

DIGITAL

East Water chooses
Schneider Electric's solution
to help manage its water system
that supports the eastern industrial
estates

East Water Group, Thailand



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East Water, the largest supplier of untreated water in the eastern region of Thailand has chosen Schneider Electric's solution for water management to support its clients in the eastern industrial estates in Rayong, Chonburi, and Chachaengsao.

Eastern Water Resources Development and Management Plc. or East Water is a company that serves as a hub for large-scale raw water management through its pipelines for industrial consumption within the country eastern coastal areas in Rayong, Chachengsao, and Chonburi, supporting various activities such as water supply, electric power, health care, industry, and many more.

At present, East Water has 15 pumping and distributing stations. The company's water pipe network is the most complete, advanced, and efficient pipeline in Thailand. The pipeline is approximately 400-kilometre long, connecting important water sources in the eastern region: Nong Pla Lai, Dok Rai, Klong Yai, and Prasae reservoirs in Rayong, Nong Khor and Bang Phra reservoirs in Chonburi, and Bangpakong River in Chachaengsao, making a solid water grid.

Mr. Cherdchai Pitiwacharakul, Senior Vice President, Operation and Customer Service of Eastern Water Resources Development and Management Plc. or East Water said, "We are determined to provide water management for both domestic and industrial consumption, supplying clients with quality water sufficiently and efficiently. Since water is one of the essentials for households and industries, shortage of water, even if only for a short period of time, causes a lot of damage.



Challenges in water management

Managing pumping water from different sources that covers areas in many provinces while ensuring constant water pressure and volume is not easy. There are many constraints to be considered such as pulling the water grid, pumping water from several sources into the water pipeline system. There is a need to control pressure and volume to be sufficient, efficient, and continuous while keeping the costs to be competitive. Therefore, it is essential to have a control system at each station and a centralized system to make a consistent work and to prevent failures that may result changing volume and pressure of water or no water, affecting the production of water supply or industrial activities. In drought, we need to manage water reserve to be adequate for all kind of usages. We need to manage water stably and sustainably to drive the eastern region and the country's activities and economy to progress without interruption.

Water management solution

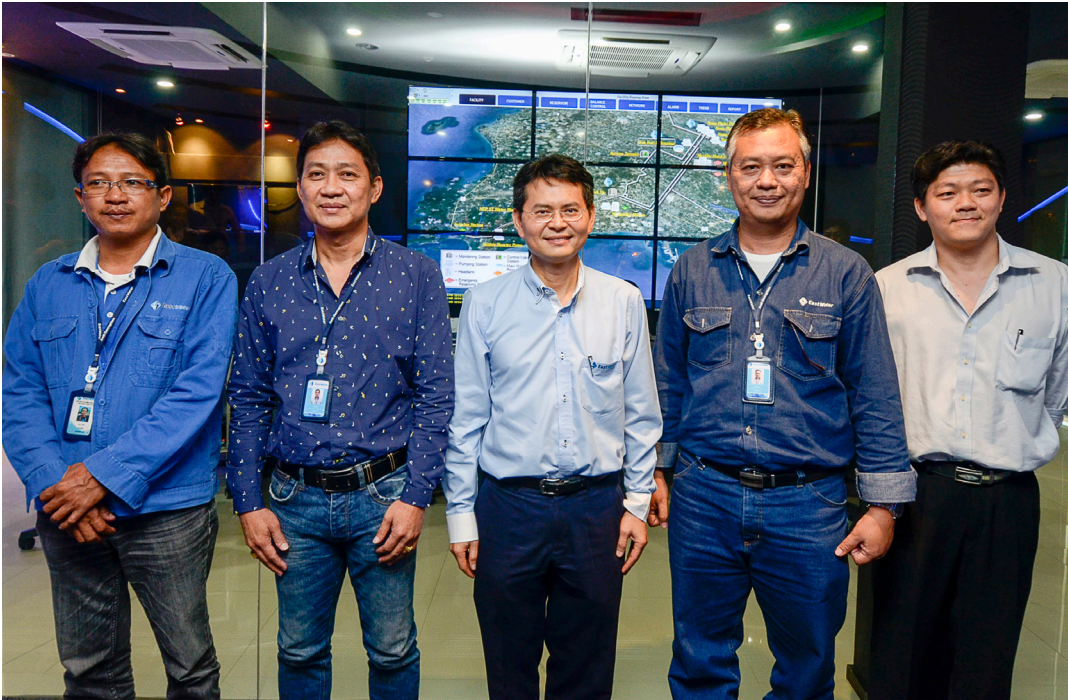
East Water uses SCADA (Supervisory Control And Data Acquisition) system to run real-time control from a single control centre, allowing them to control the pumping system efficiently at all times. The system enables the company to control and access to all information of pumping system, water pipeline network and distribution stations as well as status of water sources. By sending information directly to the central control centre, the system runs tracking, collecting, and assessing the water management effectively and accurately as well as reducing loses within the system such as costs of pumping and water lost, yielding instant problem rectification 24 hours a day. Moreover, water users are able to monitor their own water usage through Internet any time which builds confidence and transparency in East Water's service and quality of water. The core components of the system that East Water brought to its water management are Schneider Electric's solutions which comprise of:

- PLC Quantum: Automatic command and control system of pumping stations. It controls on-off pumping, flow of water, and pressure adjustment at each station. Currently, it can be used both in automatic or manual modes to ensure maximum stability and safety.
- SCADA Vijeo Citech: The centralized SCADA system allows real-time monitoring, verifying, data recording, and assessing information of water pumping at 15 pumping stations, covering the areas of information of water sources, water quality, electric system, pumping, water level, distribution, water pressure, and water volume distributed to each client. All information is sent to the operation centre in Mabtaphut and the war room in Bangkok which makes 24/7 monitoring and tackling problems possible.

Mr. Cherdchai added that "The SCADA system allows us to track progress and fix problems occurred to water distribution 24/7 which reduces water lose from pipeline from 20% to less than 3%, making the total water management effective, accurate, and transparent.

In addition, East Water has also selected Schneider Electric's NEX high voltage switchgear for powering each station.





Future development

In addition, Eastern Water aims to achieve energy saving by 5% of the electricity cost which is the main cost of water pumping. For the first phrase of this energy saving campaign, the company has installed power meters to measure and analyze the whole power system.

Mr. Cherdchai said "In addition to success in water management, East Water also sees the importance of saving energy and place it as a company's mission. In the first phrase, East Water aims to reduce energy consumption by 5%. We assigned Schneider Electric to install 76 power meters throughout the entire operation to measure and analyze power usage at each process. We expect to see the evaluation by early of October 2015 and will apply it to our planning for energy efficiency in the future."

Moreover, East Water aims at building "Smart Station" which requires no staff manning the water stations but can be monitored through the network and SCADA systems.

"East Water chooses to use the services and solutions provided by Schneider Electric because Schneider Electric is a world leader in control system, electric system, and energy management. Having this solution in place gives benefits to our business. It gives tangible return on investment. We are confident that in the long run Schneider Electric's solution will help us reduce energy costs truly," concluded Mr. Cherdchai.

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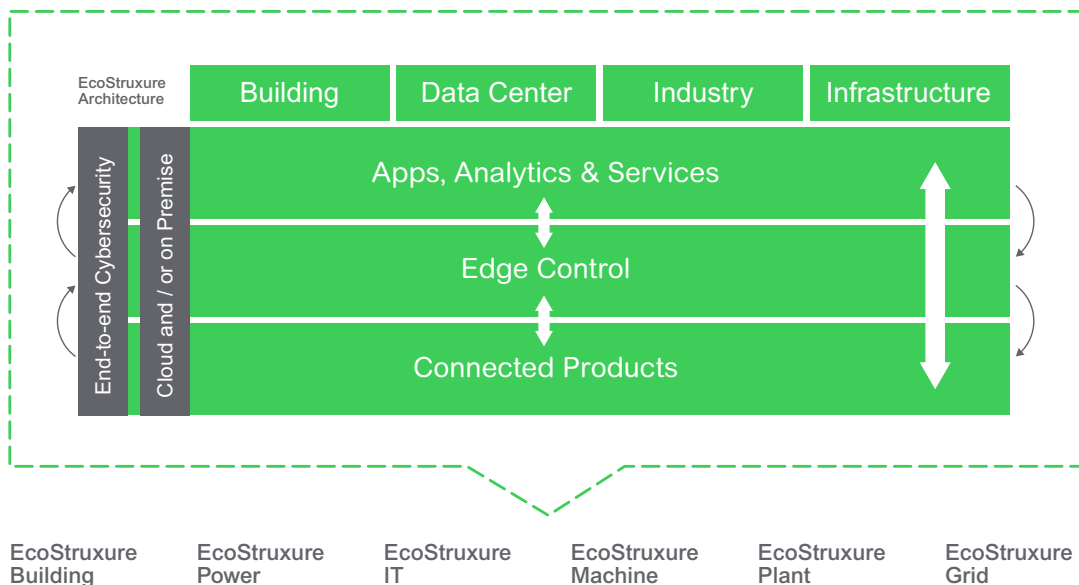
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December 2015

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