

Request for Information

RFI



For

Home Area Network Implementation Services, In-Home Displays, Smart Thermostats and Load Control Devices

For

Advanced Metering Infrastructure-Meter Data Management System (AMI/MDMS) Project

Version: 4.0
Date: 6/8/2010

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Confidentiality and California Public Records Act

All responses to this Request for Information ("RFI") will become the property of the City of Glendale and will be retained or disposed of accordingly. Therefore, the Responder is cautioned to identify on its Response any data that the Responder believes to be exempt from the publication under the Public Records Act. If Responder claims a privilege against public disclosure or otherwise objects to the records' disclosure, then the City may either decline to produce the requested information or redact portions of the documents and produce the redacted records. By submitting a Response, the Responder agrees that it shall indemnify, defend and hold the City harmless from all liability, claims, suits, demands, damages, fines, penalties, costs or expenses arising out of or alleging the City's refusal to publicly disclose one or more records that the Responder identifies as protectable, or asserts is protectable.

Introduction and Background of the RFI

With this Request for Information we request information regarding your company and your products/services. The same information will be gathered from different companies and will be used to evaluate what suppliers we will follow up the sourcing process with a Request for Proposal ("RFP") or Request for Qualification ("RFQ").

Scope

Specific information is requested according to the form below.

Abbreviation and Terminology

- AMI- Advanced Metering Infrastructure
- CIS- Customer Information System
- GWP- Glendale *Water & Power*
- HAN- Home Area Network
- IHD- In Home Display
- MDMS- Meter Data Management System
- RFI- Request for Information
- RFP- Request for Proposal
- RFQ- Request for Qualifications
- RSS- Feed- Really Simple Syndication

RFI Procedure

To answer this RFI please fill in the attached form.

Contact person listed below is available for assistance in case that is needed.

The answers to this RFI will be evaluated by staff from different functions within Glendale *Water & Power*.

Submittal

Please provide one original, five hardcopies of your RFI plus one Adobe PDF copy to City of Glendale Department of Water & Power addressed to:

Martin Powers
Assistant Project Manager
City of Glendale
141 N. Glendale Ave., Level 4
Glendale, CA 91206

Request's for Information must be received no later than **July 01, 2010 AT 5:00 PM** Pacific Daylight Time.

Proposals may be e-mailed in PDF to Mpowers@ci.glendale.ca.us to meet the deadline, but must be followed-up by one original and five (5) hardcopies within 24 hours of the deadline date and time.

This Request for Information neither expresses nor implies any obligation on the part of GWP to enter into a contract with any Respondent submitting an Information Package. GWP reserves the right to negotiate concurrently with multiple respondents.

The City will not be liable for any costs incurred by the proposer in responding to this Request for Information, presentations or any other activities related to responding to this Request For Information response and/or demonstrative expenses.

Contacts

For questions regarding this Request for Information, you are welcome to contact:

Martin Powers
Assistant Project Manager
(818) 548-3884
Mpowers@ci.glendale.ca.us

Time Line

This is the timeframe for the RFI and an eventual coming project

- 6/8/2010 – The Request for Information is sent out
- 06/23/2010 – Last date for questions
- 07/01/2010– Last date for submission of answer
- 0715/2010 – Result from the evaluation delivered from Glendale *Water & Power*
- 08/16/2010 – RFP or RFQ sent to suppliers that has passed the RFI
- 10/04/2010 – Final supplier(s) chosen for prototyping and tests

Background

About GWP

The City of Glendale has a culturally diverse population of over 200,000. The City owns and operates its own electric and water utility services. Glendale *Water & Power* (GWP) serves 71,000 residential and 13,000 business electric customers, and over 32,500 water customers.

Since 1980, Glendale *Water & Power* has been an active member of the Southern California Public Power Authority (SCPPA). SCPPA is a joint powers authority consisting of 10 municipal utilities and one irrigation district. SCPPA members deliver electricity to approximately 2 million customers over an area of 7,000 square miles, with a total population of 4.8 million. The membership includes the municipal utilities of the cities of Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles, Pasadena, Riverside, Vernon, and the Imperial Irrigation District.

One of the most important functions served by SCPPA is the sharing of information to the mutual benefit of its members, and the mutual benefit of municipal utilities throughout the state and across the nation. A good example of this function is the SCPPA Public Benefits Committee. The Public Benefits Committee serves as an association of SCPPA member utility staff in charge of public benefits fund administration, pursuant to Assembly Bill 1890. Activities of the committee include: the preparation of an annual reports detailing the use of public benefits funds, and the exchange of information regarding energy efficiency, renewable energy, low-income, and research and development programs. The SCPPA Public Benefit Committee meets monthly as a working group committee to coordinate contractor outreach, training, funding, project protocols, monitoring procedures and marketing in an effort to streamline services and provide a consistent approach and best practices to homeowners and businesses in the region. GWP reports all energy efficiency and conservation activities and results to the CEC, its local governing board, and its customers on an annual basis.

More recently, SCPPA has created the Ad Hoc Smart Grid Development Committee. This new committee is modeled after the highly successful Public Benefits Committee. Its purpose is to share information and work together to issue RFPs to select vendors for mutual benefit and to further the development and coordination of Smart Grid related activities throughout its member services territories, the State of California, and across the nation.

Smart Grid

GWP has been selected by the U.S. Department of Energy (DOE) for a \$20 million smart grid grant. GWP was 1 of 33 public power utilities to be selected. The total value of the Glendale City AMI-Smart Grid Initiative is over \$70 million. GWP began the project in August 2009. It will be completed over the next three years. The project will install a new AMI-MDMS system for all electric and water customers, increase the efficiency of GWP's distribution grid, and provide all customers with access to interval data, and new energy efficiency, load management, demand response, critical peak pricing, time of use, and dynamic rate programs.

As the first utility in the Nation to sign a Smart Grid Contract with DOE, GWP is at the forefront of the Smart Grid revolution, and GWP and the vendors associated with this project have received considerable positive press during its implementation. Additionally, GWP is a leader in the State of California in developing highly successful, cutting edge energy efficiency programs. Over the next three years, GWP will be developing new and expanding existing programs to creatively engage customers in the adoption of the new smart grid technologies. The primary focus of these programs will be turn-key direct install programs to ensure the widest dissemination of smart grid technologies, and ensure that the technologies are actually installed.

GWP is committed to developing new approaches to peak demand reduction (e.g., direct load control) and customer information and education for energy efficiency and other measures in conjunction with its Smart Grid project, including making data and information available to our customers in conformance with the Energy Independence and Security Act of 2007, Public Law 110-140, Sec. 1307. These new customer-directed programs and outreach efforts will include the following:

With over \$25 million invested since January 2000, GWP has a well established history of providing effective, award winning customer directed programs. In FY 2007-2008, our programs provided incremental energy savings of 13,547 mWh, an amount equal to 1.17% of our annual retail load, and incremental demand reductions of 6,046 KW. Cumulative demand and energy savings since 2001 are over 20,000 KW, and 69,000 mWh. GWP plans to carry this success over to new customer directed Smart Grid programs in the coming years.

Providing real benefits to our customers is the primary motivating factor in Glendale *Water & Power's* (GWP) move to the Smart Grid. That means customer access to advanced metering data and interactive participation new energy efficiency, demand response, time of use, and dynamic pricing programs. GWP is committed to developing customer directed programs to promote their participation in the benefit of Smart Grid, and has developed an extensive outreach plan to help ensure that direct customer participation in Smart Grid benefits materializes.

The first phase of our Smart Grid project is the installation of a state of the art Advanced Metering Infrastructure/Meter Data Management System (AMI/MDMS) and Home Area Network (HAN). The HAN support two-way communications with smart appliances, air conditioning systems, pool pumps, and in-home displays and web access so our residential and small business customers will have the real time information they need to better manage their electric and water usage. It is GWP's intent to provide an in-home displays to all customers that desire one, and to offer rebates for the purchase of additional home area network devices.

Smart Grid Project Expected Results

Ultimately, the GWP Smart Grid Project will provide for:

- 1) Increased use of digital information and controls technology to improve reliability, security, and efficiency of the electric grid.
- 2) Dynamic optimization of grid operations and resources, with full cyber-security.

- 3) Deployment and integration of distributed resources and generation, including renewable resources.
- 4) Development and incorporation of demand response, demand-side resources, and energy-efficiency resources.
- 5) Deployment of 'smart' technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.
- 6) Integration of 'smart' appliances and consumer devices.
- 7) Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.
- 8) Provision to consumers of timely information and control options.

Smart Grid Project Vendors

Itron, Inc - The City has signed a contract with Itron, Inc. to provide and oversee the installation of its industry leading OpenWay® AMI system, data collection engine, and Itron Enterprise Edition Meter Data Management System to support this initiative. Itron Inc. is a leader in developing AMI standards and security measures in cooperation with the DOE and the National Institute for Standards and Technology (NIST).

Tropos Networks – Through Itron, the City has selected Tropos' GridCom architecture as a core element of its Smart Grid Initiative. GridCom™ is based upon Tropos' wireless broadband mesh network system and will be used as the utility's private distribution area network to deliver high-speed communications between the utility, utility applications and utility customers. The Tropos system will be installed citywide.

Agilysys, Inc.- The City has contracted with Agilysys, Inc. to supply, install and configure an EMC V-Max Storage Area Network (SAN) and an Uninterruptible Power Supply (UPS) for the Smart Grid Project. The UPS has been installed and currently is operational in the Perkins Data Center. The SAN is installed and being configured for operation.

KEMA, Inc - Project management and technical support are being provided by KEMA, Inc., a recognized leader in Smart Grid Development. KEMA, Inc. has been supporting GWP's Smart Grid efforts since February 2008.

OPOWER, Inc – Through an existing contract between OPOWER and SCPPA, the City provides Home Energy Reports to its residential customers. The Home Energy Reporting System is a proprietary technology platform (patents-pending) that integrates usage data with a vast array of third-party housing, GIS, and demographic data to derive personalized insights about customers and their energy and water use. The software analytics engine enables the coupling of insightful messaging with specific, targeted action steps for each household to help the customer reduce their electricity consumption. OPOWER has plans to add a water component to the program in the next six months. Currently, the program is integrating the existing two month billing data and a wealth of external data sources to educate our customers on how they can save energy. As Smart Meters are installed throughout the City, customers with the new Smart Meters will be mailed an OPOWER home energy report that includes their Smart Grid data and access to the website where they can review their energy and water usage.

Smart Grid Project Status

The City is currently in the proof of concept phase of the project with full installation set to begin in Fall 2010 with full completion by Summer 2011.

Statement of Need

It is not the intent of this Request for Information (RFI) to address every component or service in Glendale *Water and Power's* (GWP) Smart Grid solution. Rather GWP is interested in defining a broad set of information for a specific subset of components and services. Additionally, while we fully expect the future RFQ/RFP may include some teaming arrangement among project vendors, we request that responders to this RFI represent their own products and/or services. This RFI is therefore open to vendors who provide the following components and related services:

- In-home displays
- Demand response/energy management services
- Programmable Communicating Thermostats
- Load Control Equipment
- Home Area Network related energy program management services
- Home Area Network communication systems
- Web-based Customer Portals for energy management services

Qualifications and Conditions which will be terms for future RFP/RFQ

Responses to the RFI will be evaluated on the criteria listed below and Responders who are qualified will be eligible to participate in a subsequent RFQ/RFP process. Participation in the RFI process will be an eligibility condition for participation in the RFQ/RFP process.

In evaluating responses to this RFI, the following criteria will be used. The order does not convey any priority or weighting in the application of these criteria.

1. Completeness of response
2. Financial strength of organization or group
3. Specific strength of organizational unit providing the solution
4. Maturity of system architecture
5. Availability and effectiveness of requisite metering applications
6. Ability to interface to a future Enterprise Service Bus as well as CCS and AMI Head Ends
7. Track record demonstrating ability to deliver in accordance with prescribed timelines
8. Demonstrated use of architectural standards
9. Maturity of implementation methodologies
10. Reference checks

Form to fill in as answer to the Request for Information

#	Question	Answer
1	Company name	
2	Company address	
3	Company web page	
4	Main products/services	
5	Main market/customers	
6	Ownership structure with ownership status in percentage	
7	Structure of mother corporation, joint ventures, subsidiaries, partnerships or other relevant relations	
8	Number of years on the market	
9	Company location(s)	
10	Environmental management system(s)	
11	Quality management system(s)	
12	Describe your business continuity management	
13	Employees	
14	Production	
15	R&D (Research and Design)	
16	Marketing and sales	
17	Quality department	
18	Financial information	
19	Last year turnover	
20	Last year gross margin	
21	Last year profit	
22	Stock markets where your company is listed	

23	Contact person and responsible for answering this RFI, telephone and email.	
24	Capacity conditions today	
25	Anticipated capacity conditions within 12 months	
26	Conditions that's listed in the RFI and can't be met	
27	Description of products or services that are already delivered to customers today, and could be comparable to what is requested in this RFI	
28	Reference customers using comparable products or services (including contact information)	
29	Reference customers using your products or services today, although they are not comparable with what is requested in this RFI (including contact information)	
30	Locations available for delivery, if not worldwide.	
31	Availability of spare parts and support worldwide locations available for delivery, if not worldwide.	
32	Describe the HAN components you provide. Include data sheets for the components.	
33	Communications protocol support. Please describe which communication gateway protocols your HAN equipment supports.	
34	Would your solution be described as an open protocol that supports a wide array of protocols or does the solution work best with specific protocols?	
35	Are the In-Home Devices (IHD) your company provides able to support other alphabets? Armenian, Korean, Spanish? Please specify which and limitations if applicable.	
36	Describe the RSS feed support for (weather information, community messages, etc) Will the feed be through IHD and/or web-portal?)	
37	Describe Utility message support for: <ul style="list-style-type: none"> ▪ Price Signals ▪ Meter Events/Alarms 	

	<ul style="list-style-type: none"> ▪ Pre-Pay Limits ▪ Etc <p>Is support provided through electric meter Zigbee or through web-portal?</p>	
38	Describe your display capabilities for a near real-time and historical consumption data display. Do your components provide periodic true up of the display with actual consumption and billing data from Itron's MDMS or through GWP's Harris CIS?	
39	If water data is provided via Itron's MDMS, describe how you would be able to display the information.	
40	Describe the application interface between a MDMS/CIS to the HAN.	
41	Does the customer portal support multiple in-home devices and protocols? Please describe.	
42	Do your components support Pre-Pay program support? (e.g. Dollars remaining, kWh remaining, etc.)	
43	Do your components provide demand response program support? Please describe how your equipment enables the utilities demand response programs. For example, does the IHD support color change or have audible signals depending on pricing?	
44	Does your IHD system provide visibility into the status of HAN components: <ul style="list-style-type: none"> ▪ Pricing Signals Received ▪ Set Points Changed ▪ Customer Override ▪ Failure to Respond to Price Signal ▪ Diagnostic Alarms Please describe.	
45	Describe the customer and utility's ability to configure and troubleshoot HAN components remotely through AMI system and/or web-based application. Describe preferred communications path (e.g. AMI network, customer's broadband internet via gateway)	
46	Do your components provide a power outage and power restoration message display (IHD, Portal, Mobile	

	application)?	
47	Describe the specific security protocols used to protect both the consumer and the utility and how each device is authenticated.	
48	Do your components provide communication network outage messaging support?	
49	Do your components support distributed generation equipment (e.g. solar panels and wind mills) and bidirectional metering support? Please describe.	
50	Do your components provide the customer with a set-up wizard for IHD, PCT and web-portal? Please describe.	
51	Do your components provide configurable usage interval display and AMI synchronized clock (time stamped usage)?	
52	Do your components have the ability to show consumption on-peak and off-peak (dollars and mWh)?	
53	Do your components have the ability to display usage using various types of graphs? Please describe.	
54	Is your device in compliance with the proposed Open HAN standards?	
55	Does your device offer an efficient, user friendly HAN gateway provisioning process for HAN devices? Please describe in detail the device registration process. (Customer registered or Utility Registered? If so, how labor intensive?	
56	Does your device have the ability to display and support OPOWER Home Energy Reports? Other Third Party content providers? Please describe.	
57	Does your company have the ability to support Itron's OpenWay System? Itron's SaveSource? Other Systems? Please describe.	
58	Do your components provide the customer with distributed generation support (IHD, PCT, Portal)? Also, please describe how you can give the customer information about how	

	much energy their distributed generation equipment has produced EVEN if that customer is not a net contributor to the grid.	
59	Please describe how a home PC can capture near real time meter data (e.g. broadband connection to the web, RF adaptor attached to a PC, etc.) If this functionality is available how is this communication secured? Please describe.	
60	Please provide your product and marketing roadmaps for IHD, PCT, and other HAN hardware. (e.g. distribution channels, anticipated unit's shipped, retail partners, etc.)	
61	Do your components have the ability to update HAN device software, firmware via AMI network and/or hard-wired (e.g. USB connection) Please describe.	
62	Are your components compatible with "U-SNAP" standard? Please describe.	
63	Is your company a member of the Zigbee alliance?	
64	Would your products software be hosted in our data system or hosted externally? Please describe in detail.	
65	Based upon previous deployments, if GWP were to promise an IHD to each of its customers what rate of penetration could GWP expect? Please describe in detail?	