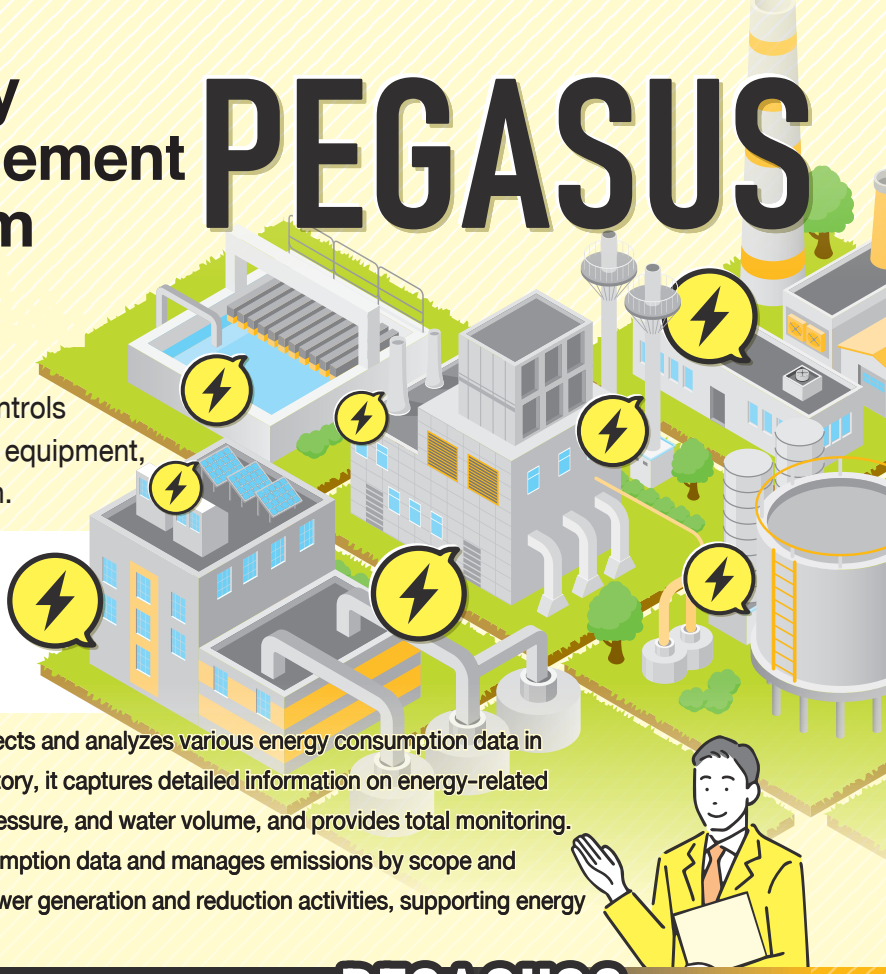
PEGASUS

Energy Management System PEGASUS

Contributing to energy savings through energy visualization

The Energy Management System monitors and controls the power consumption and usage in facilities and equipment, enabling the "visualization" of energy consumption.



Scan here to download detailed materials

The Energy Management System PEGASUS is a tool that collects and analyzes various energy consumption data in real-time within the factory. Using sensors throughout the factory, it captures detailed information on energy-related factors such as flow rate, air volume, power, voltage, water pressure, and water volume, and provides total monitoring. Additionally, it calculates carbon emissions from power consumption data and manages emissions by scope and category. The system also displays the impact of in-house power generation and reduction activities, supporting energy optimization and sustainable operations.

What is the Energy Management System PEGASUS?

Visualization — Visualization of Energy Consumption

By visualizing the energy usage within the factory in detail, you can identify which equipment is consuming how much energy. This enables the discovery of energy waste and helps find solutions for efficiency improvements.

CO2 Reduction — Calculation and Management of Carbon Emissions

The system automatically calculates carbon dioxide emissions from energy consumption data and manages them by scope and category. It supports efforts to achieve environmental goals and enhances the sustainability of the company.

Cost Reduction — Achieving Cost Savings

By optimizing energy consumption, unnecessary costs can be reduced. This is especially beneficial for manufacturing industries where energy costs represent a significant portion, greatly contributing to overall cost savings.

System Configuration

Information from each sensor is stored in the database via the "Collection Unit." The stored data can be viewed in real-time using the dashboard tool.

Energy-Saving Measures Check Sheet by Equipment

Lighting

- ☐ Turn lights on and off frequently.
- ☐ Turn off lights in unused areas.
- ☐ Clean regularly to maintain light brightness.
- ☐ Replace with long-lasting lights to reduce running costs.
- ☐ Turn off lights during breaks and after work hours.
- ☐ Reduce the number of lights within safe working limits.
- ☐ Replace with energy-efficient lighting such as LED or electrodeless lamps.
- ☐ Minimize the effort required for replacements, etc.

Air Conditioning

- ☐ Review temperature settings for air conditioning.
- ☐ Review air volume.
- ☐ Turn off air conditioning in unused rooms.
- ☐ Stop the circulation air volume in clean rooms.
- ☐ Remove obstacles around indoor and outdoor units.
- ☐ Review cooling water temperature and volume, etc.
- ☐ Review the number of air conditioning units in use.
- ☐ Use blinds to block sunlight.
- ☐ Review the operation of ventilation fans.
- ☐ Stop humidification in clean rooms.
- ☐ Improve the temperature around outdoor units.
- ☐ Review the operating hours of air conditioning equipment.
- ☐ Always close doors at entrances and in the back yard.
- ☐ Review the intake of outdoor air.
- ☐ Clean air conditioner filters.
- ☐ Clean the heat exchangers of indoor units.

Production Line

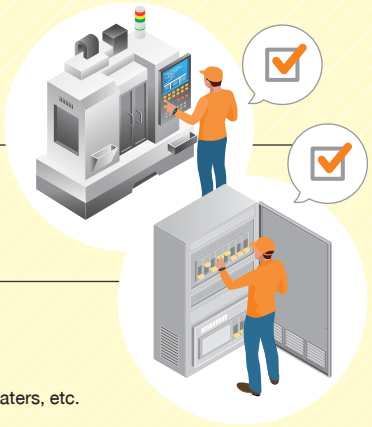
- ☐ Turn off equipment power during line stoppages or non-operational periods.
- ☐ Regularly lubricate equipment to reduce mechanical energy losses.
- ☐ Review excessive cooling of products and equipment.
- ☐ Review the set temperature of heating equipment.
- ☐ Review the operation of transport conveyors.
- ☐ Shorten the idle operation time of production equipment.
- ☐ Reduce the fan power of dust collection equipment.
- ☐ Maintain drive belts and chains properly.
- ☐ Regularly check for leaks, pressure, and temperature in cooling water systems.
- ☐ Review temperature control inside industrial furnaces used in heat treatment.
- ☐ Review the production start time.

Compressor

- ☐ Review discharge pressure and flow rate.
- ☐ Monitor air leaks and reduce pressure loss.
- ☐ Implement unit control or inverter control.
- ☐ Reduce intake temperature.
- ☐ Turn off compressors during non-production periods or holidays.
- ☐ Optimize piping systems.
- ☐ Regularly clean intake filters.
- ☐ Reduce the number of compressors in use.
- ☐ Replace with high-efficiency compressors, etc.

Pumps • Fans

- ☐ Review the discharge flow rate of pumps.
- ☐ Reduce pressure loss.
- ☐ Optimize piping systems.
- ☐ Replace with high-efficiency pumps and fans, etc.
- ☐ Review fan speed settings.
- ☐ Prevent gas and liquid leaks.
- ☐ Implement inverter control.



Chiller

- ☐ Review flow rate settings.
- ☐ Operate at the appropriate temperature.
- ☐ Replace with high-efficiency cooling water generators and chillers, etc.
- ☐ Prevent water leaks.
- ☐ Utilize cogeneration.

Boiler

- ☐ Review the set temperature.
- ☐ Reduce the number of units in operation.
- ☐ Insulate external air to prevent temperature drop.
- ☐ Utilize waste heat for cogeneration.
- ☐ Shorten operation hours.
- ☐ Prevent steam and hot water leaks.
- ☐ Stop supply to unnecessary systems.
- ☐ Replace with high-efficiency boilers and water heaters, etc.

System installation schedule

The PEGASUS Energy Management System can be available in as little as 1 month.

Current situation analysis (Within sales)	Requirement definition (1–4 weeks)	Design (1–3 weeks)	Development / Testing (1–20 weeks)	Implementation Support (1 week)

Minimum 4 weeks (1 month) ～ Maximum 28 weeks

Hardware configuration

Server type can be selected from cloud version and on-premise version.

#	Item	Recommended specs/Model
1	PC Server	Cloud version/On-premise version OS: Windows Server 2022 Standard Memory: 16 GB or higher Hard disk: Free space of 250 GB or higher Display: Resolution 1366 x 768 or higher Browser: Google Chrome (latest version) *Server machine with recommended model specs or higher
2	Client PC	OS: Windows7/8.1/10/11 Memory: 4GB or more Display: Resolution 1366×768 or more Browser: Google Chrome (Latest version) *PC machine with recommended model specifications or higher
3	Various Sensor Devices	Information Provided Upon Request

Apply for a free trial here

The Energy Management System PEGASUS is available for a free demonstration. You can utilize our sensor equipment to collect information and view the dashboard screen. To request a demonstration, please contact us at the following inquiry details.

◎ Orders and inquiries

TOMAS TECH

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