



CUSTOMER CASE STUDY

AVEVA Helps Bermuda Utility Provide Consistent Power and Deploy Upgrades Self-sufficiently

Bermuda Electric Light Company Ltd. (BELCO) - www.belco.bm
Industry - Power

Goals

- Provide reliable electric power to the entire island chain
- Deploy new capabilities and integrate new equipment self-sufficiently
- Attain ISO 14001:2004 certification

Challenges

- Bermuda's remote location in the Atlantic Ocean means that in-person support is not quick to arrive and sometimes not possible
- Island development will require increased power generation in the future
- BELCO was attempting to be the first organization in the territory to achieve ISO 14001:2004 certification

Solution

- System Platform
- InTouch® HMI
- Historian
- IntelTrac Mobile Operator Rounds®

Results

- With the help of the AVEVA software, BELCO's generating plant and transmissions and distribution system provide consistent electricity to the 65,500 residents and 465,000 tourists who visit Bermuda each year
- BELCO achieved the prestigious ISO 14001:2004 certification for environmental management, in part because of the data collection and reporting capabilities of the AVEVA Historian and AVEVA IntelTrac Mobile Operator Rounds
- The utility is expanding its integrated resources plan for the future based on the foundation of the AVEVA software and other AVEVA products

HAMILTON, Bermuda – Since 1908, the Bermuda Electric Light Company Ltd. (BELCO) has been powering the lives of the residents and visitors to the picturesque island chain of Bermuda. Its beautiful and remote location—nearly 700 miles southeast of Martha’s Vineyard on the east coast of the United State - is an asset, but also means that self-sufficiency is a way of life.

For over 100 years, BELCO has successfully met its mission: To provide a secure, reliable and sustainable electric power system for the people of Bermuda. And today, with the help of AVEVA software, BELCO is planning for a bright future.

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–
John Blizman, Vice President
BELCO Plant Management



The Importance of Planning

Dependable power when you flip a switch is something most people take for granted—until it’s not there. Across much of the world, electricity is an expected amenity. But in island locations like Bermuda, the design and maintenance of power systems can require more effort.

That’s why the utility has historically planned in 20-year increments. In 2005, BELCO completed the development of the East Power Station, the culmination of several projects that expanded capacity to meet growing demands as well as increased the efficiency of the company’s operations.

And as soon as this milestone was reached, the next 20-year project was launched. The current integrated resources plan is focused on improving distributed generation, expanding the central plant and adding renewable energy and sustainable development for homes and businesses across the 181 islands of Bermuda.

Achieving Consistency and Self-sufficiency

When BELCO chose AVEVA® software products, starting with the InTouch® Human Machine Interface (HMI) in 1995, both planning for the future and ensuring that the utility could operate consistently were deciding factors.

Bill Stang, AVEVA North America Sales Manager, says, "The big thing is that BELCO has been able to grow with our products. We've been able to help them tie everything together very cleanly and without a lot of assistance."

How have they done it? The answer is the powerful ArchestrA System Platform. This scalable technology has enabled BELCO to integrate and unify various operations management systems, including recently added and legacy devices.

John Blizman, BELCO's Vice President, Plant Management, agrees, "They're consistent across any type of equipment we have... whether it be old generators, new generators or other ancillary equipment. The operator interfaces are the same."

The easy-to-use InTouch HMI is central to meeting BELCO's goals. The standards-driven, objects-based system has supported smooth and independent upgrades, and has enabled operators to customize applications.

Another way the HMI helps is by providing an easy-to-read, graphic representation of BELCO's central plant as well as the 34 substations which are located throughout the islands. Real-time alarms show engineers exactly where their attention is required and the system provides essential trending reports, both real-time and historical.



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When Support is Needed

Even so, BELCO knows that AVEVA will be there when called upon. Support and training partner AVEVA North, with locations on the east coast of the United States, has provided assistance. But for the most part, the utility has deployed and maintained their systems independently, which is important considering its 35,668 metered connections and location in the Atlantic.

Blizman explains, "The major advantage we've experienced is that it's very easy to develop and integrate the AVEVA software with the wide variety of equipment we have here. Plus their support is global and very timely."

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Recognition for Environment Excellence

As part of the current 20-year plan, BELCO leaders set their sights on ISO 14001:2004 certification.

Audits and extensive reporting are required as part of the process, and the AVEVA Historian and the AVEVA IntelTrac Mobile Operator Rounds® mobile application

were up to the challenge. Operational data was collected, aggregated and organized with ease. The products' advanced reporting capabilities helped BELCO show auditors their plan and new environmental management policies as well as demonstrate real-time results with speed and transparency.

According to Denton Williams, VP of Energy Supply at Belco, "The IntelaTrac Mobile Operator Rounds product really helped us with implementing ISO 14001 because the results were so transparent we could readily produce reports for auditors, for external parties, we could show the regulators anything that was needed that was associated with options with operations and It was just very wide open and very easy for people to use and there was no great increase in the amount of work we had to do, it was all part of what we do."

In July 2010, the company was officially registered for its state-of-the-art production, transmission and distribution of electricity in Bermuda - the first organization in the territory to achieve this prestigious milestone!

Looking Ahead to 2025 and Beyond

Expectations are that Bermuda will continue to require expanded electricity generation, and the current integrated resources plan has accounted for this need through 2025.

In addition to AVEVA products, BELCO has deployed other AVEVA platforms and products from Triconex® and Avantis®. Because of this unique ability to integrate solutions to meet evolving demands, AVEVA hopes to continue their unique partnership with BELCO well beyond the current planning period.



AVEVA

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