

Anders Moritz on Cactus

At Tekniska Verken in Linköping, a single system can monitor all electricity, heat and steam production. A CSX system from Cactus has been installed which supervises some ten plants and several small hydraulic power stations.

Anders Moritz is Project Manager at the production unit. He has designed the new system, which replaces a 13-year-old one, in collaboration with Cactus Automation.

What does the new system do?

"The new CSX system monitors our entire energy production, the main recipients of which are the Gärstadverket works and the Kraftvärmeverket heat-energy plant. The aim of the new system is to create a complete, modern system which monitors all our electricity and district heat production."

What new opportunities does the new system offer?

"Really quite a few. From the central control point, we can not only monitor but also evaluate production at the various plants. We can calculate energy tax and power levels relative to our suppliers. We can also follow up on the plants' operation and output levels. We can then transfer collected data and prognoses to other programs and computer systems."



"Our main reason for choosing Cactus was that they had the best price and performance. We also took care that the supplier we selected was a stable one – one we could develop a relationship with in the future."

You sell power on the power exchange now, don't you?

"That's right. Because we're one of the main players in the energy business and have to keep a check on how much power is being used from different quarters, we can tender out our energy on the power exchange. At the same time, we provide the Swedish Power Network with an energy balance, and they calculate the outcome retrospectively. This whole process means we deal with a great deal of data. The new system provides us

with invoicing details and prognoses. Put simply, it's invaluable."

What equipment does the new system include?

"The new system comprises CSX servers for the Gärstadverket works and the Kraftvärmeverket heat-energy plant, and an Oracle server. There are also a number of smaller control stations and sub-stations. The new monitoring system is connected to an existing Novell PC network. The PCs are used for working in Excel, optimising



The Gästadsverket works is one of the power plants monitored by the new Cactus system. Gästadsverket is a combined power and heating plant, which means it can produce both electric and district heating. The fuel it uses is household waste – 200,000 tonnes from more than 500,000 people. The amount of energy produced is equivalent to about 50,000 tons of oil per year.

productivity, and electricity and heat prognoses.”

You've invested a great deal of money in this. What kind of financial profit do you expect to make?

“Well we spend a lot of money every year buying electrical power, for example. With better follow-up and prognostic procedures, we can optimise electricity production and cover purchases. Prognoses for loading capacity are also improving, which means we can plan production in a whole new way. Better monitoring also means increased accessibility. We should also be able to keep the temperature down at

certain places in our district-heating pipes thanks to the improved monitoring now available.”

How have you managed to integrate other makes of sub-station with the main control system?

“There are quite a few sub-stations of several different makes: Siemens, ABB and Alfa-Laval, to name but a few. This is where the Cactus CSX has proved a definite advantage. The system is flexible and designed to be compatible with other systems. The Cactus CSX is also flexible from another point of view: it's an open Unix-based system. We will be able to grow with the system, and install new applications

without spending too much money.”

Why exactly did you choose Cactus for Tekniska Verken's power plants?

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And how was it working together with Cactus?

“The project as a whole went extremely well. Cactus gave the right input when it was needed all throughout the project.”



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