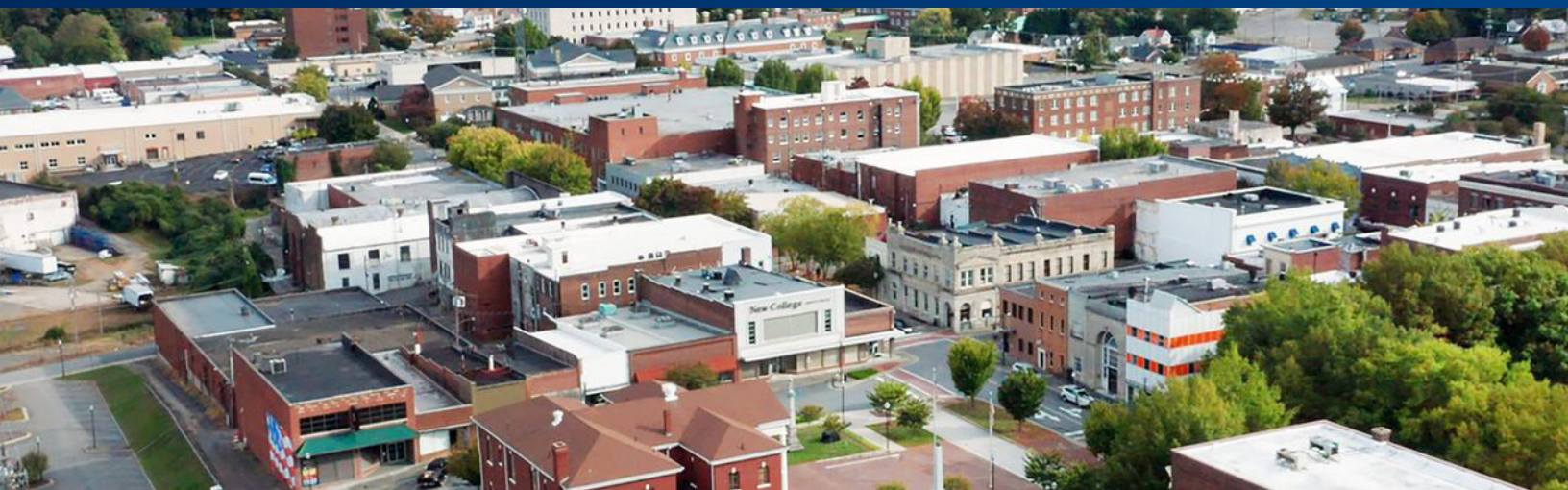


City of Martinsville, VA

Modernizing water metering infrastructure without raising taxes



Outdated water infrastructure can severely cost communities in both capital and time. With this in mind, city leaders in Martinsville, VA prepared themselves for a significant but inevitable capital expense: replacing the city's nearly 7,000 water meters.

"Some of them had been in place for 20 years or more, and as older meters degrade, they tend to run slower," said Leon E. Towarnicki, Martinsville city manager. "So we knew we were losing a certain amount of revenue because we weren't capturing the complete usage that was occurring."

Like many municipalities, Martinsville leaders struggled to fund the meter upgrade despite the critical need for

these updates. They needed an innovative approach to financing that would allow them to invest in the city's infrastructure without impacting municipal budgets.

Performance contracting enables guaranteed capital savings

The city issued a request for proposals and selected Johnson Controls after the company demonstrated how the project could be financed through guaranteed

savings. Under an energy savings performance contract, the \$7.8M project cost would be offset by guaranteed energy and operational savings of more than \$582,000 a year, for a total payback in just 13 years.

The city of Martinsville's water infrastructure initiative is expected to generate \$6.6M in savings, while the street lighting updates will deliver \$3.1M in savings. In total, the city is projected

Case study



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- Andy Lash, former Martinsville director of water resources

to reap \$9.7M in energy and operational savings over the course of the 15-year contract. This sum will fund the entire project while any surplus capital can be redirected to other critical community initiatives.

“When you look at municipal finances, it is next to impossible to pursue a multi-million-dollar project like this, as the priority goes to funding critical needs like schools or public safety,” said Towarnicki. “But creative financing methods like performance contracting allow these infrastructure projects to move forward and make for a more efficient city without impacting taxpayers.”

City-wide infrastructure upgrades to bolster the resident experience and foster long-term efficiency

Johnson Controls team of experts got to work replacing all 7,000 water meters across the city. By integrating an advanced meter infrastructure (AMI) network, the city's facilities team receives real-time alerts when it senses electric meter anomalies, such as power outages or dangerous changes in temperature. In addition to the electric and water meter upgrades, the project also included the replacement of more than 3,000 streetlights with new LED lighting. These new fixtures provide a higher quality, more

consistent light while delivering greater cost efficiency.

As a result of its collaboration with Johnson Controls, the city of Martinsville's water and lighting infrastructure has been modernized to maximize performance, customer service and cost efficiency.

These upgrades will bring direct benefits for residents. Before the upgrade, the city estimated it lost more than \$170,000 annually due to inaccurate water and electric meter readings. The new water meters guarantee greater accuracy (98.5%) over a 20-year lifetime, allowing the city to bill customers more precisely and capture significant revenue that might otherwise have been lost. In addition, the infrastructure's continuous remote monitoring capability enhances customer service by immediately flagging any unusual activity.

“This gives us an opportunity to proactively call the homeowner and flag leaks or issues they may not have noticed,” said Towarnicki. “The new metering equipment allows us to carry customer service to a level that we haven't had here before.”

The new meters have also greatly reduced maintenance costs. Less upkeep coupled with a single connected dashboard

means it's no longer necessary for water department employees to drive through the city and physically read each meter at every home and business. As a result, the city reduced its four-person meter reading crew and accompanying vehicles by half, with one individual retiring and another transitioning to another city role.

“The wealth of knowledge Johnson Controls brought was priceless,” said Andy Lash, former Martinsville director of water resources. “My advice to other local governments interested in this sort of water modernization project is, ‘Don't go at it alone.’ There's help available out there, and it's worth it. Having that expertise from Johnson Controls made a big difference. We always had someone available to us who had the experience to fill in any knowledge gaps, and that was invaluable.”

To learn more about how Johnson Controls supports local governments with modernization that maximizes performance, customer service and cost efficiency, visit:

<https://www.johnsoncontrols.com/industries/local-government>