



DATA CENTER GOES GREEN



To maintain its growth, the world's most efficient data center needs a new facility and a new source of water.

ROVISYS

RoviSys Building Technologies has been the sole building management system (BMS) provider at the company's current sites for five years, gaining exclusive knowledge and providing extensive experience in a range of solutions, from BMS and facility management to connectivity and asset management. A close working relationship with the data center operations and engineering teams, along with a history of previously successful efforts made RoviSys a natural extension of the stakeholder team and a clear partner choice for this massive expansion.



This South Carolina data center is growing fast. Boosted by a strong reputation for reliability, efficiency, and low costs, the company has maxed out their space in eight buildings with water-cooled servers. To continue this success, it needs a new facility built from scratch that offers a new, more environmentally-friendly source of cooling water.



THE PROBLEM

Data centers must be kept at a consistently cool temperature to keep servers running at the most reliable and efficient levels possible. This company's centers rely on a variety of cooling methods to achieve this, including water pulled from the local utility. With the company's current size, however, this means consuming millions of gallons of water from the local water utility every month—an unsustainable model that has already reached its top permissible limits.



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For continued growth, the company needs a new, environmentally responsible facility that provides the capability to pull water from its own source, chemically treat it, and use in its process lines. This complicated controls challenge includes coordinating varied disciplines including piping, water treatment, and mechanical, as well as organizing and overseeing numerous vendors.



THE SOLUTION

RoviSys provided a comprehensive proposal leveraging Rockwell ControlLogix FT View solutions to complete the integration of a ground water system, complete with design documentation, sequence of operations, control system diagrams, chemical treatment system, chemical and electrical contractor systems, and the specifications needed to get the project moving. Stakeholders agreed to a twelve month timeline and 4,000 total man-hours of effort.

With the guidance of an on-site RoviSys project manager lead and support engineers, RoviSys worked through the full commissioning and code solutions for the build, including:

- ✓ Input & output strategy and design
- ✓ Panel drawings for four panels in four control areas of the facility
- ✓ Graphics, sequence code, and alarms
- ✓ IO list factory acceptance test (FAT)



THE RESULT

This new facility is able to pull water directly from an underground river and chemically treat it for use in the process lines. This capability frees the site from sourcing over 1.5 million gallons of water per month from the municipal water infrastructure, enabling an environmentally responsible solution that allows operation and expansion without affecting the area's limited water resources.

Additionally, the new facility's BMS and multiple chemical systems were integrated into the existing HMI with remote access capabilities, which means the company required no additional resources to manage these new systems. This capability alone resulted in substantial financial savings for this data center.