



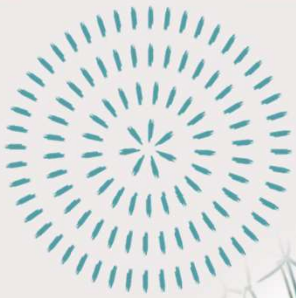
Shaping a **greener** tomorrow with every innovation.  
ITACA: Driving Advanced Climate Action through Technology 🌱



## Itaca is with you

Since **1994**, Itaca has been by its Clients' side, supporting them through various phases of technological transition. In this new era ushered in by the **Energy Efficiency Plan**, we aim to offer you the very best.





## Italian Transition 5.0 Plan- Energy Efficiency

Tax credit of up to 45% for energy consumption reduction



### What is it?

- An initiative aimed at promoting sustainability and technological innovation in businesses.
- It is a plan designed to guide companies towards greater social and environmental sustainability, integrating advanced technologies that enable a reduction in energy consumption.



# What is meant by Energy Transition?

- Energy transition" refers to the shift from a model of energy production and use based on fossil fuels (such as coal, oil, and natural gas) to one based on renewable and clean energy sources (solar, wind, hydroelectric, geothermal).
- In summary, it is the transformation process that aims to shift to the exclusive use of renewable sources, targeting climate neutrality and zero **CO2 emissions**.



# Actions in support of the Energy Transition



**Renewables:** renewable technologies are the cornerstone of the energy transition.



**Electrification:** electricity from renewable sources is the key energy carrier to promote the energy transition towards decarbonization



**Decarbonization:** the goal of the energy transition is the shift to renewable sources, while the abandonment of fossil fuels must still ensure the stability and resilience of the grids. Natural gas will play a key role.



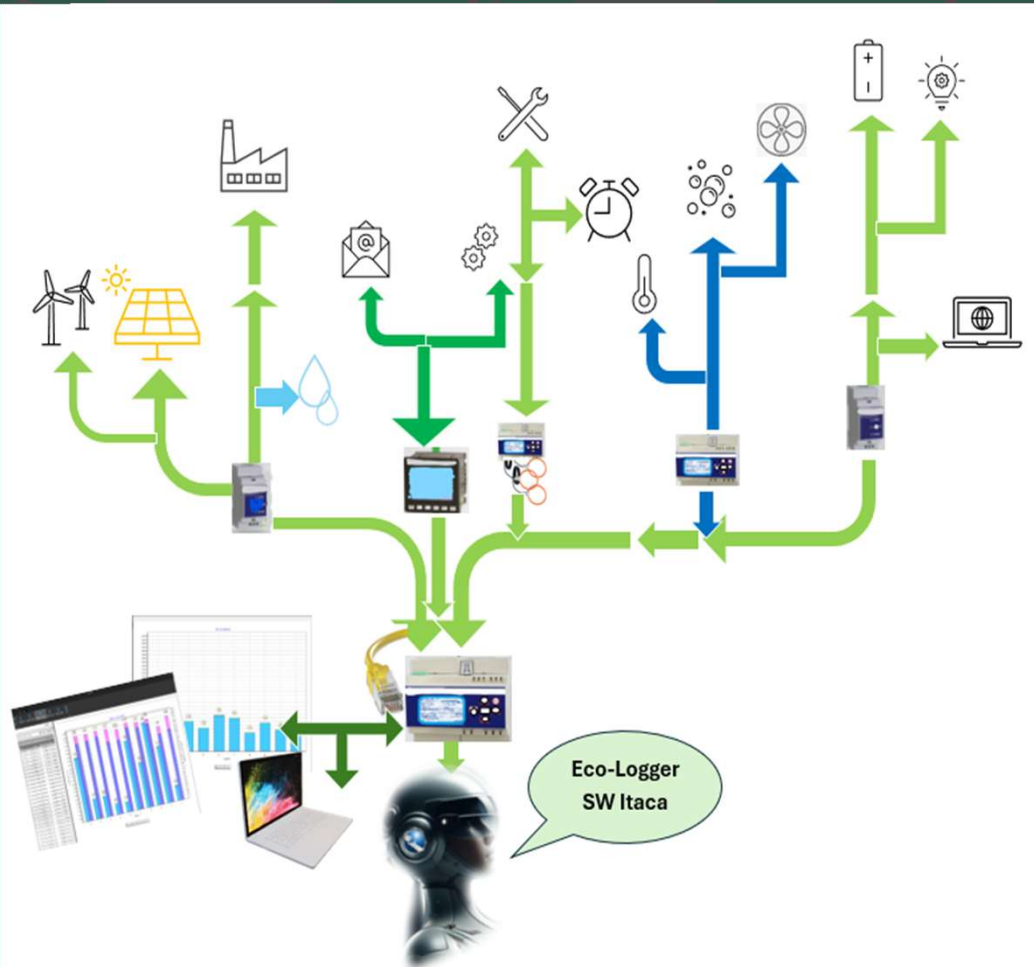
**Digitalization:** the digital transformation supports the transition of the entire energy supply chain, from the management of power generation plants to new services for consumers, including smart grids.

# Guidelines for the Transition 5.0 Plan **in Italy**

**The decree detailing** the new **Transition 5.0** Plan has been approved: its goal is to support investments made by **companies in 2024 and 2025** in digitalization and the green transition.

Expenses for tangible and intangible capital goods listed in Annexes A and B of Law No. 232 of December 11, 2016, of the Transition 4.0 Plan (thus interconnected and integrated with 4.0 logic) are eligible, provided they can reduce energy consumption by **at least 3%** of the energy consumption of the production facility located within the national territory, or **by at least 5% of the energy consumption of the processes affected by the investment.**

**Annex B (software, systems, 4.0 platforms) is expanded to include software, systems, platforms, or applications for intelligent plants that ensure continuous monitoring and visualization of energy consumption and self-produced and consumed energy or introduce energy efficiency mechanisms** through the collection and processing of data, including those from field IoT sensors.

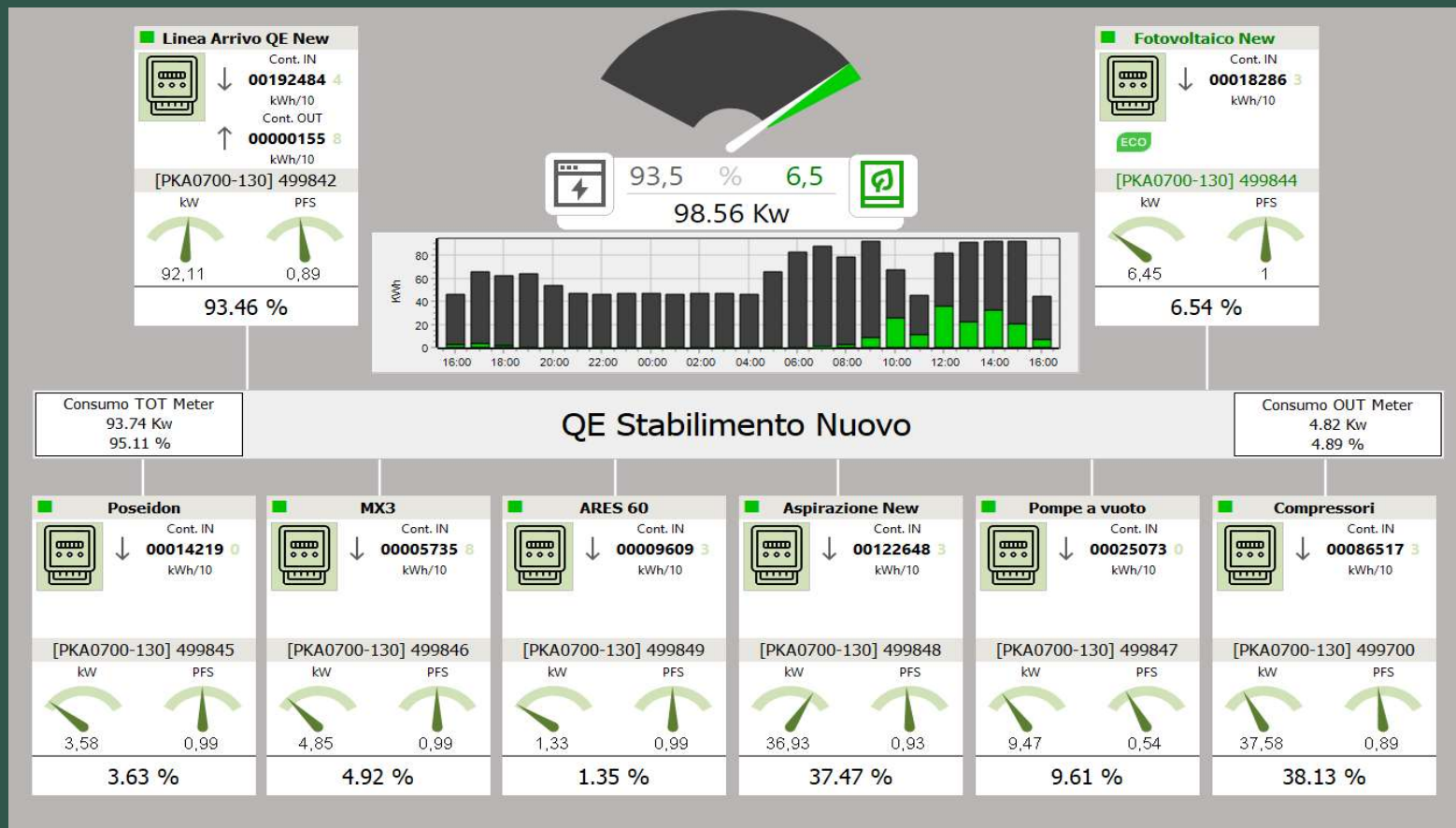


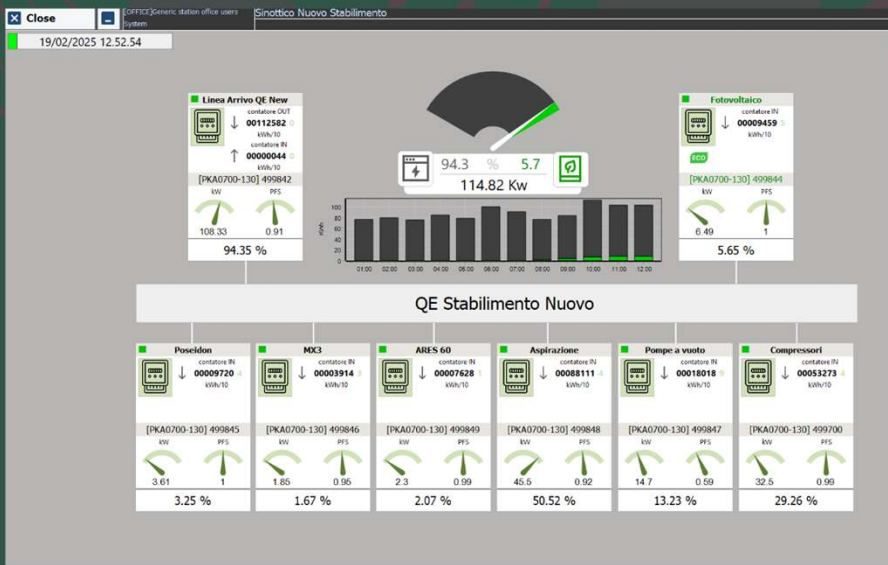
**What do you need ?  
A monitoring System.**

**Itaca has the right  
solution for you:**

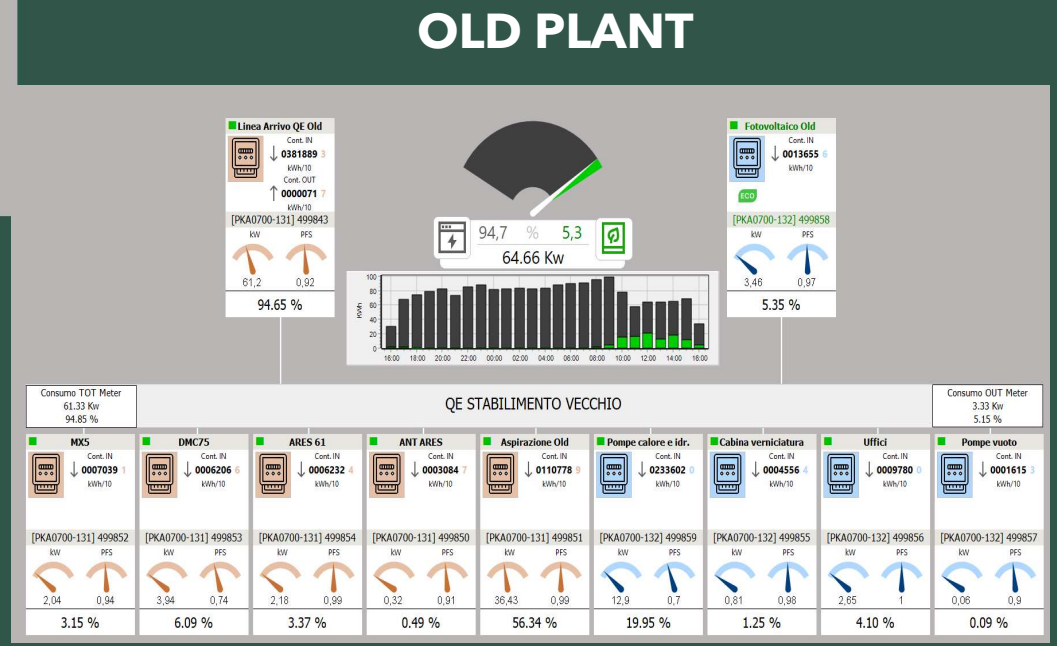
**Eco-Logger is the customized  
hardware and software solution,  
specifically designed to meet  
your needs.**

# Examples of Monitoring Consumption





**NEW PLANT**



# Examples of Consumption Monitoring in Multiple Plants

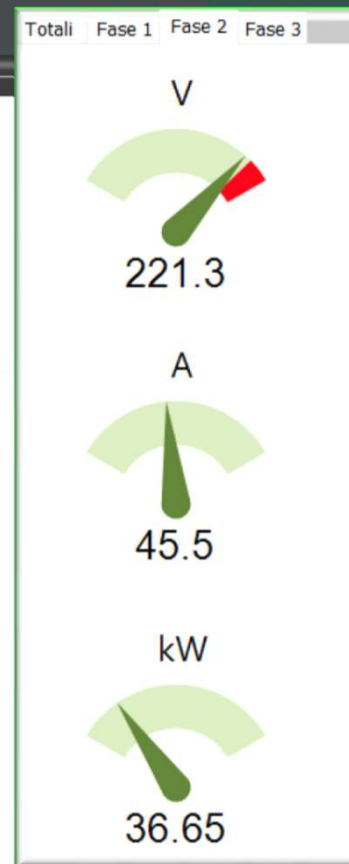


Close [OFFICE]generic station office users Valori Meter (tempo Reale) System

ID	POD	ID	Device	Dt Read
72	PKA0700-130	LIBRA - Q.E. GENERALE STABILIMENTO NUOVO	73 499842	Linea Arrivo QE New 19/02/2025 12:52:57
64	PKA0700-131	LIBRA - Q.E. GENERALE STABILIMENTO VECCHIO	74 499844	Fotovoltaico 19/02/2025 12:53:01
81	PKA0700-132	LIBRA	75 499845	Poseidon 19/02/2025 12:53:06
			76 499846	MX3 19/02/2025 12:53:10
			77 499849	ARES 60 19/02/2025 12:53:14
			78 499848	Aspirazione 19/02/2025 12:53:14
			79 499847	Pompe a vuoto 19/02/2025 12:52:49
			80 499700	Compressori 19/02/2025 12:52:53

Totale	Fase 1	Fase 2	Fase 3	Tag ID	Tag Desc	Value	UM	Date Read [19/02/2025 12:52:57]
contatore IN								
<b>0000044</b> kWh/10								
contatore OUT								
<b>00112583</b> kWh/10								
kW								
<b>111.52</b>								
PFS								
<b>0.91</b>								
1				Frequency of U1N	50.045	Hz	19/02/2025 12:52:55	
2				Phase to Neutral Voltage, RMS Amplitude U1N	217.936	V	19/02/2025 12:52:55	
3				Phase to Neutral Voltage, RMS Amplitude U2N	221.300	V	19/02/2025 12:52:55	
4				Phase to Neutral Voltage, RMS Amplitude U3N	219.259	V	19/02/2025 12:52:55	
5				Phase to Phase Voltage, RMS Amplitude U12	380.573	V	19/02/2025 12:52:55	
6				Phase to Phase Voltage, RMS Amplitude U23	381.086	V	19/02/2025 12:52:55	
7				Phase to Phase Voltage, RMS Amplitude U31	378.792	V	19/02/2025 12:52:55	
8				Phase Current, RMS Amplitude I1	186.761	A	19/02/2025 12:52:55	
9				Phase Current, RMS Amplitude I2	182.540	A	19/02/2025 12:52:55	
10				Phase Current, RMS Amplitude I3	189.852	A	19/02/2025 12:52:55	
11				Neutral Current, RMS Amplitude IN	11.264	A	19/02/2025 12:52:55	
12				Phase Active Power (+/-) P1	-37233.711	W	19/02/2025 12:52:55	
13				Phase Active Power (+/-) P2	-36654.602	W	19/02/2025 12:52:55	
14				Phase Active Power (+/-) P3	-37634.566	W	19/02/2025 12:52:55	
15				Phase Reactive Power (+/-) Q1	-15000.222		19/02/2025 12:52:55	
16				Phase Reactive Power (+/-) Q2	-15549.304		19/02/2025 12:52:55	
17				Phase Reactive Power (+/-) Q3	-16329.751		19/02/2025 12:52:55	
18				Phase Apparent Power S1	40673.977		19/02/2025 12:52:55	
19				Phase Apparent Power S2	40486.199		19/02/2025 12:52:55	
20				Phase Apparent Power S3	41640.148		19/02/2025 12:52:55	
21				Phase Power Factor (+/-) PF1	0.915		19/02/2025 12:52:55	
22				Phase Power Factor (+/-) PF2	0.905		19/02/2025 12:52:55	
23				Phase Power Factor (+/-) PF3	0.904		19/02/2025 12:52:55	
24				Phase to Neutral Voltage, Mean RMS Amplitude U-LN	219.499		19/02/2025 12:52:55	
25				Phase to Phase Voltage, Mean RMS Amplitude U-LL	380.150		19/02/2025 12:52:55	
26				Three phase current, RMS Amplitude I	186.502		19/02/2025 12:52:55	
27				Total active power (+/-) PS	-111522.875	W	19/02/2025 12:52:55	
28				Total reactive power (+/-) QS	-46879.277	var	19/02/2025 12:52:55	
29				Total apparent power SS	122800.320	VA	19/02/2025 12:52:55	
30				Total power factor (+/-) PFS	0.908		19/02/2025 12:52:55	

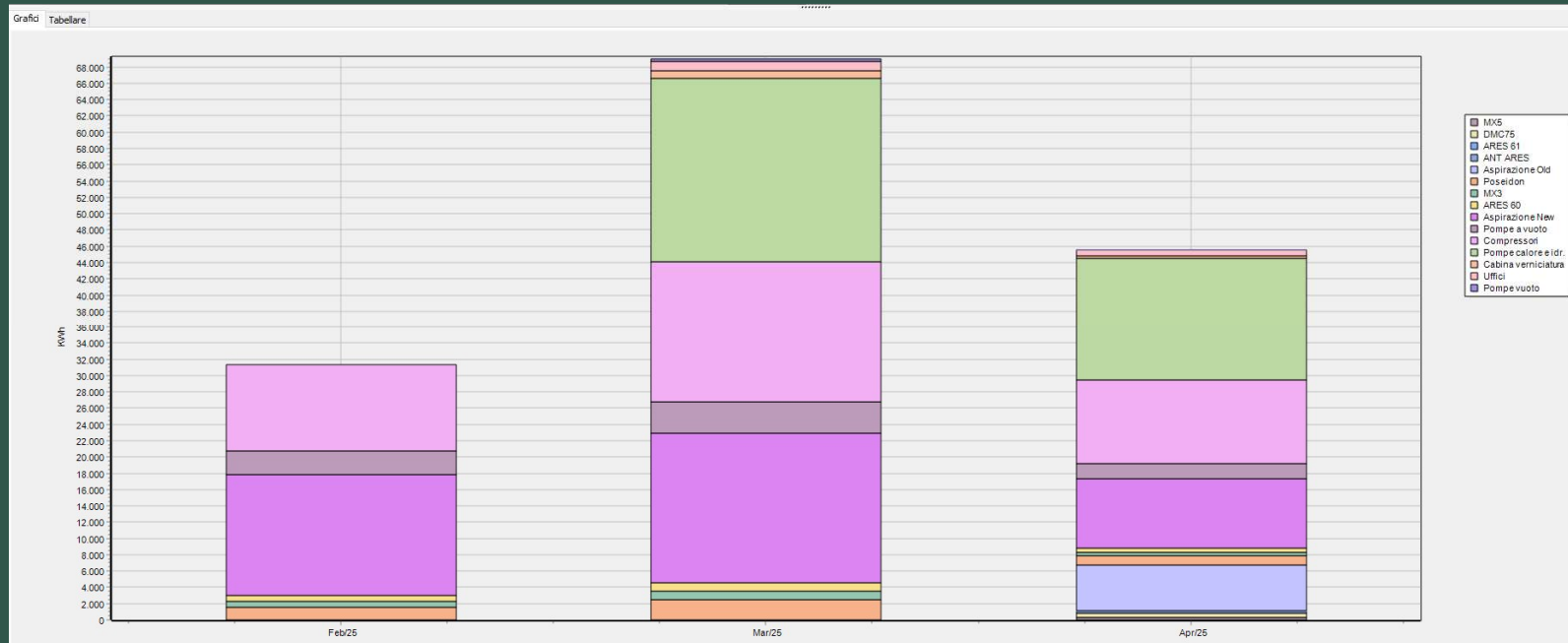


The Eco-Logger monitoring system allows for a reliable cost/benefit analysis of potential energy efficiency improvements!



# EXAMPLES OF MONITORING AVAILABLE ON ECO-LOGGER

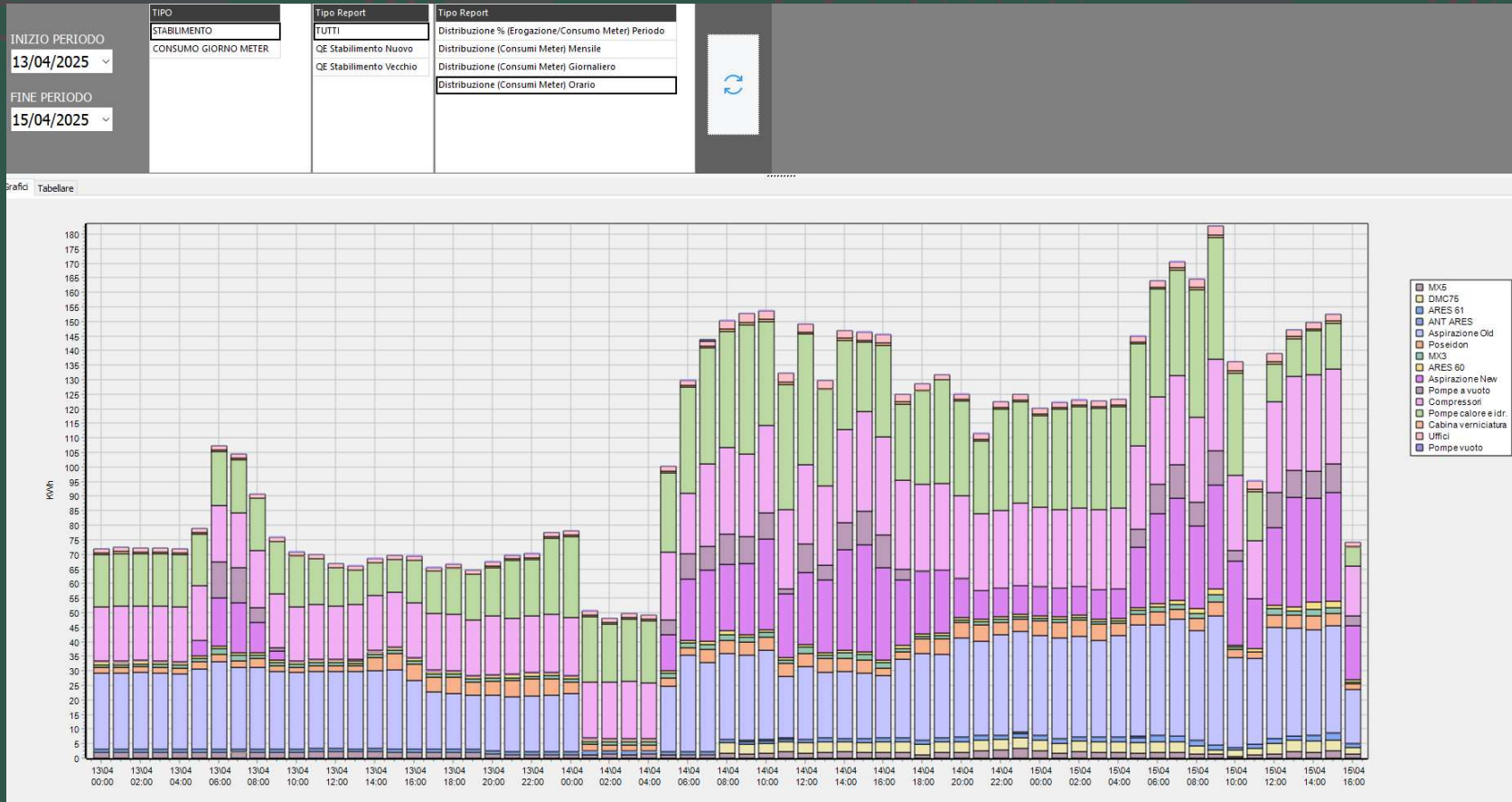
## DAILY VIEW OF THE MONITORED AREA



Comparing how the daily consumption profile changes throughout the year makes it possible to assess the site's energy consumption sensitivity to changing weather conditions. Identifying anomalous days can help reveal occasional inefficiencies, poor practices, and more

# ENERGY AUDIT & MONITORING

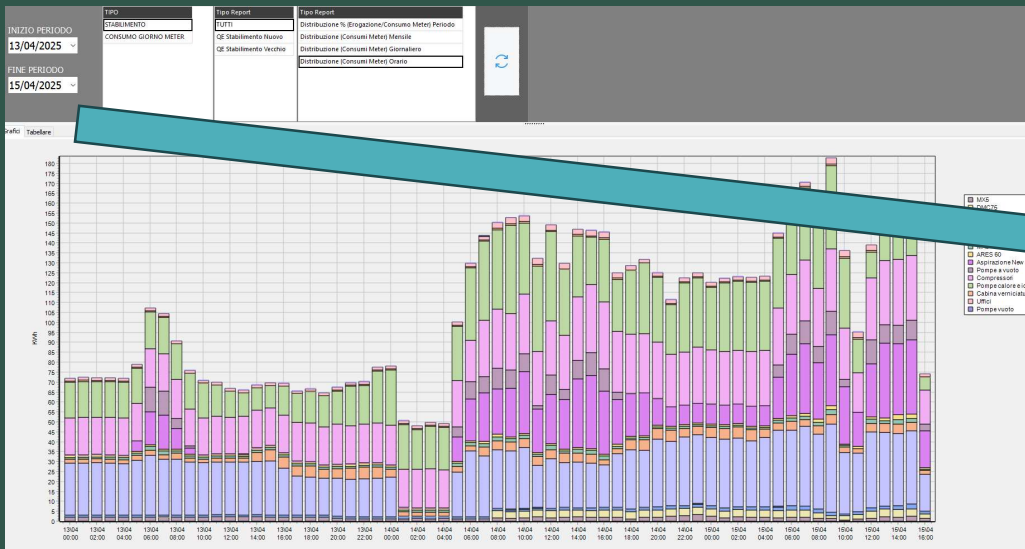
## Hourly Consumption View by Monitored Areas



The analysis of consumption by time slot, for example, can provide useful insights for evaluating the tariff structure and identifying potential areas of waste.

# Diagnostic Reports

## Tabular Report of Collected Data Exportable to XLS-With One Click!



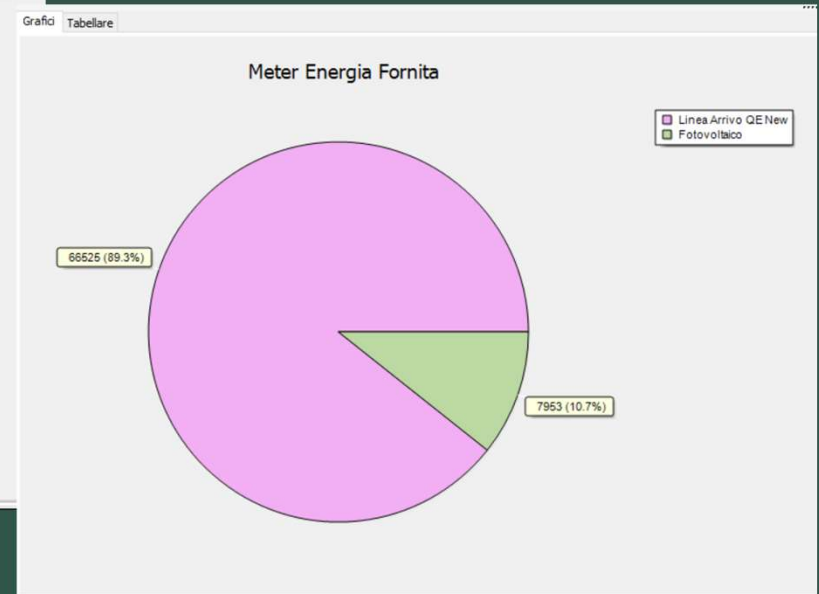
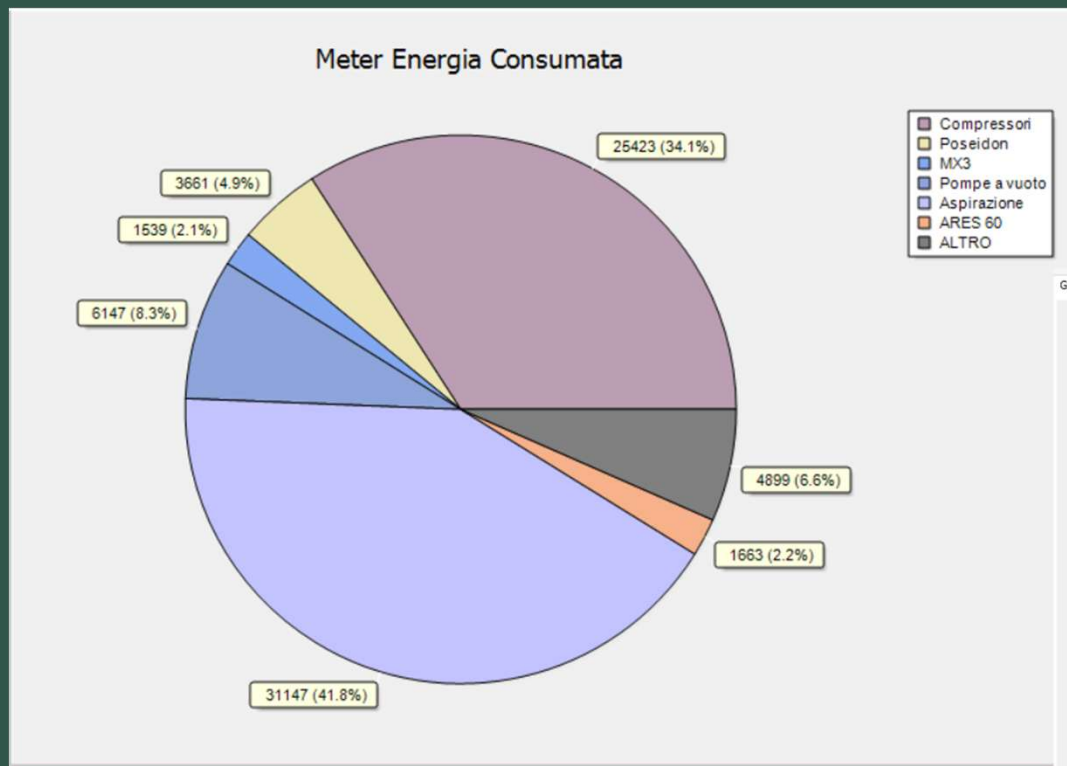
Grafici Tabellare



Giorno	Meter	kWh	kWh Tot	%
13/04/2025 00.00.00	ANT ARES	0.20	72.00	0.28
13/04/2025 00.00.00	ARES 60	0.88	72.00	1.22
13/04/2025 00.00.00	ARES 61	0.88	72.00	1.22
13/04/2025 00.00.00	Aspirazione New	0.28	72.00	0.39
13/04/2025 00.00.00	Aspirazione Old	26.11	72.00	36.26
13/04/2025 00.00.00	Cabina verniciatura	0.57	72.00	0.79
13/04/2025 00.00.00	Compressori	18.56	72.00	25.77
13/04/2025 00.00.00	DMC75	0.01	72.00	0.01
13/04/2025 00.00.00	MX3	1.04	72.00	1.44
13/04/2025 00.00.00	MX5	1.91	72.00	2.65
13/04/2025 00.00.00	Pompe a vuoto	0.07	72.00	0.09
13/04/2025 00.00.00	Pompe calore e idr.	18.11	72.00	25.14
13/04/2025 00.00.00	Pompe vuoto	0.07	72.00	0.10
13/04/2025 00.00.00	Poseidon	1.98	72.00	2.76
13/04/2025 00.00.00	Uffici	1.35	72.00	1.88
13/04/2025 01.00.00	ANT ARES	0.20	72.39	0.27
13/04/2025 01.00.00	ARES 60	0.86	72.39	1.19
13/04/2025 01.00.00	ARES 61	0.89	72.39	1.23
13/04/2025 01.00.00	Aspirazione New	0.28	72.39	0.39
13/04/2025 01.00.00	Aspirazione Old	26.06	72.39	35.99
13/04/2025 01.00.00	Cabina verniciatura	0.57	72.39	0.79

# Monitoring Examples Available on Eco-Logger

## Percentage View of Consumption by Monitored Area



# Case History

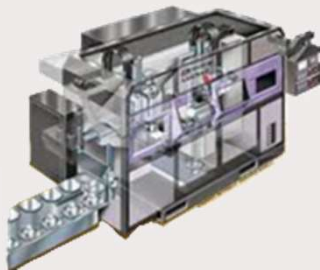
Thanks to our Eco-Logger monitoring system, a prestigious company was able to:



Identify a malfunction in the photovoltaic system, which was not actually producing the expected output due to an internal anomaly. After reporting the issue to the manufacturer, the anomaly was resolved, and the system resumed proper operation!

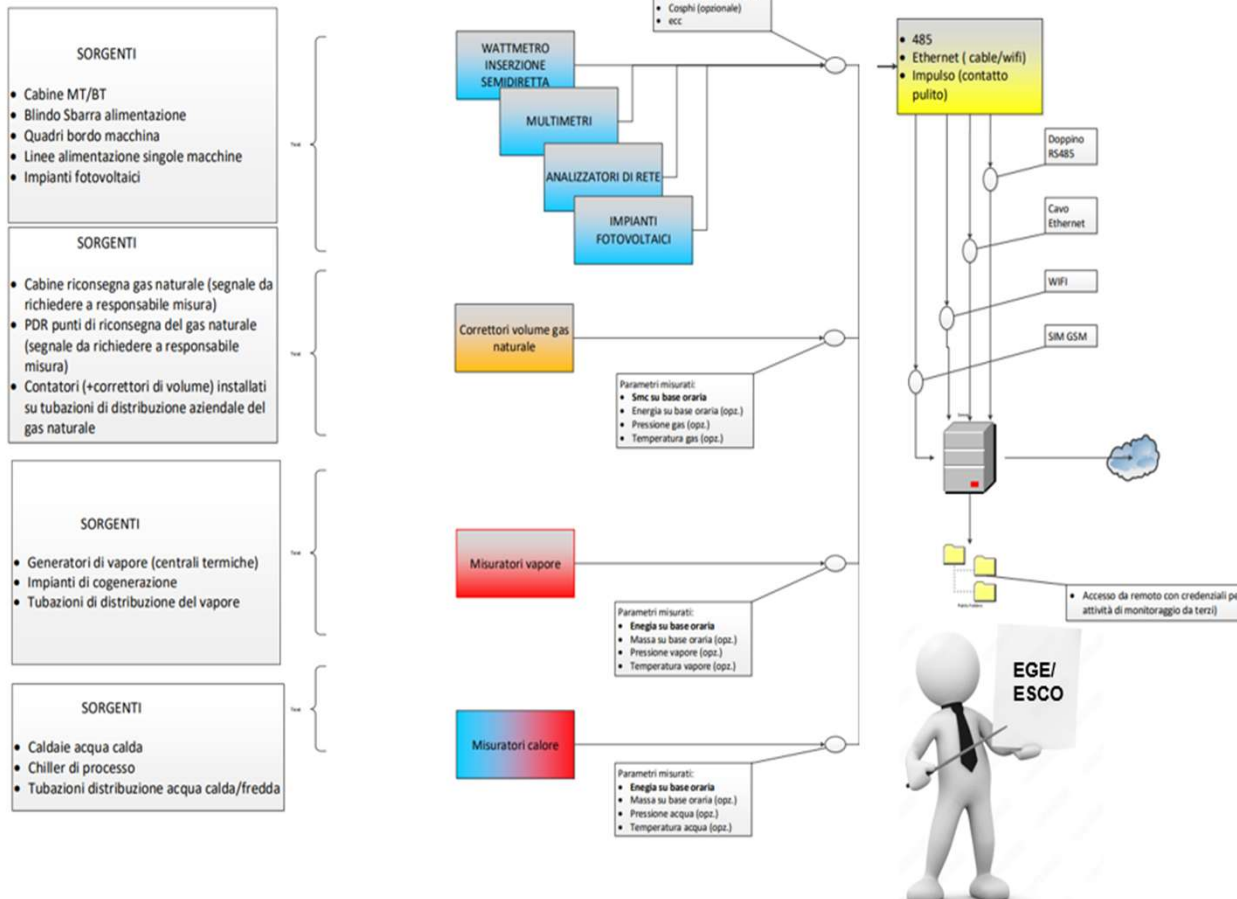


Assess the energy impact caused by the failure of an inverter in the ventilation system, which resulted in an increased daily consumption of 200 kWh!



Verify the actual energy consumption of equipment within the production system that was initially believed to be the cause of higher energy usage, but in reality, was not.

# Example of data Sources



# I Eco-Logger provide you with Energy Data



## WHAT ARE THESE DATA USED FOR AND WHO BENEFITS FROM THEM?

### Some Examples of Benefits

#### NON-ENERGY-INTENSIVE COMPANY

- Carry out an accurate breakdown of energy consumption by type of use and cost center, facilitating the Energy Analysis process.
- Identify potential waste or possible faults and malfunctions (including through the analysis of network quality in instruments, such as power factor, vector meter, harmonics...).
- Have access to data useful for the accurate sizing of potential interventions aimed at reducing consumption.

#### ENERGY-INTENSIVE COMPANY (IN ITALY)

- Reduction of System Charges on the Invoice (ASOS).
- Monitoring of energy flows for the purpose of mandatory Energy Audit in compliance with Legislative Decree 102/14.
- Compliance with ISO 50001 systems.
- Generate the necessary savings reports to benefit from incentive mechanisms (e.g., White Certificates - TEE).
- Draft a business plan for new investments.
- Calculate a General Performance Index (GPI).
- Calculate Area Performance Index (API).
- Predictive analysis of energy consumption

#### COMPANY 5.0 (IN ITALY)

- Perform an accurate breakdown of energy consumption by type of use and cost center, facilitating the Energy Analysis required for mandatory Energy Audit in compliance with Legislative Decree 102/14 or for Energy Management according to **ISO 50001** standards.
- Continuously monitor the company's energy performance (Energy Performance Indices - IPE) in accordance with **ISO 50001 standards**.
- Evaluation of energy consumption reduction of the production facility in Italy **> 3%**.
- Evaluation of the reduction in the processes affected by the intervention **> 5%**.

#### COMPANIES WITH EXCISE DUTY EXEMPTION (IN ITALY)

##### To obtain the benefits you have:

- Obligation to measure energy, taxed/non-taxed.
- Obligation to collect and store consumption data.

# BENEFITS OF ENERGY MONITORING

Carry out an accurate breakdown of energy consumption by type of use and cost center, facilitating the Energy Analysis required for compliance with the mandatory Energy Audit under Legislative Decree 102/14 or for energy management according to ISO 50001 standards.

Identify potential waste or possible faults and malfunctions (including through the analysis of network quality in the instruments, such as power factor, vector meter, harmonics...).

Detect design errors in electrical systems.

Identify potential opportunities for improving energy efficiency or reducing energy consumption.

Continuously monitor the company's energy performance in accordance with the ISO 50001 standard.

Predictive analysis of energy consumption and Energy Performance Indicators (EPI) for corrective and preventive actions.



Have data available for the proper sizing of potential interventions aimed at reducing consumption.

Verify energy savings following the implementation of specific interventions.

Generate savings reports necessary to benefit from incentive mechanisms (e.g., **TEE = Energy Efficiency Certificates**).

Based on the available data, develop a business plan for new investments.

Creation of EnPi and KPI to evaluate the energy costs of a specific production and determine the final product cost.

ROI Calculation: calculating the economic impact of energy efficiency interventions is essential to understand the payback period, allowing future interventions to be planned for maximum return.

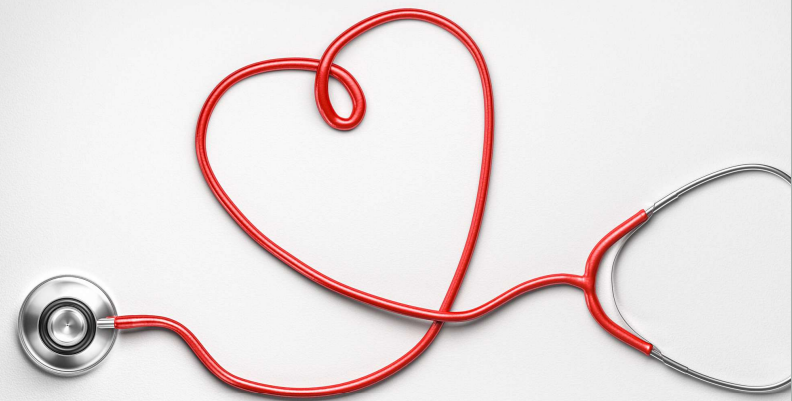
Greenhouse Gas (GHG) Emissions Calculation

Historical data storage

**Your company is important; always reach out to someone truly experienced who, with your help, can take care of it, helping it grow and develop in a healthy and strong way.**

**Itaca has been operating for over 30 years in various sectors of industrial automation, and we place our expertise in your hands.**

**Thank you for your attention!**



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