

# Energy Aggregator

## Energy Visualization, Analysis and Reporting Software Solution

GE's Energy Aggregator allows facility managers to effectively manage energy ownership through automated meter data collection, visualization of key data enabling better decision making, and fair billing and reporting for financial environmental incentives. With Energy Aggregator's accurate and easy to understand energy reporting, tenant satisfaction is also improved.

Designed to work with GE's advanced EPM Meters, Energy Aggregator provides a complete energy management visualization, analysis and reporting solution to effectively execute baseline assessments and ongoing studies to support energy management planning.

### Key Benefits

- Improve tenant satisfaction, energy ownership and savings by providing fair usage billing, visualization and analysis of energy usage
- Complete, cost effective visualization, reporting and billing solution to identify losses; define, measure and action energy management goals
- Increase operational efficiency and change energy usage behavior
- Automatically collect and centralize data from logging GE's EPM Meters (EPM 4600/7000 series/9000 Series)
- Easy setup and low ongoing cost of maintenance and ownership with features such as automated setup/update, data retrieval, and report/billing generation

### Applications

Energy Aggregator works as a complete solution for new and existing meter installations where logging EPM Meters (EPM 4600/7000 series/9000 Series) are installed:



LEED Projects and Green/  
Smart Buildings



Energy Management Assessments,  
Planning and Measurement



Commercial/Industrial Tenant  
Sub-Metering/Industrial Circuit  
Cost Allocation



Industrial/Commercial  
Energy Management

- Shopping Centers/Retail Malls
- Educational Campuses,  
Corporate Complexes



Data Centers - Supporting data for  
Power Usage Effectiveness (PUE)  
calculations



imagination at work

## Improve Energy Ownership

- Dashboard functionality to easily visualize and illustrate energy metrics
- Provide visibility to tenants and operators to increase energy awareness, encourage conservation and retain tenants
- Enable fair energy usage billing/reporting versus common, area based billing

## Measure & Action Energy Management Goals

- Reduce effort through automated data collection providing accurate, accountable information
- Perform complex calculations including aggregation, rate/tariff structures, charges and integrated billing of other commodities (Water, Air, Gas, Steam, etc.)
- Support energy management goals and decisions through usage/cost/comparison analytics

## Ease of Use & Low Cost of Ownership

- Automated discovery of meters eliminates setup errors and reduces configuration challenges
- Reduces initial commissioning efforts and ongoing operating and maintenance costs with automated setup, report email functionality and application updates
- Easy to use reporting setup for customized report formats or export to other systems

# Applications



EPM 7000



S20 Ethernet Switch



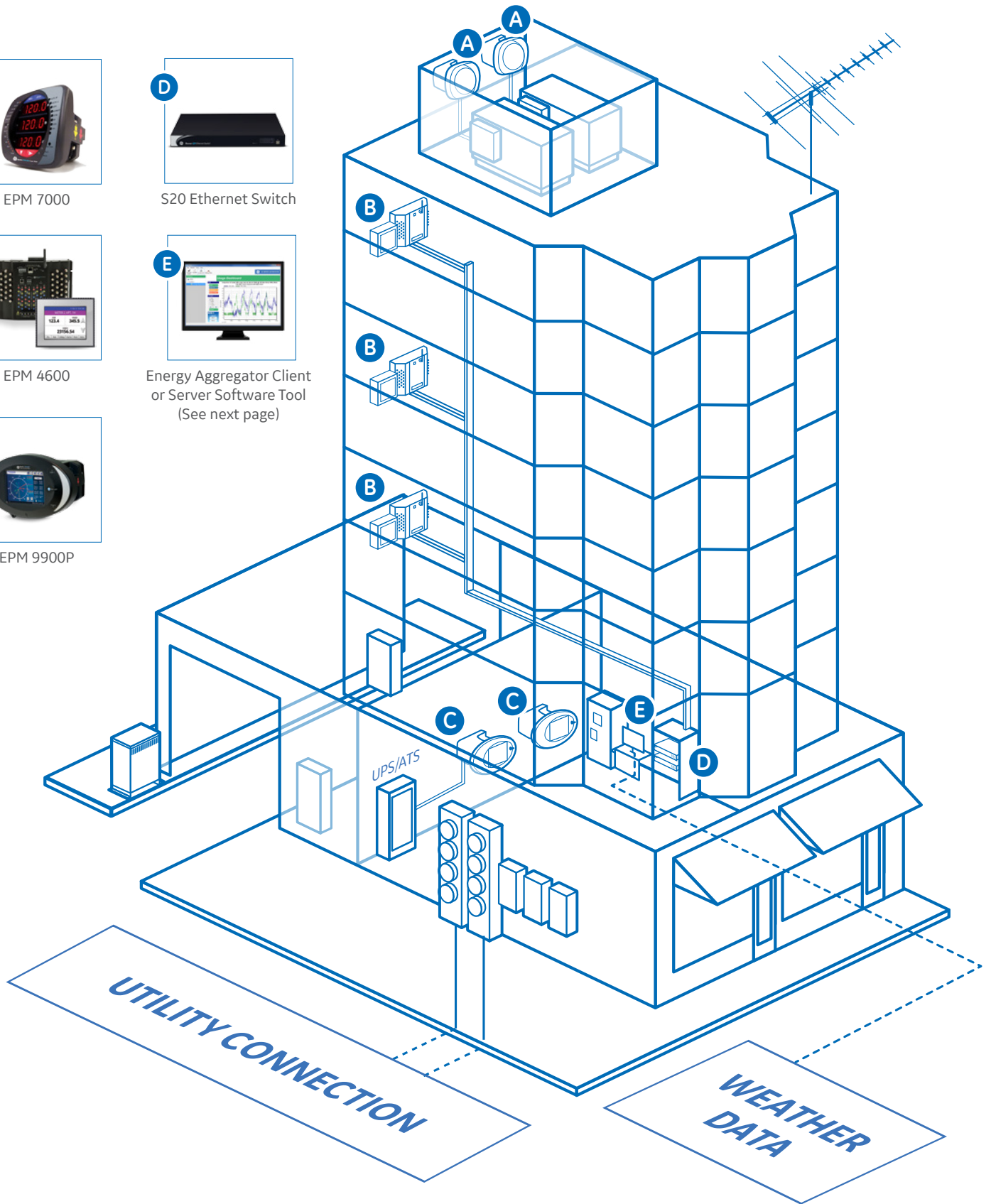
EPM 4600



Energy Aggregator Client or Server Software Tool  
(See next page)

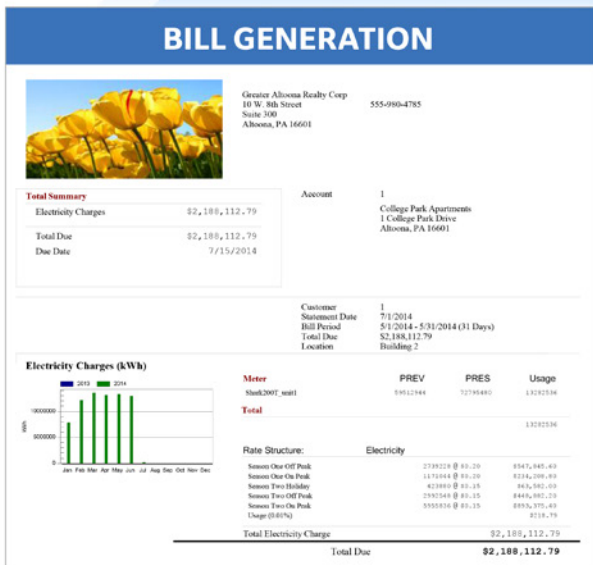
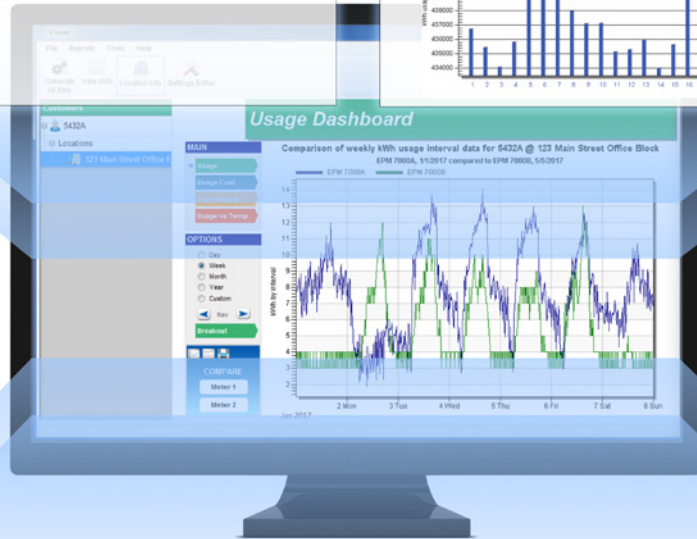
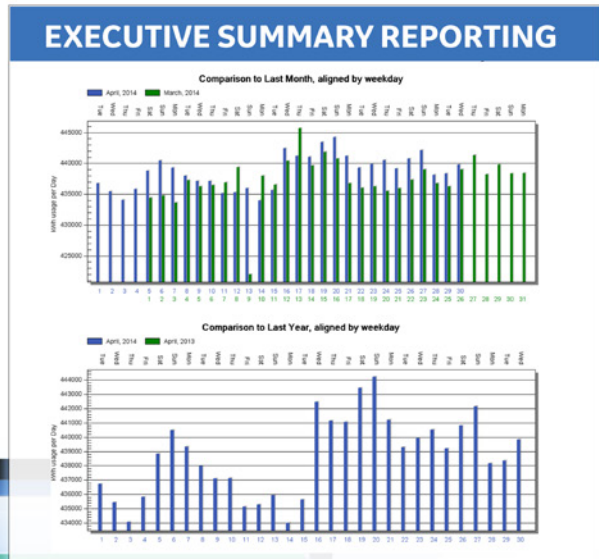
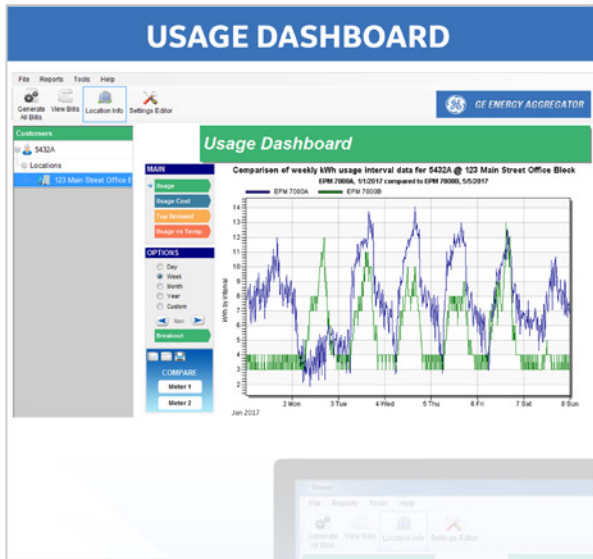


EPM 9900P



# Powerful Visualization, Reporting and Analysis

Energy Aggregator provides energy managers with a comprehensive view of energy usage with valuable data insights and analysis to improve energy management and efficiency.

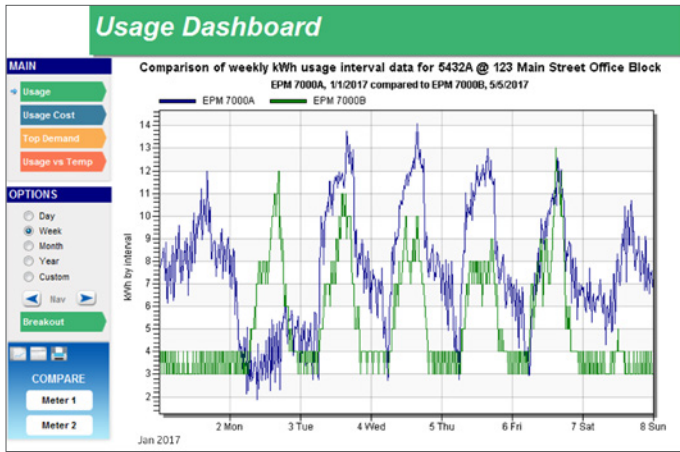


Comparison of monthly kWh top demand for 5432A @ 123 Main Street Office Block, September 2013			
EPM 7000A		EPM 7000B	
Date	kW (demand)	Date	kW (demand)
9/20/2013 2:15 PM	64.94	9/11/2013 2:00 PM	60.00
9/11/2013 12:00 PM	63.66	9/11/2013 2:30 PM	60.00
9/11/2013 12:30 PM	62.67	9/11/2013 3:00 PM	60.00
9/20/2013 2:00 PM	61.34	9/11/2013 2:45 PM	60.00
9/20/2013 11:15 AM	58.85	9/11/2013 3:15 PM	60.00
9/20/2013 2:45 PM	58.37	9/11/2013 4:00 PM	60.00
9/20/2013 2:30 PM	57.70	9/11/2013 11:45 AM	56.00
9/20/2013 12:00 PM	57.14	9/11/2013 12:45 PM	56.00
9/20/2013 1:00 PM	56.98	9/11/2013 1:45 PM	56.00
9/11/2013 11:45 AM	56.61	9/11/2013 5:00 PM	56.00
9/4/2013 3:45 PM	56.34	9/11/2013 4:45 PM	56.00

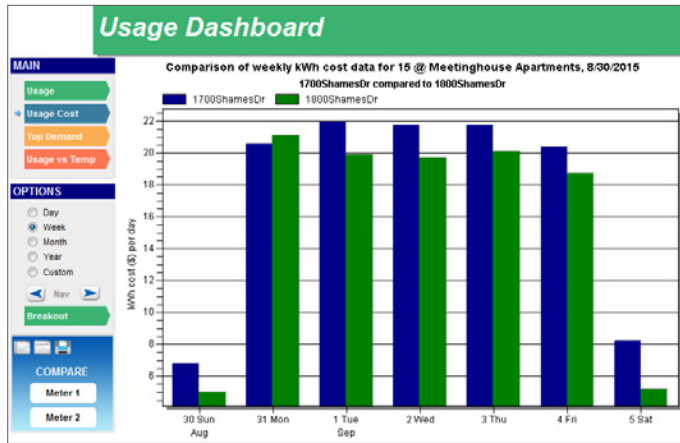
## Comprehensive Energy Visualization

Energy Aggregator provides a complete picture of energy usage with valuable data based, insight and analysis to improve tenant satisfaction and increase energy ownership.

- Easy to understand, visual dashboard views to provide trending reporting and comparison analysis over time
- Determine inefficiencies and savings opportunities, to reduce energy demand by centrally and accurately collecting and visualizing data
- Provide accurate, data based insight to tenants to increase ownership and change energy consumption
- Centralize collection for a complete view of energy consumption including electrical, water, air, gas, steam, etc.
- Compare energy consumption with location based weather data



Compare energy usage between different areas over time periods



Compare cost data between metered areas

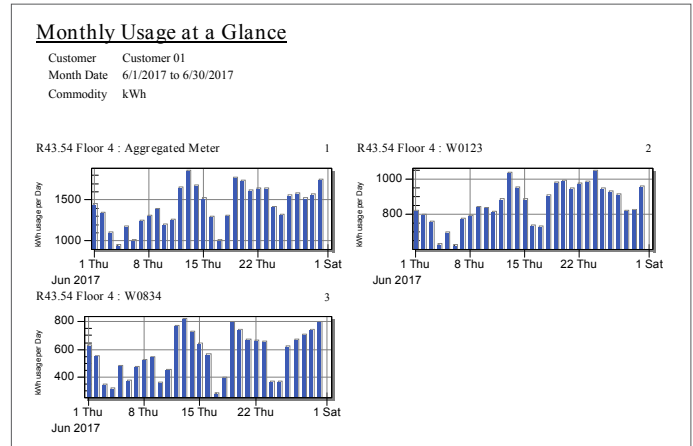
## Automated Report Generation

Energy Aggregator provides standardized and customizable reports to generated and distributed automatically to decision makers and management to enabling constant awareness.

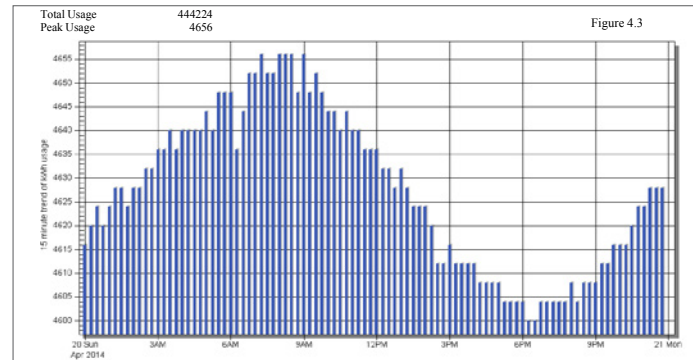
- Standardized and customizable reports provide insight on high-value aspects of energy consumption to make effective decisions
- Automated report generation and distribution ensures accurate, consistent reporting and constant awareness with low resource effort
- Easily baseline, determine and pinpoint opportunities for savings and energy improvements

Example reports include:

- Usage Summaries
- Location based Temperature Impact on usage/demand
- Monthly/Yearly Meter Comparisons
- Peak Day/Week Profile
- Average Hourly/Daily Usage



Generate reports to visualize energy usage



Generate reports to visualize and analyze total and peak demand

## Automated Energy Billing

Energy Aggregator generates standardized and customizable bills with support for rate structures and charges. Generated bills can be sent and distributed automatically to users as per a defined interval reducing resource efforts and costs involved with engaging other billing service providers.

- Standardized and customizable billing provides fair billing based on energy consumption
- Automated bill generation and distribution ensures accurate, consistent reporting and ownership with low resource effort and eliminates need to engaging billing service providers
- Support for rates structures such as fixed, tiered or TOU rates (fixed, seasonal) as well as additional charges, taxes
- Ability to bill completely for energy as well as other commodities (Water, Air, Gas, Steam, etc.)

## Supported Meters

Energy Aggregator supports the following logging enabled EPM meters:

### Submetering:

- **EPM 4600** - Multi-Feed Power and Energy Metering Solution with Display
- **EPM 7100** - Energy Submeter with Data Logging and WiFi

### Power Quality Meters:

- **EPM 7000** - Power Quality Meter
- **EPM 9450/9650** - Advanced Power Quality Metering System
- **EPM 9800** - Advanced Power Quality Metering System
- **EPM 9900P** - High Performance Power Quality and Transient Recorder Meter

**Greater Altoona Realty Corp**  
10 W. 8th Street  
Suite 300  
Altoona, PA 16601

555-980-4785

**Total Summary**

Electricity Charges	\$2,188,112.79
<b>Total Due</b>	<b>\$2,188,112.79</b>
Due Date	7/15/2014

**Account**  
College Park Apartments  
1 College Park Drive  
Altoona, PA 16601

**Customer** 1  
Statement Date 7/1/2014  
Bill Period 5/1/2014 - 5/31/2014 (31 Days)  
Total Due \$2,188,112.79  
Location Building 2

**Electricity Charges (kWh)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000
2014	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000	~100,000

**Meter**

Meter	PREV	PRES	Usage
Shark200T_unit1	59512944	72795480	13282536
<b>Total</b>			13282536

**Rate Structure: Electricity**

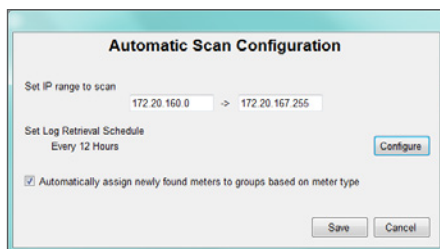
Season	Rate	Usage	Charge
Season One Off Peak	\$0.20	2739228	547,845.60
Season One On Peak	\$0.20	1171044	234,208.80
Season Two Holiday	\$0.15	423880	63,582.00
Season Two Off Peak	\$0.15	2992548	448,882.20
Season Two On Peak	\$0.15	595836	893,375.40
Usage (0.01%)			\$218.79
<b>Total Electricity Charge</b>			<b>\$2,188,112.79</b>

**Total Due** **\$2,188,112.79**

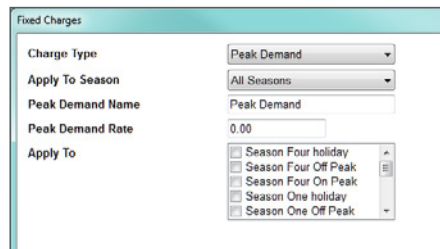
## Easy Low Effort Commissioning

Energy Aggregator is designed with functionality to make both initial setup and ongoing maintenance of the system easy for users.

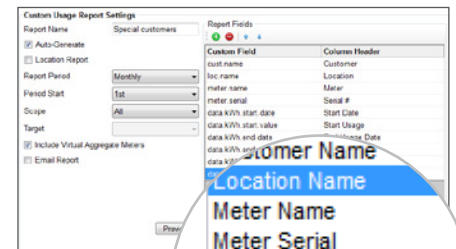
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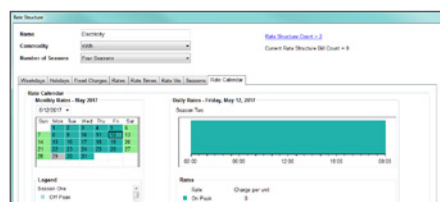
Easily add meters through MeterManager auto scan functionality



Simple configuration of peak demand charges



User-friendly report/bill configuration



Visually confirm rate structure setup

## Technical Specifications

### System requirements - Energy Aggregator

COMPONENT	REQUIREMENT
Supported Operating Systems	<ul style="list-style-type: none"><li>• Microsoft Windows® Server 2008</li><li>• Microsoft Windows® Server 2012</li><li>• Microsoft Windows® 7 Professional</li><li>• Microsoft Windows® 8/8.1 Professional Operating System</li><li>• Microsoft Windows® 10 Professional Operating System</li></ul>
Computer and Processor	<ul style="list-style-type: none"><li>• 2GHz x64 processor</li><li>• 1TB storage</li><li>• 1440x768 display resolution</li></ul>
Memory	4GB of RAM (Minimum)
Other	GE's Energy Aggregator Server requires GE Communicator v4.0 (Licensed) which provides the Meter Manager Component

## Ordering Codes

GE PART NUMBER	NAME
PLSOFT-ENAGG	Energy Aggregator License Package* - Energy Visualization/Billing Software

\* License Package Includes both GE's Energy Aggregator and Communicator Licenses

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English  
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