

Review of Energy Accounting Tools

This document gives a review of available on the market energy accounting tools. The purpose of this review is to provide results of independent evaluation of different software, describe their capabilities, features and requirements. This document is called to help Energy Managers in making preliminary decision on getting some specific energy accounting software that is most suitable to the needs and profile of the company. The information about the tools mentioned in this study was received from the Internet. Alliance's experts tested some of the tools for which demo versions were available. For the rest tools information provided is based on the available online resources.

Introduction.

Identifying the least-expensive methods to control energy costs has been a top priority of energy management professionals for years. Energy accounting is a process of collecting, organizing and analyzing energy data. For automating the process of energy accounting Energy Manager most likely would use some software package the accomplishing following major tasks of energy accounting:

1. Record and allocate energy costs
2. Troubleshoot energy problems and billing errors
3. Prioritizing capital investments that lead to more efficient energy use
4. Evaluate energy program success and communicate results
5. Create incentive for efficient energy management
6. Budget energy costs more accurately

When your organization is selecting software for Energy Accounting it is important to check if the software is capable of tracking major reasons that affect overall energy consumption of the building. If the software indicates that energy consumption by the building significantly changed, Energy Manager must be capable of identifying the cause of such change. Changes could emerge due to the number of reasons from breakage of equipment to bill errors. Before starting investigating the reason of the energy consumption change Energy Manager must check following four major reasons:

1. **Weather.** Energy used for heating and cooling varies as a result of changing temperatures. Seasonal changes cause increased heating energy use in winter, and increased use of electricity for cooling during the summer.
2. **Building area changes.** Changes in building size will also strongly influence energy consumption. If the floor square is added to the facility, energy use can be expected to increase. Most energy accounting software can correct for changes in building area by assuming that energy use will increase (or decrease) proportionately to square footage. Some software programs can account for non-proportional changes by adding or subtracting a fixed amount or percentage to the baseline consumption for each month.
3. **Operations and schedule changes.** Changes in building occupancy or schedules for building and equipment operation will affect energy use. If a building is open longer, more energy will be used for heating, cooling, and lighting.
4. **Changes in building equipment.** Only a portion of a building's total energy is weather dependent. While energy use for cooling or heating (chillers, boilers, heat pumps, and use of some fans) is weather dependent; lighting, office equipment and ventilation energy use is not.

It is mandatory that the software is able to adjust reports to the factors above.

All energy accounting tools could be divided into two major groups:

1. PC-based applications.
2. Online web services.

Each group has its strong and weak sides.

For PC-based applications it is enough to have a computer of appropriate minimum configuration (and a printer) to operate the software. Some desktop applications are able to communicate with a server (distributed applications) if the wide area network connection is available. Such software is convenient for large multi-campus companies, state, federal and municipal agencies. For online service, which allows

energy accounting, an Internet connection is required. Taking into account available computer and communication resources the company, intending to start energy accounting, may choose any kind of software, which fits its needs better.

We have some experience of rollout energy accounting tool (ASE 2.0 – energy accounting tool developed by Alliance to Save Energy, <http://www.munee.org/5218ase.htm>) in education system of Ukraine. Education institutions always had the highest priority in respect to establishing communication services, for example connecting to the Internet or running their own web-sites. Current situation in Ukraine reports that if most of the post-secondary educational institutions have well organized information systems with connection to the Internet, sometimes they even appear as Internet Service Providers, kindergartens, primary and secondary schools are poorly equipped with computer equipment, usually with dial-up access to the Internet if any. This means that the use of online services will be very complicated for such sites. On the other hand it is very convenient to have access to energy data from any computer that is connected to the Internet. This is an advantage of online services. In addition online services set very limited requirements to the computer equipment. Usually client must have Internet connection and Internet browser of appropriate generation.

There are few resources on the Internet that list energy related software including Energy Accounting software:

1. Tools Directory on the DOE website
http://www.eren.doe.gov/buildings/tools_directory/
2. Software - Total Efficiency Network (TEN) - WSU EP
<http://www.energy.wsu.edu/ten/software.htm>
3. Tools Bibliography: Energy Software Tools
<http://www.mmtc.org/ee/eem/toolbib/enersoft.htm>
4. Google Directory - Business > Energy and Environment > Management > Software
http://directory.google.com/Top/Business/Energy_and_Environment/Management/Software/
5. Municipal Energy Efficient Network - MUNEE , See in Tools :: Accounting tools :: Energy accounting <http://www.munee.org/>

PC-based Energy Accounting Software Packages.

PC-based energy accounting software is one of the oldest types of tools used for establishing computerized energy accounting (Faser is available since 1980). The simplest type of such software could be spreadsheets where Energy Manager enters utility bills and tries to make some analysis with a heap of data collected. If the Energy Manager is high professional skills and is confident of what he needs spreadsheets are sufficient for managing small number of sites (1-2) and small number of utility accounts. For a bigger number of sites and utility accounts it is necessary to organize all data in some sort of the database easier management. Being not a professional software developer Energy Manager will seek for some Energy Accounting Software that will best fit his needs. Below is description of some popular and high quality desktop software used by energy managers.

While a variety of PC-based programs were developed to handle bill and meter data, three dominated the market during the 1990s: FASER, Metrix, and The Utility Manager. That has now changed, however, with all three going through transitions. FASER was owned by now-bankrupt Enron, making future availability and support for that program problematic. Metrix is owned by Silicon Energy, which has now farmed it out to third-party suppliers in favor of its more advanced (and expensive) EEM Suite. The Utility Manager has changed hands 4 times in 5 years, with its present owner (Xcel Energy). It, too, is available mainly through third-party vendors.

1. Utility Manager.

Utility Manager Pro is designed by Save More Resources, Inc. (SMR) to help organizations of all sizes control their so-called fixed utility costs. While many people perceive utility costs as fixed, there are actually a number of actions the organization can take to reduce these expenses. Utility Manager Pro (UM Pro) provides the tools to identify and put into practice those actions that work best for the organization. UM Pro's powerful, intuitive architecture makes keeping track of complex consumption and cost information a fast, simple procedure that anyone can perform.

Several individuals and departments throughout the organization may interact with UM Pro in different ways. By tracking utility consumption and cost patterns, the program provides valuable information to facilities, production, and maintenance personnel. In larger companies, clerical personnel may handle data entry for bill payment. UM Pro's cost analysis are beneficial to accounting personnel and fiscal executives. UM Pro's design anticipates the deregulated energy market and can become a cornerstone for success in energy purchasing.

Features:

- Tracks all organization's utility costs: electricity, gas, propane, water, steam, recycling, sewer, and more
- Provides comprehensive setup, data entry, import, export, and reporting capabilities
- Houses database on local PC and/or network
- Tracks up to 750 sites, 2000 utility accounts/meters, and 2000 vendors
- Offers unlimited site groups and site categories
- Flexible financial periods: 12, 13, or 14
- Produces detailed energy cost reports
- Displays brilliant colored graphs
- Allows use of weather data or other user defined performance units
- Facilitates system management through new administration features

Technical Specifications

Utility Types

Tracks all your utility costs: electricity, gas, propane, water, steam, recycling, sewer, and more

Minimum System Requirements

Pentium II 350 MHz (PIII 500 MHz or greater recommended)

64 MB memory (128 MB or more recommended)

60 MB Hard Disk space (for the application)

20-500 MB recommended for the data, either on the local system or a server

Printer supported by Windows

Windows 9x, ME, Windows 2000, XP, and NT 4.0 SP4 or greater

Internet Explorer 5.01 SP2 or greater recommended, however earlier versions supported, call for more information

Dual monitors are recommended for data input from electronic bill images

Note: The application's performance increases with more RAM, faster processor(s), hard drive speed, and capacity

Add-On Feature

Web-based reporting

Database Capacity

Track 750 sites

Track 2000 accounts/meters

Track 2000 vendors

Unlimited site groups

Unlimited site categories

Database Platform

Microsoft Access Jet database engine

Demo for Utility Manager is available (http://www.smr.tv/UM_Pro_Demo.asp). Demo gives a number of screenshots with a short description of each screen.

SMR's Additional Support Services and Products

SMR provides a wide range of services in support of UM Pro. These services include but are not limited to:

- **EDI** – UM Pro can receive bills electronically from utility providers
- **A/P Link** – UM Pro can interface with an accounts payable or general ledger system to eliminate double or single entry and improve efficiencies related to processing utility bills
- **Database Construction** – SMR can construct an energy/utility accounting database from scratch and/or convert of an existing database to UM Pro from Excel, UM 3.1, FASER, Metrix, Access, and others
- **Database Maintenance** – SMR can perform the monthly maintenance activities of an energy/utility accounting database for either an energy manager or the actual payment of the utility bills.
- **Database Verification** – SMR can provide complete review of your database by an SMR utility expert
- **UM Pro Training** – SMR can provide generic or custom training

Contact Information

Depending on the information requested use following telephones/E-mail to contact SMR:

- Sales – E-mail: sales@smr.tv; phone: 1-866-854-7283
- Training – E-mail: training@smr.tv; phone: 1-866-854-7283
- Technical support – E-mail: support@smr.tv; phone: 1-800-313-3201

Mailing Address:

Save More Resources, Inc.

PO Box 2559

Grand Junction, CO 81502-2559

Prices

UM 4.0 Pro costs \$2,500.00

2. METRIX

Abraxas Energy Consulting was founded in 2001 and is privately owned. The original team, Gloria Amaral, John Avina, and Courtney Crewe worked for SRC-Systems, the creator of Metrix and MarketManager, for several years. Upon SRC-Systems' merger with Silicon Energy, they worked for Silicon Energy, and since fall 2001, have continued together at Abraxas Energy Consulting.

Abraxas Energy Consulting markets, sells and supports powerful energy management and analysis software and solutions including PocketControls, Metrix, MarketManager and Utility Manager. Our software can help you track energy usage and costs, determine energy usage and cost savings, and help you estimate energy and cost savings from potential energy conservation projects. PocketControls allows you to control your building from anywhere, whenever you want.

Abraxas Energy Consulting offers an integrated selection of services to its customers including: training and support of energy professionals in desktop energy analysis software, programming custom applications to help resolve energy analysis and tracking challenges, finding controls and HVAC related problems in existing buildings and fixing them, monitoring energy savings opportunities and quantifying expected savings and estimate project costs.

Abraxas Energy Consulting serves a variety of government agencies, school districts, ESCOs, utilities, property managers, and energy consultants.

How METRIX can help Energy Manager

Metrix can track any type of facility - commercial, industrial, institutional, residential, etc. You can include most any type of utility, including energy (electricity, natural gas, oil, propane, etc.), water, solid waste, and sewage. And Metrix can automatically import your bills, so you can easily track one meter or hundreds, one facility or many sites.

1. Metrix can help in tracking utility performance.

You already have a monitoring and measurement system in each of your facilities - your utility meters. And your bills contain a wealth of information about facility performance. Metrix extracts this information to identify potential problem areas, reduce utility cost overruns, and prioritize your facility management resources.

2. Verify Operation Cost Savings

Verify the performance of your energy conservation measures. Are you getting the savings you expect, after correcting for weather and other variables that affect utility cost? Metrix uses historic utility data to establish a "baseline" for the facility. This baseline is compared to post-installation readings from meters, submeters, and/or monitoring systems to quantify the measure impacts.

3. Compare Alternative Pricing

Metrix can easily compare utility costs under different pricing schedules for your specific usage profile. Would you save money with a time-of-day electric rate, or a brokered natural gas supply contract?

4. Communicate the Results

Metrix enables you to clearly communicate your results to different audiences - from energy engineers to financial decision makers. Concise reports and graphics are available for each stage of your project - setup and baseline tuning, bill validation, tracking and savings verification, price comparisons, facility ranking and summary, etc.

Metrix Capabilities and Features

1. Track an unlimited number of sites, facilities, and accounts
2. Regression analysis, report writing, graphs, data import & export are all standard capabilities
3. Track performance the right way
 - Multi-variant linear regression for more accurate baseline tuning
 - Include up to 5 variables - heating & cooling dd's and 3 user-defined variables
 - Establish performance budgets and goals
 - Account for one-time or on-going changes
4. Import and export project data
 - Automatically import utility bills from your utility or billing system
 - Automatically download daily weather data for hundreds of international sites
 - Import MarketManager project files
 - Import Faser utility bill data
 - Export to word processors, spreadsheets, databases

5. User-friendly graphic interface
 - Drag and drop sites, facilities, meters, and submeters to create your layout
 - Tuning Graphs are continuously updated to show the impacts of your baseline parameters
 - Tracking Graphs continuously monitor actual performance vs. baseline and targets
6. METRIX allows to customize the reports
 - Use pre-defined report formats provided by SRC Systems
 - Create your own formats tailored to your reporting requirements
 - Save and reuse custom formats
7. Customizable for international use
 - Switch between I-P (English) and SI (metric) units
 - Use international date, currency, time, and numeric formats
 - Convert currencies to view a project's financial performance in different monetary units

SYSTEM REQUIREMENTS

Microsoft Windows (Version 3.1, Windows for Work groups, Windows 95, NT)
100% IBM-compatible 386 system or better
8 MB RAM minimum
10 MB of hard disk space

SRC Systems periodically releases new versions of Metrix with expanded features and capabilities. During the first year of Metrix use all updates are free.

TECHNICAL SUPPORT

SRC Systems' Technical Support staff is dedicated to providing fast, accurate answers to users' questions. Complimentary introductory support is included with every license. Because the need for Technical Support is often time critical, we offer an array of support services.

Direct telephone access to SRC Systems Technical Support
Internet support via e-mail and the World Wide Web
Electronic Bulletin Board Service available 24 hours a day via modem.

TRAINING

Optimum Energy Products and SRC Systems offers 1 and 2 day training sessions. Our hands-on training approach makes extensive use of case studies. Regional training sessions are held periodically at locations throughout North America (call for a current schedule). Or we can arrange on-site training for larger user groups. Sessions can be tailored to your applications.

Contact Information

12530 Hi Mountain Rd
Santa Margarita, CA 93453
Phone: 805-438-4847
Fax: 775-201-4218
E-mail: Info@abraxasenergy.com

Price: Metrix 3.1 stand-alone license: \$2995, network license: \$4995.

Users: Approximately 1000 users worldwide, mostly in the United States and Canada.

Strengths: Regression calculations are based upon ASHRAE's Monitoring and Verification Committee's recommendations. The hands-on regression allows users to make the best correlation between usage and weather (or other input variables). Users can enter modifications to account for increases (or decreases in building usage) due to remodels or other events. Users can model most utility rates. There are no add on costs.

Weaknesses: The program becomes slow on larger projects (>200 meters). For this reason, it is recommended to split up large projects into 2 or 3 smaller ones.

3. FASER

FASER – Fast Accounting System for Energy Reporting, energy information management and analysis software.

The software is available since 1980, latest version FASER 2000 (release 2.3).

Features:

- Identify utility bill errors, system problems and recover overcharges using FASER's Energy Alarm bill-checking engine.
- Interface with accounting and reduce bill-processing costs using the FASER AP Link module.
- Audit the cost avoidance of demand side management projects and performance contracts.
- Powerful 1000 plus utility rate schedule library for rate comparison using actual metered history. Create your own custom rate schedules.
- Create formula based virtual sub-meters for recharge accounting needs.
- Input and maintain raw meter reading data into FASER using a powerful handheld recorder. Establish energy budgets.
- Determine the impact building activities have on energy consumption.
- Informative, customizable reports with batch report processing and data export features. Over 100 reports and graphs, customizable, using Crystal Reports including Bill Alarm Detail, Rate Calculation, Missing Bills, Overlapping Bill Dates, Cost Avoidance Summary and Late Fee Reports. Regression analysis of daily weather vs. energy use, applied to baseline period for cost avoidance. Budget generation of future energy costs, by building energy type.

Who use FASER

Energy and Facility Managers and Engineers, Accounting and Financial Personnel at Colleges and Universities, School Districts, Corporations, Retail, Local and State Government, Performance Contractors, Military Bases, Health Care Networks.

Minimum system requirements:

133 MHz Pentium Processor,
32 MB RAM,
Windows 95 or later,
25 MB of hard disk space for the program.

Strengths: Ease of Use. FASER AP Link Electronic interface to accounts payable software system- Check bills before they are paid. FASER Energy Alarm, the most powerful bill and meter-checking engine available. EDI mapped rate schedules and import capability. 1000 plus rate schedule library and rate schedule create wizard- compare rates using consumption history. Virtual sub meter formula creation for recharge accounting. Snapshot application for corporate-wide, read-only viewing and reporting of data. SQL database engine.

Weaknesses: Meters assigned to the same FASER account must have the same billing period. FASER account Meter reading recorder interface limited to Hewlett Packard palmtop hardware.

Users: Over 1500, U.S. and International

Prises: FASER costs \$995 for tracking up to 100 meters, and \$3995 for tracking for tracking up to 500 meters. Plus many add-on options like Unlimited Meter and/or building tracking, Cost Avoidance tracking, Report Writer, Rate Schedule Library, Daily Weather data are offered at extra cost.

Contact Information:

FASER is currently owned by Enron. Due to bankruptcy of Enron there is no any reliable information on how to get the software. Try to contact Enron headquarter at:

**1400 Smith St.
Houston, TX 77002
(713) 853-6161**

4. Stark Essentials 1

Stark Essentials Level 1 is an entry-level Monitoring and Targeting system for multi-site organizations. Delivering cost-effective analysis of information on utility invoices and meter readings, Essentials features superb ease of use and an integrated energy management action plan for immediate results. The software is adjusted for primarily use in the UK (the software has a database of weather data – degree-days, utility providers, published tariffs, etc.)

Stark Essentials 1 can help Energy Manager to:

- Establish a waste reduction target for all utilities in every building
- Set a realistic budget for all utilities in every cost centre
- Identify the worst (and best) performing buildings
- Implement an energy management program that is easy to maintain and delivers consistent savings

Stark Essentials features:

1. Flexible budget setting and cash flow forecasting
2. Bill checking for errors
3. Cost allocation for improved accountability
4. Re-charge billing to recover costs from third parties
5. Target setting and monitoring against actual performance
6. Environmental Monitoring
7. Energy Auditing
8. Monitor Performance

Stark Essentials covers a number of core areas:

1. Getting Results - The Essentials action plan for making savings
 - a. Setting up the system
 - b. Organizing & Auditing the premises
 - c. Drawing up a reporting framework
 - d. Implementing an ongoing energy management program
2. Setting Targets and Budgets
The Essentials Target and Budget Wizard automates the entire process enabling users to establish accurate budgets and targets for their entire organization.
3. Data Entry and Data Import
 - a. Unlimited number of Supplies (accounts) and Buildings
 - b. Fully pre-configured database containing all published tariffs, degree days and standard utilities. (for the UK only)
 - c. Additional fields available for floor area, hours occupied and population etc.
 - d. Ability to import electronic bill files, targets and meter readings directly into the database
4. Analysis and Reporting
Essentials comes complete with all the classic M&T reports
 - a. All accepted analytical techniques available
 - b. Special reports for benchmarking against government-defined national performance indicators
 - c. Essentials Report Wizard - modifying standard reports to your own requirements
 - d. Exception reporting

e. Expanding the system

Contact Information:

Sentinel House
10-12 Massetts Road
Horley
Surrey
RH6 7DE
UK
Phone: +44 (0) 1293 776 747
Fax: +44 (0) 1293 820 361
Email office@stark.co.uk

Stark North America, Inc
834 Tyvola Road, Suite 114
Charlotte
NC 28217
USA
Phone: 704-676-0937
Fax: 704-676-4927
Email information@starkna.net

5. EZ Sim

EZ Sim is the next step in energy accounting. It uses actual utility bills to reveal the patterns of use in commercial buildings. EZ Sim is a quick spreadsheet tool that is equivalent to a sophisticated engineering analysis. It's designed for resource conservation managers and facility operators.

Features:

- Diagnoses energy patterns and consumption
- Calibrates savings estimates to agree with actual energy usage
- Estimates energy end-uses within the facility
- Verifies vendor claims for energy products and services
- Generates performance targets to compare against actual energy bills
- Minimal building description (floor area, type of business, type of heating/cooling). Monthly utility bills.
- Weather files using mean daily temperature as proxy for all other weather variables. Can be easily updated to actual local weather. Website provides current local weather files for 250 US locations.
- Default building parameter values based on type of facility, but can be easily changed or updated by entry into spreadsheet windows.
- Primarily spreadsheet tables and graphs, several preformatted reports but all can be cut-and-paste into other applications.

EZ Sim lets the user to use utility bills for calibration a simulation of a commercial building in an interactive graphic window. Once it matches the building's utility bills, the simulation model can provide reliable estimates of potential conservation savings. With EZ Sim, the calibration process reveals how energy is used within the facility to help diagnose why there is excessive consumption or poorly functioning building components. Best of all, EZ Sim can be used to predict what future utility bills should be and can help you set performance targets to determine if your installation is on track. This is the simplest form of building commissioning -- and at very little cost.

Who use EZ Sim

Facility managers, resource conservation managers, utility reps, and ESCOs.

Users: To date about 90 users in Pacific NW, supported by Northwest Energy Efficiency Alliance.

Computer Requirements:

PC or Mac with Excel 97 or Excel 2000 installed

Strengths: Simulation is easily tuned to match actual bills, provides performance targets to compare against post-retrofit bills--a low-cost commissioning tool. Provides precision of savings estimate (error bands) for IPMVP protocols.

Weaknesses: Simplified model, assumes one heating or cooling plant. Difficult to use when there are multiple plants.

Contact:

Dave Robison

Stellar Processes, Inc.

Suite 405

1033 SW Yamhill

Portland, Oregon 97205

USA

Telephone (503) 827-8336

DRobison@ezsim.com

Web: <http://www.ezsim.com>

Prices: \$199 for standard version, \$299 for multiple-fuels version. weather files \$24 each or by annual subscription.

Online web services

1. Energy Watchdog

Energy Watchdog from UtiliVision, Inc. is the first of its kind totally on-line interactive utility bill auditing, tracking, analysis and reporting service with a built in energy advisor. Energy Watchdog combines the power of the Internet with proved utility cost reduction experience to enable end use commercial customers to take command of their utility use and cost. Upon entering monthly utility bill information into the system the user will immediately be able to run powerful reports and receive valuable advice that will help to find opportunities to reduce utility use and cost.

Energy Watchdog is a state-of-the-art Application Service that saves time, money and technical resources by storing the Energy Watchdog program and utility use and cost information on a powerful and secure computer accessible only via the Internet.

Energy Watchdog Features:

- Built from the ground up for the Internet. Utilizes web-based technologies to identify a wide variety of utility usage and cost problems, billing errors, and savings opportunities.
- Tracks all utilities – electric, natural gas, water/sewer, fuel oil, telephone, propane, trash, etc.
- Tracks basic and advanced bill detail, building and energy use profile information.
- Powerful web-based utility usage and cost analysis reports. Report features include:
 - Multi-year for comparative analysis
 - Powerful filters for report customization
 - Color graphics
 - Printable
- Built-in energy advisor helps to spot savings opportunities.
- The power of the Internet allows remote users to access the system anytime and anywhere, 7 x 24.
- User rights settings provide control over who uses Energy Watchdog and how they use it.
- Password protected and secure.
- Hosted at Interliant, a state-of-the-art hosting facility in Atlanta, GA, a major communications hub.
- Simple user-friendly interface.
- Energy Watchdog provides two levels of tracking. The basic level allows you to track billing periods, total consumption, demand (for electric bills), and cost. The advanced level allows you to track the basic level information plus additional details such as on-off peak data, taxes, service charges, generation charges, transition charges, distribution charges, power factor etc.

Users: From the information provided on the Energy Watchdog website their users range from school districts to large corporations, providing references to some 34 multi-facility organizations in the USA.

Equipment requirements:

Any computer workstation with standard Internet browser, Internet connection.

Training:

One hour of telephone based training.

Assistance to start using the system

Energy Watchdog Assistant Launch service can set up accounts, buildings, and vendors and enter related information that Energy Watchdog uses to provide monthly consumption and cost analysis reports. If you provide hard copies of bills, printouts from utility companies, or historical billing information stored in other databases or utility/energy tracking systems Energy Watchdog will also enter historical bills for your accounts. *Energy Watchdog Assistant* service can enter your monthly bills for you as you go forward month to month using the Energy Watchdog service.

Contact Information:**UtiliVision Inc.**

2790 West College

Suite 600

State College, PA 16801

USA

Tel (814) 861-3655, (877) 214-6959 (toll free)

Web: <http://www.energywatchdog.com/>

Prices: Energy Watchdog monthly subscription fees are tied to the number of accounts a user tracks in the system. End use customers can typically purchase subscriptions to Energy Watchdog for as low as \$25 per month.

2. EnergyTrax

EnergyTrax is an online reporting tool that can help to control energy usage and costs. EnergyTrax keeps all historical and current data on the secure web server so the user will always have the information available from anywhere on the Internet. By simply entering information from monthly bills, EnergyTrax will generate insightful reports and provide information for effective energy and costs management. It is a good toll for identifying saving opportunities and measuring the results. EnergyTrax will also help to analyze current information by comparing it to historical data, weather data, industry averages, square footage, and other measurements. In addition EnergyTrax and Alliant Energy Integrated Services may provide the customer with comprehensive set of energy services.

EnergyTrax Features:

- Quickly and accurately budget energy and other costs for an individual site or roll-up the information for the entire organization.
- Compare usage and energy spending across the organization to spot outliers or highly efficient sites to implement "best practices."
- Compare other factors, such as revenue, labor hours, etc. across the organization.
- Benchmark against industry averages and base year goals.
- Measure the impact of new equipment or lighting.
- Provide one common tool and central access location for all facilities to conveniently and securely organize the information.
- Control user access to involve the entire organization, from individuals at each organization unit to regional and corporate management.
- Provide useful information to management to justify energy conservation and cost saving initiatives.
- EnergyTrax offers three subscription levels designed to give increasing insight into energy consumption and its effects on the operation:
 - **Basic** is an entry-level subscription designed to fulfill basic energy information needs and budget constraints. Reports in this level will provide the insight necessary to spot trends or evaluate the results of efficiency projects.
 - **Standard** includes the same report categories as the Basic subscription, plus an additional set of reports. Standard is designed for customers that need more insight into their energy consumption, and more detail surrounding the factors that affect their energy consumption. Standard subscribers can run reports based on more complex factors, such as heating or cooling degree-days or budget against the variables at their site.
 - **Advanced** includes all report categories. Advanced is designed for those with multiple facilities that need insight, not only at the facility level, but also at the corporate level. With Advanced it is possible to compare facilities to spot outliers as well as good performers.
- Multiple Facility comparison. Each facility subscription not only analyzes energy at a particular facility, but also gives a consistent "apples-to-apples" basis to compare and contrast multiple facilities across entire organization.

- Takes into account weather conditions. Weather has a big impact on energy usage. That's why every EnergyTrax subscription gives basic weather reports based on the selection of a weather station location near your site.

Who can use EnergyTrax?

Any type of organization could use EnergyTrax: from big companies with hundreds of locations to a self-owned business with one location. EnergyTrax gives the power to set up an unlimited number of utility accounts, including water, steam, and coal. Using simple, user-friendly web pages, it is easy to customize EnergyTrax to fit the unique needs of any organization.

Users: EnergyTrax serve both regional and national customers, from large single site customers to customers with over 140 sites

Equipment requirements:

Any computer workstation with standard Internet browser, Internet connection.

Contact Information:

Alliant Energy Integrated Services
 Attn: EnergyTrax
 4902 Biltmore Lane
 P.O. Box 77007
 Madison, WI 53707-1007
 USA
 Phone: (800) 521-1725 ext.7243
 Fax: (608) 458-0110

Prices:

Prices depend on the Subscription Level chosen:

Type of Subscription	Reports available	Best suited for	Annual cost
Basic	Management reports Basic cot reports Basic usage reports Basic weather reports	Single facility or single site businesses	\$500 per facility
Standard	The same as in Basic plus Budget Reports Advanced Weather Reports Advanced Usage Reports	Smaller businesses with two to five facilities or sites or that need budgeting and weather capabilities	\$600/facility
Advanced	The same as in Standard plus Benchmarking Reports Advanced Cost Reports Corporate Comparison Reports	Any large multi-site business that needs a complete energy usage picture	\$700/facility

In addition to subscriptions the user of EnergyTrax may order additional services:

1. Data Collection
 - Historical Data Collection. EnergyTrax representative contacts up to two utilities, collects up to two years of historical data, and enters it into the system. (\$200 per facility)
 - Ongoing Data Collection. Every month, an EnergyTrax representative contacts your utility, collects your data, and enters it into the system. (\$100 per year per meter)

2. Delivery:
 - Web access plus key EnergyTrax reports e-mailed directly to you every month.(\$150 per year per facility)
 - Web access plus key EnergyTrax reports printed to hard copy and mailed to you via USPS mail every month. Delivery is currently limited to the U.S. only. (\$300 per year per facility)

Summary

Software products and services presented in this document are not the only available on the market, but the most popular among organizations that are running energy accounting. The market of software products related to energy accounting tools is more or less stable today. No new significant player appeared on the market of PC-based energy accounting software in the recent past years. At the same time introduction of Application Service Providers (ASP) – software services that are accessed through the Internet – becomes more common. ASP is easier for support and maintenance, does not require significant computer resources. Usually all the user need are any platform computer with standard Internet browser, which automatically broaden the circle of prospective customers.

To make a right choice of the software or online service available it is recommended to write a list of requirements and what you expect from the software. If the company/organization is big enough it is good to run a tender for such software, since total cost of ownership may vary in wide ranges the tender may save a lot of company's funds. For small companies/organizations, with limited staff involved in the energy accounting and support of the software, it is more reasonable to use some online service. As shown above the cost of PC-based software packages is very high but this is a lump-sum investment, after setting all accounts and making system viable the only expense for maintaining the system would be the costs for keeping position of related staff – Energy Manager and some IT staff for software support. With online energy accounting services the customer is not making significant investment for purchasing the software but must pay subscription fees that vary significantly depending on the number of sites/accounts, which would be involved in energy accounting. In addition some online services offer some other features that might be useful for enterprise management.