

Borough of Ephrata

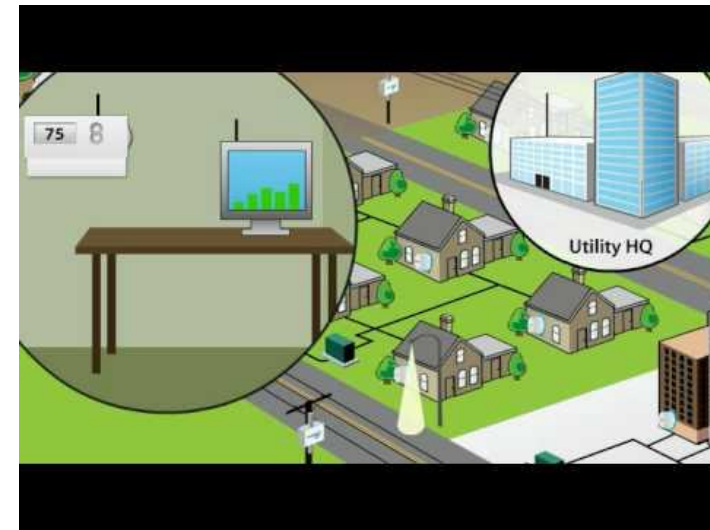
LANCASTER COUNTY, PENNSYLVANIA

Benefits of Electric Meter Project

- **Customer Service**
- **Public Safety**
- **Continuous Improvement**
- **Service Value (Efficiency)**

Customer Service

- The Advanced Metering System IS:
 - ✓ A Touchpoint with every one of our Customers
 - ✓ A gateway for Customers and Customer Service Agents to interact
 - ✓ A tool for Customers to manage their energy usage
 - Facilitates Customer efforts for Energy Efficiency
 - Facilitates Customer efforts for Energy Conservation
 - ✓ A tool for efficiently responding to new connections and disconnections



Public Safety

- The Advanced Metering System IS:
 - ✓ A tool for reporting power outages
 - ✓ A tool for responders to know where power is out
 - ✓ A tool for responders to know when power is restored
 - ✓ Advanced diagnostics built into meters – lineman safety
 - ✓ Platform for future Distribution Automation System
 - ✓ Reroute power around trouble spots
 - ✓ Minimize outages to critical infrastructure



Continuous Improvement

The Advanced Metering System IS:

- ✓ A Tool for the Borough to use for managing the distribution system
- ✓ A Platform for future system improvements
- ✓ A Means of Proactively Responding to Future Regulatory Mandates



Service Value (Efficiency)



- The Advanced Metering System **IS**:
 - ✓ A modernization of the distribution system
 - ✓ A means of improving system reliability
 - ✓ A means of more quickly responding to and preventing outages
 - ✓ A means of minimizing system losses
 - ✓ Meter reading is automated
 - ✓ Instantaneous meter readings available at any time
 - ✓ Most efficient use of limited labor resources
 - ✓ Instantaneous verification of customer connection status
 - ✓ Capable of automated turn off and restoration of power



Wireless Radio Frequency (RF) Systems

Radio Frequency Power Density Levels of Common Devices (in microWatts/cm²)

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000

Cell Phone – at ear



Microwave Oven – 2 feet



Smart Meter – 3 feet



Smart Meter – 10 feet



WiFi Router – 3 feet



FM Radio / TV Broadcast



Maximum
Minimum

Addressing Health Concerns

- World Health Organization = no adverse health effects from low-level RF energy
- Advanced meters transmit for short periods each day
 - EPRI Study of 47,000 meters: 99.5% transmit less than 3 minutes per day
- RF signals weaken significantly as the distance to the source is increased
- Continuous exposure in close proximity would be 70 times lower than FCC limits