



VYKON Energy Suite (VES) provides an easy to use, easy to understand tool for energy and facility managers to make intelligent decisions for energy and cost saving strategies.

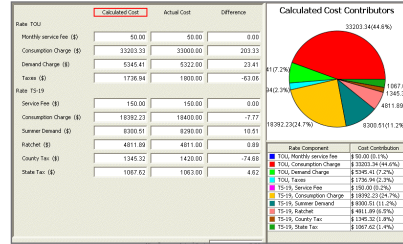
VES works with the AX Supervisor to integrate common protocols including Modbus, BACnet, OPC, and LonWorks.

VYKON Energy Suite

Building Intelligence When you need it, Where you need it

Overview

VYKON® Energy Suite (VES) is an applications suite designed to help manage energy and facilities. Built on the Niagara^{AX} Framework®, VES has the ability to gather data from diverse systems including utility meters, building automation systems, mechanical and electrical systems. VES works with AX Supervisor to integrate common protocols including Modbus, BACnet, OPC, and LonWorks. Additionally, users can import data from



a variety of sources including CSV, HTML, Oracle, SQL, and DB2. In addition to data gathering, VES provides an easy to use, easy to understand tool for energy and facility managers to make intelligent decisions for energy and cost saving strategies.

Features

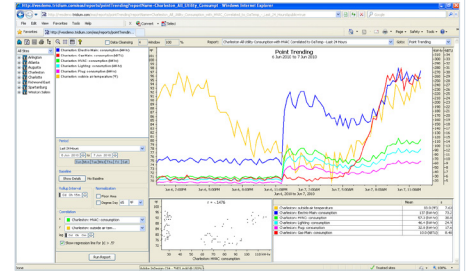
- Web-based application enables anytime, anywhere access.
- Easy to use, intuitive setup
- Context sensitive help files
- Dynamic profiling for transitioning between reports without redefining parameters.
- Universal comparison allows users to normalize and compare multiple units of measure.
- Graphical zoom provides ability to zoom in horizontally and vertically for more in-depth analysis.
- Allows aggregation of energy data on the fly.
- Configurable Energy Portal Page for user interface with custom graphics and messaging.
- Extensive data import capabilities to allow interval data to be added to the database.
- Localization support provides quick translation to several languages.
- Tools that determine effects of alternate procurement strategies.
- Analyzes the benefits of flattening loads by aggregating meters.
- Templates that help users manipulate consumption levels and determine "what if" scenarios.
- Change peak demand levels and re-compute costs based on alternative peaks and consumption patterns.
- Highly Scalable Licensing model – License your system to fit your needs from 1 meter to hundreds.
- Custom report configurations can be saved for future use

Applications

VYKON Energy Suite (VES) provides an advanced, user-friendly profiling tool designed to help users manage small buildings to enterprise-wide systems. VES offers extensive reporting flexibility, allowing users to profile any data point over any period of time. It empowers an organization to proactively manage budgets, calculate accurate cost projections and reduce energy costs. Users can easily compare energy costs based on metered interval data and applicable rate structures to benchmark facilities, identify inefficiencies, implement changes, and measure results. Users can trend and analyze energy, temperatures, production, and facility data. Fully browser-based, intuitive navigation tools make it easy to get the information when you need it, where you need it. VES utilizes a robust time series database that enables complex, multi-faceted computations. Hundreds of thousands of records from years of data can be presented in web-based reports within seconds.

Energy Audits

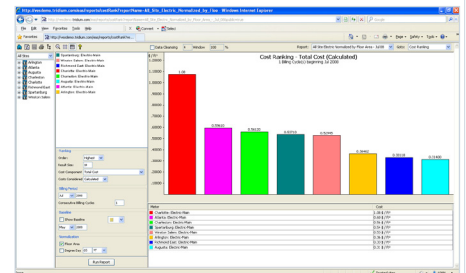
Users can analyze consumption, demand, and compute load factor with a click of the mouse. Meters can be aggregated and disaggregated on the fly to determine how underlying meters affect the total portfolio. VES allows different commodities to be converted to a common measurement unit to aggregate and compare dissimilar energy types. In addition to the flexible reporting capabilities, VES normalizes potentially confounding variables such as weather and floor area to see what energy would have been under "normal" circumstances. With the comprehensive baselining features, users can compare energy usage against historical levels, giving users a scorecard on their conservation efforts.



Point Trending Report

Enterprise Management

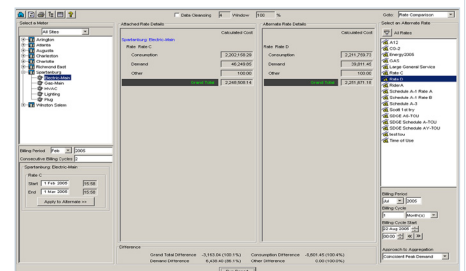
VES provides sophisticated facility reporting to analyze production information, temperatures, chilled water, equipment status, and more. Users can determine correlations and perform other statistical analysis on buildings, equipment, and energy. The exception report allows users to determine anomalies by comparing data values against a baseline or versus a user defined range. The equipment operation report allows users to compare runtime with runtime percentage information. VES provides a comprehensive M&V tool that meets International Performance Measurement and Verification Protocol (IPMVP) guidelines. The robust reporting capabilities make it the perfect tool for commissioning buildings and equipment.



Cost Ranking Report

Optimize Buying Strategies

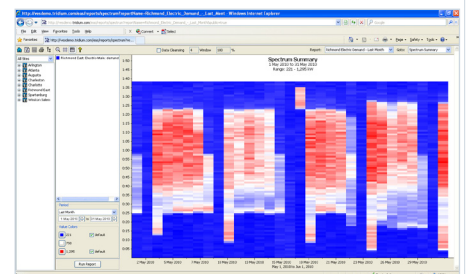
VES simplifies analyzing utility buying strategies. Users can compare different procurement strategies and rate structures without actually switching energy providers or rates. Energy managers can aggregate and disaggregate meters, try alternative rates, manipulate consumption and demand levels, and utilize a combination of rates on a single meter or group of meters. VES also allows you to compare actual costs to a pre-determined budget with delta and variance from forecasts and helps take the risk out of energy procurement.



Rate Comparison Report

Identify Opportunities

Identifying inefficient energy usage can be a daunting task. Relying on utility invoices and spreadsheets can be a monumental effort, especially when analyzing multiple accounts or meters. VES provides comprehensive capabilities through a web-browser. By analyzing meter data and rate structures with normalization for floor area and weather, users can determine which sites have the highest costs per square foot. VES helps identify and validate energy strategies at any time, from any location.



Spectrum Report

Energy Reports

Aggregation Analysis – Computes consumption and demand along with load factor for a point or group of points.

Average Daily Profile – Displays an average 24-hour period for any day or combination of days.

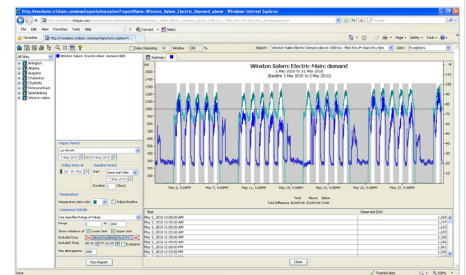
Enterprise Ranking – Ranks meters in the enterprise to identify the most and least efficient buildings.

Equipment Operation – Displays runtime and runtime percentage for digital points.

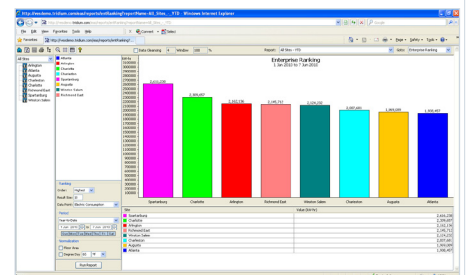
Exceptions – Allows users to compare data values versus a baseline or against a defined range of values.

Point Trending – Performs statistical analysis to determine correlations, standard deviations, slope, regression line, and mean. **Relative Contribution** – Determines how submeters or multiple main meters contribute to total energy within or between sites.

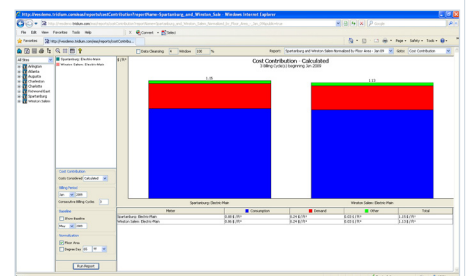
Spectrum Summary – Utilizes pattern recognition to quickly identify anomalies with inconsistent patterns indicating a need for more detailed analysis.



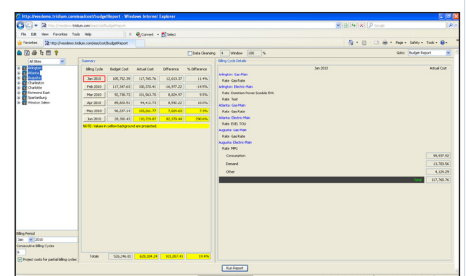
Exception Report



Enterprise Ranking



Cost Contribution



Budget Report

Cost Reports

Invoice Reconciliation – Compare utility invoices to calculated values to identify billing errors. Users can establish a historical baseline with manually entered data from utility invoices.

Cost Contribution – Determine how meters – whether sub meters within a building or main meters across an enterprise – contribute to the aggregate energy expense.

Cost Ranking – Rank meters to determine the most costly. Normalize data based on Outside Air Temperature and floor area.

Budget Report – Users can enter budgets or use historically generated data, then compare against actual costs. Make projections for reporting periods before it's too late.

What-if Analyzer – Enables prediction of future costs. Users can manipulate consumption patterns and demand levels to project savings from various strategies.

Rate Comparison – Analyze alternative rates and energy providers. Determine the effect of an energy strategy before you implement it!

Load Duration – Assess the likely impact of load management strategies on demand.

Server Hardware Requirements

- Processor Intel Pentium® IV, 2 GHz or higher
- Operating System Windows XP Professional, Windows 2003 Server (if Microsoft IIS is disabled), Vista Ultimate, Mozilla Firefox™, Internet Explorer™ 5.0 or later.
- Memory 1 GB minimum, 2GB recommended for large systems
- Hard Drive 1 GB minimum, 5 GB for applications that need more archiving capacity
- Display Video card and monitor capable of displaying 1024 x 768 pixel resolution or greater
- Network Support Ethernet adapter (10/100 Mb with RJ-45 connector)

Ordering Information

OS Number	Description
VYKON Energy Suite Licenses	
VES-STA-AX	Station connection for VYKON-AX JACEs with connected meters and energy points. No hard limit on meter or point connections per JACE. Requires VYKON-AX Supervisor. Does not include database drivers, or drivers for connected meters.
VES-PNT-AX	Single point license for IP connected points monitored by VYKON Energy Suite. Requires VYKON-AX Supervisor. Does not include database drivers, or drivers for connected meters.
VYKON AX Supervisor Options	
S-AX	AX Supervisor software for Windows XP or Windows 2000; Includes Niagara Historical Database and Workplace AX. Includes oBIX client/server driver for connecting to Niagara based JACEs only.
S-AX-LNX	AX Supervisor software for Linux; Includes Niagara Historical Database and Workplace AX. Includes OBIX client / server driver for connecting to Niagara based JACEs only.
S-AX-64	AX Supervisor software for 64 bit Window's platforms; Includes Niagara Historical Database and Workplace AX. Includes OBIX client/server driver for connecting to Niagara based JACEs only.
S-AX-SBS	AX Supervisor software limited to 3 JACEs; Includes Niagara Historical Database and Workplace AX. Includes oBIX client/server driver for connecting to Niagara based JACEs only. NOTE: No drivers can be added to Small Building Supervisor.
VYKON AX Supervisor Database Drivers (Required for import/export of data)	
S-DB-SQL	Microsoft SQL Database Driver for VYKON-AX Supervisor
S-DB-MYSQL	MySQL Database Driver for VYKON-AX Supervisor
S-DB-DB2	IBM DB2 Database Driver for VYKON-AX Supervisor
S-DB-ORCL	Oracle Database Driver for VYKON-AX Supervisor
S-DB-CSV	CSV file Database Driver for VYKON-AX Supervisor
VYKON AX Supervisor Common Open Protocol Drivers for Energy Points	
DR-S-BAC-AX	BACnet IP Driver - Includes license for 500 BACnet IP points.
DR-S-MDB-AX	Modbus TCP Driver - Includes license for 500 Modbus TCP points.
VYKON-AX Common Open Protocol Drivers for Meters connected to VYKON AX JACEs	
DR-MSTP-AX	BACNet MS/TP over RS-232 or RS-485 Driver
DR-BACNET-AX	BACNet IP over Ethernet Driver
DR-LON-AX	FT-10 LON Driver (twisted pair connection)
DR-ILON-AX	LON over Ethernet Driver
DR-MDB-RTU-AX	Modbus RTU over RS-232 or RS-485 Driver
DR-MDB-TCP-AX	Modbus TCP over Ethernet Driver

Note: Refer to current price list for additional options.