



E³A: Understanding Energy

Understanding Energy

Energy Pyramid

Net Metering

Off-Grid Living

Green Building

Understanding Your Energy Consumption

Sources and Uses

Carbon and Energy

Importance Scale Survey

Needs assessment

The effectiveness of your energy education depends on your ability to identify local needs and adapt educational materials to meet them. These questions can help you draft a needs assessment.

- **Who is the program trying to inform, influence or persuade?** Be specific in identifying your audience. Programming efforts may draw the general public, but you should know your target audience. If you mean to address multiple segments of the community — such as agricultural producers, homeowners or business owners — develop differing programming strategies and questions for each group.
- **What do you need to know? What questions need to be asked? Can you change the situation?** Before designing an assessment tool, determine what you need to know to design a program. For example, you might want to know the motivation behind your audience's interest in energy. Are they worried about rising energy prices? Are they concerned about environmental issues? Are they curious about educational projects that might be done in the community? Understanding your audience's underlying interests in energy will help you tailor programming efforts. Use the map in this guide and an importance scale survey to help.
- **How do members of your target audience prefer to learn?** Consider the venue for your educational efforts. Would your audience prefer to attend a class? View a webinar from home? Listen to a podcast? Have a one-on-one discussion about their needs? Account for your audience's preferences as you design a program plan.
- **When would your audience prefer to learn?** Take some time to learn about your audience's preferences, such as their preferred seasonality or time of day.

Needs assessment techniques

Existing information approach

This approach uses existing information to learn about the target audience. For a better understanding of your target audience's energy needs, consider the following:

- Contact the local utility. What is the average monthly or annual kilowatt-hour consumption per household or agricultural operator? Is it higher or lower than the state average? What is the price of electricity, natural gas or propane in your area, and how does it compare to other areas? Are there any significant expected changes in price? Is the utility doing educational workshops or outreach?
- Contact your local housing authority, Human Resource Development Council (HRDC) or utility to learn about weatherization and energy efficiency needs in your area. Does your community have any specific needs?
- Contact a local irrigation distributor or installer to learn more about agricultural needs. What issues in irrigation energy management could you address? What do local utilities see consumers needing addressed? What programs do they have that are underutilized?
- Contact your local University of Missouri Extension specialist. What do they know about energy needs in your area?

Attitude survey approach

Gauging attitudes toward energy education is helpful in designing a program strategy. Consumers need to determine what they want to accomplish before they can make an informed energy decision. Interest in alternative energy could stem from one of these reasons:

E³A: Map to exp



Photo credit: DOE NREL

Ask participants their primary objective using the *Importance Scale Survey*.

Objective to save money now?

YES

Use the Energy Pyramid to explain need for assessment and highlight cost and complexity increase from conservation to alternative.

NO

Objective to save money in the future?

YES

Use the Energy Pyramid to explain need for assessment and to show importance of conservation and efficiency before alternative energy.

NO

Independence from the utility?

YES

Use the Energy Pyramid to explain need for assessment and to show importance of conservation and efficiency before alternative energy.

NO

National energy independence?

YES

Use the *Sources and Uses* guide to show imported sources of energy.

NO

Reduce fossil fuels?

YES

Use the *Sources and Uses* guide to show areas of highest fossil fuel consumption.

NO

Personal sustainability?

YES

Use the Energy Pyramid to explain need for assessment and to show importance of conservation and efficiency before alternative energy.

NO

Education?

YES

Use the Energy Pyramid to explain need for conservation and efficiency before alternative energy.

NO

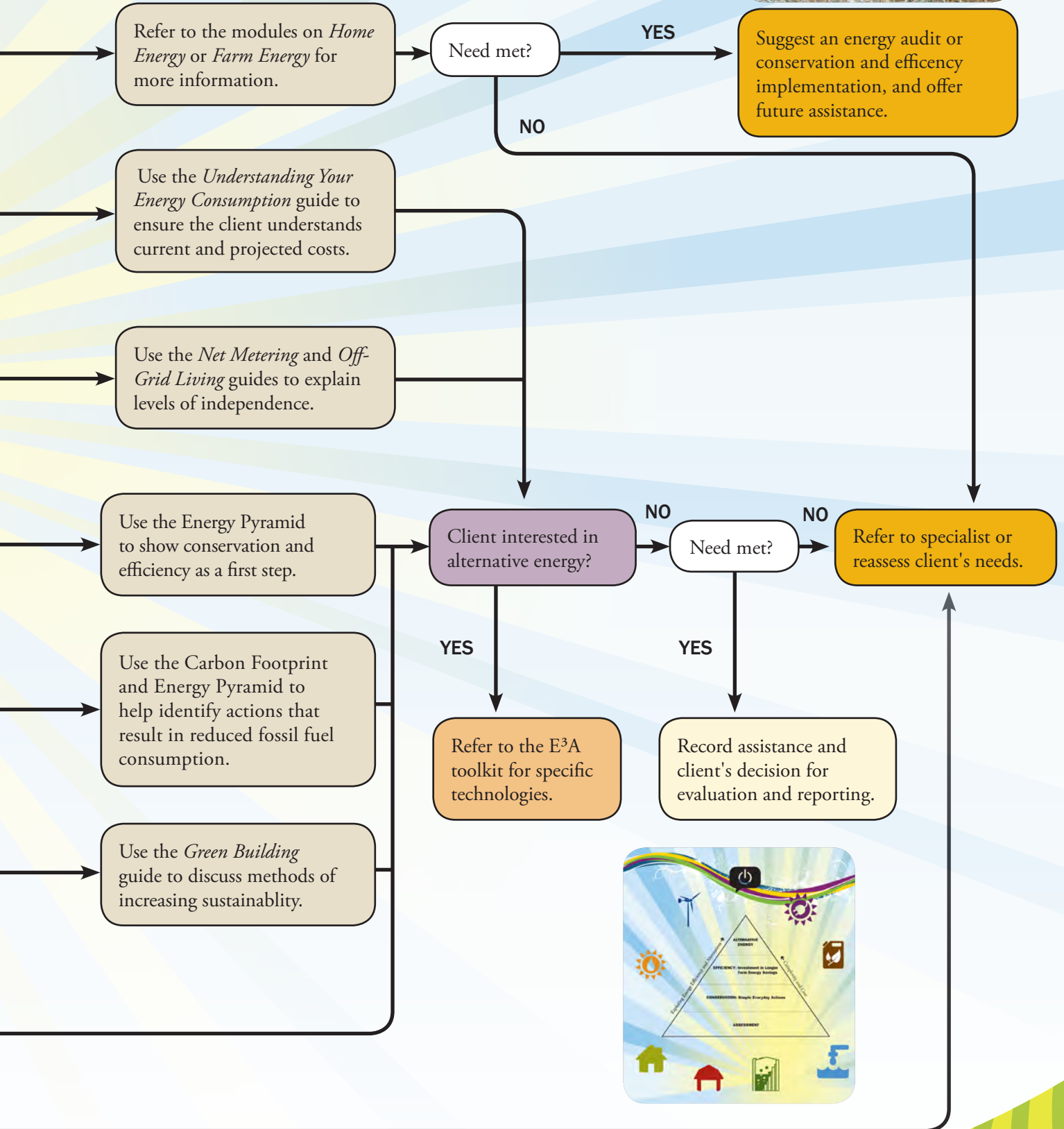


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Monitoring energy objectives



- Media discussion and in public policy debate sparked an interest. Occasionally, people make the assumption of, “I have an energy concern. Alternative energy is a hot topic. Therefore, alternative energy will address my concern.” This is not always accurate and may prove detrimental to promoting alternative energy in the long run. People who make inaccurate assumptions about the capabilities or effectiveness of alternative energy to address their issues may ultimately be dissatisfied with an alternative energy system.
- Some energy prices are rising, and consumers are acutely aware of rising prices for petroleum-based products. As prices at the pump rise, so does the consumer's desire to make changes in energy consumption. However, what is happening at the gas pump (petroleum) might not be related to prices of other forms of energy (electricity). The more consumers understand about their concerns and the actions they take to resolve them, the better the chances they will be satisfied.

The goal is to help consumers make informed decisions using unbiased, research-based information. Part of the process is helping consumers understand what problem they want to solve and helping find a way to resolve it.

Methods of assessing attitudes

Assess attitudes prior to education or in a workshop. Here are some methods for gauging your clientele's attitudes toward learning about energy during a workshop:

- **Importance scale survey** — Ask your constituents to fill out an importance scale survey. In a large group, have them report to the group or discuss their key objectives in smaller groups. In a small group, you can review the worksheets or collect them for tabulation later. Have related map handouts on hand as needed.
- **Personal interview** — In informal small groups or one-on-one teaching environments, discuss your constituents' attitudes to figure out what types of information you may need to provide. Ask why they are interested in energy efficiency or determine what they want to accomplish.
- **Sticky wall** — For groups of 10 to 20, consider using a sticky wall. Sticky walls can be created on a sheet using spray adhesive, or you can tape cards directly to the wall. On large cards, make labels for each reason

listed on the importance scale survey and stick it to a wall. Provide each participant with a large note card and a survey. Ask them to take five minutes to read the survey and write their main objective for making changes in their energy use. Ask participants to place their card under the heading that best describes their objective. If people have more than one objective, ask them to pick their top priority.

- **Facilitated discussion** — Ask participants why identifying attitudes or objectives are important. For example, “What considerations might be more or less important to you if your objectives are associated with environmental rather than financial concerns?”
- **TurningPoint clicker voting** — In larger groups, or if you feel your constituents will not want to share their reasons, this software is a great way of soliciting information without putting people on the spot.

Key informant approach

This approach identifies knowledgeable community leaders who can accurately identify needs and concerns. Interview key informants or have them complete a questionnaire to learn their impressions of a community's needs. Analyze any information obtained to develop a program strategy.

Community forum

Hold a public meeting for people in the community to discuss their energy needs, their priorities and what can be done to address their needs. All members of the community are encouraged to attend and express their concerns.

Focus group interview

Select a group of people for their skills, experience, views or position to ask a series of questions about a topic or issue to gather their opinions. Group interactions will yield detailed information about a particular issue.

References

- Iowa State University Extension. (2001, March 1). Extension to Communities. Needs Assessment Strategies. <http://www.extension.iastate.edu/communities/tools/assess/>
- University of Missouri Extension Planning, Conducting, & Analyzing Focus Groups (2002, September 27). http://www.extension.missouri.edu/4hlife/documents/evaluation/focusgroups/focusgroups_files/frame.htm

Original work created by Montana State University Extension and the University of Wyoming.
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