Tenant and Revenue metering

Things to watch for in

Make the most of

your energy℠

Schneider Electric

The True Cost of Your Utilities

- Utility costs can exceed 30 percent of your overall operating expenses

- Energy is one of the most easily controlled expenses in your organization

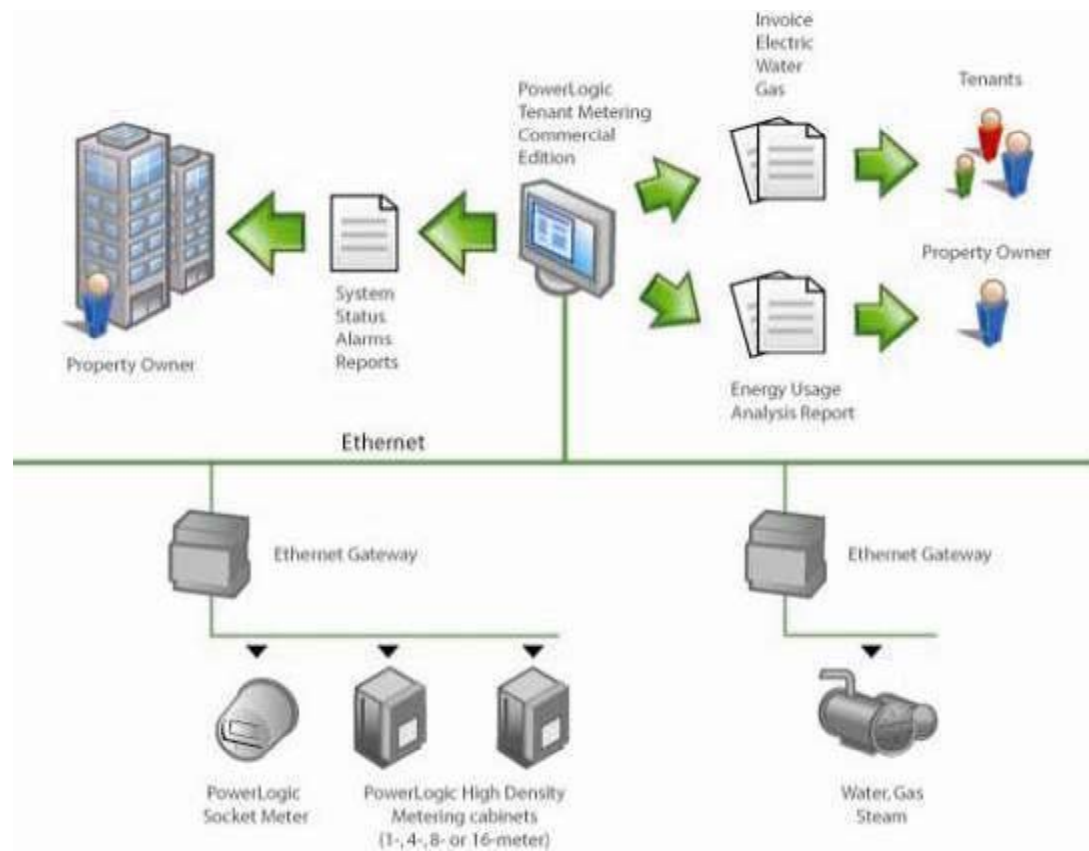- Studies continue to document the link between utility conservation and separate billing for utility usage.

Submetering in Ontario

- *Electricity Act* & the *Ontario Energy Board Act* (August 1, 2007)
  - Allows for individual metering of condominium units, through local distribution or third party companies.
  - Why? When consumers are required to pay for the electricity they actually use, overall consumption goes down by as much as 25%.

- Ontario Statistics
  - 28.8% of all Ontario households are renters (1.3 million tenant households). Almost 50% of City of Toronto households are renters
  - 40% live in apartment buildings with five or more stories. 60% for Toronto
  - Around 85% of multi-unit apartments & condo buildings are "bulk metered"

- LEED 2009 provides up to 5 points for submetering.

A Complete Solution …
PowerLogic Submetering Solutions

Whether you need a complete billing solution for new construction or a billing solution that easily integrates with your existing infrastructure — PowerLogic submetering fits the bill.

PowerLogic ION Meters

Measurement Canada Certified for Billing

Features

ANSI C12.20

Advanced Control

Loss compensation

EN50160

Sag/Swell detection

Transient detection

Web-enabled

High Speed Metering

Direct Ethernet Access

Revenue Accuracy

Status Monitoring

Waveform Capture

Automatic Alarming & Control

Trend Logging

Energy Pulsing

Real-time Power & Energy

Value

ION7650

ION8600 -A

ION8600-B

ION7550

ION7350

ION7330

ION7300

ION6200

E4800

PowerLogic Submetering Hardware Overview

- **High Density Metering enclosures**
  - 8 & 16 meter enclosures
  - 1 & 4 meter enclosures

- **E4800 Multi-Circuit Meter**
  - Field configurable, 24 current inputs, single & three phase
  - Flexible CT options: 5A, 80mA & 330mV
  - Ethernet & phone modem communications
  - On-board data storage (up to 2 years)

- **Socket meter**
  - ION 6300

High Density Metering - 1 Meter

- Available with PM810, PM820, PM850 or ION6200
- Revenue Canada sealable with ION 6200
- Enclosure type options
  - Indoor, Type 1 (clear viewing window)
  - Outdoor, Type 3R (no window)
- Applications
  - 1-phase or 3-phase
  - 120/208V, 240V, 277/480V, 480V*, 347/600V*, 600V*
- Minimal wall space required
  - 11.3"h x 7.2"w x 7.4"d   (Type 1)
- UL 508a & UL 50 certified

  * *Requires CPT included in enclosure (option 4T)*

High Density Metering - 4 Meters

- Available with PM810, PM820, PM850 or ION6200
- Revenue Canada sealable with ION 6200
- Indoor (Type 1) & outdoor (Type 3R) versions
- Applications
  - 1-phase or 3-phase
  - 120/208V, 240V, 277/480V, 480V*, 347/600V*, 600V*
- Includes voltage disconnect switch (non-fused)
- Minimal wall space required
  - 30.6"h x 7.2"w x 7.4"d
- UL 508a & UL 50 certified

* *Requires CPT included in enclosure (option 4T)*

PowerLogic E4800 Multi-Circuit Meter

- Very flexible high-density meter for single and three phase circuits
- Applications:
  - Single phase: 20 single phase circuits
  - Three phase: 10 - 3CT circuits (wye)
- Accuracy: 0.5% *(including CTs)*
- Measurements:
  - Real, reactive & apparent power & energy
  - Power demand
  - Power factor
  - Voltage & current per phase
- Voltage inputs:
  - Single Phase   120/240V, 120/208V
  - Three Phase   247V / 480V / 600V
- Current inputs:
  - 80mA, 5A or 333mV*
- On-board data logging *(up to 2 years)*
- Communications: Ethernet and Modem
- Real-time data via HTTP and ModbusTCP/IP
- Dimensions:
  - 80mA & 333mV: 13.1"h x 11.8"w x 2" d
  - 5A: 13.1"h x 17"w x 2"d
- Revenue Canada Approval pending

   *   333mV CTs are not revenue grade (1% typical)
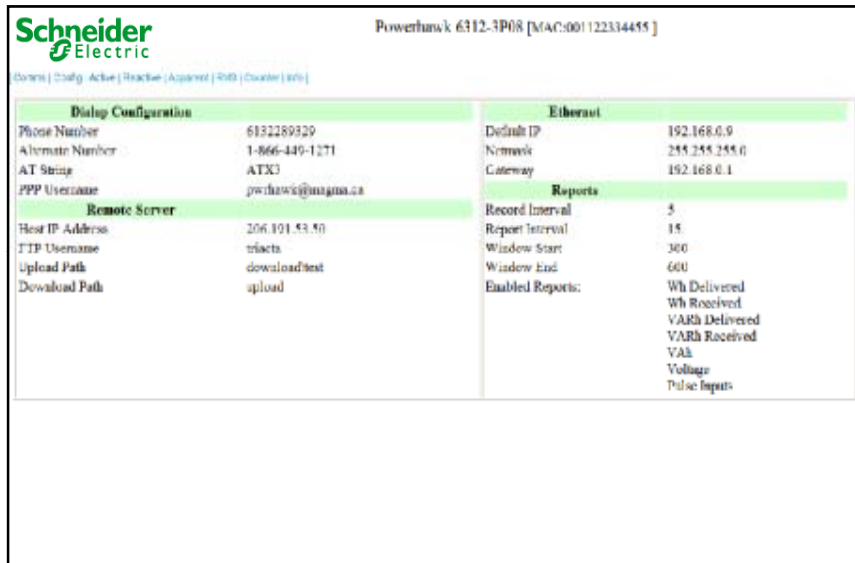
PowerLogic E4800 Multi-Circuit Meter

- **Easy Installation:**
  - Each metering device (up to 20 meters in one device) uses less wall space than a clipboard
  - Suitable for both retrofit and new construction applications
  - Can be easily installed by a single technician
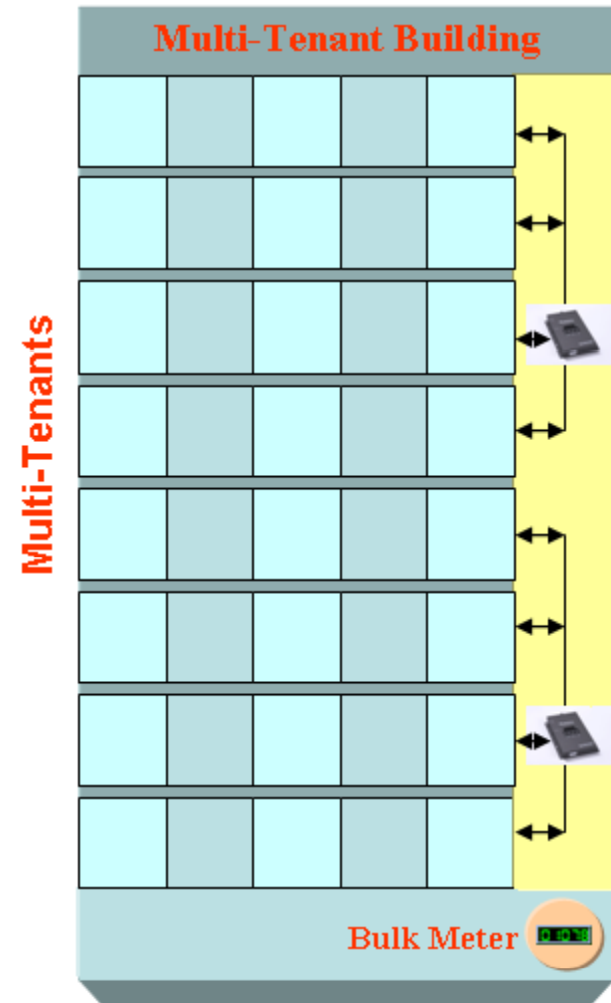
E4800 Multi-Circuit Meter Web Pages

- Meters provide web interface to access real-time values & status information

- Very comprehensive & easy to use

Panelboard Integrated Metering

- Meters & CTs will be factory mounted & pre-wired in I-Line panelboards

- Panels will be offered in specific sizes
  - 8, 12, 16, 24 circuits
  - Custom panels available

- Coming 1Q 2009

PowerLogic ION 6300 Socket Meter

- S-base meters
  - Forms: 12S, 16S, 9S, 36S, & 45S
- Accuracy: 0.2%
- Measurements
  - Real energy
  - Per phase voltage & current, plus magnitudes & angles
- Communications
  - RS485 Modbus interface for communications.
- Inputs / Outputs
  - 120 to 480V auto-ranging
  - Self-contained: up to 200A
  - Transformer rated: up to 20A

PowerLogic Tenant Metering Software Overview

- Tenant Metering
  - Real & reactive energy
  - Comprehensive rate support
    - Flat & tiered rates
    - Demand & power factor
    - Seasonal rates
    - Time of Use
  - Taxes & miscellaneous charges
  - WAGES metering (Water, Air, Gas, Electric, Steam)

Tenant Metering Software

- **Automatic device detection for easy setup**
- **PC-based data logging + auto upload for devices with onboard logging**
- **ModbusTCP/IP (Ethernet) and ModbusRTU (RS485 serial) comms**
- **Tenant / account management**
- **Configurable billing cycles**
- **Comprehensive RateWizard™ tool**
- **Billing / Invoicing generator**

Submetering Software

Data Communications

Intelligent Devices
- **Power meters**
- **Trip units**
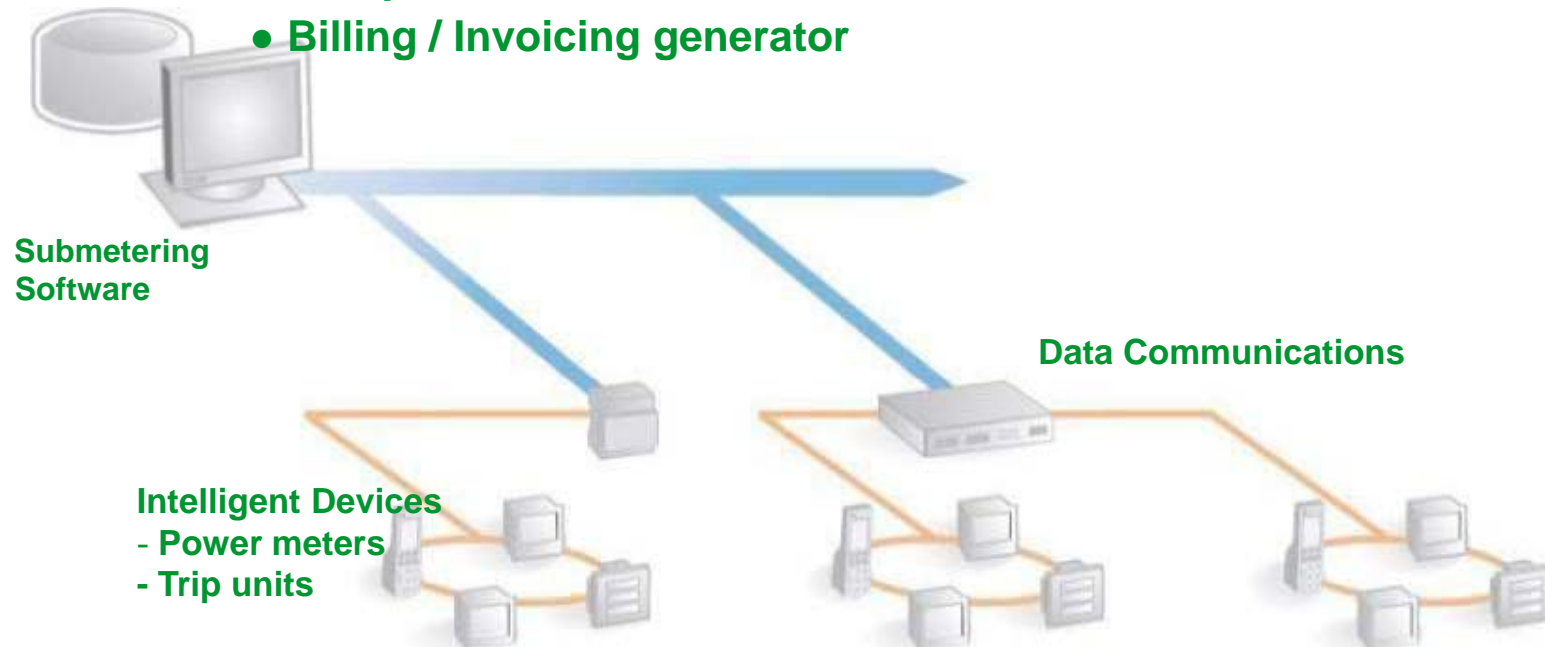
Tenant Metering Software
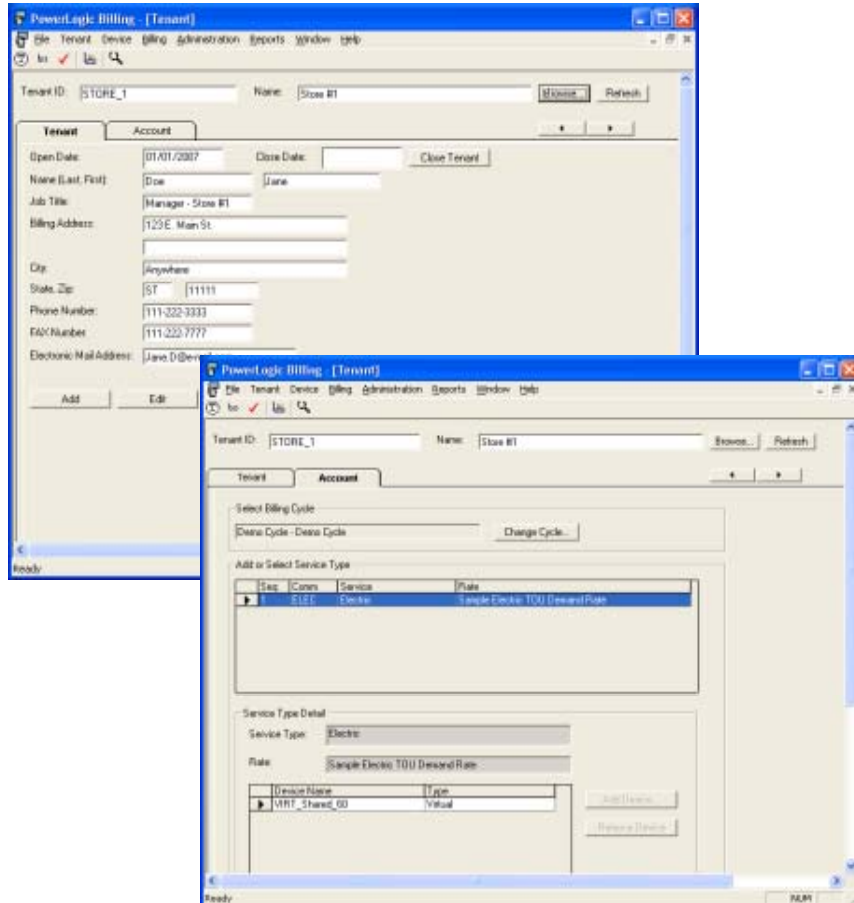
● **Billing Software Supports…**

- ● Tenant and account management
- ● Tenant and account searches
- ● WAGES for multiple commodity billing
- ● Assignment of multiple meters to an account
- ● % allocation of meters to multiple accounts
- ● Single account for electric, gas, water, steam, & air devices

Tariffs
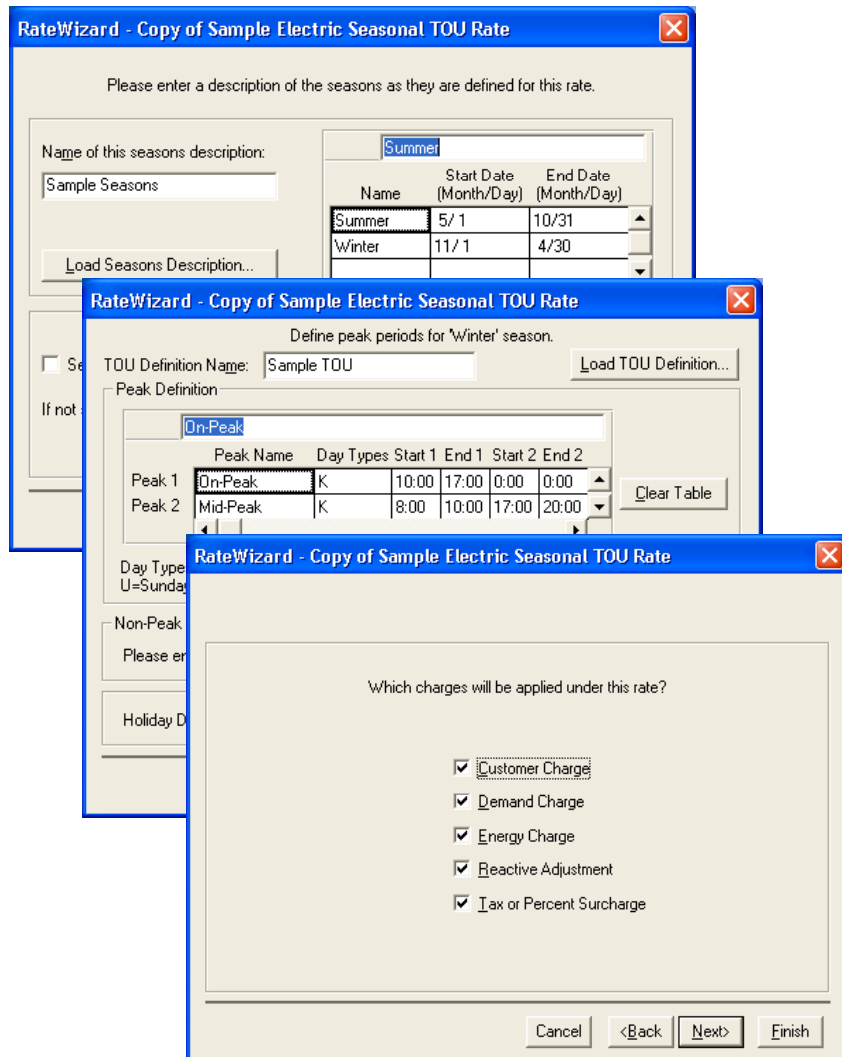
- **RateWizard® walks you through the steps of setting up a tariff**
- **Enter tariff information such as tariff name, utility (WAGES) type**
- **Choose the structure of the tariff**
  - Seasonal
  - Time of Use
- **Choose the charges in the tariff**
  - Customer Charge
  - Demand
  - Energy
  - Power Factor
  - Taxes
- **Default / sample rates provided**

Billing Cycles
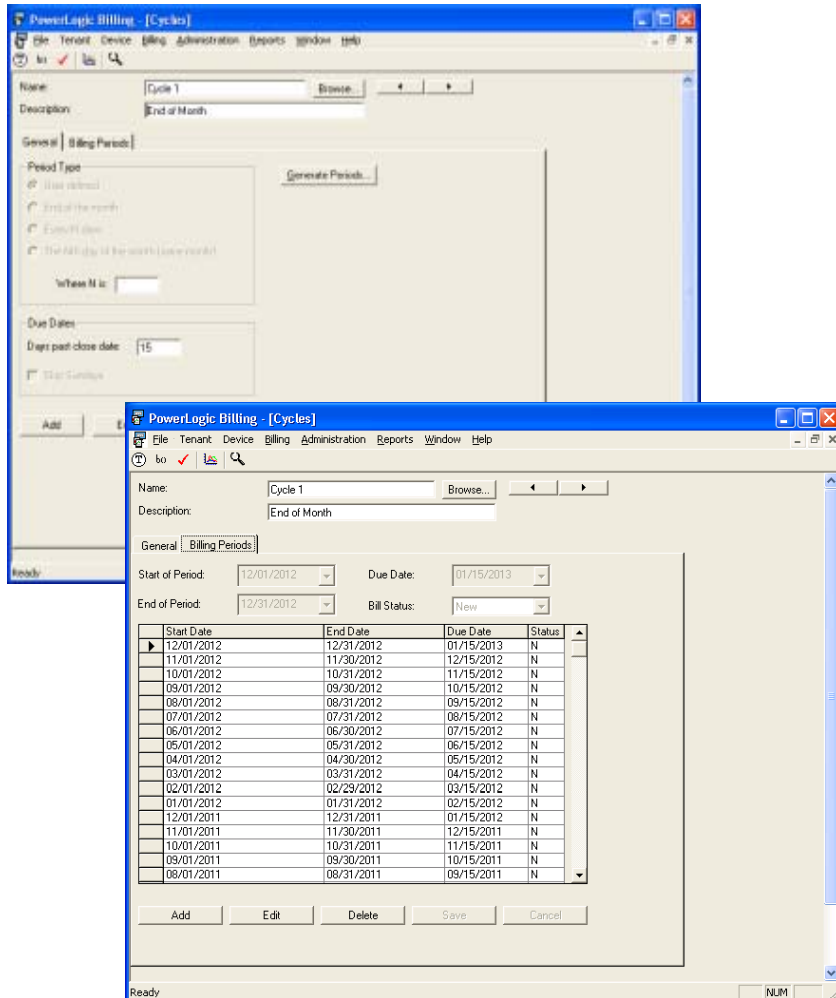
- **User defined billing cycles**
  - Billing period start
  - Billing period end
- **Supports multiple billing cycles**
- **Default / sample billing cycles provided**

Demand Charges

- **Choose type of demand charge**
  - Block & tiered
  - Time of Use
- **Choose units for demand charges**
  - kW
  - kVA
- **Enter charges for each Time Of Use period**

Tenant Metering Software
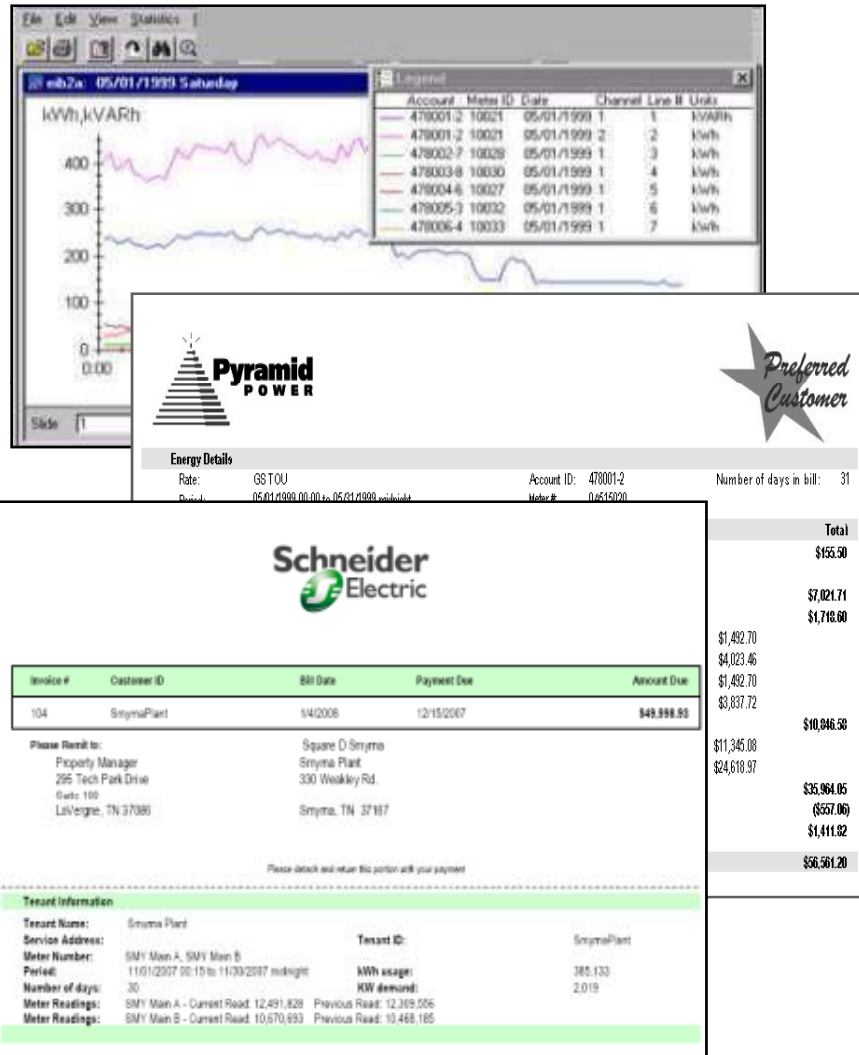
- **Billing processes allow for . . .**
  - Billing of multiple bill batches via user defined bill cycles
  - Reviewing and correction of bills online before issuing to tenants
  - Viewing load data associated with an invoice
  - Invoicing via paper and/or PDF format
  - Customizable logos & remit-to information

- **Five years of posted invoices are preserved**
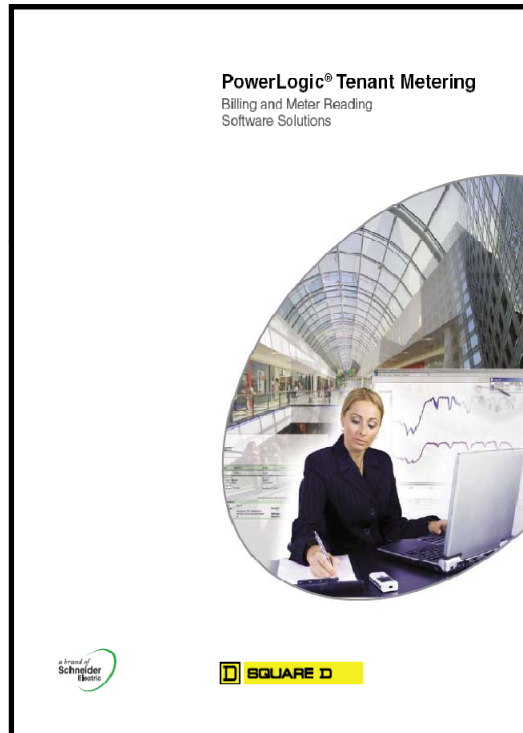
Reporting - View Load Data
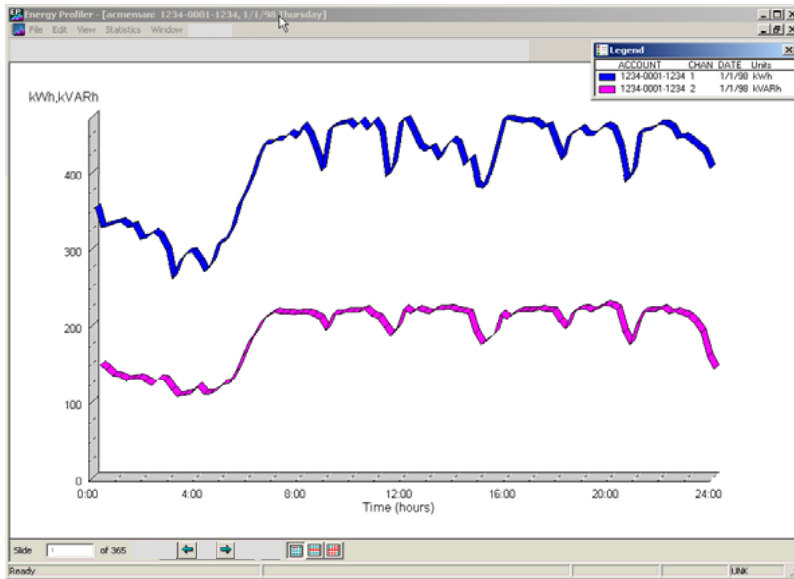
- **One year of interval data is available for load profiles**
- **Load data can be viewed in a graphical chart . . .**
  - Daily
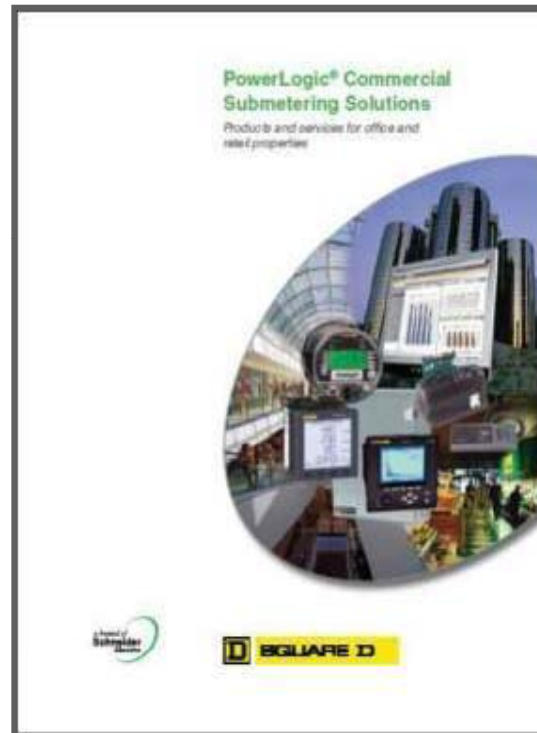 - Weekly
  - Monthly
- **Statistical analysis of data provided**

Submetering Brochures

3000BR0709

3000BR0703

3000BR0705