy related decisions?

		1 Not at all	2	3	4	5 Extremely	7 NA
A	First cost						
B	Operating costs						
C	Payback						
D	Advice from colleagues						
E	Manufacturers catalogs or representatives						
F	Reliability of a product or a design						
G	Energy efficiency						

4. What other important factors influence your energy related decisions?

5. Do *you personally* place high value, medium value, low value, or no value on:

		1 High	2 Medium	3 Low	4 No Value
A	Reducing energy use?				
B	Continuing education or training programs?				
C	Environmental issues?				
D	Recycling?				
E	Innovation?				
F	Adoption of "cutting edge" technologies?				

6. How often have you made changes to your business practices as a result of energy efficiency information you have received? Would you say...[READ LIST]

1. Never
2. Once or twice
3. A few times
4. Often
5. Very often
6. Not applicable

Web Use

7. Do you have access to the Web from your desk at work?

1. Yes
2. No
9. Don't know

[IF "NO" OR "DON'T KNOW" THEN ASK]

8. Can you access the Web from another computer at work?

1. Yes
2. No
9. Don't know

9. What are the top two Web Sites that you use to get energy information?

1. Alliance to Save Energy [<http://www.ase.org>]
2. CREST [<http://www.crest.org>]
3. EIA (Energy Information Administration) [<http://www.eia.doe.gov/>]
4. Energy Star Home Page [<http://www.energystar.org>]

5. EREN/EREC (Energy Efficiency and Renewable Energy Network) [<http://www.eren.doe.gov>]
6. LBL (Lawrence Berkeley Labs) [<http://www.lbl.gov>]
7. ORNL (Oak Ridge National Laboratory) [<http://www.ornl.gov>]
8. Specific product and/or vendor Web Sites
9. Wisconsin Energy Center [<http://www.ecw.org>]
10. Other [SPECIFY: _____]
97. None/Don't use the Web or Internet for energy research
98. Don't know name of page

Awareness

10. Have you ever heard of the Energy Ideas Clearinghouse?
 1. Yes
 2. No
 9. Don't know

[IF AWARE OF CLEARINGHOUSE THEN ASK]

What type of services or information do you believe the Clearinghouse offers?

11. Why have you not used the Clearinghouse? [DO NOT READ LIST; ENTER ALL THAT APPLY]
 1. Lack of time/too busy
 2. Didn't know how to contact them
 3. Didn't think they could provide useful information
 4. Already use other sources for energy information
 5. Other [SPECIFY: _____]
 9. Don't know

Marketing

- 14a. What two trade or professional associations do you value the most?

Acronyms:

ASHRAE=American Society of Heating, Refrigeration, and Air-Conditioning Engineers

APPA=Association of Higher Education Facilities Officers

AWWA=American Water Works Association
AESP=Association of Energy Service Professionals

14b. What trade or professional magazines do you use to get most of your energy information from?

15. What do you feel is the best way to market the Clearinghouse services to professions such as yours? [DO NOT READ LIST; ENTER ALL THAT APPLY]

1. Direct mail
2. Advertising
3. Newspaper
4. Trade journal
5. Association newsletter
6. Tradeshows
7. Conventions
8. Personal presentation
9. Internet
10. Information via 1-800 number
11. Other _____

Classification

And just a few questions for classification purposes only...

16. Would you describe your position as... [READ LIST; SELECT ONE RESPONSE ONLY]

1. Organization executive
2. Program or department manager
3. Line staff
4. Analyst
5. Self employed
6. Other [Specify: _____]

17. How long have you been in your current position?

_____ Years

18. How long have you been doing this kind of work?

_____ Years

19. Would you say that you have significant influence, some influence, little influence or no influence on your company's decision to implement energy efficient practices or equipment?
 1. Significant influence
 2. Some influence
 3. Little influence
 4. No influence
 9. Don't know/Can't say

20. Would you like to be included in Energy Newsbriefs, an e-mail service that notifies recipients of new arrivals in the Clearinghouse library?
 1. Yes (e-mail address: _____)
 2. No
 3. Don't have e-mail

Thank you for taking the time to participate in the survey. We hope you can visit the Web site soon and make use of the Energy Solutions Database (*If respondent asks, the Web site address is <http://www.energy.wsu.edu/eic/>*). If you have any questions or concerns remember that you can contact someone in the Clearinghouse at 800-872-3568

Current User Survey

Hello, can I please speak with _____?

My name is _____, from Gilmore Research and we are speaking with people who may have used the Energy Ideas Clearinghouse services. We are conducting a study of the Energy Ideas Clearinghouse and would appreciate talking with you for a few minutes. And, by participating, you will be entered in a contest to win a free Palm Pilot.

IF NEEDED: We are not selling anything

[SCHEDULE CALLBACK IF NECESSARY]

1. According to our records, you have contacted the Energy Ideas Clearinghouse, also known as the Clearinghouse. Have you contacted them in the past 12 months?

IF USER SAYS NO OR DON'T KNOW THEN:

WITH CONTACT INFO READ: Our records show that you contacted them in ____ regarding _____. Is this correct?

IF CONTACT INFO NOT AVAILABLE THEN READ: The Clearinghouse is a free information service with answers to energy questions. You may have contacted them by calling the Clearinghouse telephone hotline, e-mailing them, visiting them, or accessing their Web page.

1. Yes, in the past 12 months (*skip to Q1c*)
 2. No (*Terminate*)
 9. Don't know (*Terminate*)
- 1c. Did you contact the Clearinghouse with a work-related question or a question about your home?
 1. Work-related question (*Skip to Q2*)
 2. Home (*Terminate*)
 3. Work and home (*Skip to Q2*)
 9. Don't know (*Terminate*)

2. Which Clearinghouse services have you used? [READ LIST; ENTER ALL THAT APPLY]

	Have you . . .	1 yes	2 no
2a	Received a literature search?		
2b	Received engineering assistance or analysis?		
2c	Received a publication or fact sheet?		
2d	Received product or pricing information?		
2e	Received referrals to other energy programs, services, or resources?		
2f	Received the Energy Newsbriefs e-mail announcing new arrivals in the Clearinghouse library?		
2g	Accessed the Web page?		
2h	Used any other Clearinghouse Service that I haven't mentioned? [SPECIFY]		

[FOR EACH SERVICE RECEIVED/USED (Q2) ASK]

3. How useful did you consider the service to be? Using a scale of 1 to 5, where 1 means “not at all useful” and 5 means “extremely useful,” how useful was...

		1 Not at all	2	3	4	5 Extremel y
3a	The literature search?					
3b	The engineering assistance or analysis?					
3c	The publication or fact sheet?					
3d	The product or pricing information?					
3e	The referrals to other energy programs, services, or resources?					
3f	The listservice e-mail announcing new arrivals in the Clearinghouse library?					
3g	The Web page?					

4a. Overall, how satisfied are you with the Energy Ideas Clearinghouse services? Please use a five-point scale where 1 means “extremely dissatisfied” and 5 means “extremely satisfied.”

1. Extremely dissatisfied
- 2.
3. *(Skip to Q5)*
4. *(Skip to Q5)*
5. Extremely satisfied *(Skip to Q5)*

9. Don't know (*Skip to Q5*)
- 4b. Why were you not satisfied with the Clearinghouse services?
[DO NOT READ LIST; ENTER ALL THAT APPLY]
1. Clearinghouse information/services did not answer my question/Not relevant to my needs (*Ask Q5*)
 2. Information not comprehensive enough (*Ask Q5*)
 3. Slow service/Didn't respond (*Skip to Q5*)
 4. Other [SPECIFY: _____] (*Skip to Q5*)

Use of the Clearinghouse Information

5. Now, I would like to ask some questions that will help us understand how energy information is shared or used. For each item please tell me if you have “never” done this, done it “once or twice,” or done it “several times or more.” READ STATEMENT AND REPEAT AS NEEDED. Have you done this once or twice or several times?

	Have you ever . . .	1. Never	2. Once or twice	3. Several times	7. Not Applicable	9. Don't Know
5a.	Recommended the Clearinghouse to others					
5b.	lent or copied materials obtained from the Clearinghouse to others					
5c.	used technical data from the Clearinghouse to support a decision					
5d.	demonstrated or explained to a colleague a technique(s) or strategy that was presented by the Clearinghouse					
5e.	promoted or implemented changes to internal policies or practices in response to something presented by the Clearinghouse					
5f.	suggested or insisted that an in-house colleague or subcontractor incorporate ideas learned from the Clearinghouse					
5g.	discussed ideas presented from the Clearinghouse with manufacturer or manufacturer's representative to encourage product changes					
5h.	included the technical data provided by the Clearinghouse in a report or proposal for a client					

6. Did you use any of the information provided from the Clearinghouse services in some other manner than what I just mentioned?
1. Yes
 2. No (*skip to Q8*)
 9. Don't know
7. In what other manner did you use the information provided from the Clearinghouse services? [PROBE FOR SPECIFICS, INCLUDING TYPE OF EQUIPMENT, PROCESSES, ETC.]
-
-
8. Did your use of the Clearinghouse services result in a lot of cost savings, some cost savings, little cost savings, or no cost savings?
1. A lot
 2. Some
 3. Little
 4. None
 9. Don't know
9. Did your use of the Clearinghouse services result in a lot of energy savings, some energy savings, little energy savings, or no energy savings?
1. A lot
 2. Some
 3. Little
 4. None
 9. Don't know
11. Did the Clearinghouse give you all the information you were seeking, most, some, or none of the information you were seeking?
1. All (*skip to Q14 UNLESS SUPPOSED TO ASK Q13*)
 2. Most (*skip to Q14 UNLESS SUPPOSED TO ASK Q13*)
 3. Some
 4. None
 9. Don't know
12. Why didn't you contact the Clearinghouse again for additional information? [DO NOT READ LIST; ENTER ALL THAT APPLY]
1. Lack of time
 2. Did contact them

3. Didn't think they could provide more information
4. Prefer other information sources
5. Other [SPECIFY:_____]

[IF INFORMATION NOT USED (SEE Q5=NEVER/DON'T KNOW/NOT APPLICABLE FOR Q5A-H AND Q6=NO), THEN ASK]

13. Why did you not use any of the information provided from the Clearinghouse services? [IF Q11a=3 OR 4 THEN ASK AS: Any other reason you did not use any of the information provided from the Clearinghouse services?] [DO NOT READ LIST; ENTER ALL THAT APPLY]

1. Lack of time
2. Lack of interest
3. Higher initial cost
4. Length of the payback
5. Product availability
6. Information wasn't relevant/Dissatisfaction with information
7. External (changed position, project directions)
8. Only seeking general information/browsing
9. Other [SPECIFY:_____]

Energy and Energy Efficiency Information

14. What are the three main places you get energy and energy efficiency information?

1. Associations
2. Books/ Library
3. Codes
4. Colleagues/Peers
5. Consultants
6. EIC/Clearinghouse
7. Energy Efficiency Resources
8. Federal Government(DOE,EPA,FEMP,ETC)
9. Internal Sources
10. Internet
12. Manufacturers/Distributors
13. Meetings/Seminars/Conferences
14. Meter Reading
15. State Government
16. Trade Magazines/Publications/Newsletters/ Catalogues
17. Universities
18. Utilities
19. Vendors/ Suppliers

- 97. Other
- 98. Don't Know/ Not Sure
- 99. Refused

15A. Would you say that you have significant influence, some influence, little influence or no influence on your company's decision to implement energy efficient practices or equipment?

- 1. Significant influence
- 2. Some influence
- 3. Little influence
- 4. No influence (*Skip to Q17*)
- 9. Don't know/Can't say (*Skip to Q17*)

15B. When making energy related decisions, how important are the following factors for you and your company? Using a scale of 1 to 5, where 1 means "not at all important" and 5 means "extremely important," please tell me how important [READ ITEM] is for energy related decisions?

		1 Not at all	2	3	4	5 Extremely	7 NA
15a	First cost						
15b	Operating costs						
15c	Payback						
15d	Advice from colleagues						
15e	Manufacturers catalogs or representatives						
15f	Reliability of a product or a design						
15g	Energy efficiency						

16. What other important factors or sources influence your energy related decisions?

17. Do *you personally* place high value, medium value, low value, or no value on:

		1 High	2 Medium	3 Low	4 No Value
18a	Reducing energy use?				
18b	Continuing education or training programs?				
18c	Environmental issues?				
18d	Recycling?				
18e	Innovation?				
18f	Adoption of "cutting edge" technologies?				

18. How often have you made changes to your business practices as a result of energy efficiency information you have received? Would you say...[READ LIST]

1. Never
2. Once or twice
3. A few times
4. Often
5. Very often
6. Not applicable

Web Page Feedback

19. Do you have access to the Web from your desk at work?

1. Yes (*Skip to Q22 or Q23*)
2. No (*Skip to Q22 or Q23*)
9. Don't know

[IF "NO" OR "DON'T KNOW" THEN ASK]

20. Can you access the Web from another computer at work?

1. Yes
2. No
9. Don't know

[IF RESPONDENT HAS INTERNET ACCESS (Q20=1 or Q21=1, 2, 3) BUT HAS NOT USED CLEARINGHOUSE WEB PAGE (Q2g) ASK Q22]

21. You mentioned earlier that you have not accessed the Clearinghouse Web page. Why have you not accessed the Clearinghouse Web page? [DO NOT READ LIST; ENTER ALL THAT APPLY]

1. Didn't have the need (*Skip to Q28*)
2. Didn't know it existed (*Skip to Q28*)
3. Don't have time/takes too long (*Skip to Q28*)
4. I use other sources of information (*Skip to Q28*)
5. Couldn't find it/Didn't have address
8. Other [Specify: _____] (*Skip to Q28*)

[IF RESPONDENT HAS USED CLEARINGHOUSE WEB PAGE IN Q2G]

22. You mentioned earlier that you have accessed the Clearinghouse Web page. Have you accessed it once or more than once?

1. Once (*skip to Q25*)
2. More than once
9. Don't know (*skip to Q25*)

23. About how often do you access the Clearinghouse Web page? Would you say...[READ LIST IF NEEDED]

1. Four or more times a month
2. 2-3 times a month
3. Once a month
4. A few times a year
5. Less often
9. Don't know

24. Which Clearinghouse Web pages have you accessed? Have you accessed the...[READ ITEM]...page?

	Have you accessed the . . .	1 yes	2 no
24a	Technical, or energy solutions database		
24b	Events calendar		
24c	Jobs listing		
24d	Software/files links page		
24e	Publications links page		
24f	Links to energy sites page		
24g	Newsgroups page		

**[FOR EACH CLEARINGHOUSE WEB PAGE ACCESSED
IN Q25 ASK]**

25. Using a scale of 1 to 5, where 1 means “not at all useful” and 5 means “extremely useful”, how useful was the information on the...

		1 Not at all	2	3	4	5 Extremely
25a	Technical, or energy solutions database					
25b	Events calendar					
25c	Jobs listing page					
25d	Software/files links page					
25e	Publications links page					
25f	Links to energy sites page					
25g	Newsgroups page					

26. On a scale of 1 to 5, where 1 means “extremely dissatisfied” and 5 means “extremely satisfied,” how satisfied were you with the...

		1 Not at all	2	3	4	5 Extremely
26a	Speed of the Clearinghouse Web page					
26b	Layout of the Clearinghouse Web page					
26c	Overall value of the information on the Clearinghouse Web page					

27. What would you like to see offered on the Clearinghouse Web Page that is not currently offered at the site?

[ASK Q28 OF ALL RESPONDENTS WITH WEB ACCESS]

28. What are the top two Web Sites, other than the EIC Web Site, that you use to get energy information?

1. Alliance to Save Energy [<http://www.ase.org>]
2. CREST [<http://www.crest.org>]
3. EIA (Energy Information Administration) [<http://www.eia.doe.gov/>]
4. Energy Star Home Page [<http://www.energystar.org>]

5. EREN/EREC (Energy Efficiency and Renewable Energy Network) [<http://www.eren.doe.gov>]
6. LBL (Lawrence Berkeley Labs) [<http://www.lbl.gov>]
7. ORNL (Oak Ridge National Laboratory) [<http://www.ornl.gov>]
8. Specific product and/or vendor Web Sites
9. Wisconsin Energy Center [<http://www.ecw.org>]
10. Other [SPECIFY: _____]
97. None/Don't use the Web or Internet for energy research
98. Don't know name of page

Marketing

29. What do you feel is the best way to market the Clearinghouse services to professions such as yours? [DO NOT READ LIST; ENTER ALL THAT APPLY]

1. Direct mail
2. Advertising
3. Newspaper
4. Trade journal
5. Association newsletter
6. Tradeshows
7. Conventions
8. Personal presentation
9. Internet
10. Information via 1-800 number
11. Other _____

30a. What two trade or professional associations do you value the most?

Acronyms:

ASHRAE=American Society of Heating, Refrigeration, and Air-Conditioning Engineers

APPA=Association of Higher Education Facilities Officers

AWWA=American Water Works Association

AESP=Association of Energy Service Professionals

30b. What trade or professional magazines do you use to get most of your energy information from?

Classification

And just a few questions for classification purposes only...

30. What sort of work does your organization do? [READ LIST IF NECESSARY; SELECT ONE RESPONSE ONLY]
1. Architects
 2. Contractor
 3. Consulting firm (economics/program planning/evaluation)
 4. Engineering/Building design or construction
 5. Building management and operation
 6. Public Utility/Gas/Electricity
 7. Private Utility/Gas/Electricity
 8. Professional or trade organization
 9. Property owner/manager
 10. Government
 11. Research institute/University
 12. Manufacturing/Production
 13. Other [Specify: _____]
31. Would you describe your position as... [READ LIST; SELECT ONE RESPONSE ONLY]
1. Organization executive
 2. Program or department manager
 3. Analyst
 4. Self employed
- Or something else [Specify: _____]
32. How long have you been in your current position?
_____ Years
33. How long have you been doing this kind of work?
_____ Years
34. Would you like to be included in Energy Newsbriefs, an e-mail service that notifies recipients of new arrivals in the Clearinghouse library? REPEAT TO VERIFY
1. Yes (your e-mail address: _____)
 2. No
 3. Don't have e-mail

Thank you for taking the time to participate in the survey.
Remember if you have any energy-related questions you can call
the Clearing house Hotline or the Web page.

(HAVE TELEPHONE/E-MAIL ADDRESS AVAILABLE) We
hope you can visit the Web site soon and make use of the
Technical Solutions Database (*If respondent asks, the Web site
address is <http://www.energy.wsu.edu/eic/>*). If you have any
questions or concerns remember that you can contact someone in
the Clearinghouse at 800-872-3568

Appendix B. Online Survey Results

Based on 168 participants through April 1, 2000

1. About how often do you access the Clearinghouse Web pages? Would you say...
 - a. Daily or more often 7 (4%)
 - b. 2-4 times a week..... 9 (5%)
 - c. Once a week 11 (7%)
 - d. 2-3 times a month..... 24 (14%)
 - e. Less often 34 (20%)
 - f. This is my first time 83 (49%)

2. Which Clearinghouse Web pages have you accessed? Have you accessed the...?

Have you accessed the...		Never/Missing	Rarely	Occasionally	Somewhat Often	Very Often	Net Accessed
a	Technical (Energy) solutions database	32%	16%	40%	8%	4%	68%
b	Events calendar	51%	13%	25%	8%	2%	49%
c	Jobs listing	57%	18%	17%	7%	2%	43%
d	Software/files links	47%	14%	29%	8%	2%	52%
e	Publications links	32%	14%	36%	12%	6%	68%
f	Energy sites links	21%	14%	32%	24%	9%	79%
g	Newsgroups page	56%	18%	17%	5%	3%	44%

[FOR EACH CLEARINGHOUSE WEB PAGE ACCESSED
ASK]

3. How useful did you consider the Clearinghouse Web page to be? Using a scale of 1 to 5, where 1 means “not at all useful” and 5 means “extremely useful”, how useful was the information on the...

	1 Not at all Useful	2	3	4	5 Extremely Useful	Missing (NA)	Average
Technical (Energy) solutions database	1%	4%	24%	23%	16%	32%	3.7
Events calendar	0%	7%	18%	15%	7%	52%	3.5
Jobs listing page	1%	4%	18%	10%	8%	58%	3.5
Software/files links	1%	10%	18%	14%	8%	49%	3.4
Publications links	0%	8%	23%	21%	13%	34%	3.6
Energy sites links	1%	7%	22%	26%	21%	24%	3.8
Newsgroups page	2%	11%	13%	11%	5%	57%	3.2

4. On a scale of 1 to 5, where 1 means “extremely dissatisfied” and 5 means “extremely satisfied,” how satisfied were you with the...

	1 Extremely dissatisfied	2	3	4	5 Extremely Satisfied	Missing (NA)	Average
Speed of the Clearinghouse Web page	1%	4%	17%	46%	29%	3%	4.0
Appearance of the Clearinghouse Web page	1%	7%	26%	41%	23%	3%	3.8
Overall value of the information on the Clearinghouse Web page	1%	8%	18%	44%	24%	5%	3.9

5. Do you have the EIC Web paged bookmarked?
 - a. Yes..... 114 (68%)
 - b. No..... 49 (29%)
 - c. Missing..... 5 (3%)

6. Is there anything that you would like to see offered at the Clearinghouse site that is not currently offered?

A "tools" section where analysis spreadsheets and/or the software related technical and financial items is kept. Maybe an area specifically on financing also would be helpful.

Advances in energy related technology reports such as batteries, fuel cells, PV, geothermal heat pumps etc.

Canadian content. I am disappointed that the notion of "regional" does not extend across the border into British Columbia, Alberta or the Yukon.

First time - Really like it!

I'm looking for info regarding harnessing our abundance of rain (i.e., a 'water wheel generator?') to produce electricity independently. it seems I heard of folks in Seattle doing this years ago. Can anyone point me in the right direction?

I have not fully explored, but will. My time must sign me off.

I really like your new format. However, I searched for "fuel cells" and two links did not work;. Energy Department Targets... and News; sce, energy, hydrogen. A regional flavor would be good - regional events and activities...

I'm learning to use it. It is very useful.

Keep up the good work

Late breaking technology updates Trends reporting

More links to related sites

Not really - just want to compliment you on your jobs database, there is really no other around that just addresses energy efficiency jobs.

Some of the print it very small. For those with glasses, small fonts are hard to read.

There must be loads of Energy Support that the Clearinghouse can provide that I haven't asked for yet, but it will happen.

Well laid out. Fast. Hope to see the "related article" links continue to grow.

Much more information about concrete/polystyrene wall systems.

Hyperlinks that say "Click Here" to send Email should give the E-mail address. This is for people who do not use a mail server program on their computer but instead a mail server like Hotmail.com or Yahoo.com. We can then cut and paste the address. Clicking on the link brings up Microsoft Outlook which is not enabled on our computers.

Global information, not just about "pacific nw!"

More detailed engineering type data on various systems. For instance, I do not want to be told that they will save money, I want access to detailed data on how they do it such as length of tube in geothermal applications, temperatures, etc

Yes. I'm looking for a simple colored map which shows the various electric utility service territories in the NW. I had such a map from BPA a few years ago, but have misplaced it. It would be nice if the territories could be clicked on and linked to the utility website's energy pages. A similar map for natural gas utilities would be helpful as well, but I've never seen even a hard copy of this.

Thanks.

More residential support and information. I would rather go here than to other government sites, because it is hard find information on their sites.

Just starting to use. Looks good so far. Perhaps designate locations of free downloadable energy related software.

Everything is excellent!

You probably should revise your store locator software. Mileage between Butte (zip code 59701) and Kalispell is 227 miles, not 50. Salmon, ID is much farther than 87 miles, too.

Improve the web page and information board format and structure for easier reading and to access the various pages. Organize and clarify topics. Increase the overall speed to access various pages.

Contacts to local groups in SoCal. I need to sign up exhibitors for the Upper Newport Back Bay Earth Day on April 16, so need some live people to present the Green energy case.

Mathematics resources for teachers

More information on new energy saving products

Power Quality Database

An index of what is in the database, otherwise I'm left shooting in the dark many times for keywords that match what you have.

More information like the questions on residential stuff for homeowners. More info on products, like windows, light bulbs, insulation, etc.

Yes, your address on the first page

More Links

More industry contact lists

It is extremely useful

A separate area dealing exclusive on photovoltaics.

Technical publications on energy efficiency, solutions to electrical problems, tutorials on basic electrical engineering.

I came to your site looking to find data for a report that I am writing, and when I entered everything I could possibly need was before me. This is not asking you to offer something else but complimenting you on how much you already offer.

Provide easier opportunity for potential suppliers to notify you of their product and how it operates. Also as I later find out you need more space in the "other" sections as I could not adequately describe that my company designs, manufactures and installs energy saving control equipment.

Residential Energy Efficiency Financing

More dynamic articles on the front page

More renewable energy information, or links to useful sites.

7. What Web sites other then the EIC Web Site do you use to get energy information?
 - a. Alliance to Save Energy 50 (30%)

- b. CREST 40 (24%)
- c. EIA 56 (33%)
- d. ENERGY STAR Home Page..... 74 (44%)
- e. EREN/EREC 64 (38%)
- f. LBL 28 (17%)
- g. ORNL..... 19 (11%)
- Specific product and/or vendor Web Sites
- h. Wisconsin Energy Center..... 17 (10%)
- i. Other [SPECIFY: _____] 37 (22%)

OTHERS:

- AEE (2)
- Bonneville Power site
- CMHC's website for building construction issues
- ConWeb (2)
- DOE (3)
- EEBA Comfort Living
- EGSA DARNELL
- Environmental Defense, WebDirectory(envir. orgs
- EPRI(2)
- FEMP
- NEEA (6)
- Newsdata
- OIT
- Oregon Office of Energy (2)
- PNNL
- PSCCC
- Real Goods
- RESNET, Energy Rated Homes of America
- Search Engines
- Seattle Lighting Lab
- The Electric Utility WWW Resource List
- Utility page (2)
- Various Australian sites
- Western Area Power Administration
- WIRE / ISES
- www.detr.gov.uk
- www.energy.com
- www.energycentral.com
- www.energyguide.com
- www.energyoutlet.com
- www.epri.com
- www.ndsu.nodak.edu/ndsu/klemen

www.nwbuildnet.com/nwbn/environmental.ht
 www.poweronline.com (2)
 www.solar design.web.com
www.windows.lbl.gov

8. How do you share or use energy information from the Clearinghouse?

	Have you ever . . .	1. Never	2. Once/twice	3. Several times	Net Once or More
a.	recommended the Clearinghouse to others?	33%	29%	24%	52%
b.	lent or copied materials obtained from the Clearinghouse to others?	43%	24%	18%	42%
c.	used technical data from the Clearinghouse to support a decision?	36%	28%	21%	49%
d.	demonstrated or explained to a colleague a technique(s) or strategy that was presented by the Clearinghouse?	43%	26%	11%	37%
e.	promoted or implemented changes to internal policies or practices in response to something presented by the Clearinghouse?	54%	18%	8%	26%
f.	suggested or insisted that an in-house colleague or subcontractor incorporate ideas learned from the Clearinghouse?	53%	17%	8%	25%
g.	discussed ideas presented from the Clearinghouse with a manufacturer or manufacturers representatives to encourage product changes?	56%	18%	4%	22%
h.	included the technical data provided by the Clearinghouse in a report or proposal for a client?	44%	25%	10%	35%

9. What are the three main places you get energy and energy efficiency information? Please select only three.

- a. Advertising 15 (9%)
- b. Books..... 23 (14%)
- c. Colleagues/Peers 29 (17%)
- d. College/university 15 (9%)
- e. Conferences 16 (10%)
- f. Consultants 8 (5%)
- g. Consumer Reports 16 (10%)
- h. Contractors 3 (2%)
- i. Dealers/distributors 4 (2%)

- j. Electric Utility 31 (18%)
- k. Fed. Govt. Agency 23 (14%)
- l. Gas Utility 3 (2%)
- m. Internet 124 (74%)
- n. Library 21 (13%)
- o. Local Govt Agency 17 (10%)
- p. Manufacturers..... 14 (8%)
- q. Newspaper/Mag/Trade Journal . 57 (34%)
- r. On-going education..... 13 (8%)
- s. Other dept in firm/org 2 (1%)
- t. Retailer 1 (1%)
- u. Seminars 10 (6%)
- v. Staff members 5 (3%)
- w. State Govt Agency 6 (4%)
- x. Trade or prof assoc..... 13 (8%)
- y. Other _____ 3 (2%)

10. What sort of work does your organization do? [PLEASE SELECT ONE RESPONSE ONLY]

- a. Architects 6 (4%)
- b. Contractor..... 10 (6%)
- c. Consulting firm 15 (9%)
- d. Engin./Bldg design or construction.12 (7%)
- e. Bldg. Management/operation..... 2 (1%)
- f. Public Utility 29 (17%)
- g. Private Utility 15 (9%)
- h. Professional org..... 5 (3%)
- i. Property owner/man. 5 (3%)
- j. Government..... 23 (14%)
- k. Research inst./Univ/School. 18 (11%)
- l. Manufacturing/Prod. 7 (4%)
- m. Other 15 (9%)
- n. Missing..... 6 (4%)

11. Would you describe your position as... [PLEASE SELECT ONE RESPONSE ONLY]

- a. Organization exec..... 13 (8%)
- b. Program/dept. manager 45 (27%)
- c. Line staff 21 (13%)
- d. Analyst 23 (14%)
- e. Self employed..... 23 (14%)
- f. Other [Specify: _____]..... 24 (14%)
- g. Student..... 5 (3%)
- h. Engineer 4 (2%)
- i. Missing..... 10 (6%)

12. And finally, can you please provide us with your name, e-mail, and daytime phone number?

Name: _____

e-mail: _____

Phone: _____