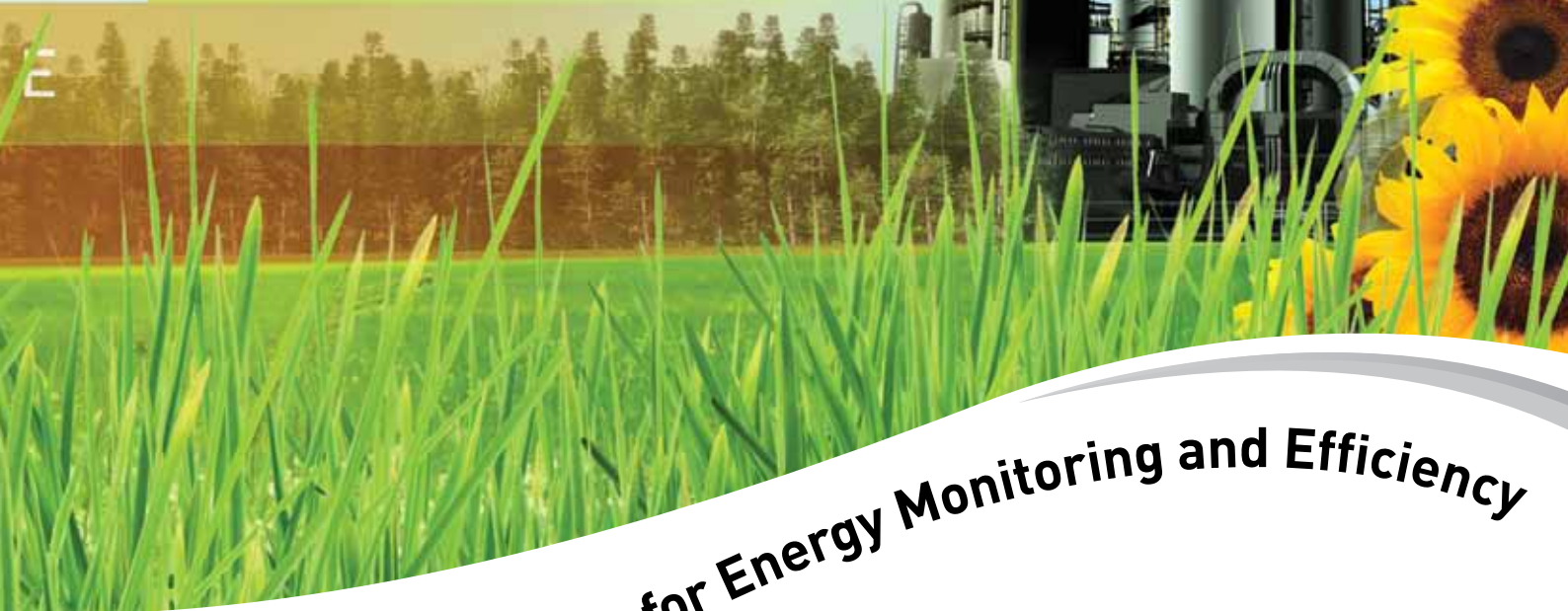



Movicon Pro.Energy[®]



D



The Best Solution for Energy Monitoring and Efficiency



Movicon Pro.Energy[©]

“Collecting, displaying and analyzing our energy consumption is vital to our energy efficiency policy. For us this means reducing costs, increasing competitiveness and maintaining the eco-sustainability of our entire organization.”



Software technology for energy efficiency

Energy efficiency is a key priority for every company. Progea offers software solutions specifically designed to monitor energy consumptions and guide companies in the right direction to increase efficiency and sustainability.

Installing energy management systems is a greater priority than ever to improve energy efficiency and reduce consumption that constitutes a major part of building and production costs.

The introduction of strict standards requires most companies to adopt new energy efficiency standards as defined by ISO-50001 relating to Energy Management standards or EN-15232 which puts energy efficiency into four classes. An Energy Management system is the basis for detecting the corrective measures needed to achieve continuous energy efficiency improvements.

The Pro.Energy® software enables companies to reduce energy costs by analyzing consumption and implementing efficiency concepts with considerable

economic returns that contribute towards reducing pollution and creating an ecosafe image for the company.

Pro.Energy® provides an opportunity to all manufacturing companies that enables them to confront an energy crisis effectively and institute new policies that target efficiency improvement with rapid returns.

Effective collection of local and remote production site energy consumption information is indispensable to perform analysis targeted at reducing waste and optimizing energy consumptions for efficient and sustainable energy management.



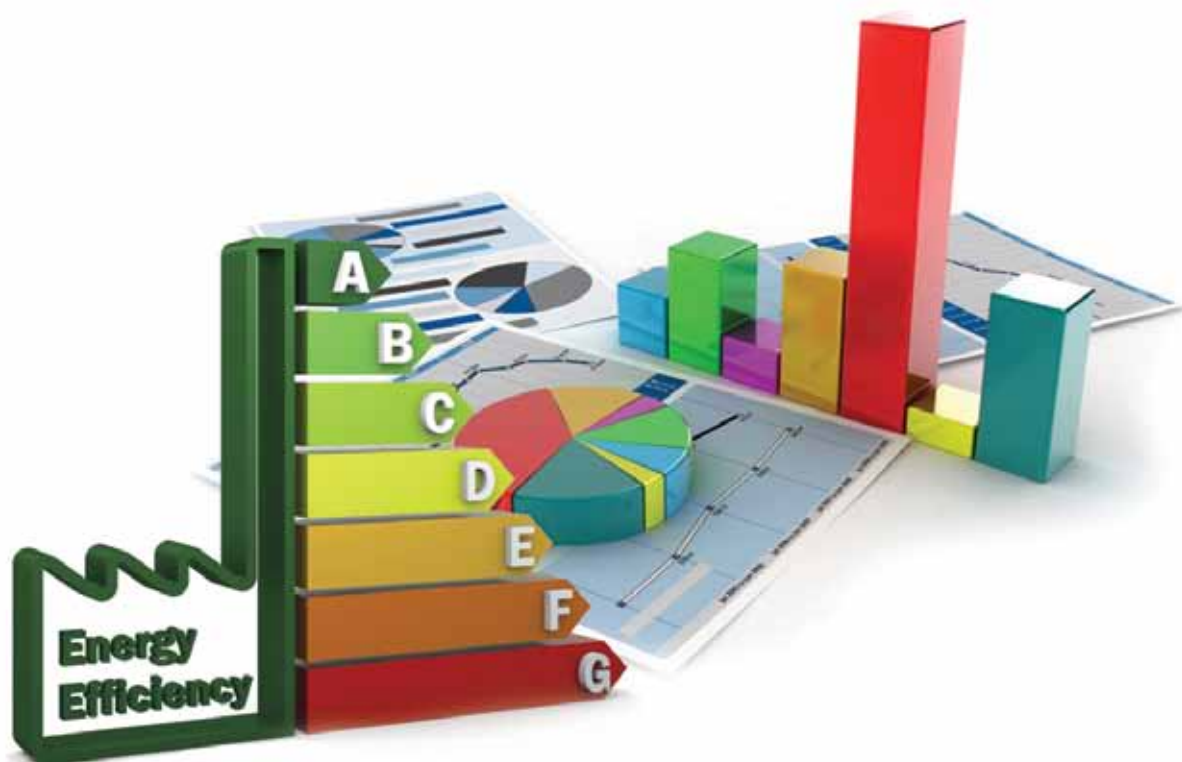
Pro.Energy® is a simple and effective solution based on open, reliable and flexible technologies

Pro.Energy® makes plants and buildings more efficient by pinpointing the key indicators that enable reduction of energy consumption and increase profits.

Pro.Energy® aids Energy Managers and other users in analyzing company consumption in order to manage energy efficiency through valid decision-making strategies. Pro.Energy® is a functional Movicon module that enables you to connect a diverse range of meters installed in various types of energy carriers to measure consumptions in real-time, record and aggregate them in a relational database (SQL Server). This data can then be analyzed by time range, carrier or cost center by comparing the different time ranges, values or manufacturing sites, independently from the deriving data source. This will greatly aid those in charge to make the right decisions and quickly put the appropriate corrective measures in to action. Pro.Energy® offers safe and efficient connectivity tools that collect real-time information.

A configuration wizard guides the user in associating data and creating databases automatically and safely to create Energy Analysis projects in an instant, with immediate results.

The solution is also open to customization whether for field communication, displaying measures or analytical reports. In addition to bidirectional connections to managerial systems the predisposed ODBC connectors also enable the creation of simple MES solutions by cross-referencing consumption data with production data.



Effective collecting, recording and analyzing of energy measures

Energy Performance Indicators (EnPIs) across the entire organization can be calculated to reduce consumption, eliminate waste and optimize resources.

A strong company strategy for constant measuring and monitoring of electricity, gas, water, compressed air or steam usage will enable sustainable savings and an increase in competitiveness.

Energy consumption visibility

The ability to collect consumption calculations will allow users to gain a clear picture of the energy infrastructure and utility distribution.

Identify potential energy savings

A thorough analysis of opportunity areas is possible through consumption calculations related to manufacturing and building sites, time range and business situations.

Monitoring corrective action results

To assess the benefits of the corrective actions undertaken you can monitor the consequent advantages in real-time and hypothesize new interventions as part of a continuous effort for improvement.

Document efficiencies and use of incentives

The complete and powerful set of data analysis tools provided allows users to verify, document, export and send reports on actual consumption reductions to interested parties as well as take advantage of any incentives to obtain specific certification requirements.



■ Indispensable for energy certification

Standards, Certifications, Incentives: Pro.Energy® offers an integral and flexible solution that easily communicates actual consumption.

In today's world it is not just 'power-hungry' companies that need to reduce consumption. Energy use greatly contributes to company expenditures. This encourages companies to adopt energy efficiency programs not only to save on energy bills but also as a practice of sustainability that will give the company a positive image. Modern technology monitoring systems are being used to obtain energy efficiency levels that enable businesses to access incentives offered by government and power companies that make energy efficiency a worthwhile investment. In addition, the increasingly strict standards penalize 'power-hungry' companies and encourage them to adopt the appropriate tools for reducing consumptions and CO2 emissions.

The Energy Managers

Energy Managers are assigned the task to manage and rationalize energy use. The role of the energy manager involves:

- Implementing the appropriate actions, interventions, procedures to promote rational use of energy.
- Ensuring the predisposition of annual energy consumption based on end energy user financial parameters.
- Provide energy verification data of interventions aided by state contributions.

The ISO 50001 Standard

This standard provides business organizations with a reference framework for integrating energy performance in daily activities. It also aims to promote the best practices for energy management as well as to improve projects designed to reduce emissions caused by the greenhouse effect. At a worldwide level this will enable businesses to adopt one standard and use the same methodology to identify and implement improvements. The basic structure of the standard is designed on the Deming cycle model with the philosophy of continuous improvement: Plan-Do-Check-Act approach. In order to achieve this type of certification it is essential to deploy a Monitoring and Analysis system such as Pro.Energy®.

The UNI EN 15232 standard

The UNI EN15232 standard is used as a guide to define energy efficiency in buildings. This is achieved by using four classes to assess what impact automation and control systems have on the energy performance of thermal and electrical installations in the building. The standard provides guidance on how to assess current energy efficiency and performance capacity of electrical systems such as heating, air conditioning, illumination through management and control systems. It also establishes the potential savings in electricity and heating that can be obtained by deploying plant automation systems with high classed energy efficiency (A, B, C, D).



Complete and thorough consumption analysis

Pro.Energy® offers integrated analysis tools based on fully equipped ready-to-use reports, charts and tables.

The Energy Performance Indicators (EnPIs) indicators are essential to performing effective consumption analysis. They are the most reliable method to use in analyzing and improving energy efficiency by detecting energy waste to drive its elimination.

Pro.Energy® collects all energy carrier data, records it on a database to enable thorough and accurate analysis using specially designed reports, charts and tables. It is based on simple and reliable technology that is ready to use but can be customized as needed.

In addition to recording real-time meter measures, the system also allows the user to define and record virtual calculations. This enables users to run comparisons on actual behaviors versus those of virtual ones, or use virtual calculations to manage and reallocate energy logic groups by, for example, recalculating specific meters.

By applying these different methods Energy Managers and users will be able to obtain powerful analytical reports containing the information they need to quickly pinpoint and take action on areas of energy waste.

1. Consumption Reports – Consumption data analysis in table and chart format with selectable meters, value totals with minimum and maximum calculations for selected time ranges.

2. Cost Reports - Consumption analysis indicating costs for each energy carrier.

3. Behaviour Charts - Consumption behavior charts for selected time range.

4. Time range comparisons - Graphical analysis comparing values calculated in different time ranges.

5. Threshold Control - Analysis for pinpointing exceeded set thresholds.

This information is a vital aid to energy managers looking to eliminate waste and optimize consumption. The recorded data analysis management is simple, yet powerful and comprehensive. All reports can be managed locally or via web. They can also be printed or exported in the most popular formats (Excel, PDF, etc.).

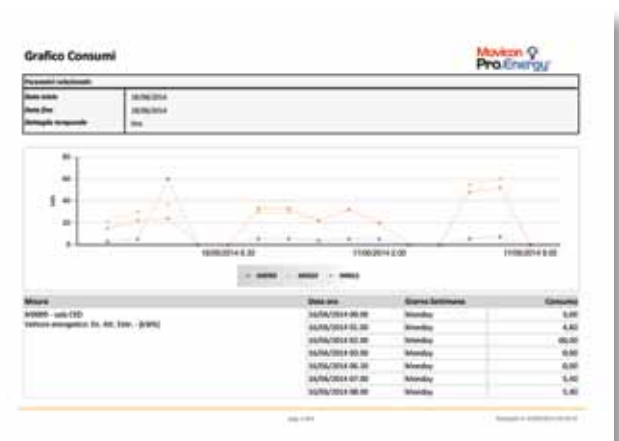
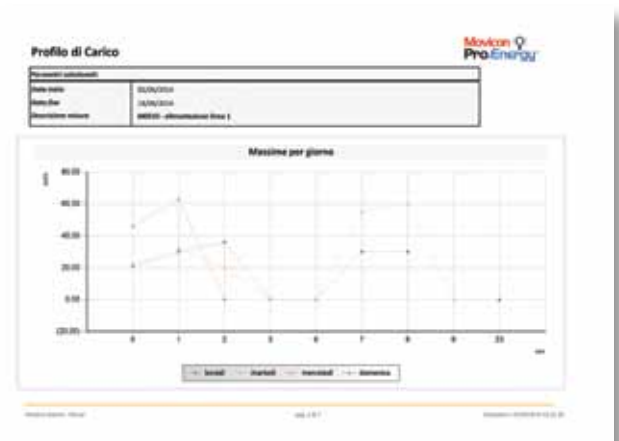


Grafico Consumi				
Parametri selezionati				
Data inizio	10/01/2014			
Data fine	10/01/2014			
Gruppo logico	001			
Metro	Unità	Valore minimo	Valore massimo	Consumo
001001 - Unità 001	kWh	0.00	0.00	0.00
001002 - Unità 002	kWh	0.00	0.00	0.00
001003 - Unità 003	kWh	0.00	0.00	0.00
001004 - Unità 004	kWh	0.00	0.00	0.00
001005 - Unità 005	kWh	0.00	0.00	0.00
001006 - Unità 006	kWh	0.00	0.00	0.00
001007 - Unità 007	kWh	0.00	0.00	0.00
001008 - Unità 008	kWh	0.00	0.00	0.00
001009 - Unità 009	kWh	0.00	0.00	0.00
001010 - Unità 010	kWh	0.00	0.00	0.00
001011 - Unità 011	kWh	0.00	0.00	0.00
001012 - Unità 012	kWh	0.00	0.00	0.00
001013 - Unità 013	kWh	0.00	0.00	0.00
001014 - Unità 014	kWh	0.00	0.00	0.00
001015 - Unità 015	kWh	0.00	0.00	0.00
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001018 - Unità 018	kWh	0.00	0.00	0.00
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001098 - Unità 098	kWh	0.00	0.00	0.00
001099 - Unità 099	kWh	0.00	0.00	0.00
001100 - Unità 100	kWh	0.00	0.00	0.00

Physical and Logic Meters

Pro.Energy® collects measured unit data (meters) from various energy carriers in the field. However, this is not enough to carry out a detailed analysis. It is useful to create meter group logic to measure consumption values that are logically grouped according to department or site existing in the building. Pro.Energy® enables users to create measures from different meters in order to obtain reports and graphics according to the logic group desired.

Virtue Measurements

Users can freely define Virtual Measurements that are energy consumption values from a combination of measures and calculations or mathematical formulae. The possibility to define virtual or theoretical energy consumption values is fundamental for performing analytical comparisons with 'real' measures.

Threshold and Cost Control Management

Pro.Energy® provides the option to define rate bands by customizing the system with time rate bands and cost tables defined according to existing energy company contract agreements. This method is very effective for analyzing consumption data. It gives a more accurate picture of energy performance in terms of how much is spent on bills, when energy supersedes set thresholds, when energy is used the most or the least and in what period.

Visualization via Web

Data can be managed over the web using the Web and Web Client technology to access real-time measures and analytical reports using common Internet browsers. The integrated web technology permits use of distributed architectures to display and analyze a building's consumption, from any physical location.



Communication

Open data acquisition for total connectivity at every level.

Forget monitoring software that has restricted use and offers just measuring tools that have to be brought separately! Pro.Energy®, instead, is an open architecture that can be integrated with any measuring tool used in the company even if they vary from each other. An integrated system must be capable of collecting any value from the field even when it derives from different devices such as multimeters, meters, PLCs and sensors.

I/O Drivers

A wide ranging native I/O Driver library has been integrated to communicate with measuring and control systems (i.e. Modbus, Bacnet, Konnex, LON, Simatic, Schneider, ABB, Profibus, Profinet IEC 60870, IEC 61850 and many more).

OPC

OPC DA, OPC DA XML technology has been integrated both for Client and Server. OPC UA is also available.

Networking

Expansive network connectivity with distributed stations in WinCE HMI panels.

DB Connectors

Special read/write DB connectors to any database and business application or system using simple tables in share mode for connecting to any managerial system (ERP) or business system (SAP) make Movicon Pro.Energy® the best connectivity system between field monitoring and control and managerial levels. It also allows for production data and energy consumption cross-referencing.

Historian

Process data archived in relational SQL Server™ database.

The process data collected by Movicon Pro.Energy® is recorded and archived for analysis using the Data Logger objects, which are created automatically by the wizard. The wizard aggregates data with simplicity and defines the recording and archive management modalities. This important job guarantees the basic concepts of simplicity, reliability and openness. The Microsoft SQL Server license is not required for using Pro.Energy® in simple architectures.

The data tables are structured automatically and database calculations are displayed in dashboards and in analytical reports with all the information necessary for fast and effective analysis. This simple object-oriented configuration method makes it easier to customize handle, display and record real-time data with the aid of Movicon platform architecture, of which Pro.Energy® is a functional module.

Data collection openness

The collection of measurements, operating status and alarms requires a local HMI interface on the production unit if not already available as digital information from PLCs. The Pro.Energy® architecture can connect remote terminals both as web-based terminals and local HMI operator panels in Window CE at a low cost. Integrated features directly manage the distribution of data collection and visualization points. This will enable users to safeguard, if not reduce, investment costs that would otherwise be used in financing invasive interventions.

Data Redundancy

Movicon Pro.Energy® offers the possibility to use the Data Redundancy function to manage automatic synchronization of historical data stored in PC systems with redundant hardware and communication features. Movicon Pro.Energy® is the right choice for "mission critical" data collection systems.

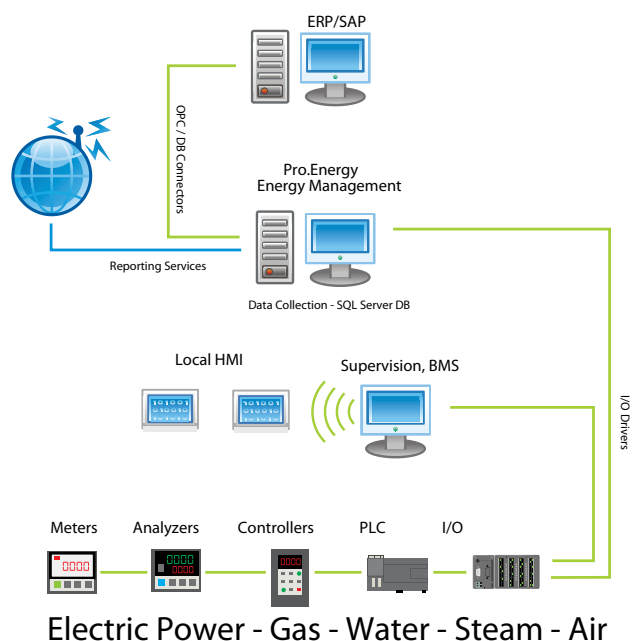


Flexible and open architecture

Pro.Energy® uses the consolidated Movicon architecture for communication and data collection.

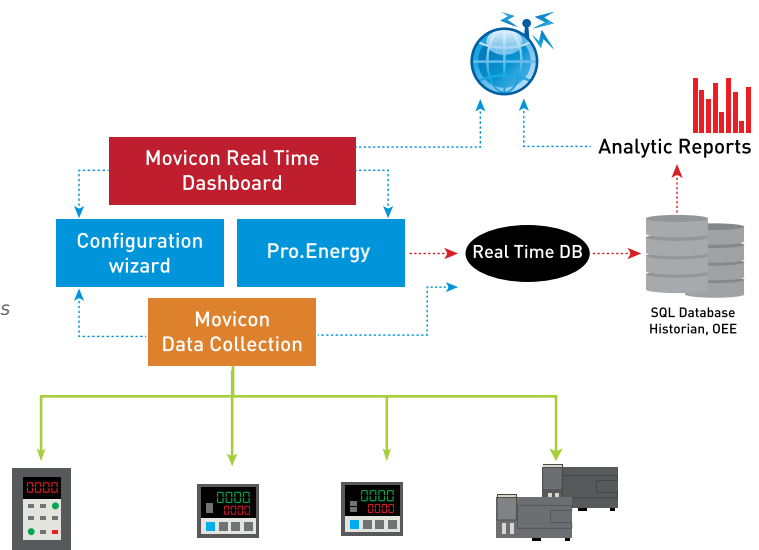
By using Pro.Energy®, companies can install the Energy Efficient Manager system with direct connection to preinstalled measurement systems and production line integration without having to worry about which connection modality to use.

With the aid of Movicon, Pro.Energy® is able to provide a number of integrated solutions that enable connectivity towards production systems. This is accomplished by using native I/O drivers to connect directly to PLCs, Multimetres, Analyzers, Remote I/O, PLC or control systems. In addition, connectivity via OPC Client or Server towards already installed SCADA or HMI systems is also possible. Data can then be collected without having to invest more in additional installations on the production side. The collected data is then aggregated and archived in the Ms SQL Server relational database tables. This will enable the calculated energy performance indicators (EnPI) to be displayed locally using remote control that is made possible by the Movicon Pro.Energy® Web architecture. Ultimately, the system also provides full bidirectional connectivity with ERP or SAP systems to achieve total information flow back and forth from top to bottom.



A simple and cost efficient solution to implement. It uses consolidated technologies for managing all the components needed to make it effective:

1. Communication with measuring systems
2. Historian and data collection
3. Real-time dashboard
4. Analytical consumption, costs and EnPIs reports
5. Threshold and eventual cut-off management
6. Access via web using tablet and smartphone



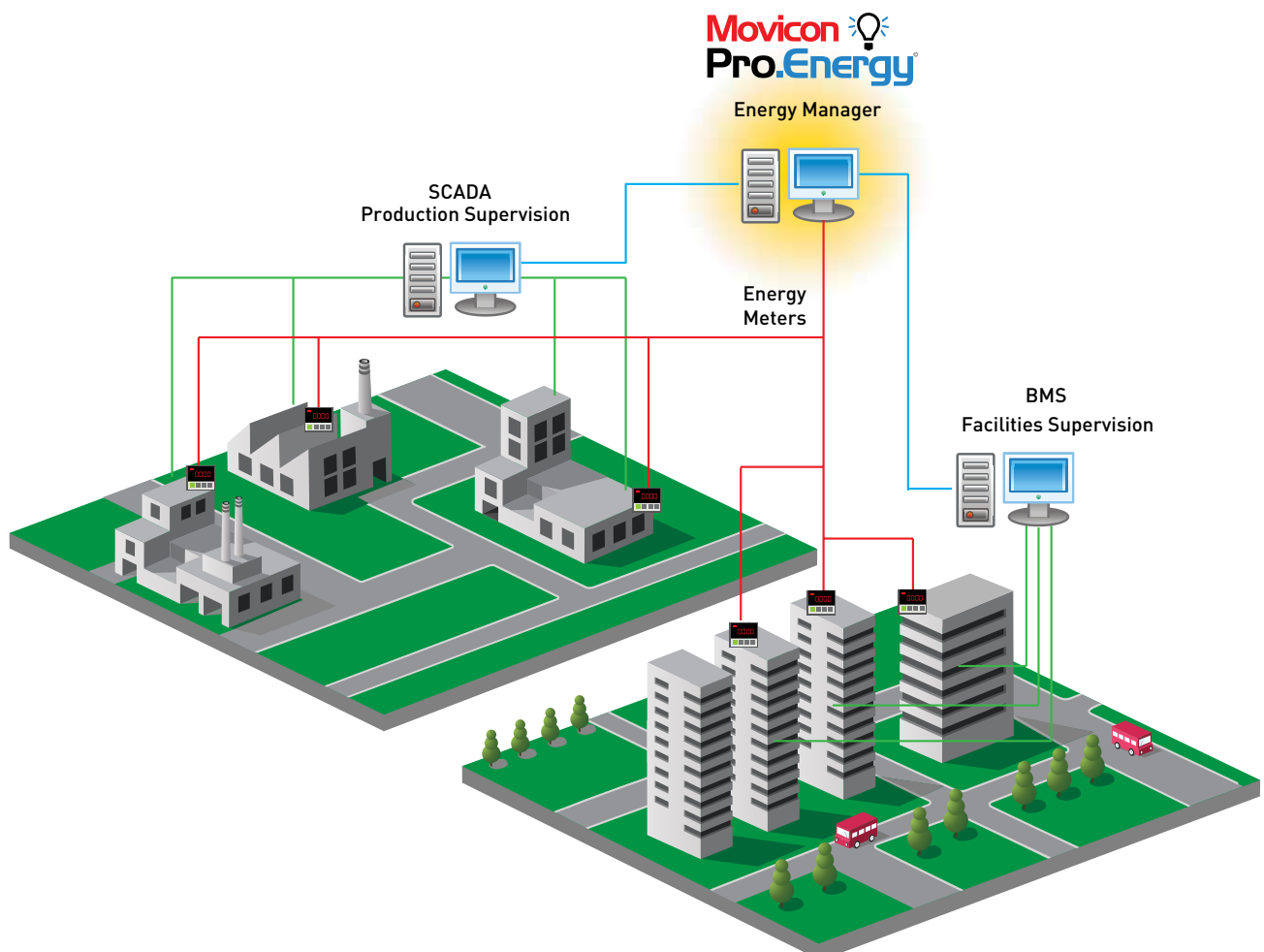
Application Examples

Pro.Energy® can be applied anywhere, in any business or infrastructure with minimal investment or invasiveness.

Pro.Energy® is a standard solution used in all applications for data collection and analysis of measures and energy consumption meters. It can be applied as a simple monitoring system or a supervisory system (BMS Building Management System) of the building or infrastructure in combination with Movicon SCADA/HMI supervisory projects. It can be used in independent “stand alone” architectures applied as a server for the ‘telemetering’ of existing remote systems without changing, modifying or replacing any existing measuring and automation systems.

Pro.Energy® can connect to available and existing meters, PLCs or SCADA/HMI to collect consumption and production information from their databases.

If no Supervision system (BMS) exists, the solution offered by Pro.Energy® can also be used for integrating display screens and managing the organization’s or building’s information. Pro.Energy® has been designed to reduce investments and avoid modifications unless necessary. Pro.Energy® uses the best technology available for collecting, managing and analyzing energy data and controls, and automates illumination control systems, energy distribution and HVAC, among others.





■ Technical support service is our added value

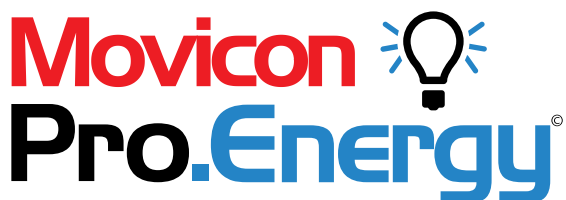
**Openness, Integration, Customization, Support.
Progea satisfies every need.**

Progea, through its network of Partners, Solution Providers and System Integrators, can provide end users the necessary and fundamental help and advisory services to achieve success with their project.

There are many advantages in using a standard product but having the capacity and know how required to develop and adapt the product to specific needs of the company is what counts in making the whole project successful. Progea is more than willing in assisting users in helping them analyse specific needs, define the appropriate specifications, implement and test run projects to evaluate the end results. It must be taken into consideration that a Consumption Analysis simply provides an indication on how or not energy is being used efficiently within the organization. These indications alone will not improve your consumptions unless combined with the full cooperation and willingness of the Energy Manager and the organization at all levels. The causes detected by the indicators can only be removed by working together. This is the only way to achieve complete success.



Progea has been in operation since 1990 in producing industrial automation software platforms. A long tradition that conveys strong and matured experience in the sector with a vocation for innovation that derives from a dedicated team of young and motivated design engineers and technicians. Progea places quality above all else: the company has ISO 9001:2008 certification and their software products are placed under strict test runs and they are certified in accordance to the specific standards. The services are erogated by a motivated and competent team who are totally focused on their customers' specific needs. Testimony of great customer satisfaction achieved from their services is demonstrated by the numerous partner references which include Phoenix Contact, ABB, Panasonic, Asem, Vipa, Suetron among many others.



■ Key Features

Openness. Pro.Energy® is a Movicon functional module with architecture based on XML and SQL Server.

Security. Pro.Energy® guarantees maximum data security based on SQL Server with redundancy management.

Standards. Pro.Energy® is completely based on standard technologies to safeguard your investment.

Performances. Pro.Energy® guarantees real-time management of your information with the capacity to handle data collects up to a frequency of 10 Ms.

Powerful Data Logging. Collected data is recorded using Data Loggers that record data and archive SQL Server tables with automatic data recycling.

Connectivity Pro.Energy® integrates a vast ranging communication driver library that is ready to connect to all measuring and meter devices (Modbus, Bacnet, Konnex, LON, Siemens, Schneider, Rockwell, Profibus, Profinet, Ethernet/IP and many others). The drivers include functionalities such as automatic Tag import, remote connectivity via modem, multi-station concept for point-to-point protocols. In addition to included driver library Pro.Energy® also offers full connectivity via OPC, both with OPC DA, OPC UA, OPC XML DA technology as both Client and Server.

Configuration Wizard. Pro.Energy® is a Movicon functional module based on a configuration wizard, which is used to simplify field variable selection and automatic creation of data collection databases. Real time dashboards, calculation databases and analysis reports are created automatically following a simple step-by- step procedure.

Ready-to-use and Customizable Reports Pro.Energy® is equipped with Performance and Downtime Analysis Reports based on the SQL Server Reporting Service. In addition, this solution also offers expansive possibilities to integrate and customize using the Movicon Report Designer or Crystal Report.

Web-enabled Architecture. Pro.Energy® also offers web-enabled dashboards with real-time measurements and reports. It permits access to Server data using Internet browsers. Its performance and security guarantee cost and maintenance reductions.

Open and customizable AnPIs Analysis Modules.

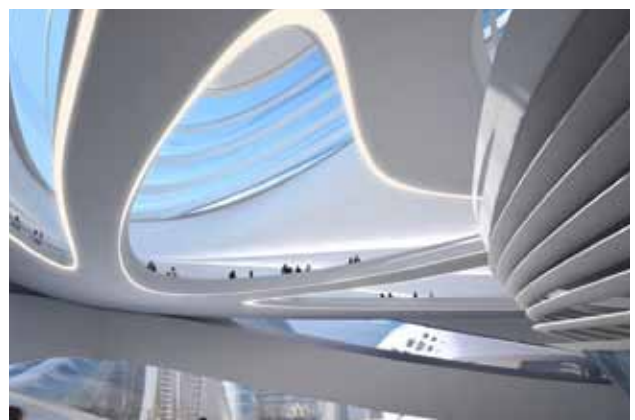
The EnPIs analysis modules propose simple and effective solutions for obtaining all the consumption measurements of energy carriers in the most practical, quick and open way possible. Reports, Tables and Charts permit a complete production analysis with the option to print and export displayed data. All data can be managed in custom architecture.

Integrated Connectivity with Movicon. Pro.Energy®, in addition to interfacing with any supervisor, offers great advantages in network connectivity with the Movicon SCADA systems using WinCE HMI panels based on Movicon CE.





**An investment with immediate returns
on energy efficiency and waste reductions
in all industrial sectors**





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