

# ELIPSE PLANT MANAGER OPTIMIZES TRACKING OF PROCESSES AT RECÔNCAVO ENERGIA

The platform by Elipse Software streamlines Recôncavo Energia's data retrieval from natural gas wells that supply Imetame Termelétrica's four plants

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#### Needs

Imetame was established in 1980, and for the past decades it has developed and expanded its business. Currently, the Imetame Group operates in different markets, such as metal-mechanic, ornamental rocks, port logistics, oil & gas, and energy. Imetame Thermoelectric comprises four plants (Prosperidade I, II, III, and IV), all located at Camaçari municipality, in Bahia state (northeastern Brazil).

The thermoelectric plants' generation capacity is 131MW altogether and electricity is produced from natural gas. The gas comes partially from Progresso, Caruru, Acarajé, and Prontidão wells, which are property of Recôncavo Energy, a company that, like Imetame Thermoelectric, also belongs to Imetame Group.



Imetame Thermoelectric plants



In their pursuit for a system to collect, analyze, and store data from the natural gas wells mentioned above, Recôncavo Energia has opted for <u>Elipse Plant</u> <u>Manager (EPM)</u>. Developed by <u>Elipse Software</u>, the international developer of solutions for remote and real-time process management, EPM is a platform that can collect information from different sources, add context to it, and store it efficiently.

The platform also ensures high recording/query performances, in addition to greater data usability and availability. To implement EPM, Recôncavo Energia signed a partnership with <u>i9 Engenharia e Tecnologia</u>, the Brazilian company that provides innovative solutions for automation, engineering, and technology.



OCC from where the EPM screens are accessed

# Solution

The EPM solution was configured to collect, via OPCUA protocol, information from PLCs of the natural gas wells as well as of the plants' hub. Communication was set up by i9 so that the software by Elipse can collect data directly from controllers, with no need for third-party applications.

Also installed in the solution are SQLServer Express - Microsoft Corporation, EPM Server, and Interface Server - Elipse. Users called "sa" were created both



for SQL and EPM, (sa – System Administrator), in addition to three users for EPM: Administrator, Supervisor, and Operator.



Structure displaying the connection between EPM and the wells' PLCs and HUB, where all devices from the plant communicate

In this application, EPM works as the information manager. The platform is responsible for acquiring, storing, and providing process data, and is vital for the system's fiscal measurement because it elaborates and validates production data.

With the software by Elipse, Recôncavo Energia can access and analyze data in a more agile, contextualized way. Before the introduction of EPM, operators needed to browse and open a series of screens in the supervisory to search for any specific bit of information. Nowadays, with EPM, data is accessed and analyzed graphically within seconds.





Before EPM: browsing and opening a series of screens to retrieve information

Through its charts, EPM allows Recôncavo Energia to query and analyze the outflow of natural gas coming from Progresso, Caruru, Acarajé, and Prontidão wells into Prosperidade I, II, III, and IV thermoelectric plants. This research can be retrieved at any time interval specified by the user.



Chart displaying the outflow of natural gas from wells into thermoelectric plants



At the variables' registry, EPM allows setting up type, limits (highest/lowest), and engineering units of each variable. New engineering units can be added as needed. Historic and data compression per variable can be enabled/disabled, and deadband can be enabled and configured.

All the options above are available as EPM add-ins in Excel. In the event of a high number of variables, this will make the registry more agile, reliable, and standardized, due to the alterations being imported and/or exported directly from/to the software database of Elipse.

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EPM screen for editing variables' registry

## **Benefits**

According to Cristiano Luiz Broetto Depizzol, Engineering Advisor for Imetame Energia, the EPM system streamlines both information search and decision making, being an essential trackability tool.

"This platform has become essential for our processes, because it allows us to analyze the root cause of issues while meeting the stipulated regulatory compliances," he said.



Among the main benefits Elipse EPM has brought to Recôncavo Energia, we highlight the following:

- More reliable information about the process, supplied in real time.
- Data and occurrences from the process can be analyzed at several time intervals.
- The automation systems' maintenance crew benefited greatly from these changes. Previously, they had to access the fiscal outflow computer every month to issue the production data report. With EPM, this is no longer necessary, since all the collaborators involved in the process can now access this information directly from the software by Elipse, so the report is no longer required.
- EPM provides a collaborative environment for managing information, allowing the development of industrial intelligence applications in a quick, reliable way with high scalability. Therefore, it helps make decisions in real time with accurate information, which leads to the continuous optimization of the productive chain without getting in the way of the operation.

## Datasheet

Client: Recôncavo Energia Solution provider: i9 Engenharia e Tecnologia Elipse product: EPM Server v. 4.16.190 Platform: Windows 11 Number of copies: 1 I/O points: 4,000 Drivers: OPCUA