# Utility Bill Analysis Quiz Answer Key

# Weatherization Energy Auditor – Single Family

DISCLAIMER: This quiz is intended for use as an interim review. Distribute to students after training the associated curriculum chapter, or the next day, to refresh the lesson. Being publicly available renders this specific quiz invalid for use as a formal assessment tool for accreditation.  See Tier 2.14(b) IREC 01022 ISPQ accreditation standard.

Learning Objectives

By attending this session, participants will be able to:

* Discuss the heat values for different fuel types.
* State the advantages of analyzing utility bills.
* Define the terminology and categories of information used in a typical fuel bill.
* Demonstrate how to use utility bill analysis to determine base load vs. seasonal usage.

Questions and Rationale

**Objectives:**

* Discuss the heat values for different fuel types.

**Question:**

1. Approximately how many BTU’s are contained in 125 cubic feet of natural gas?

1. 75,000
2. 125,000
3. 25,000

**Rationale:**

**A** is incorrect. (see B)

**B** is correct because there are 1,000 BTU’s per cubic foot of natural gas. Therefore, 125 cu.ft. X 1,000  *=* 125,000 BTUs

**C** is incorrect. (see B)

**Objective:**

* State the advantages of analyzing utility bills.

**Question:**

2. There are numerous advantages to analyzing utility bills. From the list below check all that apply:

* A. Target weatherization to those homes with high energy use.
* B. Determine loads due to base load vs. other loads to help guide focus of audit.
* C. Assist clients in interpreting their energy-use patterns and identifying potential savings through changes of habit.
* D. Determine normalized energy use before and after weatherization to discover true savings.
* E. Identify potential health and safety issues related to moisture.

**Rationale:**

**A**, **B**, **C** and **D** are correct; answers are self explanatory.

**E** is incorrect. Utility bill analysis will not identify health and safety issues.

**Objective:**

* Define the terminology and categories of information used in a typical fuel bill.

**Question:**

3. An electrical bill will contain the following kinds of information except:

1. Distribution charge.
2. Monthly Kwh consumption.
3. Therms.

**Rationale:**

**A** & **B** are incorrect because those items do appear on electric bills.

**C** is correct because therms is a unit of measurement used to express gas consumption, not electricity.

**Objective:**

* Demonstrate how to use utility bill analysis to determine base load vs. seasonal usage.

**Question:**

4. A monthly estimate of base load use throughout the year is determined by:

1. Averaging the three highest months of use.
2. Totaling the three lowest months of use.
3. Averaging the three lowest months of use.

**Rationale:**

**A** is incorrect because the highest three months of use would be more representative of seasonal heating or cooling use.

**B** is incorrect because total use would result in an erroneous estimate. It must be averaged over three lowest months to get a realistic estimate as in C.

**C** is correct.