

Naperville Smart Grid Initiative

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Naperville



Naperville Smart Grid Initiative

Smart Grid Overview

Smart meters

COSTS, PRIVACY & SECURITY

Deployment map

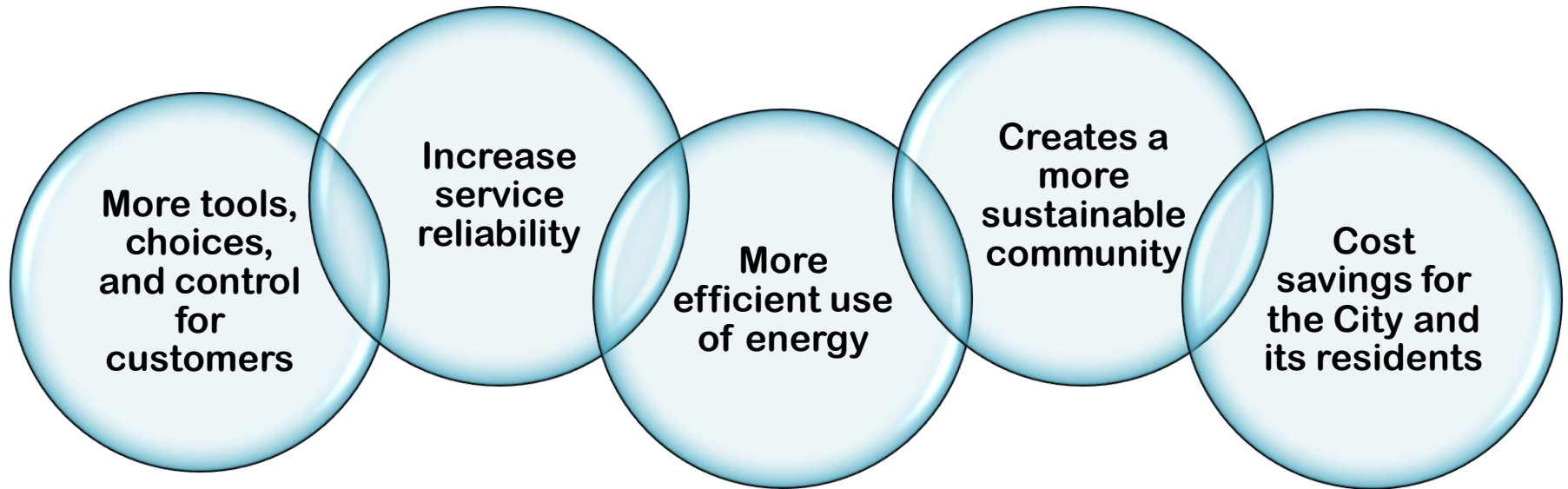
Benefits: the 4 E's

Customer Bill of Rights



NSGI Explained

The NSGI will upgrade Naperville's electric utility infrastructure and key system. It will create a Network that allows two-way communication between the utility and its customers.



Naperville



Advancing in Technology



- The Department of Public Utilities-Electric (DPU-E) has been implementing digital upgrades over the last 20 years.
- In 2009, the DPU-E was the only Illinois utility to receive a Department of Energy (DOE) grant out of over 500 applicants nationwide.
- The City received \$11 million in DOE grant funding for the \$22 million NSGI project.

Naperville



Smart Meters



**57,323 smart meters
scheduled for installation
starting January 2012**

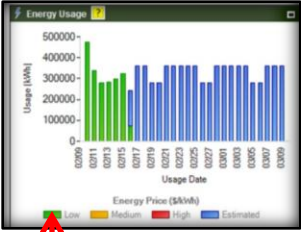


- **Approximately 27 million smart meters currently installed in the U.S.**
- **An estimated 65 million smart meters (50% of total U.S. households) will be installed by 2015 based on current deployment activity and plans***
- **95% of all smart grid deployments nationwide are wireless**

**Study conducted by the Institute for Electric Efficiency*

Single adaptive path from Mesh Network

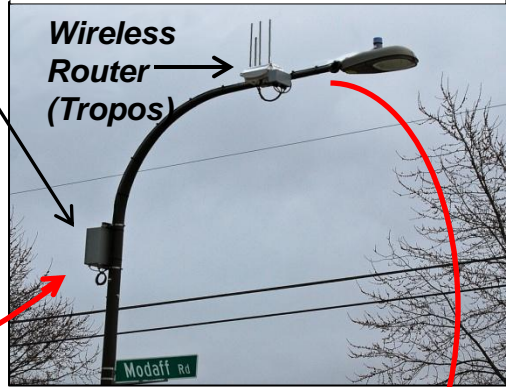
View electric usage on home computer through ePortal website



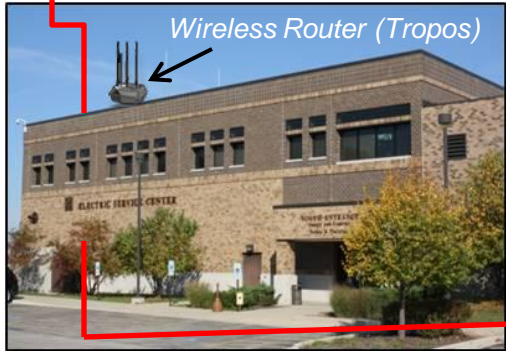
Smart Meter
sends signal

Data Collection Box (Gatekeeper)

Streetlight with wireless router and data collection box



*Wireless routers not shown to scale



Electric Department



Fire station



Streetlight with wireless router



PRIVACY & SECURITY

What happens to my usage data collected from the Smart Meter?

You can view your data through a secure ePortal website.

[DASHBOARD](#) | [ENERGY MANAGEMENT](#) | [HOME CONTROL](#) | [MY WORLD](#) | [SETTINGS](#)

Energy Usage
 Usage (kWh) vs Usage Date (02/09 to 03/09). Legend: Low (Green), Medium (Yellow), High (Red), Estimated (Blue).

Weather
 Naperville IL
 Hi / Lo : 30°/28° F
30°F
 Humidity : 86 %
 Wind : 7 mph W
 Pressure : 28.86 in

Current Price
 EDR Green
 \$0.00/kWh

Active Programs
 Demand Response
 Inactive

Smart Savings
 Price Manager
 Energy Saver

Message from CALICO ENERGY
 Your home has been equipped with a selection of power control and metering devices that will allow you to save energy and participate in discount rate programs. You can participate in Demand Response programs as well as do your own Home Energy Management. This portal will provide you insight into your energy usage and costs plus the ability to save money by participating in special rates and programs.

News and Events
 Communes get smarter with energy management using the smart plan.

Know more about
 Frequently Asked Questions Refer a Friend Benefits

ePortal

- Secure access
- Monitor and manage electric usage on a daily and monthly basis
- Available 2013





View and manage energy usage by using the secure ePortal website or optional home energy displays and thermostats.

The data will only be used by the utility to manage billing and operations. It will not be shared with third parties without customer authorization.

- Residents can purchase a Home Energy Device (HED) in order to view near real-time energy consumption information from the utility meter.
- The projected cost of a HED is estimated at \$100 through Schneider Electric, the City's HED vendor.

When will your meter be upgraded?

LEARN HOW TO USE THE INTERACTIVE MAP

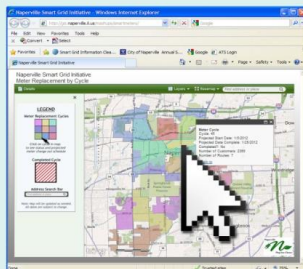
1. Open the City of Naperville website www.naperville.il.us and click on the NSGI link.



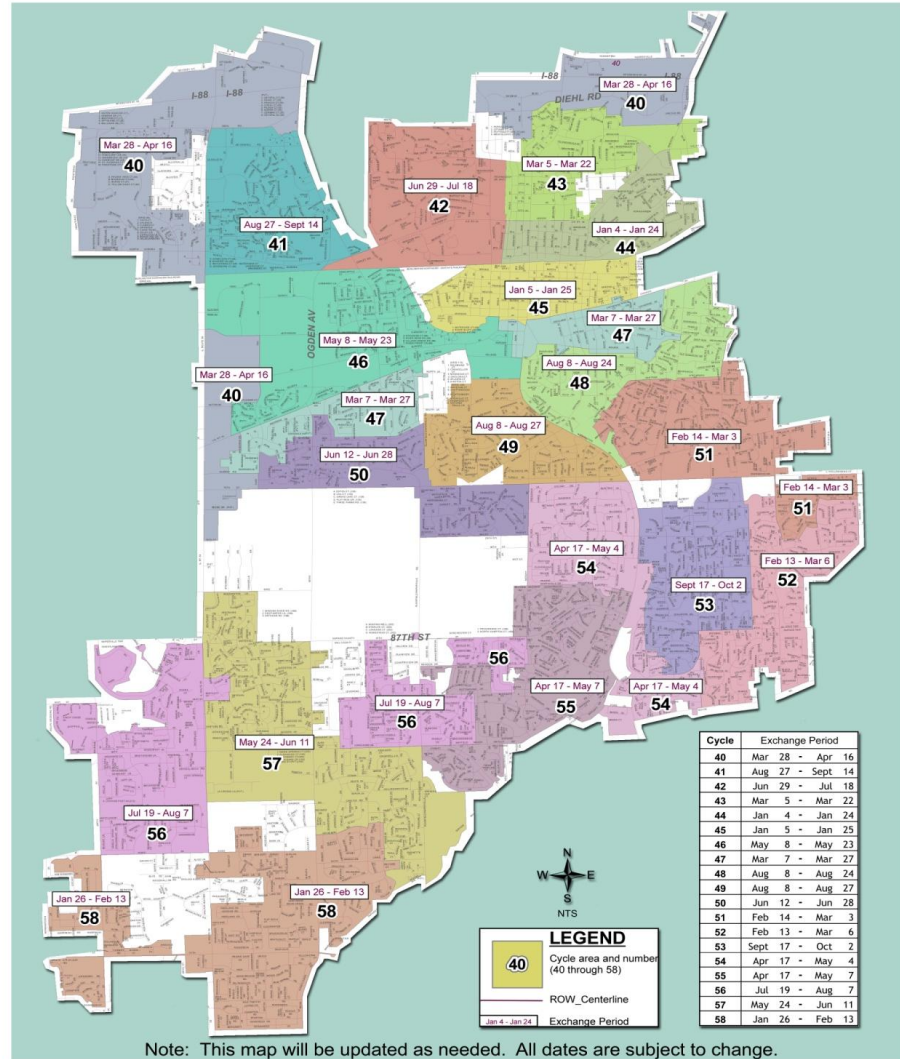
2. Click on the NSGI Deployment Map button to activate the map.



3. Click on the map itself OR type in an address in the 'Find address or place' bar.



As each cycle is completed, the map will be updated to indicate the status of that area.



Note: This map will be updated as needed. All dates are subject to change.

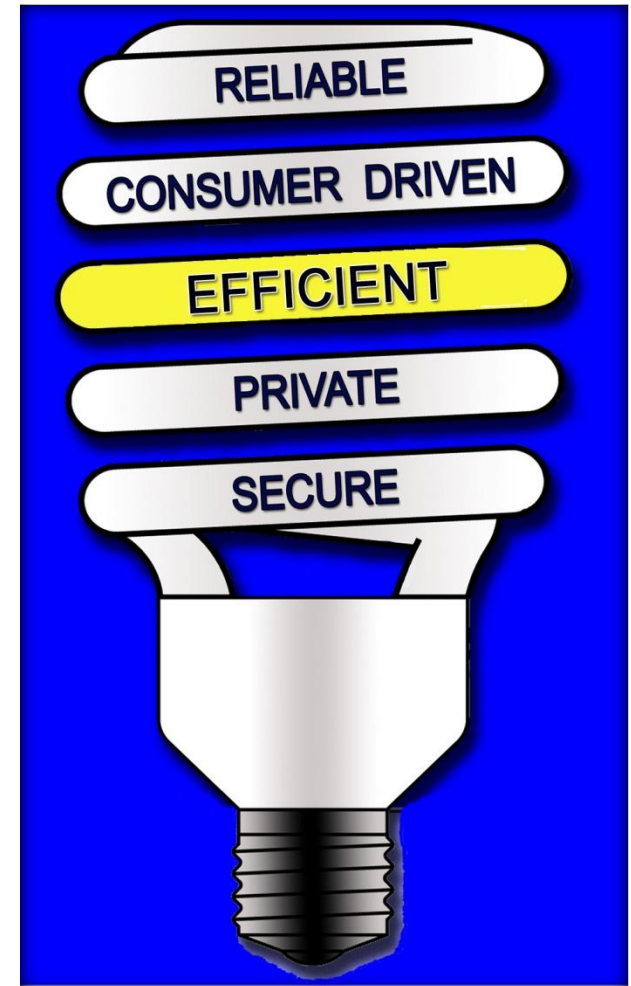


Why is Naperville Doing this?



- One of the many reasons... **EFFICIENCY**

- Buy only what we consume
- Reduce waste in distribution
- Consumers see clearly how they use electricity
- Future opportunities - enable residents to save even more
 - smart appliances
 - demand response programs
 - power generation and storage



Naperville



NSGI Benefits – the ‘4 E’s’



Energy

Customers can make **smarter, more efficient choices** about how they use energy.

Environment

The NSGI paves the way for a **cleaner environment** and the **electric vehicle**.

Education

Naperville-area students will have a practical tool to learn about energy consumption and conservation and gain firsthand experience on emerging technologies and **future careers**.

Economy

The City’s electric utility will continue to **attract businesses** with its low rates and reliable service. The NSGI provides customers with tools to **save money**. The project is spurring **job creation** locally as well as nationally, helping grow our country’s economy.



COSTS

How much is this costing?
How will this affect my electric bill?



*customer centered
participation*



*Visit
www.recovery.gov
for more information*



*incentive to use less
energy on high
demand days*

Resident electric bills will **NOT** increase due to NSGI.

No general fund (property tax) dollars are being used for this \$22 million project.

Capital improvement funds and an \$11 million federal grant are paying for this project.

Studies and surveys have shown that customers can save 5-10% on their electric bill by being aware of their energy usage and how much it costs.



Customer Bill of Rights



- The right to be **INFORMED**
- The right to **PRIVACY**
- The right to **OPTIONS**
- The right to **DATA SECURITY**

<http://www.naperville.il.us/emplibrary/nsqi-billofrights.pdf>

Naperville



Please visit city's web site
with any questions
you may have

www.naperville.il.us/smartgrid.aspx

