



MEMORANDUM

To: Mayor and City Councilors
From: Rich Olson, City Manager
Date: February 19, 2015
Re: Consideration – Authorization to proceed with Pilot Program for Nexgrid AMI FAN System

BACKGROUND:

For over five years, City staff has been working on the development of a Fixed Area Network, which would allow the City to remotely turn on/off meters and allow customers to have a self-determined payment date for their utility bills. Staff has been trying to utilize the City's existing Itron electrical meters, which would allow the development of the network to be more cost-effective. However, over the last few years, staff has run into the problem of lack of hardware support for the Itron system. In addition, integrating electronic reading of water meters has become an issue.

I have served on an ElectriCities technology group that has looked at smart grid technology and evaluated vendors in this area. ElectriCities has developed a strategic partnership with Nexgrid, which has become the vendor of choice for most of the NCEMPA member cities. The Nexgrid system is fully integrated, which allows for remote reading of both electrical meters and water meters. The system will also allow the option of load management.

The advantages to the Nexgrid system are:

- Real time communication;
- Remote connect and disconnect;
- Time of use capability;
- Outage notification;
- Load management.

A report published about 18 months ago indicates that about 30% of all the City's existing load management switches are not functioning or have been disconnected by the property owner. The unintended consequence is an estimated cost to the City of \$100,000 to \$150,000 per year in increased demand charges.

City staff has been working with the Nexgrid vendor to determine the cost of a complete upgrade of the City's system. That cost exceeds \$3 million. Before staff recommends to the City Council such a large expenditure, we have worked with the Nexgrid representative to develop a pilot project in an effort to determine if we can quantify the benefits we may see from the program. The information received from the pilot project will be used to evaluate the cost effectiveness of a complete conversion.

ANALYSIS:

In January, staff met Scott Wheeler with Nexgrid about a pilot project for Nexgrid's AMI Fixed Area Network system. At that time, it was recommended that the City do a pilot study of 300 end point devices, 100 electric meters, 100 water meters and 100 load control switches on residential and commercial customers around the downtown area. Staff has selected customers based on location, utility usage, water heaters and air conditioners that could be controlled during load management times and cut off history. In order to minimize cost, staff selected customers from Locus Street east to Water Street and Elizabeth Street south to Church Street. Seventy (70) residential customers and 30 commercial customers have been selected in this area, including City and County Offices. The selected customers will be able to view their usage history in real time using a secure log-in password or by using a mobile APP thru MyEco 1 website. **The cost for the pilot program is \$49,623.**

Equipment can be ordered as soon as the pilot gets approval and will take no longer than 90 days to arrive. Once equipment is installed, training will begin with meter technicians, customer service representatives and other staff. ElectriCities will host the AMI system, and meters will be read every 15 minutes or as often as needed. Meters can also be read on demand (force read), if needed. This AMI system will also help with outage restoration during power outages like we have encountered this week with the ice storm.

FINANCIAL:

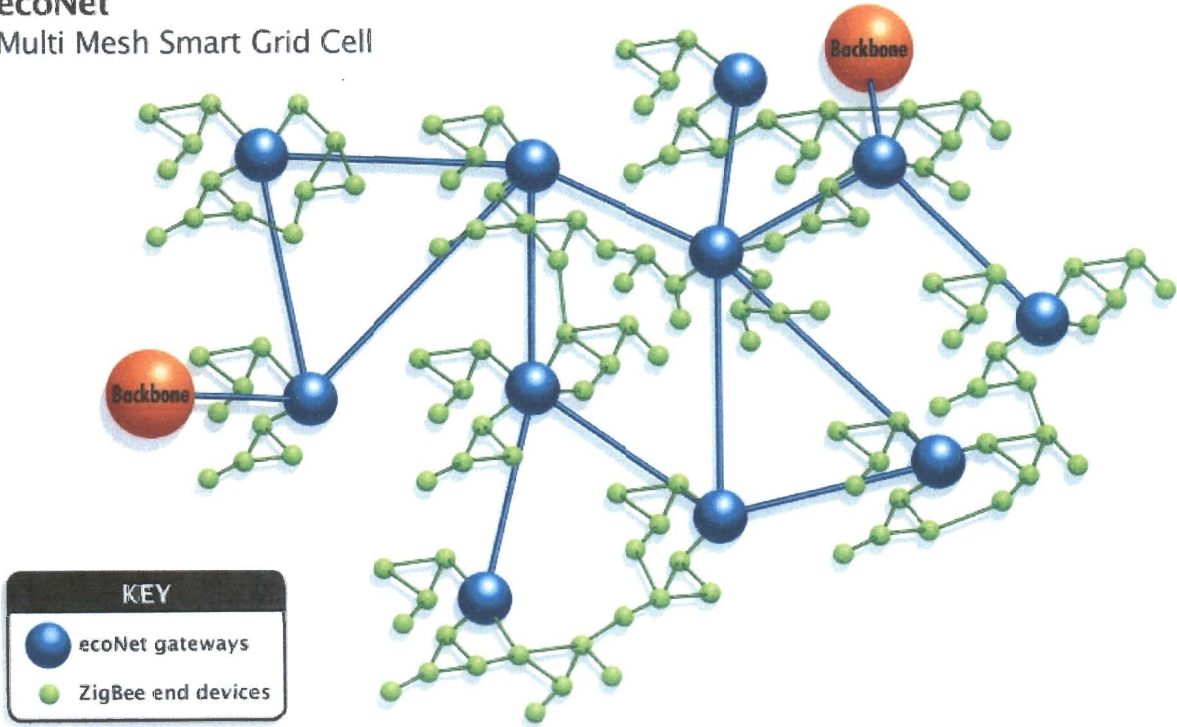
The Finance Committee discussed this matter during their meeting of February 19, 2015. Upon motion by Mayor Peel, seconded by Councilman Donnelly, the committee unanimously recommended approval by the City Council.

STAFF RECOMMENDATION:

By motion, authorize staff to move forward with the pilot project with Nexgrid as described herein.

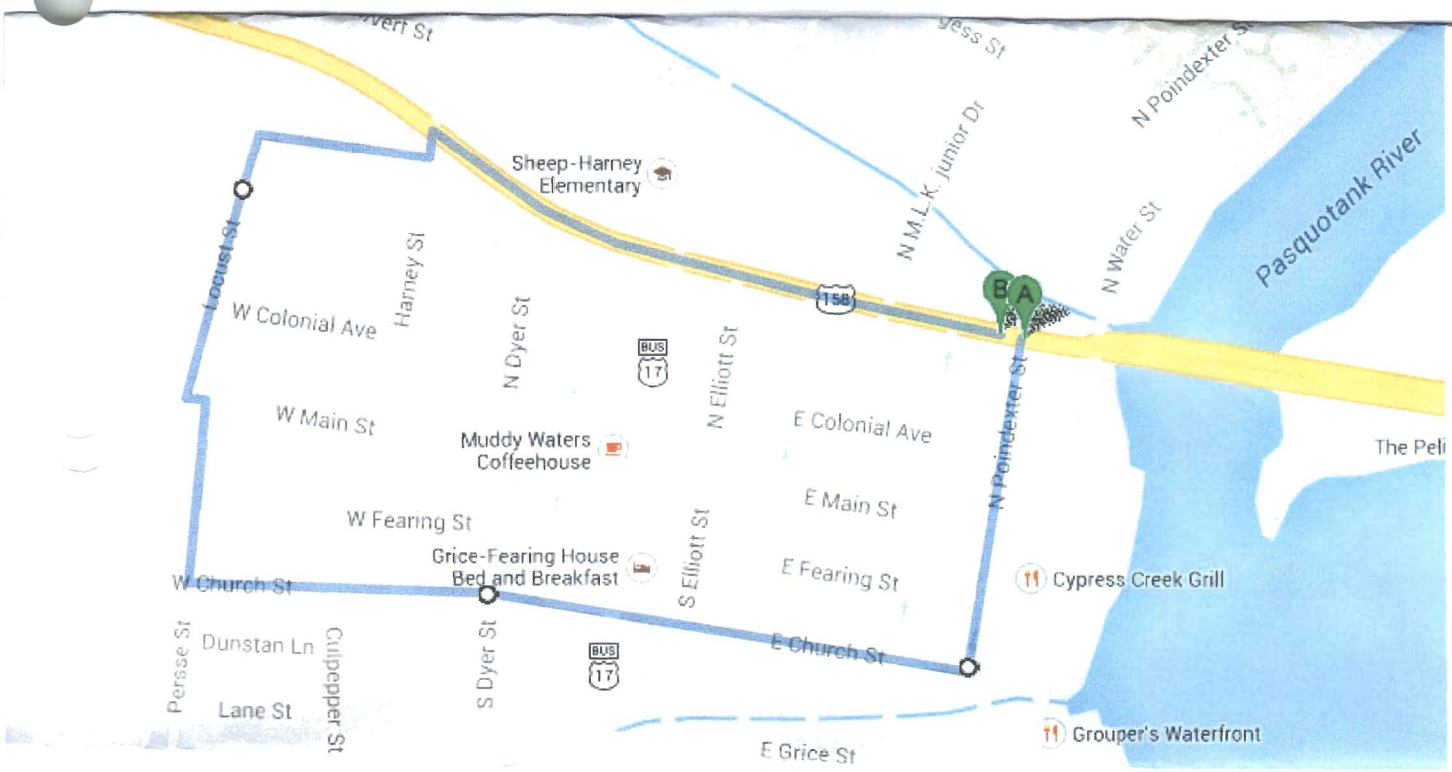
RCO/vdw

ecoNet
Multi Mesh Smart Grid Cell



KEY

- ecoNet gateways
- ZigBee end devices



Press Release

FOR IMMEDIATE RELEASE



Nexgrid Begins Installing Street Light Mounted Smart Grid Gateway

Locust Grove, VA. August 22nd, 2011 - Nexgrid, the leading provider of standards-based smart grid solutions, today announced that it has begun shipping the latest version of its flagship product, the ecoNet SL.



Like all ecoNet products, the ecoNet SL is a multi-mesh gateway that leverages Nexgrid's patent pending dual mesh technology to provide seamless and ubiquitous wireless communication in support of AMI, HAN, Demand Response, and other Distributed Automated functions. The ecoNet SL gateways support the latest WIFI 802.11N and ZigBee wireless communication standards. The SL product changes the game by being the easiest to install gateway available on the market. It is lightweight, very durable, and plugs into the photocell available on all common street lights in North America. Additionally, the ecoNet SL manages and monitors the streetlights providing energy usage and bulb outage notification.

Haim Shaul, CMO and co-founder of Nexgrid said, "Our system has gained traction because we have always focused on creating solutions that are easy to use, whether our software, our gateways, or our end devices. The ecoNet SL is truly groundbreaking because it allows for an installation to be completed in less than 30 seconds." Shaul added, "Our customers have found that they can install the SL without any tools or any wire splicing. Quite simply, no other smart grid gateway product on the market can make this claim."

About Nexgrid

Nexgrid (formerly Intelagrid) is the emerging leader in broadband standards-based smart grid and smart home products. Nexgrid enables utilities to deploy a scalable, reliable, and secure infrastructure for advanced metering and real time monitoring that will scale as the needs of the smart grid grow over time.

Nexgrid's software suite allows utilities and their customers (residential and commercial/industrial) to manage and monitor all aspects of the system through a unified portal/web/smartphone environment. The software supports all major web browsers, iPhone, iPad, Android, Blackberry, iGoogle, and any smartphone.

For more information, visit: www.nexgrid.net.

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innovative smart grid solutions