

# ELIPSE E3 PROVIDES GREAT WATER AND POWER SAVINGS IN OFFICE GREEN, IN PALHOÇA (SC)

**Solution developed by Elipse Software optimizes the consumption of power, water, and other integrated systems in the building automation of the first business venture to achieve the LEED (Leadership in Energy and Environmental Design) pre-certification in the state of Santa Catarina**

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## NEEDS

The Pedra Branca Sustainable Urbanism venture is the first project in South America selected for the Clinton Climate Initiative. The Climate Positive Development Program was launched by the former American president Bill Clinton, founder of the William J. Clinton Foundation in May 19 2009 in the C40 Cities Climate Leadership Group summit in Seoul, South Korea.

The Pedra Branca project was designed to present positive strategies for climate, working as a strong economical and environmental example to be implemented in cities. Several efforts were made to reach this goal, including investments in building automation.

In this context, integrator Engetel Automação e Segurança installed [E3](#), supervisory and control solution by Elipse Software, in four Pedra Branca buildings in Palhoça (SC). Emphasis to [Office Green](#) because it was the first one to achieve the LEED pre-certification in the state of Santa Catarina.

Used in 143 countries, [LEED](#) is an international system for environmental guidance for buildings, granted by the [Green Building Council](#), which was created to encourage transformation of projects, building sites, and operations, always focused on sustainability.



Initial application screen reproducing the image of Office Green Project on the right

## SOLUTION

Elipse E3 allows controlling several variables and devices related to measurement systems for power, water, cooling, exhaustion, and alarms. Check more details about this control system below.



System developed with E3 for Office Green management

## MEASUREMENT OF POWER CONSUMPTION

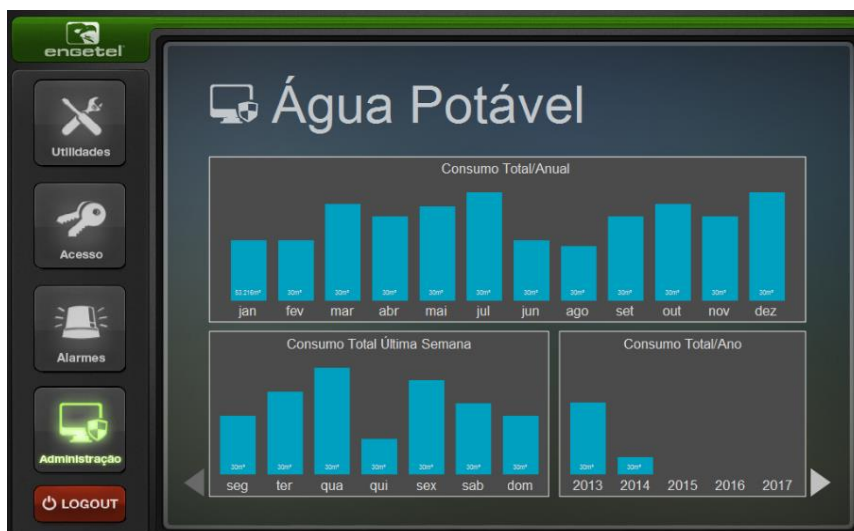
Using its screens, the software allows users to monitor power consumption in some strategic points in the project, such as elevators, exhausters, etc. The system also provides lighting control, which allows triggering a circuit and defining schedules to turn the lights on or off automatically, or else using a light sensor.



Control screen for power consumption

## MEASUREMENT OF WATER CONSUMPTION AND LEVELS

The software allows controlling the measurement of general consumption of drinking water and reusable water in the building.



Screen to control drinking water consumption

On one of its screens, it is possible to monitor the level of water accumulated in tanks and pumps. The system monitors and generate alerts operators during failure situations, such as a problem with a pump or a flood, for example.



Screen to control levels of water in the tank and in the reusable cistern

## REFRIGERATION AND EXHAUSTION SYSTEM

E3 commands allow turning air conditioning engines on or off on common areas of the building. Also controls the exhaustion system of the basement and the air-handling units of commercial rooms.



Screen to control the air conditioning located on the building's main hall

## FIRE DETECTION AND ALARM SYSTEM

The software monitors the fire detection system, informing operators about all occurrences and what procedure is more adequate for that situation, so that all needed actions can be performed as soon as possible.

## REPORTS

E3 provides reports that help analyzing the functionality of lighting, alarms, and climate systems, as well as the savings generated by a rational usage of power and water.

## BENEFITS

- Savings on power spent with lighting due to system's automatic shutdown programming, which allows remotely shutting down lights in periods when rooms are not in use.
- Savings on power spent with air conditioning due to system's automatic shutdown programming, which allows blocking the triggering of engines in periods with mild temperatures.
- Controlling power spent with elevators, air conditioning, hydraulic pumps, and lighting, allowing the project manager to monitor the monthly consumption and then analyze best practices to reduce it.
- Alerting, via alarm system, in cases of water shortage by the water utility, allowing that residents can perform preventive actions to save water.
- Controlling the consumption of drinking water, which allows the project manager to monitor it weekly and perform actions to reduce it if needed.
- Monitoring the usage of reusable water, informing how much drinking water was spared by this system.

## TECHNICAL INFORMATION

**CLIENT:** Cidade Pedra Branca

**SYSTEM INTEGRATOR:** Engetel Automação e Segurança

**ELIPSE PRODUCT USED:** Elipse E3

**PLATFORMA:** Windows Server 2008

**NUMBER OF COPIES:** 4 E3 Server

**I/O DRIVER:** PLC 300, MDX 201, and Modbus