SIEMENS
Ingenuity for life

HEMPSTEAD

DELICIOUS & NUTRITIOUS
A two cup serving of watermelon is an excellent source of vitamins A, B6 and C.

WATERMELONS

The City and Siemens partner to upgrade infrastructure and improve operational efficiency through digitalization.

City of Hempstead, Texas

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Siemens helps the city create a perfect place to live and work while delivering a first year savings of over $200k in labor and maintenance costs.

Hempstead, Texas, is located 50 miles northwest of downtown Houston, along busy U.S. Highway 290 and close to several academic institutions, such as Prairie View A&M University, Texas A&M University, and Blinn College. This "City of Character... Growing Stronger," as their mission statement proclaims, has a population of over 6,200 people. The town's economy is based on county government and shipping. Hempstead is also known as the watermelon capital of Texas and the community comes together every July, as has been the custom for over a quarter of a century, to celebrate Watermelon Festival.

Client Objectives

Mayor Michael Wolfe, Sr. and city officials are always seeking new ways to create a perfect place where citizens can grow and prosper and prospective businesses are enticed to establish roots. They began requesting bids from vendors who shared the same vision and could help them update Hempstead's aging infrastructure.

Metering of gas, electrical, and water utilities was identified as one of the first priorities. Meters of various sizes and brands of manufacturers were installed over the years, leading to inconsistent performance, unreliability, and inaccuracy. That, combined with the operational inefficiencies associated with manually reading meters, resulted in higher operational costs and less revenue than expected being collected for the city.

A solution was needed to prevent this loss and close the gap between the volume of water produced and the water billed to customers each month. "This project was pivotal to creating a solid foundation for future growth and opportunity," said Mayor Wolfe. "We didn't want to just purchase a product from a supplier. We sought a partner who could deliver innovative and sustainable solutions that would reduce operating costs and optimize operations in a more transparent, accurate, and fair way."

Siemens Solution

The Building Technologies Division of Siemens Industry, Inc., has long been a leader in the water and wastewater industry. Siemens dedicated team of professionals, processes, and procedures ensure the ideal automated metering solution is designed and implemented according to a community's unique requirements.

In this case, the local Siemens team listened to the city's unique needs. Siemens helped identify the sources – leaks, tampering, unbilled consumption from meter inaccuracy, unmetered consumption, and meter reading inefficiencies – and provided a solution to fix the problems.

The proposed solution included a Siemens-guaranteed Performance Contract to make the project viable for the city. This winning proposal featured a turnkey automated metering infrastructure (AMI) solution that would meet the city's objectives of:

- Improving meter accuracy so citizens pay for what they actually use
- Eliminating the need to manually collect data/reads
- Reducing operating costs and overtime charges
- Strengthening reliability and accountability of the utility infrastructure
- Giving citizens greater access to their utility data
- Providing faster response to citizen inquiries
- Optimizing reporting, tracking, and data collection

Two facility improvement measures (FIMs) were defined. First, automate the meter infrastructure for electric, gas, and water, and replace old, inefficient meters. With the help of Siemens expertise, the city chose a third-party system, Sensus FlexNet®, one of the industry-leading manufacturers

for AMI technologies, as the best solution for this community. Working with smart meters and sensors, the FlexNet system securely transmits and receives customer usage data so distribution and use of the various utility systems can be proactively managed.

The new technology would be the first steps in digitalizing the city with the new meters and AMI system serving as the backbone. The second FIM would establish a Supervisory Control and Data Acquisition (SCADA) system at 9 lift stations. By utilizing the AMI backbone, Siemens was able to provide the city with a way to control and monitor all its lift stations.

Key to installation was setting up a clean, accurate, and up-to-date database. To verify the accuracy of the data, Siemens conducted a database analysis and reviewed various areas, such as:
- Correct number of digits and multipliers
- Proper syncing up of files
- Data-matched installation pictures and addresses
- Consumption history was verified for any outliers

Additionally, random field surveys were conducted to double-check meter and radio accuracy – and all data was confirmed to be correct.

"Siemens was able to resolve errors, correct data, and establish a baseline for us," said Anthony Hill, Project Manager for the City of Hempstead. "What would be a huge undertaking for any city with limited resources and expertise was completed professionally by Siemens, including all ancillary system components. This was all included in the project without any hidden fees."

CLIENT RESULTS

Replacing aging and inaccurate utility meters, as well as installing AMI technology, allowed the City of Hempstead to enhance revenue by capturing lost and unaccounted for water, reducing operations and maintenance costs, and generating savings from lower water meter reading costs. With the new meters in place, data is now collected and transmitted reliably and securely. In year one, accurate water metering of water consumption helped the city recoup over $46k in revenue, as well as provide a savings in labor and maintenance in excess of $197K annually. The Siemens team will confirm the performance of the system through ongoing monitoring and verification on an annual basis.

Furthermore, the solution provided the needed upgrades without increasing taxes or fees. The city's new, smart technology conveys to prospective businesses that Hempstead has the infrastructure in place to support growth. Citizens are ensured of accurate and timely billing, with fewer rate increases and improved customer service. If a leak should occur, the Public Works crew will receive an alarm so that it can be quickly handled and resolved.

"We listened to the city's vision for growth and prosperity and knew we had powerful tools that could help them do more with their infrastructure. But our partnership doesn't end with the completion of the project," said Chad Nobles, Siemens Account Executive, State & Local Government. "Whether sponsoring STEM programs, giving advice on the latest technology, or finding ways to make the city more sustainable and energy efficient, our goal is to help Hempstead create a perfect place – where people can come to work, learn, live, grow, and succeed."

"From answering questions that arise in our day-to-day operations, to volunteering time to help youth at our Summer Science Program, Siemens is involved and invested in our community."

**Michael Wolfe, Sr.,
Mayor of Hempstead**