CUSTOMER STORY

Howest: measuring the savings of cogeneration and solar

Howest wanted proof of the value its energy efficiency investments created, in a volatile market with a mix of energy sources. On Energis.Cloud it monitors its cogeneration and solar self-consumption, reports the savings to management and trains students on real data.



CUSTOMER	SECTOR	COUNTRY
howest	Higher education	Belgium

€209,750

saved in 2022 through self-consumption of cogeneration and solar power

866,810 kWh

produced by solar and cogeneration in 2022

At a glance

- **Who:** Howest (https://www.howest.be/), a university of applied sciences in Kortrijk, Belgium, with a bachelor's programme in energy management and a Smart Technology lab (STER lab).
- **What they set up:** the consumption and production of the campus buildings on one platform (electricity, natural gas, solar and cogeneration), dashboards and progress reports for management, and the same platform in the classroom.
- **The result:** €209,750 saved in 2022 through self-consumption of the power from its cogeneration (CHP) and solar installations, savings shown to management, and students trained on real data.

The challenge: savings that were hard to prove

Howest worked hard to meet its energy efficiency targets, but it could not be sure of the value its energy conservation measures created, and so could not put a figure on the return of its efficiency investments.

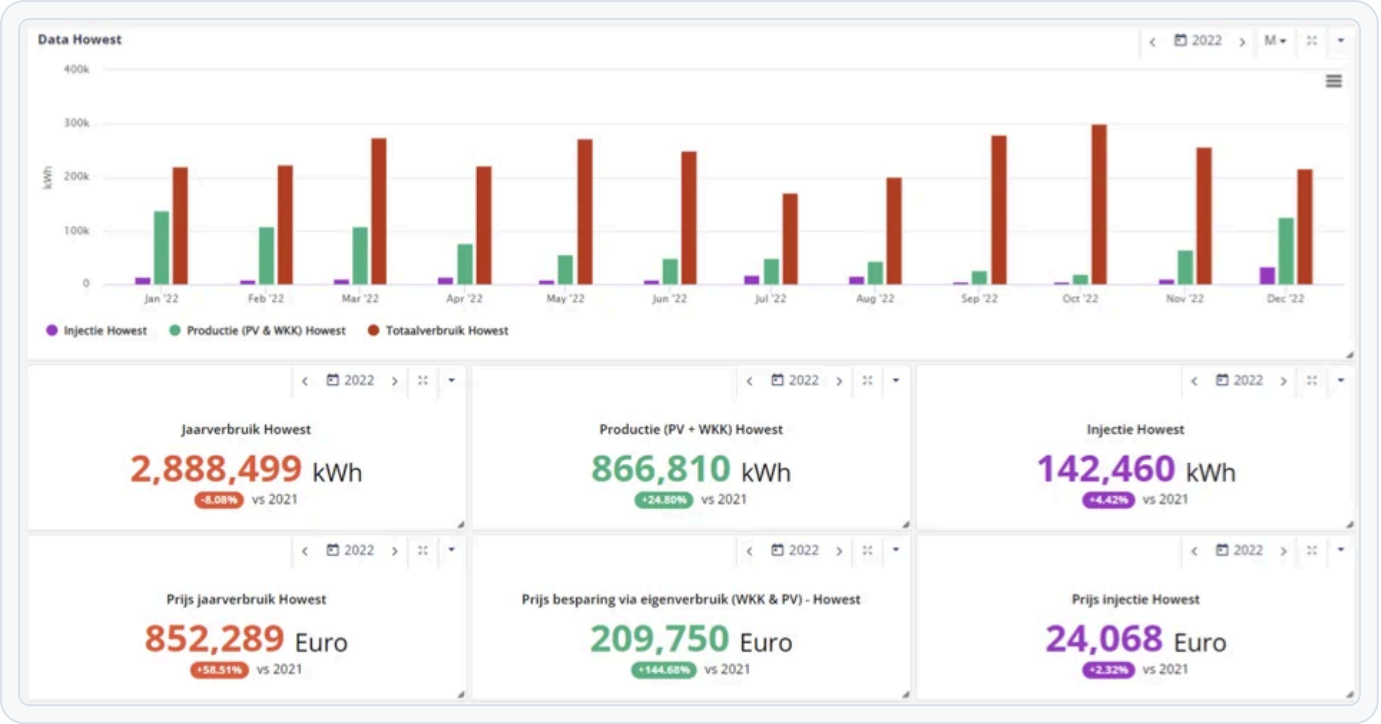
A volatile energy market and a mix of sources, electricity, solar, natural gas and cogeneration, made the savings even harder to report to the university's management.

The school also wanted its students, the energy managers of tomorrow, to learn on the tools energy managers use at work.

What they set up in Energis.Cloud

- **Every source on one platform.** Consumption, solar and cogeneration production and the power sent back to the grid, for the buildings of the campus. See data integration.
- **Dashboards for the savings.** Yearly consumption, production, injection and the money saved through self-consumption, each compared with the year before. See dashboards.
- **Prices next to consumption.** Day and night electricity prices and the gas price, month by month and year by year, so the savings hold up when the market moves.
- **Progress reports for management.** The platform turns several years of history into reports that show the savings made. See automated reporting.

- **Anomaly detection.** Unusual values in the data sets show up as anomalies to check. See anomaly detection.
- **In the classroom.** Students produce energy reports, analyse data, compare buildings and assets and present the results to management, during their studies and their internships.



Howest's 2022 dashboard: consumption, production by solar and cogeneration, injection, and €209,750 saved through self-consumption, each against 2021. From the Howest case study.

The results

	Before	With Energis.Cloud
Savings	Hard to quantify	€209,750 saved in 2022 through self-consumption
Production		866,810 kWh from solar and cogeneration in 2022
Reporting	Hard to explain in a volatile market	Progress reports for management, with prices next to consumption
Teaching		Students work on the same data as the energy team



Howest students. Photo from the Howest case study.

In their words

> “Energis.Cloud is a powerful tool that gives insight into the consumption and production of different buildings of an organisation (baseline) and creates awareness to reduce energy consumption and energy costs. You can make a lot of correlations with the data so that further improvements are possible.”
>
> **Jurgen Van Ryckeghem**, Teacher and Research Coordinator, Smart Technology lab, Howest

For whom

Howest runs its own campus buildings: the work we describe for multi-site organisations.

Frequently asked questions

How does a university measure the savings of its cogeneration and solar?

Meter what the installations produce, what the buildings consume and what goes back to the grid, then put a value on the power used on site. Howest tracks the result as “savings through self-consumption”, year against year: €209,750 in 2022.

What is self-consumption?

The share of the electricity produced on site, by solar panels or a cogeneration unit, that the buildings use themselves instead of buying it from the grid. Every kWh used on site is a kWh not bought.

How do you report energy savings to management when prices move?

Show the prices next to the consumption. With day and night electricity prices and the gas price on the same dashboard, a saving can be told apart from a price change.

Can students learn energy management on real data?

Yes. Howest’s energy management students use Energis.Cloud during their studies and internships to report, analyse, compare buildings and present results, as they will at work.