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Tip #218

Complete a [building tune-up](#) (retro-commissioning) to ensure existing systems perform as designed.

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FAQs

Click on the questions below to reveal the answers.

Download a [printable version](#) (PDF 112KB) of all the questions and answers.

General Project Information

What is the advanced metering project?

Right now, it's fairly basic.

Fort Collins Utilities is upgrading mechanical electric and water meters in homes, schools and businesses throughout the community with electronic devices that will enable two-way digital communication between the meter and the utility.

The meter upgrade will involve replacing electric meters and installing transmitters on water meters. All meters in the Utilities' service area will be replaced.

How are advanced meters different from what we have now?

The new meters will provide wireless communication between meters and the utility, eliminating the need to send a technician to customers' homes and businesses to manually read meters. Over 500 of our larger commercial customers have had these meters since 1995.

Will the new meters read both water and electric use?

Utilities will read the meters for the utility services Fort Collins Utilities provides to your home or business.

How can I access the data provided by the new meters?

In the future, a website and online portals will provide usage information for customers who want to review their data. Each customer will have access only to their own data. This online view of usage is projected to be available in 2013.

Are other communities pursuing advanced metering projects?

Fort Collins Utilities is among 100 utilities nationwide to receive grants to develop a "smart" utility grid for advanced metering. The Fort Collins grant award includes participation from the City of Fountain. These projects are independent of each other, with each city covering its own share of project expenses.

In our region, Fort Collins-Loveland Water District, Poudre Valley REA and Colorado Springs Utilities are implementing similar advanced metering programs even though they are not grant recipients.


Benefits

What makes this meter project "advanced?"

Existing mechanical electric meters will be replaced with electronic meters, and a transmitter will be installed on water meters. This will allow two-way communication between the meters and the utility, giving customers data that will allow them to better understand and manage utility use and costs. It also allows the Utilities to provide better service to our community.

Report a Problem

- [e-Bill - Pay Bill Online](#)
- [Start or Stop Service](#)
- [Manage Your Account](#)



Learn more about new electric rates.
[CLICK PHOTO](#)

What are the benefits to replacing meters? How will service improve?

There will be immediate system and operational advantages from the meter upgrade. While customers won't actually see many of the early benefits, *additional customer benefits will emerge over time*, including increased flexibility and options to manage utility use. To start with, the new meters will:

- provide more timely customer service
- prepare the utility and the community for emerging technologies
- use information and technology to maintain high system reliability
- make utility operations even more cost-effective

There are several other benefits we anticipate. Many of these represent choices and more control for customers. The project will: - support better customer service in responding to high use questions - help meet our community's goals for resource conservation and environmental sustainability - improve our ability to provide and restore electric and water service by responding more quickly and efficiently to outages - provide early water leak detection - efficiently manage pipes and wires (making better use of the community's utility assets) - enable quick service turn on/turn off when customers move - read meters remotely - provide enhanced billing capabilities and voluntary programs to assist customers

Why is Fort Collins Utilities pursuing this project now?

There are many reasons this is the right time to pursue this project, including:

Customer Service: Utilities has long been at the forefront of the industry in striving to provide high levels of customer service.

Examples:

- High electric reliability from the electric line undergrounding program
- High water quality resulting from best practices followed in water treatment

System Operations: Enhanced communications and control of the utility system enable improved system operations and environmental benefits.

- fewer customer service calls, system efficiency, potential avoidance of need for new generation; consistent with the *Utilities for the 21st Century*

Installation Process & Schedule

What can I expect during meter installation?

We are taking steps to make sure that customers know what is happening and when. You will receive pieces of communication from Utilities when it is time for installation in your area. Typically, the **installation process** doesn't require customers to be present and results in only a brief interruption to electric service and in almost all situations no interruption to water service. The Advanced Meter **electric video***^[2] and **water video***^[2] provide an overview.

I recently had a new water meter installed, so why am I getting another one now?

Utilities maintains meters as needed and has been implementing a water meter replacement project for some time. To support the Advanced Meter project, installers are now replacing certain components of the water meters but typically not the meter itself. Depending on the age of the water meter, sometimes those also need to be replaced. An appointment will be scheduled for that work.

When will meters be replaced?

Meter replacement began in March 2012 for residences and businesses located in a four-square-mile area in zip code 80525 (**Phase I**). Replacement of all remaining meters will begin in September 2012 through 2013. Customers will be notified prior to installation.

How the System Works

How detailed is the data that is collected by the new meters?

Normal operating practice will be to measure energy or water use in intervals ranging from 15 minutes to one hour.

In addition, a snapshot of meter data may be requested on demand (this is often called "pinging") in order to quickly answer customer questions or occasionally troubleshoot system issues. This capability represents a significant financial savings and environmental benefit because we can do this without sending a technician to the customer's site.

An example of this capability will be responding to customer calls about residential power outages. In the course of the call, we can use the system to determine if power is on at the meter or not. Many times a customer power outage is caused by a circuit breaker in the customer's home. By "pinging" the meter, faster, higher-quality service can be provided without sending crews out to assess the problem.

How often will the new meter transmit my data?

The meter will transmit data in brief intervals at times throughout the day. This data will then post to the billing system once a day.

Will the utility monitor my consumption to know when I am home?

The detail of the data from advanced metering cannot detect the presence of people in their homes. Advanced metering simply measures the consumption of electricity and water.

Will you turn off or control my thermostat or my appliances through these new meters?

Participation in all such programs will be strictly voluntary. The advanced metering project will allow customer choice, money-saving opportunities, and the opportunity to reach our city sustainability goals.

Thermostat controls would require a special thermostat that the customer must elect to install if they wish to participate in a voluntary program. Future equipment, thermostat, or appliance communication capabilities and appliance behavior will be strictly controlled by the customer.

How secure will my utility data be?

Through this project, the City is implementing the Cyber Security Plan submitted to, and approved by, the federal government. The City is also enforcing the same stringent standards on all project/utility vendors. The City will be audited by the federal government to ensure all necessary precautions have been implemented.

Concerns

I have read some negative articles about advanced metering projects in other communities. Why is Fort Collins pursuing it?

Many lessons have been learned about advanced metering projects and related applications from projects throughout the country. Fort Collins is taking advantage of both positive and negative experiences in other communities to guide our project and ensure its success. We are also using experienced resources as needed to assist with the project. We are convinced that the benefits are significant and build towards our community's future.

How does this project compare with the Smart Grid City project in Boulder?

The Smart Grid City project in Boulder was a pilot program of Xcel Energy. Xcel had a difficult time placing fiberoptic cables underground because of the rocky ground, which caused cost and schedule overruns. Fort Collins Utilities' electric distribution system is 99.9% underground already, and we have an extensive fiberoptic network in place. Also this project is not a pilot program. It is being built with proven technology, equipment and applications.

What level of Radio Frequency (RF) transmission do the meters emit?

Currently, many devices emit RF transmission in public buildings and homes, including cell phones and towers, cordless phones, baby monitors, garage door openers, wireless internet routers, and microwave ovens. Wireless networks already exist downtown, at the hospital, public libraries and in private businesses in Fort Collins. Studies show that these sources emit higher levels of RF than advanced meters.

What is Fort Collins doing to assess the potential health risks from advanced meters?

The City made arrangements with Dr. Bruce Cooper of the [Health District of Northern Larimer County](#)² to conduct an independent assessment of available research on the health related risks from advanced meters. Dr. Cooper provided a summary of his findings in the [Review of Health Effects Related to Smart Meters](#) (PDF 43KB) and responded to questions at the [July 12, 2011, City Council Work Session](#).

Will this project interfere with my privacy?

No. Fort Collins Utilities takes this issue very seriously and complies with all local, state and federal regulations to protect our customers' personal data and information. All customer information—including personal information, bill payment type or status, utility use, and more—are strictly protected.

Fort Collins Utilities is subject to the Colorado Open Records Act and Fort Collins Municipal Code §26-26, which govern the accessibility of public records.

Utilities is also subject to the FACT Act (Fair and Accurate Credit Transactions Act of 2003), which requires federal agencies, including the Federal Trade Commission, to establish guidelines for use by creditors to prevent identity theft. In 2007, the FTC published the "Red Flags Rules" requiring that creditors create and implement a program to address the detection, prevention, and mitigation of identity theft. As a creditor, Fort Collins Utilities implemented an identity theft prevention program under the Red Flag Rules, which went into effect December 31, 2010.

How will this project affect jobs?

Initially, investing in advanced meters will save the labor and operational expenses of reading meters. Fort Collins Utilities is working with meter readers to provide training and skill development for other jobs. Several meter readers have already found new positions of their choosing; we continue to work with the others during this transition. As the project progresses, business processes will change and may affect other Utilities jobs.

Project Costs and Funding

What is the cost of the Fort Collins project?

The cost of the electric portion of the project is \$31.4 million. A three-year, \$15.7 million matching grant through the 2009 American Recovery and Reinvestment Act (ARRA) is helping to finance half of this portion of the project. The balance of the electric project expense is being paid by bonds to enable the costs to be spread-out over a longer time period so that Utilities can take advantage of project savings to recover the cost.

In addition, the water meter project is budgeted for \$4 million. Grant funds are not available for the water portion of the project.

Why is the federal government spending this money?

In 2009, the federal government, through the American Recovery and Reinvestment Act, announced the investment of \$3.4 billion of stimulus money on 100 smart-grid projects in 49 states. This injection of capital will make electricity delivery more reliable and help consumers use energy more efficiently. Improving the infrastructure will also allow the country to use more solar and wind power.

Will this project increase my rates?

No. Project savings will cover the costs.

Other factors will influence utility rates in coming years, including purchase power costs, which are linked to:

- the cost of fuel for generating electricity
- the cost of chemicals for water treatment
- changing regulatory requirements
- infrastructure maintenance
- system upgrades

In addition, new seasonal three-tier **residential electric rates** went into effect in early 2012. Those rates are designed to encourage conservation, so customers who use a lot of electricity and do not take conservation measures will likely see substantial increases in their electric bills. These substantial increases are the result of the new rate structure.

Why is Utilities doing this expensive project?

The benefits of upgrading the meter system—which includes system efficiency, increased customer choice and positive environmental impacts—are important aspects in continuing to serve our community well. After developing a thorough business case, we have determined that this represents a positive economic return and a solid investment for the community's future.

Environmental Considerations

What are the environmental impacts/benefits of this project?

The immediate impact will be related to upgrading all meters currently in service. Our studies indicate that automation of this system will:

- take 22 vehicles off the road through meter reader savings
- eliminate just less than 200,000 vehicle miles and 2,700 customer service calls annually and result in a reduction in CO2 emissions of approximately 67 metric tons

What is happening to the old meters?

Utilities is recycling the existing meters in an environmentally responsible manner:

- Testing all electric meters replaced during **phase I** (March - May 2012). Electric meters replaced in phase II and III will receive sample testing based on results of phase I testing.
- Selling used meters where possible (to other public power utilities), keeping them out of the waste stream
- Recycling remaining meters in accordance with the Utilities' stewardship mission and in accordance with local, state and federal regulations

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