Pro.Energy©

The Software solution
for Energy Monitoring
and Efficiency

progea

Pro.Energy©

The software solution to collect, display and analyze **energy consumptions**, essential for any Energy Efficiency policy. Enabling companies to **reduce costs**, **increase competitivity** and **eco-sustainability**.

Software Technology for Energy Efficiency

Progea offers software solutions aimed at monitoring consumptions to guide the company in the right direction to reducing costs, increase efficiency and sustainability.

Deploying energy management systems has now become an even greater priority to help reach energy reduction goals by making its use more efficient. Energy bills make up a significant percentage of company production and building management costs. In addition to this, the enforcement of more stringent norms are pushing companies to endorse new energy efficiency standards such as those defined by the recent ISO-50001 norm relating to Energy Management standards, or the EN-15232 which classifies energy efficiency into four classes. An Energy Management system is the basis for detecting the corrective measures needed to achieve continuous energy efficiency improvements that are now a top priority for every company.

The Pro.Energy© module offered by Progea enables companies to reduce energy costs by analyzing consumptions are pushing to implement efficiency concepts with considerable financial returns and carbon footprint reduction that contributes to the company's eco- friendly image. This software is a Movicon. NExTTM platform functional module and therefore ensures standards and openness to manage not just energy efficiency but also control functions, alarms, notifications, load release and data visualization. Pro. Energy© provides an opportunity to all manufacturing companies to confront the energy crisis effectively and setup new policies that target efficiency improvement with rapid return of investment and consequential important benefits.

Pro.Energy© is a easy to use and effective solution

Pro.Energy© makes plants run more efficiently by identifying the Key Indicators (EnPIs) that consent to reducing consumptions and increasing profits.

Energy indicators (EnPI: Energy Performance Indicator) provide the information necessary for monitoring consumption.

Energy comsumption visibility
Consumption measurement acquisition provide a clear and complete picture of energy usage and how it is distributed within the company.

Identify potential energy savings
Knowing consumption measures relating to production site, period and company business situations makes it easier to identify where to intervene to improve efficiency of energy use.

Monitoring the result of corrective actions
To assess the real benefits gained by administering corrective actions, you can monitor results in real-time and consequently evaluate other corrective measures as part of a continuous effort for improvement.

Documenting efficiency
A complete set of powerful consumption data analysis tools allow you to verify, document, export and send reports on the effective consumption reductions achieved to concerning parties and take advantage of incentives or obtain desired certifications.

Supporting Energy Managers
Pro.Energy© is the best solution that supports Energy Managers, and others responsible for analyzing energy consumption within the company, in their decision-making to improve energy efficiency. Pro.Energy© is a Movicon.NExTTM functional module that connects to different meters of different energy providers , measure the consumptions in real-time, record and aggregate them a relational database (SQL Server), for subsequent data analysis by period, provider s or cost center. Data comparisons can also be performed according to period, values or different production sites, independently from the data source. This will help managers make the right decisions and take quick action.
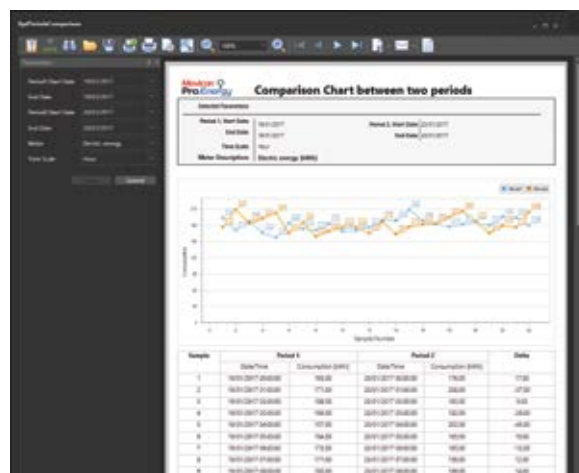
Indispensable for Energy Certification

Norms, Certifications, Incentives: Pro.Energy© offers you an integral, flexible and transparent solution for your certification systems.

In today's World it is not just 'power-hungry' companies that need to reduce consumptions. It is a well-known fact that the energy factor consistently affects company running costs significantly. Companies feel obligated to endorse energy efficiency programs not just to save on energy bills but also as a principale of ethics and sustainability that will reflect on the company's image. Nowadays, energy monitoring systems can be used to achieve energy efficiency and give businesses access to incentives made available by government and utilities, making energy efficiency a worthwhile investment. In addition, the increasingly stringent norms penalize 'power-hungry' companies and oblige them to adopt the appropriate tools for reducing consumptions and CO_2 emissions.

The ISO 50001 Standard
This recent standard provides business organizations with a reference framework for integrating energy performances in the daily running of their activities; in addition, it aims to promote the best practices for energy management as well as to improve management using projects designed to reduce emissions caused by the greenhouse effect. The fundamental structure of the normative is designed on the Deming cycle model with the 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 defines Energy Performance of Buildings. Through the introduction of 4 energy efficiency classes to assess what impact automation and control systems have on the energy performances of thermal and electrical installations in the building. It also establishes the potential savings in electricity and heating that can be obtained by deploying plant automation systems. Ultimately, in order to obtain certification, companies are required to adopt a Monitoring and Analysis system such as Pro.Energy©.
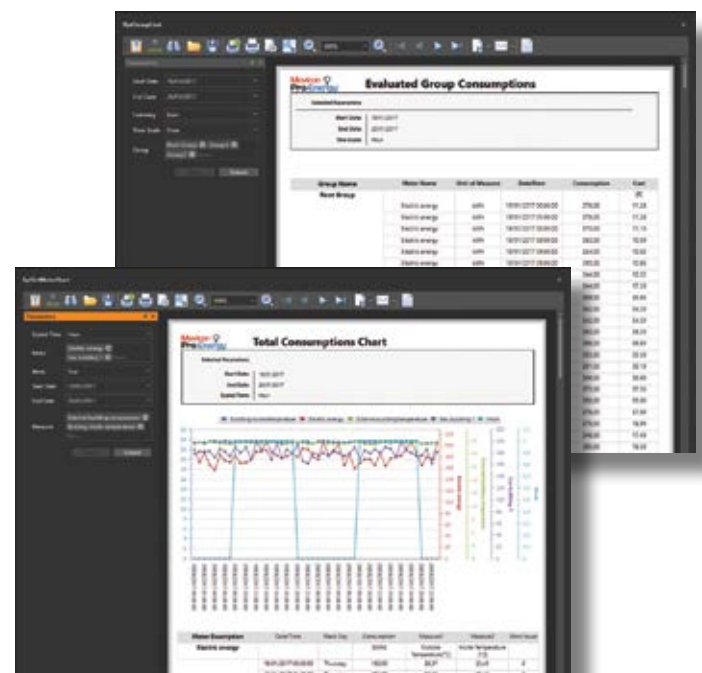
Simple, immediate and transparent energy consumption visualization

Pro.Energy© offers visualization of all energy consumptions: effective, complete, quick and transparent to all.

Pro.Energy© has been designed to ensure transparent visualization of all energy consumption values collected by measuring systems and meters throughout the entire company, locally and from remote sites. Thanks to the Movicon.NExT™ technology, on which the Pro.Energy© module is based, you will be able to view energy information using local display monitors and the internet (i.e. common internet browsers, smartphone or tablet). The information obtained by using this technology will help you to achieve drastic reductions on operational maintenance and license costs, and minimize company investments like no other energy monitoring system available on today's market can do.

The Energy Dashboard
The collected data are displayed in real-time by Pro. Energy© on a dashboard with clear and pleasant operating status indicator graphics. Operators will find it easy to control all production situations, whenever and wherever using the Web-enabled graphical interface. The Dashboard interface has been designed to satisfy the most recent ergonomic requirements and is completely open to customization by integrating advanced management and control functions of a supervisory system.

Pro.Energy© offers integrated and ready-to-use analysis tools based on reports, charts, data tables and billing.

The Energy Performance Indicators (EnPIs) indicators are essential to performing effective consumption analysis. Pro.Energy© collects all energy carrier data and ecords them on database to enable thorough and accurate analysis using purposely designed reports, charts and tables based on simple and reliable technology that is ready to use and customizable as needed. In addition to recording real-time meter measures, the system also allows the user to define and record "virtual" measurements as pleased. This will enable users to run comparisons on the actual trends and virtual ones or use virtual measurements to manage and reallocate energy logic groups by, for example, summing up specific meters. By applying these different methods Energy Managers and users will be able to obtain sophisticated and powerful analytical reports containing all the information they need to detect areas where energy is being wasted.

Total Connectivity to the Field and to the Cloud

Pro.Energy© is based on reliable, scalable, modular and standard technology for open solutions that integrate with any architecture.

Pro.Energy© is based on open architecture that integrates with a diverse number of different measurement tools used in the company. An integrated system must have the capability to collect any measurement value from the field, whether it be from meters, I/O sensors and instrumentation, PLC, RTU, Inverters, fieldbus or network.

I/O Drivers
A vast library of native I/O Drivers integrated for communicating with measurement and control systems protocols (i.e. Modbus, Bacnet, Konnex, LON, Simatic, Schneider, ABB, Profibus, Profinet IEC 60870, IEC 61850 and many more).

OPC UA
The OPC UA standard technology (IEC62541) is supported and native as the platform's information Model. It is supported as both Client and Server for the maximum data integration and openness.

Networking and Data Sharing
Vast network connectivity for distributed architectures, or SQL database table sharing with distributed workstations for connecting to any ERP system or SAP business system.

IIoT Gateway
Communication Drivers for integrating IoT systems, for example transport layers on public networks. PubNub, OPC UA Azure, MQTT and other Protocols.

Microsoft SQL Server-based
All process data collected by Pro.Lean© are recorded and archived for subsequent analysis using Data Logger objects that are automatically created by the project configuration wizard Pro.Lean© can even work without a Microsoft SQL ServerTM license, in simple project architectures.

Data Collection Openness
The collection of measurements, operating states and alarms, if not already available as digital information from the PLC, may require a local HMI interface on the production system. The Pro.Energy© architecture is the ideal solution for connecting human-machine interface displays of any type: local HMI, in networks or over the HTML Web. In this way, any necessity for distributed collection or visualization points will be managed by the integrated features, safeguarding investments and reducing costs avoiding invasive interventions.

Data Redundancy
Pro.Energy© offers the possibility to manage the Data Redundancy function, by automatically synchronizing historical data on PC systems with redundant hardware and communications permitting its application in "Mission Critical" data collection systems.

Open flexible architecture

Pro.Energy© uses the powerful and open Movicon.NExT™ platform technology for communications and recording data.

Pro.Energy© enables you to deploy an Energy Efficiency Management system in your company, by connecting it to preinstalled energy measurement systems and integrating it with your production lines, without worrying about which connection methods to use. The Movicon.NExTTM connectivity enables Pro.Energy© to offer numerous integrated solutions that enable connectivity to production equipment, by means of native I/O drivers, directly to PLCs, Multimeters, Analyzers Remote I/O or control systems

Pro.Energy© also connects through OPC UA Client and Server towards HMI or SCADA systems already installed on production lines, or towards remote telemetry devices in Industrial Internet of Things (IIoT). Therefore, data can be collected without investing heavily and without additional installations on the factory floor. As Pro.Energy© Uses the Movicon.NExT™ technology, it is very simple to integrate all the features needed to create a true a powerful supervision architecture.


SCADA/ERP

Analytics

Cloud

Web Access

Pro.Energy

Gas   Energy   Steam   Water   Compressors
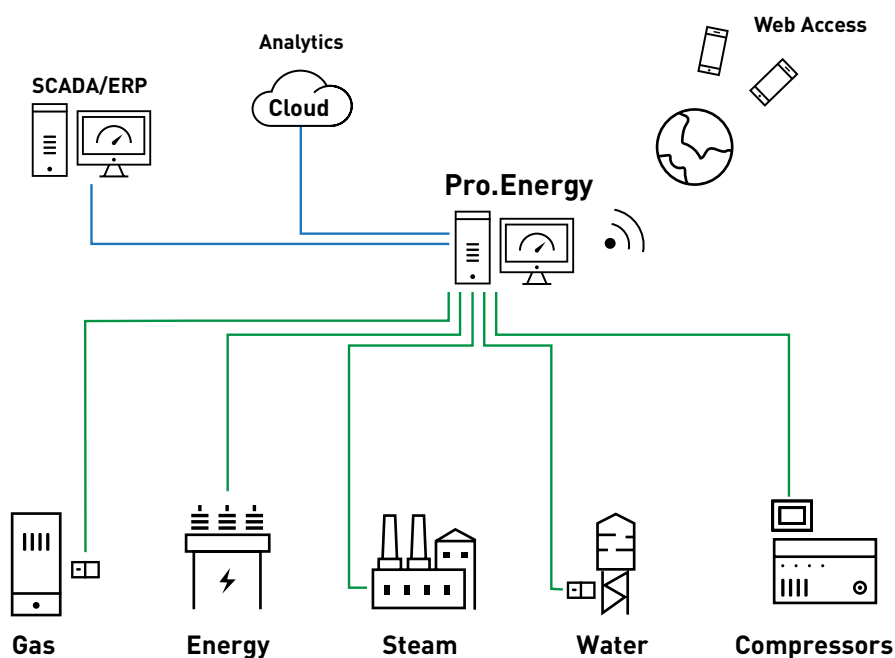
Fast and safe return of investment

An investment for Energy Efficiency with immediate returns, to reduce energy waste in any industrial sector and infrastructure.

Pro.Energy© is a "standard" solution that can be used in all energy measurement and energy consumption meter data collections and analysis applications. It can be applied as a simple monitoring system or as a Building Management System (BMS) supervision of production sites or infrastructures, in combination with Movicon™ SCADA/HMI supervisory projects, or in independent and stand-alone architectures deployed on a server for the smart metering of existing remote equipment. For example, Pro.Energy© can be deployed in existing business architectures, without changing, modifying or replacing existing energy measuring or automation systems. It has been designed to reduce your investment to a minimum, without making changes to your existing system unless absolutely necessary. It is the best technology available for collecting, managing and analyzing energy data with the possibility to control and automate lighting, energy distribution, HVAC and other systems.

Pro.Energy

Energy Manager

SCADA
Production Supervision

Energy
Meters

BMS
Facilities Supervision
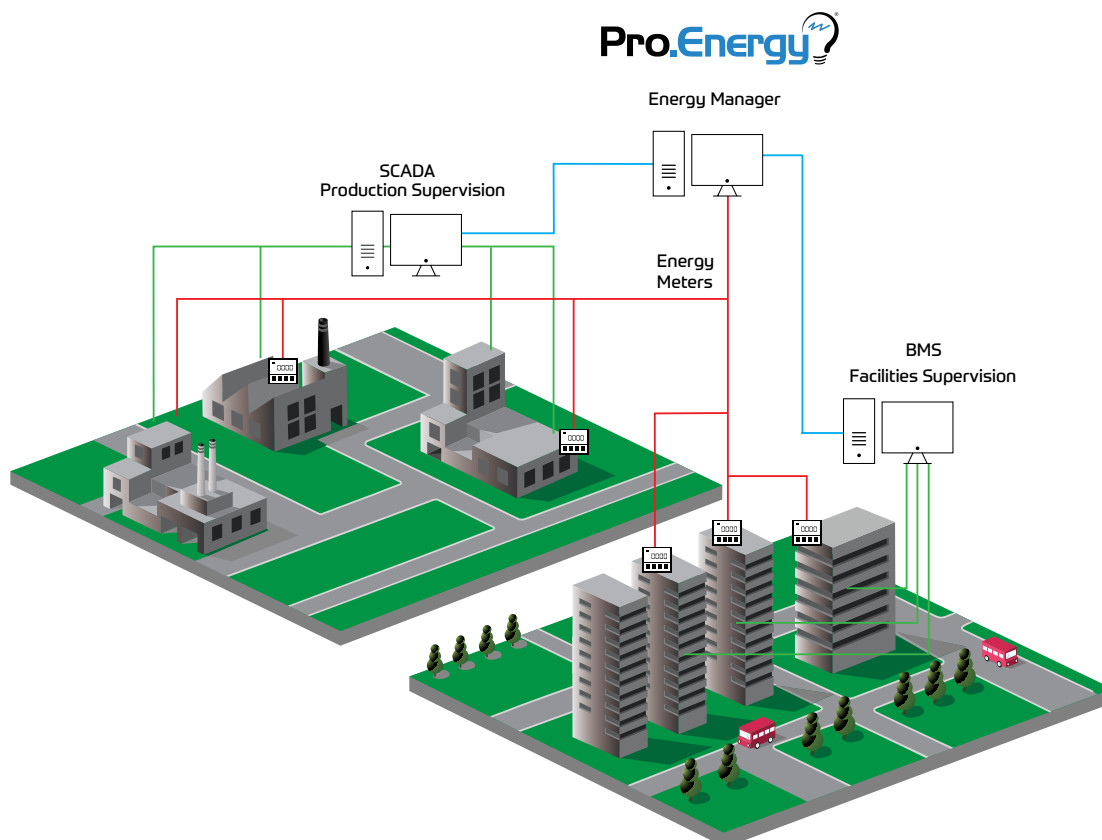
Key Features

Openness.
Pro.Energy© is a Movicon functional model and inherits the platform's .NET, XAML, SQL Server™ and HTML5 technology.

Configuration and Wizard.
By using a configuration wizard, Pro.Lean© makes it easy for users to select field variables and create data collection databases automatically. It just takes a few steps to automatically create real-time dashboards, calculation databases and analytical reports.

Standards.
Pro.Energy© is based completely on the most modern standard technology to safeguard your investment.

Performance.
Pro.Energy© guarantees real-time data management and offers a structured data analysis management on databases and for handling big data as well.

Powerful Historian.
Collected data are recorded using Historian objects that store data on SQL Server archive tables with automatic data recycling management.

Connectivity.
Pro.Energy© integrates a library containing a vast selection of communication drivers for connecting to all types of automation devices (Modbus, Siemens, Schneider, Rockwell, Omron, Saia, Mitsubishi, Profibus, Profinet, Ethernet/IP and many others). The drivers include functions for automatically importing tags, remote connectivity with telemetry systems or IIoT. In addition, it offers full connectivity with OPC UA both as Client and Server.

Ready-to-use and Customizable Reports
Pro.Energy© offers integrated and ready-to-use Analytical Reports of historical data which can be accessed both locally and via web, and that can be fully customized and integrated using the Report Designer.

HTML5 Web Architecture
Pro.Energy© offers local and web-based dashboards and reports with real-time energy measurement data. Data can be access on Server using internet browsers and allows access to data on the server via internet browsers. The performance and security of the HTML5 standard guarantee cost reduction and maintenance.

Open and customizable EnPIs Analysis Modules.
The EnPIs analysis modules offer easy to use and effective solutions to obtain all the energy consumption measure from energy carriers that is practical, fast and open. Reports, Tables and Charts allow complete analysis of energy consumptions with the option to print and export the represented data. All data can be managed in customizable architectures.

Integrated Movicon™ Connectivity.
In addition to interfacing with any supervisory system, Pro.Lean© also offers the great advantage of integration and connectivity with the Movicon.NExT SCADA/HMI systems.

Service and Consulting

The service, an added value

The Total Cost of Ownership (TCO) of a software platform is also strongly influenced by the quality of related services. Important parameters such as learning times, response times, quality of service and consultancy are generally considered to be the true added value of a software product. Progea services have the quality that only the manufacturing company can guarantee. Training, Assistance and Consultancy guarantee the user in coping with any application or unexpected need, which contribute towards reducing internal implementation and development costs.

Progea is directly present with its offices in Italy, Switzerland, Germany and the United States. Furthermore, an international distribution network guarantees the presence of the Progea™ trademark all over the world.

A solid partnership

Progea software technologies are widespread in automation by leading companies in every industrial sector, with over 150,000 licenses installed worldwide. As a demonstration of the quality and reliability of its software products, Progea is proud to have been selected by the major players in the industrial automation sector.

Progea technology is used and distributed, even with product customizations with the customer's brand, by the world leaders in automation.

Do not hesitate to contact us, we will be happy to analyze your needs and offer you the ideal solution, also through the international network of System Integrators who are experts in Progea technologies.

Progea is available for any analysis and consultancy needs, and to support you in all your Industry 4.0 projects. Contact us for a demo and for any further information:

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