



CASE STUDY: TAMPA ELECTRIC COMPANY

Panasonic Video Walls Give TECO Real-Time Decision Making Capability

Challenge

To enhance TECO's power allocation and external power source purchasing decisions by providing access to real-time system demands, current and advance-forecast weather information, power demand maps, spreadsheets, and a host of other information relevant to maximizing the efficiency and cost effectiveness of the company's six power generating stations.

Solution

Replacing four antiquated overhead projectors with two video walls comprised of 18 Panasonic thin-bezel TH-55VF1HU 55-inch video wall IPS display screens, controlled by the Creston system, programmed to allow designated marketing managers to change, move or combine available data views on a screen-by-screen basis.

Result

In the words of Tampa Electric Fuels Management Portfolio Analyst Dan Akins "it's like we went from a go-cart to a Ferrari."

For 118 years, Tampa Electric Company (TECO), a subsidiary of Halifax, Nova Scotia-based Emera, Inc., has been supplying electricity to residential, commercial and industrial users in an area of approximately 2,000 square miles of West Central Florida encompassing Tampa Bay.

In addition to serving its 730,000 customers with electricity from six traditional coal or natural gas generating stations, TECO is a pioneer in alternative energy with solar arrays powering such iconic Florida attractions as the Museum of Science and Industry, LEGOLAND Florida, the Florida Aquarium, and Tampa's Lowry Park Zoo.

The company's latest solar power generating facility is a state-of-the art system that employs 200,000 thin-film sun-tracking solar panels to produce 30 percent more energy than possible with fixed solar arrays. The 23-megawatt solar plant has the capacity to power more than 3,200 homes and provide environmental savings of up to 30,000 tons of carbon dioxide annually, the equivalent of removing up to 6,000 cars from the road.



Dan Akins' Fuels Management Group is charged with making daily, sometimes hourly, decisions on the most economical way to meet the TECO power grid's immediate demands. Since going operational approximately one year ago, the Panasonic Video Walls have proven invaluable in enabling the Fuels Management Team to become nimble and to respond to both expected and unforeseen aberrations in power consumption with increased speed and accuracy.

"Basically, our decisions are predicated on the system's current and projected load," Akins said. "We have both coal and natural gas-powered plants and our job is to determine which units need to be operated when and at what output and in what order that power should be released. Essentially these judgments are cost analysis decisions and the more information we have in front of us the more accurate our decisions will be. The video walls add a whole new dimension to the process by, among many other things, giving us up-to-the minute power pricing and availability. It even shows us transmission line maps between where excess power is available and our own grid.

"With the seven by two Panasonic Video Wall 27.83 feet wide by 4.4 feet high array of 14 TH-55VF1HU displays we have a massive amount of information instantly available to us," Akins continued. "We have maps of where demand is coming from, we can call up spreadsheets on outside power pricing and availability, current weather conditions, graphs of the mega-watt value the online plants are generating at the current moment, local news, system wide or area-specific current generation, JPGs, PDFs, just about anything."

Given the right-this-instance, real-time emphasis of the system, it's somewhat surprising to learn that some of the most valuable information displayed on the Wall is almost totally divorced from current conditions.

"One of the groups in our company puts together an hourly forecast of expected power requirements over a seven-day period," Akins noted. "We can, of course, bring that raw forecast up on the video wall, but one of the programs that feeds it goes far beyond that. It takes that forecast and other data such as historic air conditioning and heater usage patterns and does projections of expected loads in specific times and places.

"That gives us much more than our former one-dimensional estimate of where we'd be at our peak demand point each night. Now we can also prepare for the next day and for some period of days after that with a reasonable degree of certainty that the conditions we've prepared for will, within an acceptable plus or minus range, come to pass."

In addition to the 14-screen array (the "long wall" in TECO parlance) mounted on a 30-foot wall in TECO's trading center, there are also an arrangement of half-cubical spaces occupied by marketing managers who have mandated the installation of a 2x2 Panasonic TH-55VF1HU Video Wall (the "short wall") on a hallway with better sight lines to some of the cubicles.

According to both Dan Akins of TECO and Ken Avis, president of the ProMedia Group, the integrator who installed the system, selecting the video display panels for the two video walls was essentially a "no-brainer." As he tells it, "We sent out an RFP and got two or three proposals from different vendors," Akins recalls. "Then Ken Avis came in showed us a mini-wall made up of four Panasonic in a 2x2 configuration and we were sufficiently impressed by their brightness, resolution, color fidelity and extended viewing angle to make a decision right then. The Panasonic quality and price points were simply unbeatable."

Mounting, wiring, and interfacing the 18 Panasonic display screens with the Creston Control system went, according to Ken Avis, "as smoothly as expected" except for one unforeseen glitch; the 30-foot wall intended to hold the long video display turned out to be warped."

The ProMedia Group made sure the installation wall was perfectly flat by adding installation rails that allowed the panels to be mounted as tightly as possible. "Panasonic, as usual, came through. Which validates a point I try to make every time I introduce Panasonic products to potential customers. That with Panasonic, you're not just buying the high performance of the units, you're also buying an unparalleled level of service," further notes Avis.

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