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REPORT TO LAW & LEGISLATION COMMITTEE
City of Sacramento

915 I Street, Sacramento, CA 95814-2604

STAFF REPORT
June 5, 2008

Honorable Members of the
Law and Legislation Committee

Title: PG&E Smart Meters

Location/Council District: Citywide

Recommendation: Direct staff to prepare and bring directly to the Council for approval an Interim Ordinance exempting antennae on City streetlight facilities from Special Permit requirements.

Contact: Lucinda Willcox, Staff Aide, 808-5052; Jason Hone, Junior Planner, (916) 808-5749; Joy Patterson, Principal Planner, 808-5607

Presenters: Lucinda Willcox

Department: Transportation/Development Services

Division: Office of Director/Planning

Organization No: 3416

Description/Analysis

Issue: PG&E has requested permission to use City 39 streetlight poles for the installation of SmartMeter equipment as part of its systemwide automated meter reading system for residential utility customers. If PG&E cannot use existing facilities, it will need to install utility poles to mount the equipment.

In connection with implementing the city's wireless broadband network, the City Council amended the Zoning Code to exempt antennae meeting specified criteria from requirements for special permits. The equipment used by PG&E does not meet the size and dimension criteria for this exemption. Staff recommends an Interim Ordinance exempting additional antennae on City streetlights from special permit requirements. The City will continue to review and specify conditions through the revocable encroachment permit process and agreements for the use of City property. A permanent ordinance governing antennae on City facilities will be brought for consideration by the Law and Legislation Committee and City Council in the fall.

Policy Considerations:

The PG&E SmartMeter equipment does not meet the current size and dimension requirements for the Zoning Code's antennae exemption, and therefore would require individual special permits for each of the 39 proposed streetlight locations, in addition to the requirements for revocable encroachment permits and agreements with PG&E.

Additional changes to the Zoning Code can better and more efficiently address the variety of equipment that may be associated for this kind of technology. To support automated meter reading systems and the associated reductions in vehicle traffic and emissions, the agreement and revocable permit process can be used identify appropriate criteria to suit the circumstances.

The June 2007 WiFi agreement granted a non-exclusive right to use City streetlights, in anticipation of other potential users of similar technology. No more than one installation will occur on any one streetlight pole.

In the same manner as the WiFi agreement, PG&E's meters will not be installed on pedestrian "acorn" style streetlights or any historic facility.

In addition to the Interim Ordinance, staff will bring to Council a revocable permit agreement with PG&E for the installation of SmartMeter equipment, and a supplemental agreement with PG&E for the City's administrative costs.

Environmental Considerations: The proposed ordinance amendments and installation are exempt from the provisions of the California Environmental Quality Act (CEQA) under Section 15061 (b) (3) of the CEQA Guidelines. Use of smart meter reading technology will reduce the number of vehicles needed to read meter with associated benefits in reductions of air pollutant and greenhouse gas emissions.

Committee/Commission Action: None

Rationale for Recommendation: Installation of SmartMeter equipment on City streetlights will minimize visual intrusion that would be necessitated if PG&E is required to install separate utility poles. In addition, the agreement between the City and PG&E supports improved gas utility service to City residents and will reduce the number of vehicles needed for gas meter readers, consistent with the City's sustainability agenda.

Financial Considerations: The agreement proposed between staff and PG&E would provide $39.00 per streetlight pole per year for 20 years, to be paid up front, for a total of $30,420. This is generally consistent with the WiFi agreement that pays $36 per installation annually. In addition, PG&E has agreed to a supplemental agreement at the rate of $120 per installation to address certain administrative costs, for a total of $4,680.

Emerging Small Business Development (ESBD): None

Respectfully Submitted by: _____
Francesca L. Halbakken
Operations Manager

Approved by: : _____
Jerry Way
Director of Transportation

Recommendation Approved:

for _____
Ray Kerridge
City Manager

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Background

PG&E SmartMeter Program

In 2006, PG&E conducted a successful pilot of its automated metering technology in Vacaville. Full deployment of the technology began in Bakersfield the following Fall, and PG&E is continuing to install the equipment throughout its service territory to serve its 10.3 million residential customers in its service area.

To automate the reading of its gas meters, PG&E needs to install pole-mounted "SmartMeter" telecommunication equipment. Each equipment module consists of a data collector unit (DCU), two whip antennae, coaxial cable, and an optional photovoltaic adapter. Wind load calculations and radio frequency specification reports were provided and reviewed by City staff. PG&E has already installed necessary equipment on residential gas meters in Sacramento to be read with this equipment.

Proposed Use of City Streetlight Poles

Where feasible throughout the state, PG&E has been installing the equipment on its own facilities. The company has fewer poles in Sacramento because it does not provide electrical service to this area. PG&E's options are to install the equipment on City streetlight poles or install new poles in the public utilities easement (PUE) for this equipment.

PG&E proposes to install SmartMeter equipment on 39 street pole locations throughout the city to create an adequate grid to read the gas meters. An example is pictured in Exhibit A. Staff is reviewing the 39 proposed locations for physical, operational, and site suitability. The PG&E SmartMeter installations will only include the larger or "cobra" style streetlights and none that include traffic signals or any other antenna or communications equipment.

Zoning Code Amendments

In general, City Code requires a Special Permit from the Zoning Administrator or Planning Commission to locate any antennae in the City. In connection with the City's agreement to deploy a citywide wireless broadband network, on July 31, 2007, the City Council adopted amendments to the Zoning Code so that antennae meeting specific criteria and installed on City property pursuant to a revocable encroachment permit are exempted from the requirement for a special permit. The SmartMeter equipment used by PG&E does not meet the size and dimensions specified in that Zoning Code exemption.

Installation of antennae or any equipment on City property requires permission from the City through a revocable encroachment permit, necessary agreements with the City, and appropriate environmental review

To meet the time constraints for PG&E's installation, staff recommends adoption of an Interim Ordinance that would exempt antennae on City streetlights from special permit

requirements, returning this fall with a permanent Zoning Code amendment after further discussion and outreach. The Interim Ordinance would exempt any proposals for such facilities from special permit requirements under the Zoning Ordinance, not only PG&E's proposals. Any proposals for streetlight use, like the PG&E agreement, would be brought forward to the City Council for approval.

SmartMeter Specifications

The SmartMeter equipment employed by PG&E includes Data Collection Units (DCUs) which are weatherproof assembly mounted on utility poles, and contain a receiver/transmitter, a computer, modem, and a battery. Power is provided by the battery which is recharged by a connection the A.C line. PG&E will use the streetlight electrical facilities, and will be billed separately by SMUD for the equipments' electrical use.

The SmartMeter equipment that will be mounted in streetlight poles includes the DCU Box, two antennae, an antenna boom, and connecting cables. Specifications for these components are as follows:

	DCU Box	Antennae	Antenna Boom	Cable
Dimensions	24x13x9 inches	29.75 inches tall	4 ft length	0.405 in diameter; length as required
Weight	59 lbs (including battery)	2 lbs each	2 lbs	0.065 lbs/ft
Mounting	Below light arm	At ends of antenna boom	Min 25 ft At top of pole	Secured with UV stable wire ties

City staff has reviewed the wind load calculations and radio transmission frequency of these units to ensure they can be structurally accommodated safely and will not cause radio interference with other applications. In addition, under the revocable permit, if any location is determined to pose any kind of safety, operational, or other problem, the permit can be revoked and an alternate location or means put in place.

Similar Applications

On June 21, 2007, the City Council approved an agreement for the design, deployment, and operation of a wireless broadband network in Sacramento with Sacramento Metro Connect, LLC (SMC). Under this agreement, SMC had non-exclusive rights to install its antennae on City facilities, including buildings and streetlights. SMC envisions a maximum use of 1,500 streetlight locations.

In February 2008, the City issued a Request for Proposals for automated meter reading technologies for City water meters. City staff is evaluating the proposals it received and will bring back recommendations for City Council approval.

WiFi and automated meter reading technologies continue to evolve and advance. While there may be opportunities and benefits to share technology and equipment for different

applications, it may also not suit specific application needs or proprietary concerns. Staff will continue to review all proposals and applications to balance efficiency and business needs, and will recommend collocation or shared use where it will best meet operational needs. Any additional users of PG&E's SmartMeter equipment must be approved by the City under the revocable permit agreement.

Exhibit A: SmartMeter Installation on Streetlight