

Manpower-  
Saving



# Using AI to Reduce Energy Analysis Man-hours by **92%**!

Company A, took a great deal of time analyzing the energy data collected in the field of PCB mounting.

AI-powered analysis tools reduced both energy and analysis efforts.

What's the secret?

See inside  
for details!



## Customer's Concern

Even if a system has been constructed to collect data that can be used for energy saving, like collecting energy consumption and production volume, there is a limit how much data a human can quantitatively grasp, analyze and improve.



Analyzing from a CSV file takes time and effort

Want quantitative understanding of energy loss

Effect of improvement is unpredictable



## What has improved

Energy saving analysis and diagnosis application EcoAdviser helps customers understand the current status of energy use.

In addition, the automatic extraction and diagnosis of energy loss by AI enabled us to estimate the loss and the root cause of the loss in the process, which led to detailed energy conservation activities.



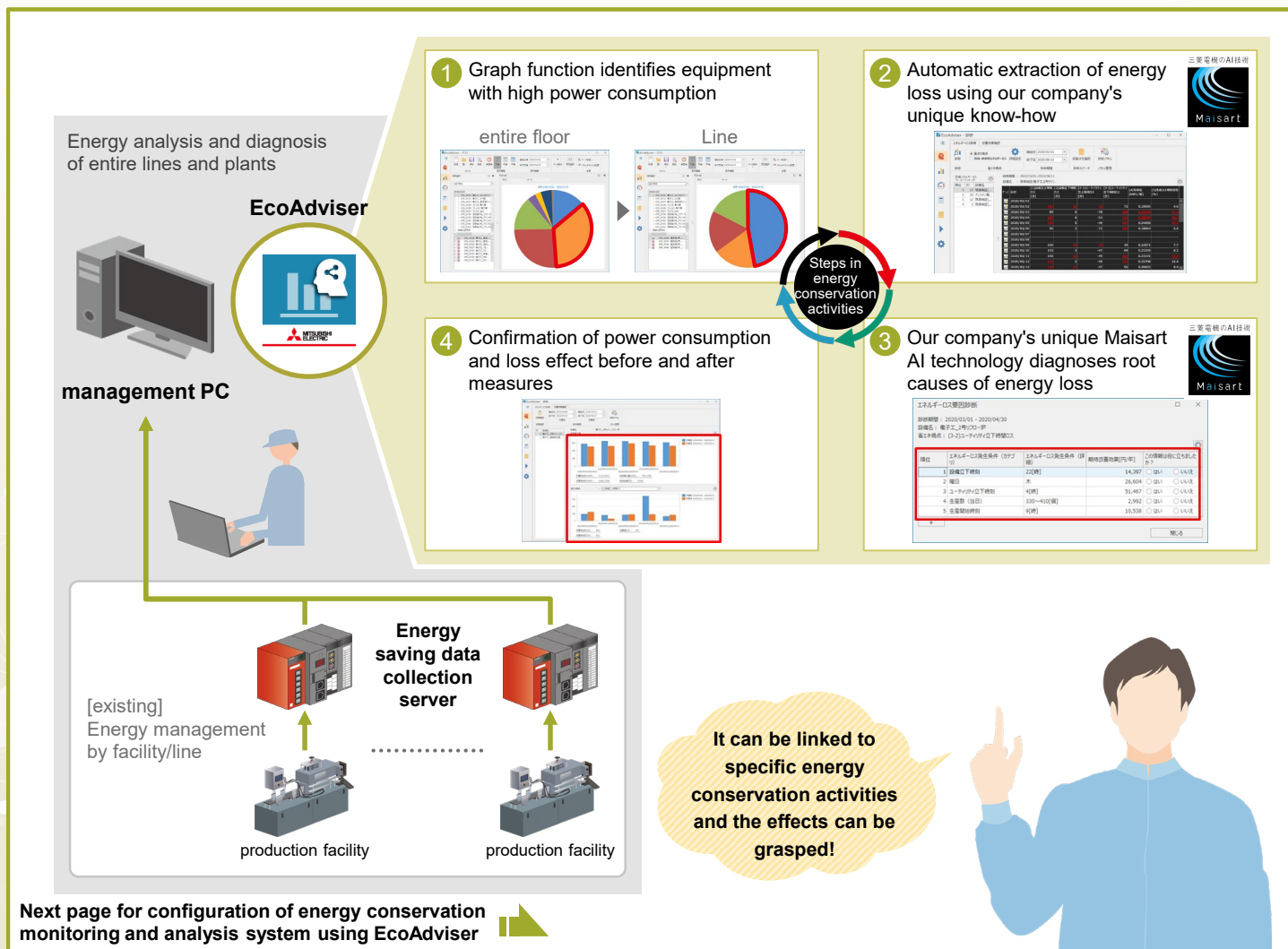


## Point 1

With the dashboard screen creation function, energy and production information are displayed simultaneously on multiple graphs, enabling energy saving analysis from multiple perspectives.  
Improved awareness of energy saving among on-site staff by showing on a large display.

## Point 2

Our company's unique AI technology, Maisart, automatically extracts energy loss and facility utilization rates, their deterioration factors and ranks them.  
In addition, the effectiveness of energy saving measures can be confirmed and reviewed on the verification screen before and after the measures are taken.



## Return on investment (ROI)

Cost

Approx.  
**¥296,000** /equipment

\*1 Cost of new purchase of EcoAdviser only

Construction period

**1** day

Payout period

Approx.  
**8 months**<sup>\*2</sup>  
**4. Two months for equipment!!**

### \*Interpretation of payout period

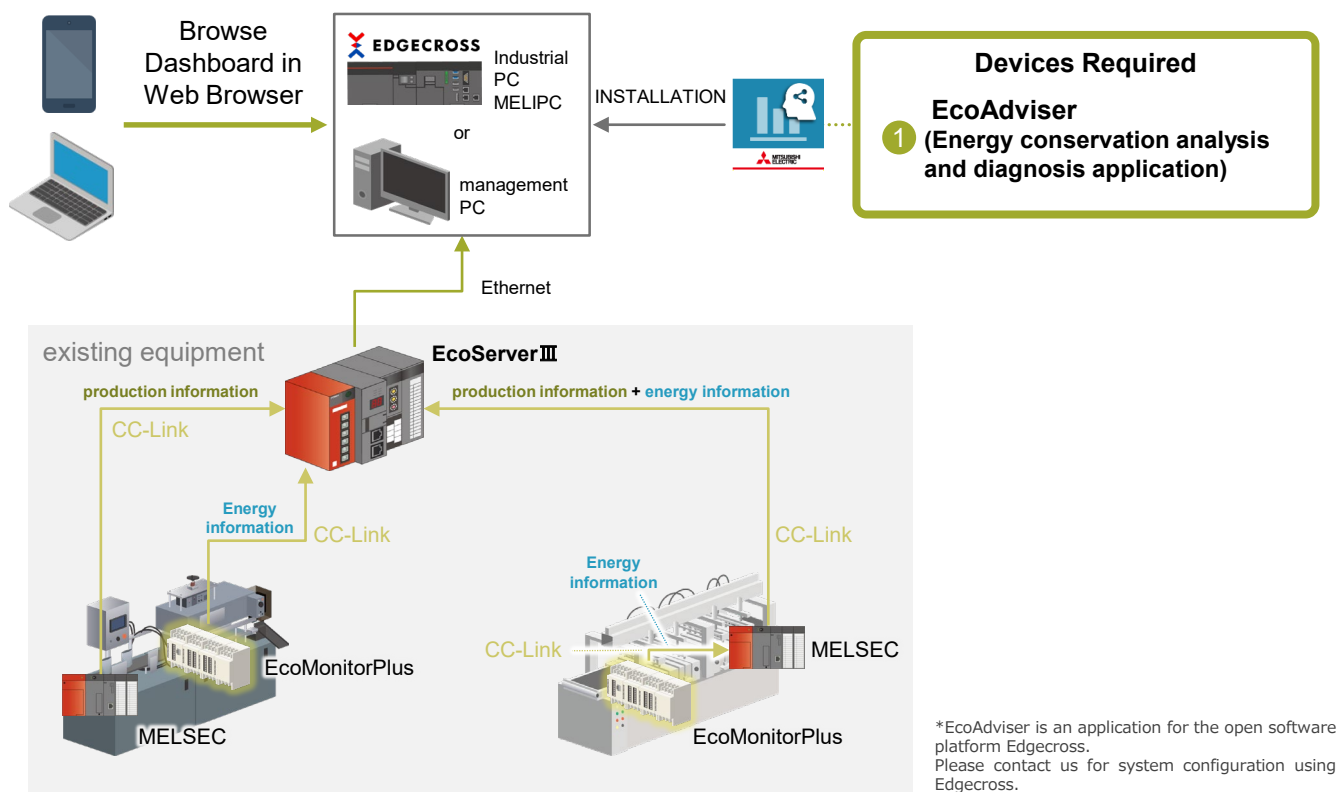
[Personnel expenses] If the conventional data analysis time is 4 hours per month, the data analysis man-hours that can be reduced in 1 year is (4 hours - 20 minutes) × 12 months = 44 hours.  
If the cost of analysis work is 5,000 yen/hr, the reduction cost for 1 year is 5,000 yen × 44 hours = 220,000 yen.

[electric (al) charge] Annual reduction of ¥210,000.  
(150,000 kWh → 135,000 kWh, calculated at 14 yen/kWh.)

=>If the construction cost is 296000 yen, the collection period is 296,000 yen / (220,000 yen + 210,000 yen) ≈ 8 months.

## Example of energy conservation monitoring and analysis system using EcoAdviser

The energy conservation monitoring and analysis system introduced in this application example consists of the existing energy conservation data collection server EcoWebServer III and the energy conservation analysis and diagnosis application EcoAdviser.



### Equipment Configuration (example)

Please separately prepare cables for connection to devices other than the major devices listed below.

Type	Model	Overview	Standard price (yen)
<b>1 Energy Saving Application EcoAdviser</b>			
analysis and diagnostic applications	MES3-EAP1-AI	Enables data analysis and diagnosis	296,000
<b>2 Energy Conservation Data Collection Server EcoWebServer III</b>			
Energy Conservation Data Collection Server EcoWebServer III	MES3-255C	Data can be collected and visualized from energy measurement terminals, etc.	470,000
<b>3 Measuring instruments, etc.</b>			
EcoMonitorPlus control unit	EMU4-CNT-MB	Control based on energy measurement information	60,000
EcoMonitorPlus expansion unit	EMU4-VA2	Energy measurement is possible for equipment, etc.	43,000
EcoMonitorPlus Option Unit	EMU4-CM-C	Communication is possible with CC-Link	36,000
Split type current sensor	EMU-CT50-A	dedicated current sensor	4,500

\*Two current sensors are required. Ratings should be selected according to the equipment.

\*The number of energy measurement units varies depending on the number of equipment to be measured.

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### Safety precautions

To use the products listed in this publication properly, be sure to read the relevant manuals before use.