

**Tampa Electric Company Presentation**  
for  
**Florida Public Service Commission**  
**Smart Meter Workshop**

September 20, 2012



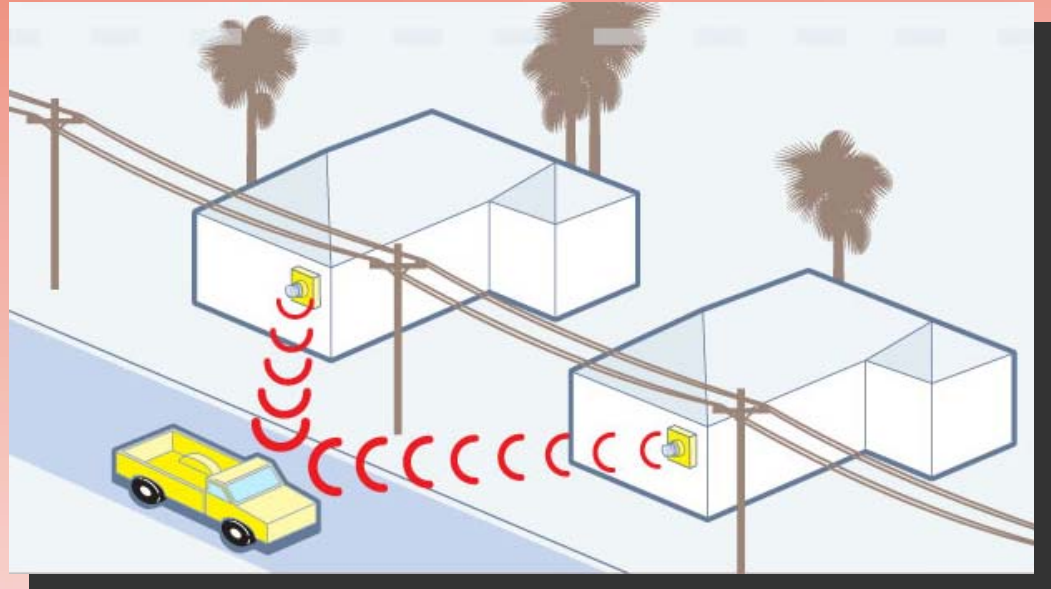
# Tampa Electric AMR Meters

- Tampa Electric currently has more than 682,000 Automated Meter Reading (AMR) meters in service
- AMR installation project began in September 2003 and was completed in January 2012
- The 2003 AMR initiative provided Tampa Electric with significant meter reading cost savings
- Tampa Electric doesn't have any AMI meters in service but is evaluating AMI meters for future use in an upgraded system



# Tampa Electric's AMR Meters

- Tampa Electric uses Itron's Automated Meter Reading (AMR) Residential meter which is commonly referred to as a "drive by" meter
- The AMR meter contains a frequency hopping spread spectrum transmitter.



- The AMR meter is a transmit-only device that collects customer kWh use and transmits that data over the 902 - 928 MHz Industrial, Scientific and Medical (ISM) RF band.
- The duration of an AMR meter's transmission is less than 10ms
- AMR transmissions occur periodically every 4-6 seconds or on regular intervals every 30 seconds depending on the meter model

# AMR Meter Regulations and Standards



- All of Tampa Electric's meters comply with the workmanship, safety, and accuracy standards in the American National Standard for Electric Metering (ANSI C12)



- All AMR meters are in compliance with the FCC's Code of Federal Regulations, Part 15 (Radio Frequency Devices), Subpart C (Intentional Radiators)



- A third party, Advanced Compliance Solutions, tested and demonstrated that Itron's AMR meters used by Tampa Electric comply with Part 15, Subpart C of the FCC's Code of Federal Regulations.



*Federal Communications Commission  
Office of Engineering & Technology*

- Tampa Electric's own testing has shown RF emissions from its meters are within the FCC Limits for Maximum Permissible Exposure for General Population/Uncontrolled Exposure expressed in the FCC OET Bulletin 56



# AMR Transmissions

- An AMR meter's transmission includes:
  - Total kWh consumption
  - Peak billing demand (Commercial customers only)
  - The meter serial number
  - Meter type
  - Tampering indicators
  - Error checking information
- An AMR meter's transmission does not include:
  - Instantaneous kW
  - Interval or Time of Use (TOU) data
  - Voltage/Current
  - kVAR
  - Personally Identifiable Information (PII)
    - Name
    - Address
    - Social security numbers
    - Billing account numbers
    - Credit card numbers



# Information Standards

- Tampa Electric follows Fair Information Practice Principles established by the Federal Trade Commission in Title 16, Chapter 1, of the Code of Federal Regulations.
- Tampa Electric has an internal Code of Ethics and Business Conduct that provides standards to protect sensitive information





# Public Communication

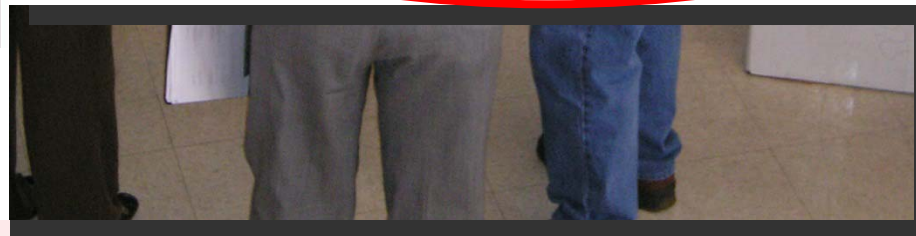


Tampa Electric provided information to its customers about the new AMR meter installations through a variety of avenues:

- Bill inserts that included FAQs about the new technology
- Web pages dedicated to providing customers with AMR meter information
- Knocked on customers' doors to inform them of the change to an AMR meter
- Newspaper were published articles about the AMR meter installations
- Visited the University of South Florida to educate people about AMR technology
- In the white space on the monthly bill

New Charges Due by Feb 23, 2009		Service from Dec 29 to Jan 30
Customer Charge	Residential 110 Rate	8.50
Energy Charge	720 kWh @ \$.05257/kWh	37.85
Fuel Charge		
First 1,000 kWh	720 kWh @ \$.06416/kWh	46.20
Above 1,000 kWh	0 kWh @ \$.07416/kWh	0.00
<b>Electric Service Cost</b>		<b>\$92.55</b>
Florida Gross Receipts Tax	Based on \$92.55	2.37
Franchise Fee	Based on 6.230%	5.91
City Tax		5.25
<b>This Month's Charges</b>		<b>\$106.08</b>
<i>Amount not paid by due date may be assessed a late charge of 1.5% or \$5.00, whichever is greater.</i>		
<b>Total Due</b>		<b>\$106.08</b>

**We're shifting to Automated Meter Reading**  
 Over the next few months, Tampa Electric representatives will be installing digital automated meters at customer locations throughout the Carrollwood and Oldsmar areas. Automated Meter Reading (AMR) is a proven method of remotely reading meters using advanced communication technology that allows for increased privacy and convenience and also reduces human errors. You will experience a brief interruption to your electric service when the meter is being installed.  
 Visit [tampaelectric.com/community/whats happening](http://tampaelectric.com/community/whats happening) for more information



tampaelectric.com



# Customers' Concerns with AMR Meters

- A very limited number of residential customers have contacted Tampa Electric to express their concerns with AMR meters through letters, emails, or phone calls
- After education about AMR technology, only 12 customers requested a meter change



- These customers have concerns with RF emissions and privacy
- As a temporary measure, Tampa Electric has replaced these 12 AMR meters with digital meters without an RF transmitter or delayed the installation of an AMR meter



# Tampa Electric Metering

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- Tampa Electric upgraded its metering with Automated Meter Reading (AMR) Technology beginning in 2003
- Tampa Electric's electric metering is safe, accurate, and complies with national standards and federal regulations
- Tampa Electric continues to communicate with its customers about new metering technologies and services offered
- Tampa Electric continues to look for and evaluate new metering technologies to ensure it delivers electricity using the best practices in the industry



# Tampa Electric Meter Operations

