

# zenon: a flexible tool for electrical substations

Termokimik Corporation has supplied a completed turnkey installation made up of a solid urban waste incinerator (SUW) integrated into a heat recovery system boiler/steam turbine with a 14 MW generator, within the scope of the construction of a waste to energy plant for the AcegasAps Group. AcegasAps Group is the number one company operating in the multi-utility sector in North-east Italy. The project has resulted in the production of electrical energy for the national grid, recovering energy from waste treatment.

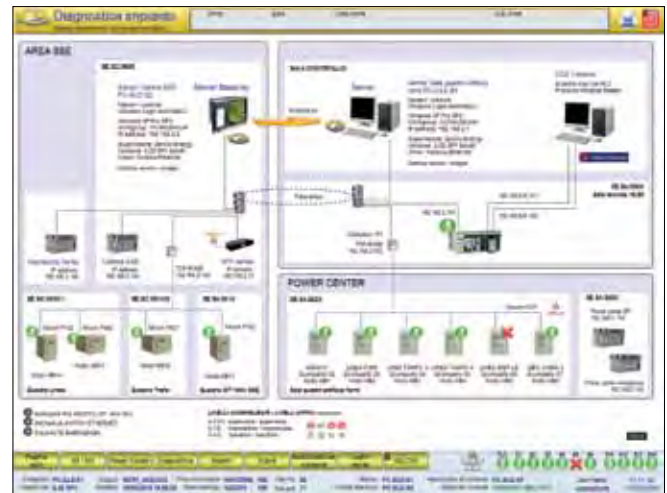


Termokimik Corporation is a highly successful company that operates in the field of the construction of industrial plants and processes. With the strength of over half a century of experience behind it, the firm is able to offer its clients professionalism, competence and above all effective, user-centric solutions. As a dynamic and flexible company, Termokimik Corporation has been capable of success through the inclusion of a multitude of sectors within its range of activities; from energy to water treatment, environmental technologies for flue gas treatment and pollution control, to innovative technologies for the capture of carbon dioxide produced by combustion processes.

For the construction of the high voltage (HV)/medium voltage (MV) electrical interface for this project Termokimik Corporation turned to F.M. Automazione, a company with over ten ye-

ars experience in the fields of automation and process controls, electrical supervision of building automation, and machine and process management for public works. It is a reliable firm with solid and proven experience throughout northern Italy. Thanks to their broad and industry specific expertise, F.M. Automazione was able to respond to the request for the construction of a SCADA dedicated to the management of the electrical components with professionalism and meticulous planning. This enabled the company to deliver the application for the control of the high voltage feeder, the medium voltage distribution and another series of service functions and complete the implementation in a timely and effective manner.

F.M. Automazione Sales Manager, Mr. Mariano Manti, and the HMI Division Manager, Mr. Renzo Rossi, describe their meeting



with COPA-DATA Italy: “Over these last ten years of work in the electrical power distribution sector, we have developed a series of notable applications and approaches for the energy sector. Over this period, we have tested a myriad of products all of which were missing something. Our conclusions were always the same: the ideal software still hadn’t been developed. We intuitively knew the list of features we would require for our kind of application. And that was how we found out about zenon; it is endowed with all of the qualities that we need. Having used it, we are very satisfied. We have seen its results in the field”.

Thanks to zenon Energy Edition, F.M. Automazione has succeeded in implementing the application in a fast, simple and complete manner.

### ZENON’S NATIVE REDUNDANCY ENSURES THE UTMOST RELIABILITY

The main server is located in the control room, in order to ensure the utmost reliability. A second server has been installed to create a redundant system, enabling access to the system and data collection even if the main computer were to malfunction or go off line. The second server was installed in the electrical substation and acts as a local operator station, with access restricted to authorized personnel only. The two PCs are always synchronized thanks to zenon’s native redundancy: all of the process, archive and project data is constantly backed up and synchronized automatically. But there is another advantage to this type of functionality: the simplicity of the procedures needed in the event of changes to the project. Whilst previously, it was necessary to work directly on the different machines located throughout the plant, using zenon modifications on the main server, the standby server and any clients are updated automatically.

### FLEXIBILITY THANKS TO RESOLUTION INDEPENDENCE

What if the two PCs used have different sized monitors with different resolutions? No problem! zenon enables the automatic

adaptation to the resolution appropriate to the current launch of the application. During the creation of the system, when the project engineering was already in an advanced phase, it was decided that a monitor display with a size and style more in line with the furnishings being used and with a different resolution would be utilized. This was no obstacle for zenon, as the resolution was immediately recognized by the system and all of the process images were automatically resized. zenon’s resolution independence was of immense help for the engineers of F.M Automazione who didn’t have to recreate everything from scratch.

### EASE OF DESIGN THANKS TO ONLINE PROJECT CHANGES

During the commissioning of the project, hot updating of the application proved to be invaluable: once the changes had been engineered on the developer’s laptop PC, they are sent by way of zenon’s remote transport to the PC server in the control room. To make the changes live, it is sufficient to use zenon’s “hot reload”. The key advantage to this is that it is not necessary to stop and re-launch the entire application - an operation that can take several minutes - thereby avoiding inconvenience for the control room personnel.

Furthermore, during implementation of the application, the Project Manager, Eng. Massimo Bugini, was able to use additional new functions, which turned out to be very useful. These functions included specific drivers for the PLC safety relays, the remote desktop integrated into the development environment, the commands authorisation, malfunction diagnostics, and synoptic screens with zoom and de-cluttering functions.

“We are very satisfied with the work done. We haven’t just found another software provider in COPA-DATA, but instead we’ve found a team of people with whom we have created a true working relationship that has turned out to be constructive for both sides,” conclude HMI Division Manager, Mr. Renzo Rossi, and Sales Manager, Mr. Mariano Manti.