


AVReporter Energy Management Solutions

References of applications

 <http://www.twitter.com/avreporter>

 <http://www.energy-management-software.org/>

Applications

Buildings (Offices, Logistic Centres, Warehouses, Shopping Centres, etc.)

Functions:

- Implementation of load-shedding (in case of electricity and gas)
- Reduce peak demand and power factor penalties
- Monitoring of consumption and subscribed-power optimization
- Cost-allocation and sub-billing
- Building maintenance and monitoring solutions (SMS and/or e-mail alarms, alarms and events logs, keeping track of events and event change, application of automation software)
- Energy Performance Certification of Buildings - A policy tool to improve energy efficiency
- Application of renewable energy sources- reduction of CO2 emission



Industry (Cement Factories, Car Parts Factories, Pharmaceuticals, Food and Beverages, etc.)

Functions:

- Collection of measurement data (gas, water, electricity, etc.), checking power quality- avoiding short service life of equipments
Implementation of building/production plant monitoring and maintaining solutions (SMS and/or e-mail alarms, alarms and events logs, keeping track of events and event change)
- Monitoring consumption and controlling electric system (keeping track of position indicators and alarms) executing switching functions- system monitoring and simplifying maintenance tasks
- Defining energy consumption and production cost per production unit
- Collection of measurement data of more sites in one system (centralized energy management) – application of integrated energy contracts
- Comparing energy use and production data of different production plants, application of global solutions, controlling and improving possibilities of global energy efficiency indicators in a multi-national environment
- Application of renewable energy sources- reduction of CO2 emission
- Serving the ISO 50001 Energy Management System Standard - reduce costs, increase energy efficiency and improve energy performance



Critical infrastructure (Banks, Hospitals, Data Centres, etc.)

Functions:

- Schedule maintenance on the bases of CB operation numbers
- Monitor operation conditions of UPSs
- Building maintenance and monitoring solutions (SMS and/or e-mail alarms, alarms and events logs, keeping track of events and event change, application of automation software)
- Analyse and isolate the source of power quality problems (EN50160)
- Verify compliance with new power quality standards
- Improve continuity of service
- Monitoring of consumption and subscribed-power optimization



Utilities (Energy Supply Companies, Industrial Parks, Building Complexes, etc.)

Functions:

- Improve continuity of service
- Metering all key interchange points with the highest possible accuracy.
- Analyse and isolate the source of power quality problems (EN50160)
- Ensuring the reliability and efficiency of your network and equipment.
- Sub-bill tenants for energy costs (gas, water, electricity, etc.)



Multisite Applications (Multinational Factories, etc.)

Functions:

- Aggregate multi-site costs and negotiate global contracts
- Comparing energy use and production data of different production plants, application of global solutions, controlling and improving possibilities of global energy efficiency indicators in a multi-national environment
- Collection of measurement data of more sites in one system (centralized energy management) – application of integrated energy contracts
- Serving the ISO 50001 Energy Management System Standard - reduce costs, increase energy efficiency and improve energy performance, KPI reports, etc.
- CO2 emission calculations and reduction, Green House Gases reports



AVReporter key features

AVReporter is a smart solution, a software tool, a key component to energy management systems.

Many companies and institutes started adapting to new rules and regulations of energy management, also trying to become more responsible for the environment and cut down on energy costs and consumption.

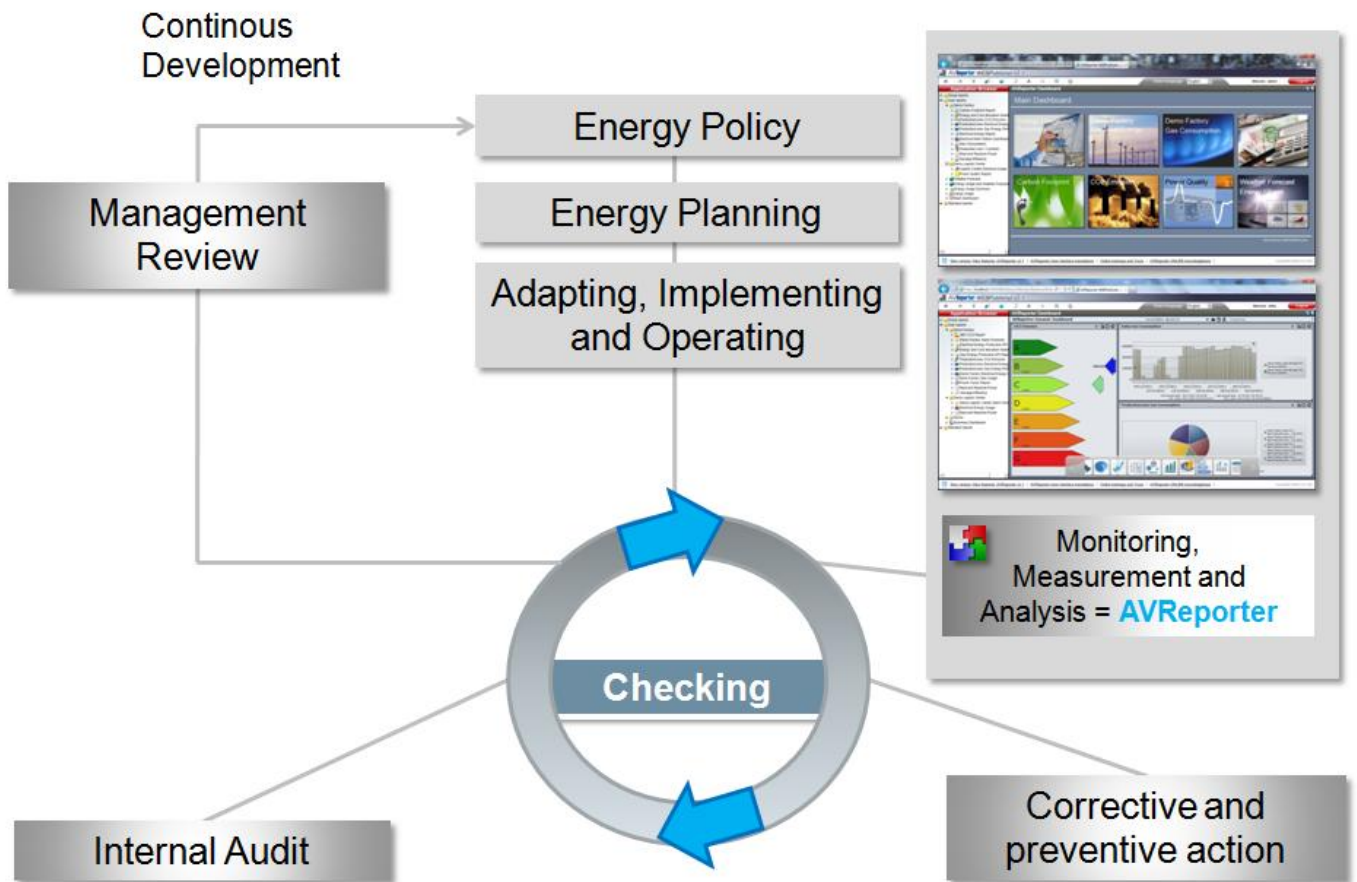
Generally the first step is introducing an energy management programme. Energy advisors can be invited to investigate the current situation and make suggestions for changes. Small steps like switching the lights of when unused, closing doors to keep heat in can result in 5-10% energy savings. Factories, bigger institutes, blocks of apartments most probably will be looking to achieve a better ratio in the smart way. Energy management systems can measure data via installed hardware and turn it into valuable information. The AVReporter Energy Management software then will turn this information into reports and analytical information aiding energy efficiency, helping to realize where and when to change user platform in order to reduce consumption.

AVReporter has different versions and modules, serving the specific needs of the customers.



- User friendly interface with guided help and online Knowledge Base support.
- On the fly multi-language support and additional language packs are available on request (updates of the language databases are available on the web page (www.konsys-international.com)).
- The desktop and web interface are intuitive and user-friendly, and have been designed for the needs of both the engineer and manager. Everyday users will require minimal training.
- High performance modular structure (support 32 bit and 64 bit environment), designed to be scalable taking advantage of the latest windows operating system and CPU technologies.
- Provided with a comprehensive suite of energy management reporting tools, while remaining open to utilize custom add-on modules that can be downloaded and added at any time.
- Provides reporting for all utilities in one platform (electric energy, gas, vapour, water, sewage, etc.).
- Facilitates the creation of custom billing and cost allocation summaries for multi-tenanted facilities or multi-departmental operations, complete with the option to export key financial data to existing invoicing or ERP systems.
- Reporting energy use by product, production unit, or some other unit of service, as required for tracking the key performance indicators for any business (kWh/HDD, kWh/ton, kWh/unit, kWh, shift, etc).
- Support for local requirements, such as, language, currency, date format, corporate formatting standards, custom reports or dashboards, custom calculation methods.
- Powerful query engine for custom calculations at run-time or using pre-calculated source data. Results can be stored in the database for expediting report execution. This same tool can be used to create forecasts from historical data.
- Broad range of report and dashboard applications such as KPI reports, Energy Ratings using ABC charting, Energy Use Allocation, Energy by Threshold Limits, Optimization of energy bookings, Energy Consumption Forecasting, Green House Gases reports, CO2 emission calculations, ISO 50001 Energy Reports, Examination of quality features, Statements of efficiency of the application of renewable energy sources, etc.
- AVReporter can be networked with data concentrator devices directly, commercial metering systems using serial, Ethernet, or wireless devices, as well as, with databases in commercial HVAC control systems, SCADA systems, DCS systems, ERP systems, etc.
- Comprehensive Multi-User and Security Access Level Management, whereby each user has a login name and password, providing access to specific menus and features. Users can be limited to individual buildings, departments or organizational levels.
- AVReporter can be installed using a Server-Client solution and/or a web based solution; this combination is used to meet the specific requirements for access to individual sites for International or Multi-site applications.
- AVReporter may be installed with Web Publisher to provide each user with a comprehensive suite of web reporting tools without having the complete application installed, while bringing your plant and corporate communities together when discussing energy management topics and objectives.
- in WEBPublisher Dynamic Dashboard interface presentable reports can be created more quickly and easily due to the application of the new Silverlight technology. The Gadget Bar assures handy tractability for the user.
- Due to Microsoft's LightSwitch application AVReporter functions can be extended easily allowing to use custom input forms for production data, cost allocation, demand charges etc.
- AVReporter allows you to prevent the appearance of inaccurate data samples of incremental quantities (such as consumption) because of register overflow or other type of event when the incremental value is reset to zero.

- It is possible to connect to weather forecast sites and read weather data.
- Virtual devices can be created in a matter of seconds. This function can be used, for example, to summarise the consumption of all meters in a building and store these as sample values of a virtual meter representing the entire building.
- AVReporter can be accessed from mobile devices and supports the most popular web browsers: Internet Explorer, Firefox, Google Chrome, Apple Safari



Case studies

Shopping Centre Energy Management - Tenant Billing:

Typical example: **Shopping Centre**

- Area of shopping centre: 30 000 m²
- Number of shops: 30
- Number of resource monitoring units: 80 (for measuring electricity, gas and water)

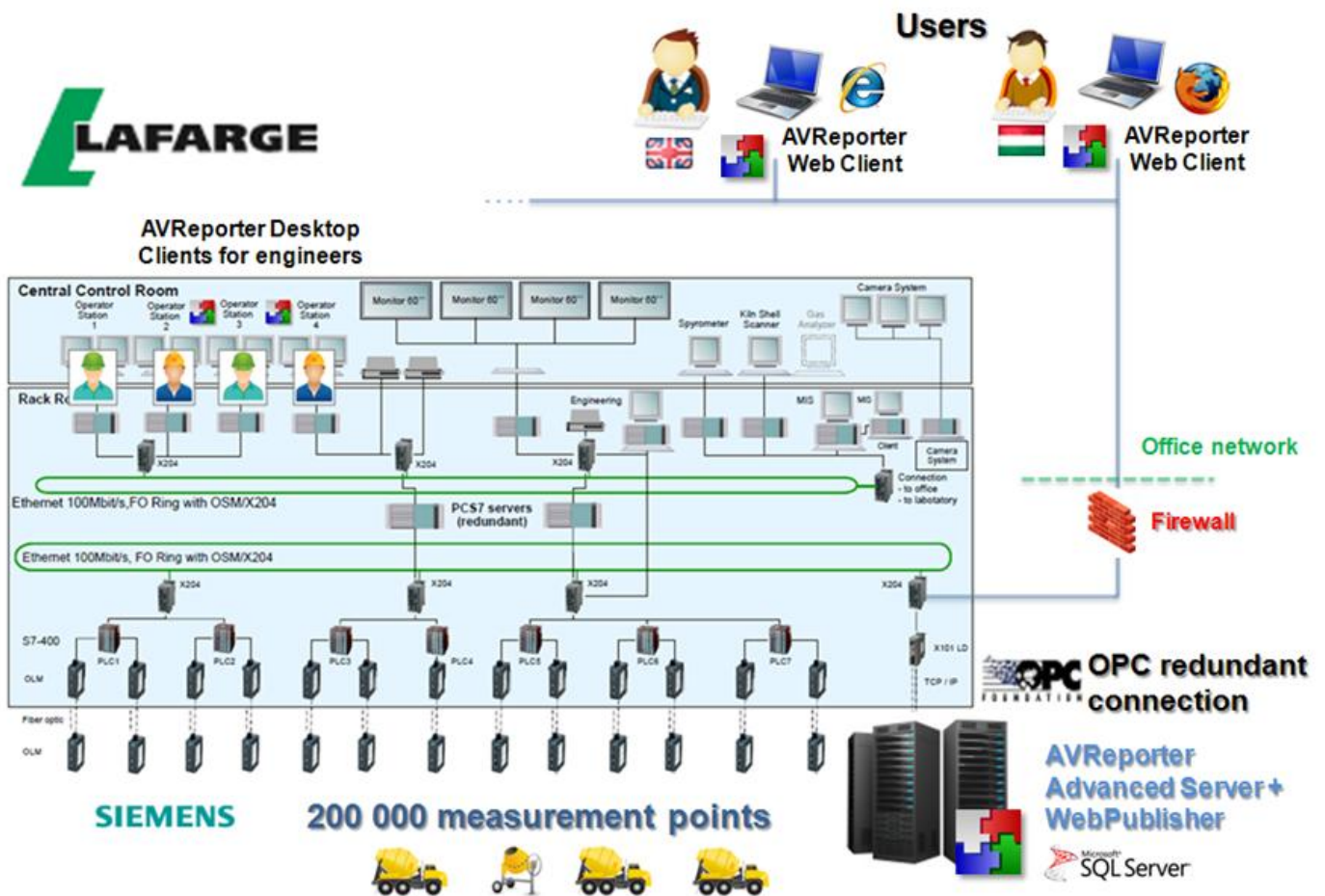


Customer requirements and completed solutions:

- **Handling the different types of consumption** (electric energy, gas, water, sewage) using one common system and interface
- **Easy to manage user-friendly environment** (multi-language support for reporting, German to Management, Hungarian to local engineer)
- Cost allocation according to internal cost centres with invoicing (**Bill Verification, Financial Analysis**)
- **Providing tax authority approved invoicing** to retail tenants with data export to their existing ERP system (SAP)
- **Flexible custom-tailored solutions** according to the requirements of the user: support of individual reports, local requirements - language, currency, date format, individual layout, application of individual calculation methods



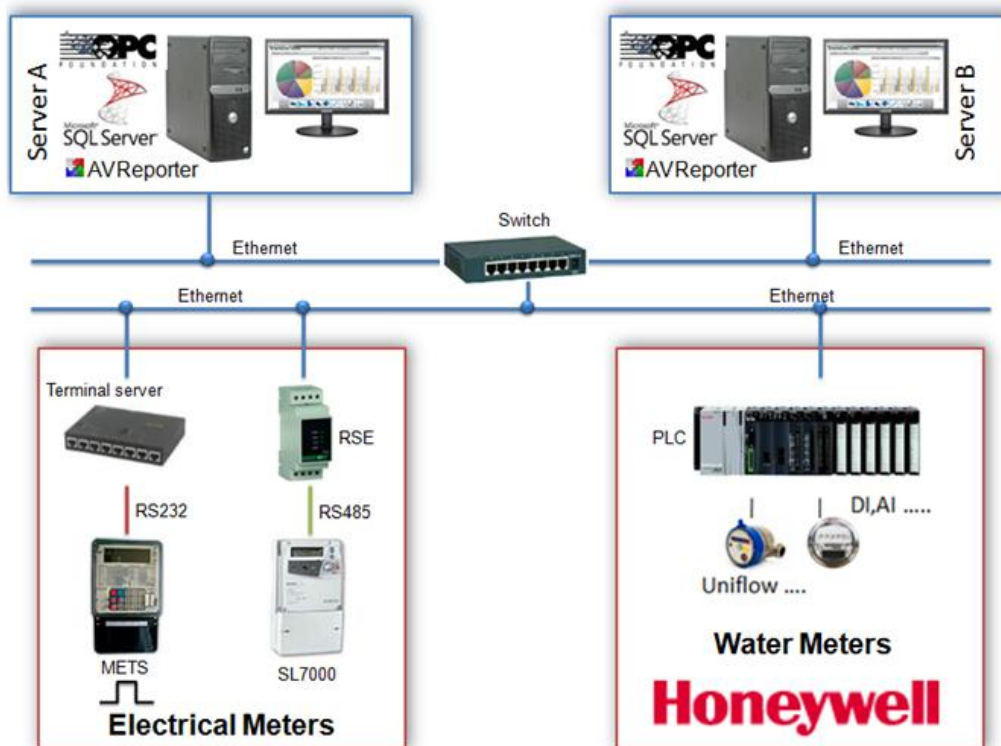
Cement Factory application:



Customer requirements and completed solutions:

- **Store and analyze the collected data** for water, steam, and gas to forecast energy usage from production data
- **Preparation of energy cost and internal cost allocation reports** (calculate energy cost per production unit)
- **Multi-User and Security Access Level Management**, whereby each user has a login name and password, providing access to specific menus and features. Users can be limited to individual buildings, departments or organizational levels.
- **Support complex calculation methods on the source data**
- **Creation of customized reports and dashboards** (company logo, currency, custom layout, local language support)
- **Unlimited possibilities of report preparation functions:** KPI reports, Green House Gases reports, CO2 emission calculations, Optimization of energy demands
- **Support redundant OPC server connection**
- **Web based reporting and dashboard interface**

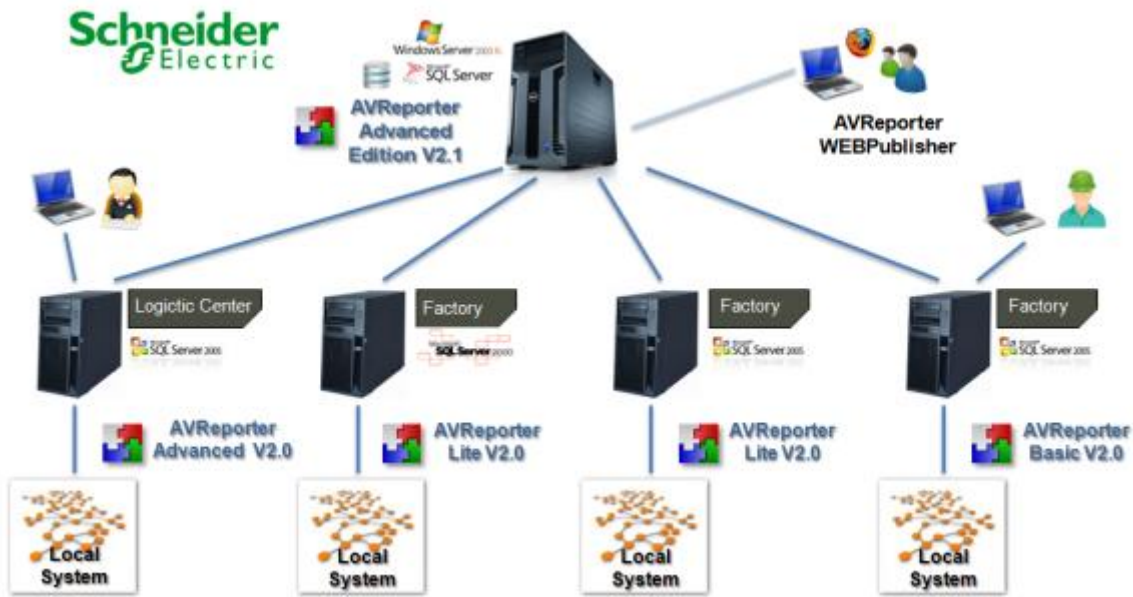
Industrial Park Energy Supply Company application:



Customer requirements and completed solutions:

- **Comprehensive Multi-User and Security Access Level Management**, whereby each user has a login name and password, providing access to specific menus and features. Users can be limited to individual buildings, departments or organizational levels.
- **Flexible networking options** that link multiple systems providing easy connections to ODBC compliant databases (energy prices database).
- **Support OPC server connection**
- **Support redundant database storing**
- **Support revenue meter communication protocols (COSEM, etc.)**
- **Support complex calculation methods on the source data (billing calculations)**
- **Providing tax authority approved invoicing** to retail tenants with data export to PDF or Excel file
- **Complex efficiency calculations, data modelling, virtual points, and data quality features**
- **Creating customized reports and dashboards** (company logo, currency, custom layout, local language support)
- **Unlimited possibilities of report and dashboard preparation functions:** KPI reports, Optimization of energy demands, Energy Use Allocation, Energy by Threshold Limits, Energy Consumption Forecasting, Examination of quality features, Consumption Reports, etc.
- **Web based and desktop reporting and dashboard interface**
- **Support alarming and event notification**

Multisite Enterprise Energy Management application:



Customer requirements and completed solutions:

- **Comprehensive Multi-User and Security Access Level Management**, whereby each user has a login name and password, providing access to specific menus and features. Users can be limited to individual buildings, departments or organizational levels.
- **Flexible networking options** that link multiple systems providing easy connections to ODBC compliant databases, CSV files, and other database schemas.
- **Support for team- sharing and on-line collaboration** (support multisite functions)
- **Creation of Production KPIs to track and summarize energy performance** by manufactured product or production unit.
- **Creating customized reports and dashboards** (company logo, currency, custom layout, local language support)
- **Unlimited possibilities of report and dashboard preparation functions:** KPI reports, Green House Gases reports, CO2 emission calculations, Optimization of energy demands
- **Web based reporting and dashboard interface (manager- oriented dashboards)**

