



User's Guide

Energy Pyramid
Fact Sheet

Net Metering Fact Sheet

Off-Grid Living Fact Sheet

Green Building Fact Sheet

Understanding Your Energy
Consumption
Fact Sheet

Sources and Uses
Fact Sheet

Carbon and Energy
Fact Sheet

Importance Scale Survey

For more energy information, go to
<http://energy.tennessee.edu>.

Needs Assessment

Your success in implementing effective energy education will hinge upon your ability to identify local needs and adapt educational materials to meet those needs.

Developing a needs assessment involves answering the following questions:

- **Who should be assessed? Who is the programming attempting to inform, influence, or persuade?**
Be specific in identifying the audience you wish to assess and ultimately impact. Programming efforts may draw “the general public,” but you should know your target audience. If you are attempting to address multiple segments in the community (agricultural producers, homeowners, business owners, etc.) be aware of developing differing programming strategies for each and asking different questions in the assessment process to establish their needs.
- **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 in order to plan programming. As an 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 the underlying interests in energy will aid in tailoring programming efforts. Use the E3A Map in this guide and the Importance Scale Survey to help!
- **How do members of your target audience prefer to learn about energy?**
Program planning should consider the venue of educational efforts. Would your audience prefer to attend a class? View a webinar from home? Listen to a pod cast? Have a one-on-one discussion about their needs? Understand audience preferences as you design your programmatic plan.
- **When would your audience prefer to learn about energy?**
Take some time to learn about audience preferences (seasonality, time of day, time of week, etc.).

Five Needs Assessment Techniques

1. Existing Information Approach

This approach uses existing information to obtain insights about the target audience. To gain a better understanding about your target audience needs in energy, consider the following:

- Contact the local utility. What is the average kilowatt-hour consumption per month or year per household/agricultural operator in your area? Are you higher or lower than the state average? What is the price of electricity, natural gas, or propane in your area? How does it compare to other areas? Are any significant changes in price expected? Is the utility doing educational workshops or outreach?
- In housing, talk to your local housing authority, Community and/or Economic Development Council, or utility. What are the weatherization and energy efficiency needs in your area? Are there unique needs in your community?
- In agriculture, talk to the local irrigation distributor/installer. What needs exist in irrigation energy management? Talk to the local utility – what needs are they finding? What programs do they have that are underutilized?
- Contact the Tennessee Energy Education Initiative, *TVA's Alliance to Save Energy* or Extension Specialist. What do they know about energy needs in your area?

E³A: Map to Explore



Ask participants their primary objective (use the Importance Scale Survey).



Objective to save money now?

YES

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

NO

Objective to save money in the future?

YES

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

NO

National energy independence?

YES

Use Energy Source and Uses fact sheets to show imported sources of energy.

NO

Reduce fossil fuels?

YES

Use Energy Source and Uses fact sheets to show areas of highest fossil fuel consumption.

NO

Personal Sustainability?

YES

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

NO

Education?

YES

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

NO

Spring Energy Objectives



Refer to Home or Agriculture Energy Efficiency & Conservation Folders.

Need met?

YES

Encourage an energy audit or conservation and efficiency implementation and offer future assistance.

NO

Use the Price of Energy fact sheet to ensure that the client understands current and projected costs.

Use Net Metering and Off-Grid fact sheets to explain levels of independence.

Use Energy Pyramid to show conservation and efficiency as a first step.

Client interested in alternative energy?

NO

Need met?

NO

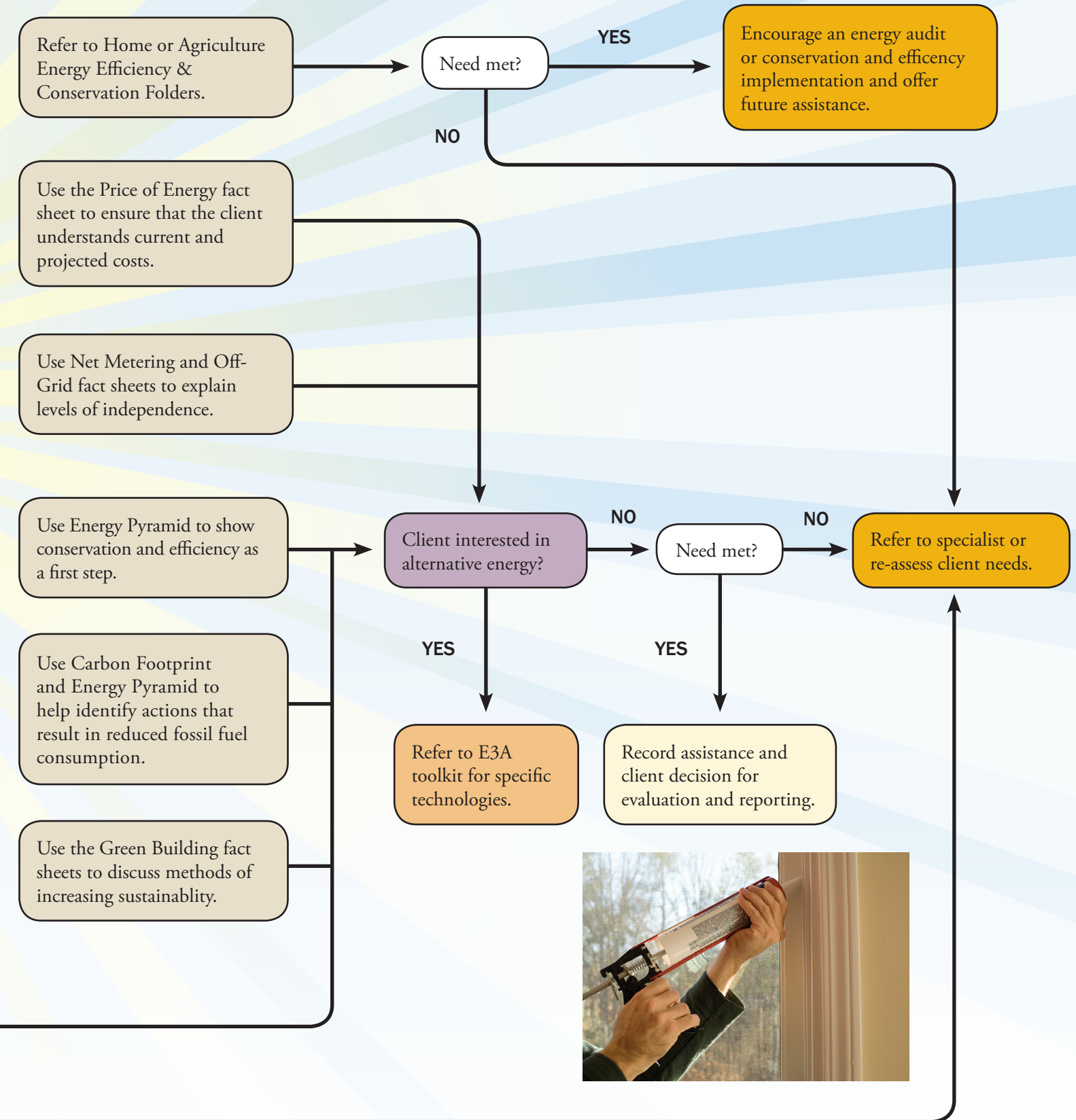
Refer to specialist or re-assess client needs.

Use Carbon Footprint and Energy Pyramid to help identify actions that result in reduced fossil fuel consumption.

Use the Green Building fact sheets to discuss methods of increasing sustainability.

Refer to E3A toolkit for specific technologies.

Record assistance and client decision for evaluation and reporting.



2. Attitude Survey Approach

Attitude assessment in energy education is important in designing programming strategy. In order for a consumer to make an appropriate energy decision, they first need to determine what it is they seek to accomplish. Consumers often express a desire to invest in alternative energy because:

- Alternative or renewable energy is a topic in media and in public policy debate. Sometimes, the assumption is made, "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 actually prove detrimental to alternative energy in the long term, as people who make inaccurate assumptions about the capabilities or effectiveness of alternative energy to resolve their specific issue may ultimately be dissatisfied with system ownership.
- Some energy prices are rising. Consumers are especially aware of rising prices for petroleum-based products. As pump prices increase, the desire of consumers to make changes in energy consumption also increases. However, what is happening at the pump (petroleum), may not be related to prices of other forms of energy (electricity). The more consumers can understand their concerns and the actions they take to resolve those concerns, the more likely they are to be satisfied with their results.

As educators, our role is to help consumers make informed decisions using unbiased, research-based information. Part of the informing process is helping consumers to understand what problem they are attempting to solve and then finding a course of action that will resolve their problem.

Methods of Assessing Attitudes

Attitudes can be assessed prior to an educational event, or as part of a workshop. In a workshop, here are some methods for establishing the attitudes in learning energy from your clientele:

- Importance Scale Survey: Ask constituents to complete an Importance Scale Survey worksheet. In a larger group, you can have them report to the group or discuss their key objectives in smaller groups. In a small group, you can review the worksheets. You can also collect them for tabulation later. Have the related map handouts on hand to address the needs.
- Personal Interview: In non-formal small groups or one-on-one teaching environments, discussing the attitudes of the constituent can help you to assess the types of information you may need to present. You may ask why they have interest in energy or what they are trying to accomplish.
- Sticky Wall: For groups of 10 to 20, you may consider using a sticky wall. Make labels of each "reason" listed on the Importance Scale Survey on a large card 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 down their top/primary objective for making changes in their energy use. Ask the 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.) Sticky walls can be created on a sheet using spray adhesive, or if a sticky wall is not practical, use large sticky (Post-it type) note cards that can be placed directly on the wall or easel pads.

- Facilitated Discussion: Ask participants why identifying attitudes or objectives is important? As an example, "What considerations might be more or less important to you if your objectives are associated with environmental concerns than with financial concerns?"
- TurningPoint Clicker Voting: In larger groups or if you feel your constituents will not want to share their reasons, TurningPoint clicker voting can be a great way of soliciting information without putting people on the spot.

3. Key Informant Approach

The Key Informant Approach identifies community leaders who are knowledgeable about the community and can accurately identify needs and concerns. Key informants can complete a questionnaire or interview to obtain their impressions of community needs. The information is then analyzed and programming strategy is determined.

4. Community Forum

A public meeting is held where the participants discuss some of the energy needs facing the community, what some of the priority needs are, and what can be done about these needs. All members of the community are encouraged to attend and express their concerns.

5. Focus Group Interview

A group of people selected for their particular skills, experience, views, or position are asked a series of questions about a topic or issue to gather their opinions. Group interaction is used to obtain detailed information about a particular issue. Use the Montana State University Extension MontGuide "Using Focus Groups for Community Development," (publication number MT200807HR) to implement this form of needs assessment.

References

Iowa State University Extension. (2001, March 1). Extension to Communities. Retrieved May 17, 2011, from Needs Assessment Strategies: <http://www.extension.iastate.edu/communities/tools/assess/>

Original work created by Montana State University Extension and the University of Wyoming. Adapted for use in Tennessee by Martha Keel, Department of Family and Consumer Sciences.