

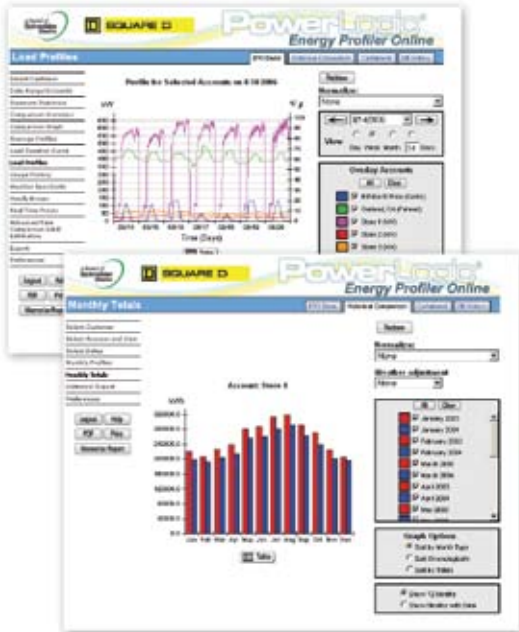
# PowerLogic® Energy Profiler® Online System



## Applications:

- Energy load analysis
- Energy budgeting and bill forecasting
- Demand response and load curtailment program management
- Real-time pricing program management

EPO's Real-Time Pricing module lets users see interval data for accounts with future pricing information, and multiply that data against a price stream.



EPO lets energy customers control their costs by providing the information they need: exactly how, when and where their organizations uses energy.

## Energy Profiler Online

Schneider Electric/Square D's Energy Profiler® Online System (EPO) is the industry's foremost load data visualization and analysis application. This flexible, easy to use system turns customer usage data into actionable information, freely accessible to all customers and internal users.

It would take days or even weeks for a customer to replicate these analyses using conventional means, collecting bills from various locations - and the customer still would not have the required level of detail.

EPO instantly distills meaningful information from volumes of raw data over the Internet in a secure, password-protected environment. This information helps customers identify wasteful energy usage at individual sites, and is far more profitable than changing suppliers.

The service is available to users at their convenience, 24/7, and regular updates ensure that customers get the most current information. EPO is highly intuitive and requires minimal user training or programming.

## Key features

- Data access and analysis
- Automated reporting
- Estimated bills and rate comparisons
- Demand response and curtailment programs
- RTP programs
- Alarming
- Administration tool



## Features & benefits

### Data access and analysis

- Data in both graphical and tabular formats
- Multiple time period analysis (year to year, etc.)
- Normalize demand and usage across multiple facilities
- Handle electricity, gas, and chilled water in one place
- Aggregate data from multiple sites
- Graphically display power factor (PF) values

### Automated reporting

- Save and view customized reports
- Schedule regular automatic delivery via email

### Estimated bills and rate comparisons

- View previous bills and real-time estimates
- Explore the effects of rate changes
- View cost per square foot and/or day information
- Compare rates to evaluate best pricing structures

### Demand response and curtailment programs

- Manage customer interactions via intuitive interface
- Notify hundreds of customers simultaneously
- Meet compliance requirements for programs
- Bill based on curtailment performance
- Review performance relative to curtailment

### RTP programs

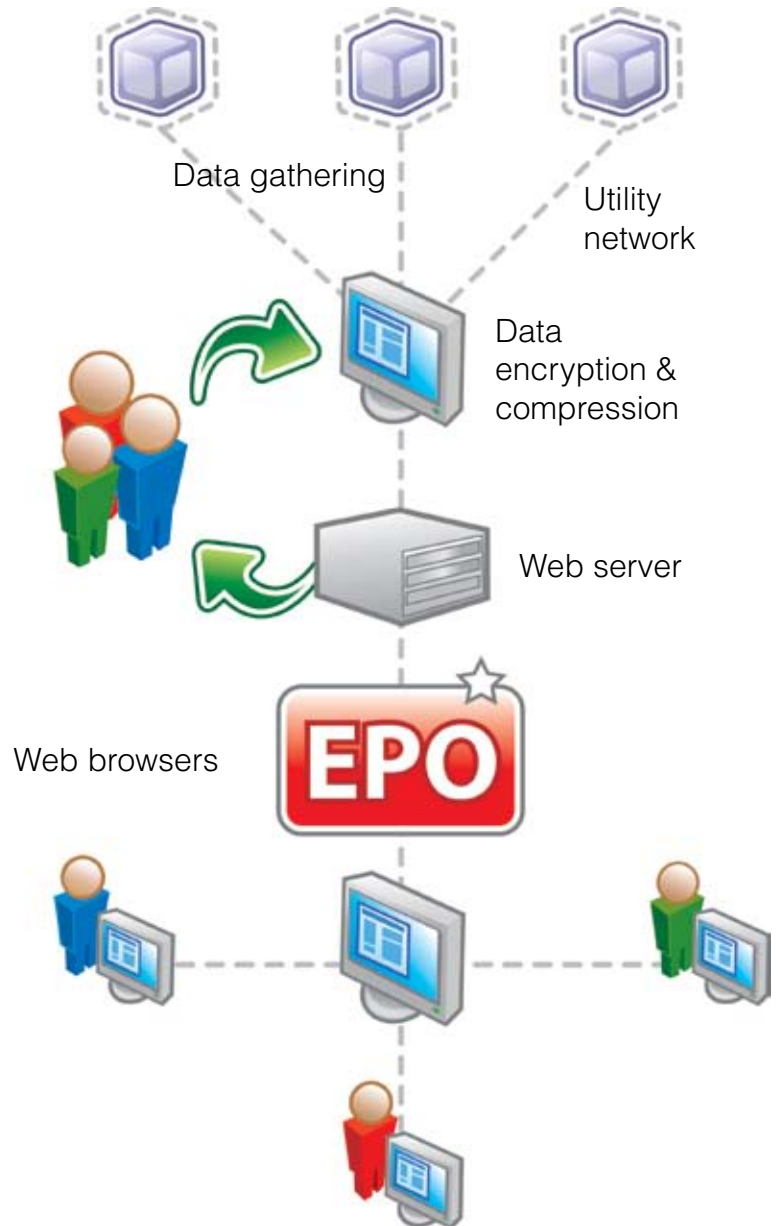
- View future and historical daily price streams
- View RTP energy charge calculations
- Select day ahead daily forecasted loads
- Analyze “what-if” usage, assess impact of changes

### Alarming

- Automatically notify customers when consumption exceeds a preset threshold
- Set min/max thresholds for usage or pricing
- Designate recipients for email or pager alarms

### Administration tool

- Manage passwords, user rights, etc.
- Assign accounts and customers to system users
- Manage accounts, edit attributes, assign rates, etc.
- View administrative and system usage reports



## Hosting facility

The EPO solution is hosted in Schneider Electric's secure and reliable environment:

- All systems are secured in a state of the art data center, with fire, temperature, humidity and dust controls.
- Database servers are behind monitored firewalls, with enforced packet filtering, as well as Network Address Translation (NAT). Web servers are located in a DMZ under strict monitoring and filtering rules.
- Full and incremental rotating daily backups are performed with weekly backup files sent for off-site storage. All systems are monitored 24/7 with administrators being automatically paged in the event of a problem.

### Data collection and processing procedure:

1. Meters are read by the utility on a regular basis.
2. Interval data is exported on a scheduled or manual basis to a file format supported by EPO.
3. Slinger software compresses, encrypts, and sends files to our FTP server.
4. Our Communications Gateway moves files from FTP to the import server.
5. Schneider Electric imports the files into the EPO database.
6. Status messages, indicating receipt and import of files, are sent via email to the system administrator at the utility.
7. EPO web server connects to the database through the firewall.
8. Customers log into EPO via a secure web channel.
9. All servers and other components are constantly monitored to ensure optimum system performance.

## Analysis reports

EPO lets customers use their existing web browser to:

- Analyze their metered interval load data for multiple locations
- Compare energy usage among similar facilities
- Accurately benchmark energy usage in multiple facilities
- Measure the effectiveness of various energy efficiency efforts
- Download energy usage data for further in-house analysis

Several standard reporting functions in EPO let the user visualize and easily analyze load data. Standard analysis reports demonstrate usage review energy efficiency measures and potential cost savings.

## Optional modules

### Bill estimation

EPO provides commercial and industrial customers with bill information, even during the billing period. Flexible functionality provides access to load data and the analytical tools needed to understand energy usage.

### Curtailement

EPO supports curtailment programs by enabling immediate communication with customers and freeing up resources.

The service handles a broad variety of market requirements for curtailment programs, and models individual customer contract parameters for curtailment programs, sharing this in real time with program administrators during operations.

Utilities can automatically notify curtailment customers via email or pager and review an "acknowledged load" figure, updated every ten seconds. Customers signal their participation without directly contacting a utility staff member.

### Real-time pricing

EPO provides an RTP communication gateway to customers and delivers the tools and information they need to understand how they use energy and make valuable use of RTP.

EPO can distribute price level information in the same way it delivers usage data, letting customers see the following day's price levels in graphical form.

Users can predict costs by performing what-if analysis and adjusting their own historical detailed energy data and applying this to actual dynamic pricing information. EPO provides a conduit for price data and a tool to help customers efficiently manage their energy costs.



**Bill Estimates** | EPO Basic | Historical Comparison | Curtailment | Bill History

Select Customer

Date Range/Accounts

Summary Statistics

Average Profiles

Lead Duration Curve

Lead Profiles

Usage History

Weather Sensitivity

Hourly Prices

Real Time Prices

Advanced Rate Comparison & Bill Estimation

Expert

Preferences

**Account Summary**

Account ID	Account Name / Service Type	Total Bill Current Rate	Total Bill Comparison Rate	Difference
FAC000	Factory			
	Bundled Electric Service	\$1,077,384.32	\$808,461.08	\$268,923.24
	Bundled Gas Service	\$10.00	-	-
	<b>Total</b>	<b>\$1,077,394.32</b>	<b>\$808,461.08</b>	<b>\$268,933.24</b>

**FAC000**

**Additional Information**

Average Usage: 704,004 kWh / Day      Average Cost: 35,913.14 \$ / Day  
5.10 ¢ / kWh

**Bundled Electric Service Details**

Rate: Commercial Rate      Meter #: R1234a  
Account Name: Factory      Account ID: FAC000  
Period: 07/24/2006 00:00 to 08/22/2006 midnight      # of days in bill: 30

Bill estimates provide valuable information for budgeting and forecasting

**Usage History** | EPO Basic | Historical Comparison | Curtailment | Bill History

Select Customer

Date Range/Accounts

Summary Statistics

Comparison Statistics

Comparison Graph

Average Profiles

Lead Duration Curve

Lead Profiles

**Usage History**

Weather Sensitivity

Hourly Prices

Real Time Prices

Advanced Rate Comparison & Bill Estimation

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Preferences

**Usage by Day for 7/24/2006 - 8/22/2006 (for Average of All Selected Accounts)**

Redraw

Select Account: Average of All Selections

Normalize: None

Weather adjustment: None

7/24/2006

Graph Detail:  Weekly Detail  Monthly Detail  Weekly Total  Monthly Total

Legend: Peak demand (blue line), Usage (red bars)

Typical usage by day

**Comparison Statistics** | EPO Basic | Historical Comparison | Curtailment | Bill History

Select Customer

Date Range/Accounts

Summary Statistics

**Comparison Statistics**

Comparison Graph

Average Profiles

Lead Duration Curve

Lead Profiles

Usage History

Weather Sensitivity

Hourly Prices

Real Time Prices

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Expert

Preferences

**Actual:**

Account	Total Energy (kWh)	Weekday Energy (kWh)	Weekend Energy (kWh)	Load Factor	On-Peak Total Energy (kWh)	Off-Peak Total Energy (kWh)	On-Peak Max. Demand (kW)	Off-Peak Max. Demand (kW)
Store 1	261,622	205,141	76,482	58.03%	137,444	144,178	668.8	874.0
Store 2	18,043	13,951	4,892	66.51%	6,775	12,068	36.52	39.35
Store 3	36,152	26,470	8,681	60.29%	13,050	23,102	68.06	73.52
<b>Sum</b>	<b>336,616</b>	<b>245,461</b>	<b>91,155</b>	<b>ILA</b>	<b>157,268</b>	<b>179,348</b>	<b>ILA</b>	<b>ILA</b>

\* = Maximum

Normalize: Square Feet      Weather adjustment: None      Redraw

Account	Total Energy (kWh / Sq. Ft.)	Weekday Energy (kWh / Sq. Ft.)	Weekend Energy (kWh / Sq. Ft.)	Load Factor	On-Peak Total Energy (kWh / Sq. Ft.)	Off-Peak Total Energy (kWh / Sq. Ft.)	On-Peak Max. Demand (kW / Sq. Ft.)	Off-Peak Max. Demand (kW / Sq. Ft.)
Store 1	234.7	171.0	63.73	58.03%	114.5	120.1	0.5574	0.5617
Store 2	12.16	9.936	3.221	66.51%	4.371	7.796	0.02358	0.02339
Store 3	164.3	120.3	44.01	60.29%	59.32	105.0	0.2139	0.3342
<b>Average</b>	<b>137.1</b>	<b>106.1</b>	<b>36.99</b>	<b>64.43%</b>	<b>55.41</b>	<b>77.65</b>	<b>0.2983</b>	<b>0.3071</b>

\* = Maximum

Comparison statistics display



## Security

EPO stores and serves sensitive customer information and Schneider Electric employs a variety of methods to ensure the integrity and security of this data.

### Firewall

Schneider Electric employs a two-stage system: the Primary Firewall ensures that only Web (http), SSL (https), and FTP requests are admitted to the appropriate systems. The Secondary Firewall ensures that only requests from EPO servers reach the EPO database.

### Secure sockets layer (SSL) encryption

Connection via a login process authenticates users by an ID/password combination. The secured SSL connection encrypts data between the EPO server and the user's Web browser.

A temporary session ID is valid only for a specified login ID, for a limited time, to prevent misuse of privileges.

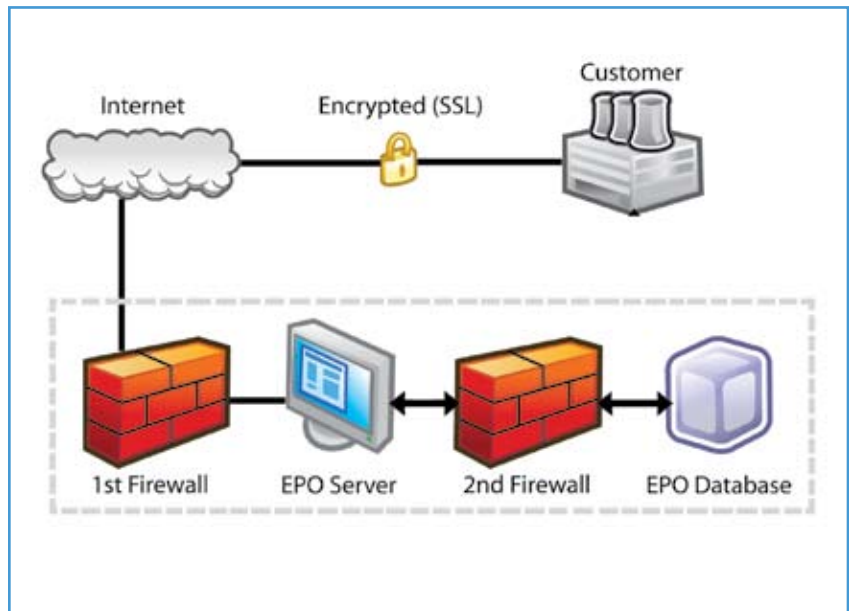
### Transfer encryption

Prior to FTP transmission, usage data is secured using triple DES encryption, making them unreadable to unauthorized parties.

## Engineering services

Our services team can help you with system selection, project management, integration, custom reporting, documentation, and training to meet your organization's unique needs.

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## Data collection system integration

EPO supports the following formats for meter data:

- MV-90 Mainframe Format
- Lodestar Direct Output Format
- Meter Data Exchange Format (MDEF)
- California Meter Exchange Protocol (CMEP)
- XML (AMRDEF DTD, available on request)

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