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SOUTHERN CALIFORNIA GAS COMPANY

ADVANCED METERING INFRASTRUCTURE

CHAPTER I

SOCALGAS AMI VISION AND POLICY

Errata to

Prepared Direct Testimony

of

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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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TABLE OF CONTENTS

I. INTRODUCTION

This chapter presents: (i) the Southern California Gas Company's ("SoCalGas") vision for enabling its customers to better manage their natural gas consumption through the use of advanced metering infrastructure ("AMI") technology; and, (ii) an overview of SoCalGas' proposed strategy for deploying AMI.

There are four compelling reasons for the California Public Utilities Commission ("Commission" or "CPUC") to adopt SoCalGas' proposed gas AMI system. First, the proposal is consistent with and supportive of the State's Energy Action Plan's ("EAP") endorsement of energy conservation. SoCalGas' AMI system will provide individual customers with access to energy usage and cost information to manage their energy bills by changing their energy consumption behavior. The demand side conservation is described in the testimony of Mr. J.C. Martin in Chapter VI. Second, the proposal provides substantial operational efficiencies that will benefit SoCalGas customers. SoCalGas witness Mr. Edward Fong presents the economic justification for pursuing AMI deployment for 6 million SoCalGas meters in Chapter II. The testimony of Mr. Mark Serrano in Chapter III describes the operational benefits that would accrue to SoCalGas customers. These operational benefits offset approximately ~~84.5%~~ 85.0% of the cost of the AMI system. Together with the reasonable demand side conservation benefits described by Mr. Martin, the proposal is cost-effective for SoCalGas' customers. Third, the proposal provides significant environmental benefits, as identified in Mr. Martin's testimony in Chapter VI. And finally, the proposal offers the potential for a communications network capable of being used by water companies to promote water conservation and better water management.

For these reasons, SoCalGas requests Commission authorization to proceed with an investment of ~~$1.09~~ $1.08 billion to implement a gas AMI system in its service territory during the 2009 – 2015 period including installation of AMI technology on 6 million gas meters. Specifically, SoCalGas requests the following:

- Expedited approval of initial funding of $~~12.4~~ 12.7 million for program management set-up activities and to initiate pre-deployment information systems work as is described in more detail in the testimony of Mr. Serrano in Chapter III and Mr. Christopher Olmsted in Chapter IV, respectively.[1]
- Approval for the installation of natural gas AMI modules and meters, an AMI communications network and implementation of information technology systems beginning in 2011 as is described in more detail in the testimonies of Mr. Serrano in Chapter III and Mr. Olmsted in Chapter IV.
- Authority to establish a balancing account to record the difference between the authorized revenue requirement and actual operations and maintenance ("O&M") and capital-related costs associated with an investment of ~~$1.09~~ $1.08 billion for full deployment of the proposed SoCalGas AMI as is described in more detail in the testimony of Ms. Allison Smith in Chapter VIII.

II. BACKGROUND

A. Energy Action Plan

The State has demonstrated that it is committed to pursuing various policy objectives to determine the right blend of conservation and infrastructure investments that meet California's needs. The State's Energy Action Plan ("EAP"), which was adopted in 2003, states the following about natural gas usage:

> "California's demand for natural gas also is increasing. Currently the state uses 2 trillion cubic feet of natural gas per year. Historically, the primary use of this fuel was for space heating in homes and businesses. …Overall, natural gas use is

[1] Pre-deployment funding identified in Mr. Serrano and Mr. Olmsted's testimonies are in direct cost dollars (Mr. Serrano: O&M=$~~1.0~~ 1.1 million, capital=$~~0.6~~ 0.8 million; Mr. Olmsted: O&M=$0.1, capital=$7.3 million; Mr. Martin: O&M=$0.1; contingency = $1.1 million and Overheads, escalation, taxes= $~~2.1~~ 2.2 million. Total = $~~12.4~~ 12.7 million. A detailed table is included in Mr. Fong's testimony.

growing by 1.6 percent per year. Eighty-five percent of natural gas consumed in California is supplied by pipelines from sources outside the state."[2]

Furthermore, the EAP states the following:

"In implementing this plan, the agencies are mindful that energy services – both natural gas and electric – are essential to every Californian's general welfare and to the health of California's economy. As actions to improve the reliability of these services are considered, the agencies will each take into account the effect the action will have on energy expenditures, the environment and climate change, and the overall economy. Alternatives to proposed actions will be evaluated in an integrated fashion, consider the cost of action or inaction, and consider the equitable distribution of costs among customer classes and groups."[3]

B. Commission's Policy on Advanced Metering Infrastructure

The CPUC and the California Energy Commission ("CEC") conducted a four year investigative study and rulemaking proceeding on "Advanced Metering, Demand Response and Dynamic Pricing", R.02-06-001. In this rulemaking, the three major electric utilities under Commission jurisdiction were directed to file applications to deploy AMI systems. Additionally, the State's Energy Action Plan (EAP I & II) clearly established that demand side management (conservation, energy efficiency and demand response) is the preferred or first option that must be considered in the "loading order" when attempting to balance future energy needs.

As a result, the Commission has authorized funding for AMI deployment for Pacific Gas & Electric ("PG&E") in Decision (D.) 06-07-027 and San Diego Gas & Electric ("SDG&E") in D.07-04-043. PG&E and SDG&E are combined gas and electric utilities and funding for their AMI projects includes installation of gas communication modules (gas modules) on gas meters

[2] State of California Energy Action Plan, Adopted May 8, 2003 by the CPUC, pp. 4.
[3] IBID, pp. 8.

to provide daily meter reads. PG&E received authorized funding of approximately $1.7 billion to install AMI on 5.1 million electric meters and 4.2 million gas meters.[4] SDG&E received authorized funding of approximately $570 million to install AMI on 1.4 million electric meters and 900,000 gas meters. Most recently, the Commission adopted a settlement agreement between Southern California Edison Company ("SCE") and the Division of Ratepayer Advocates ("DRA") in D.08-09-039 that will allow $1.63 billion in ratepayer funding for SCE's proposed AMI project to install approximately 5.3 million AMI electric meters.

III. SOCALGAS GAS AMI VISION AND POLICY

SoCalGas proposes to join the other major California natural gas investor owned utilities ("IOU") by deploying a gas AMI system in its service territory during the 2009 – 2015 period to enable its customers to better control and manage their energy bills with access to timely natural gas usage information and to realize the substantial operational and environmental benefits associated with a gas AMI system. The operating benefits will cover approximately ~~84.5%~~ 85.0% of the AMI project life cycle costs, higher than any of the other AMI applications thus far. SoCalGas believes customers will utilize the information provided by the AMI system to lower their gas usage. Along with the reduced cost of operations, should residential customers reduce natural gas consumption by 1%, installation of the network will more than pay for itself. In addition, deployment of a SoCalGas gas AMI system will eliminate over 6.3 million vehicle miles each year as manual meter reading is eliminated, thus reducing greenhouse gas emissions by over 3,000 tons of CO_2 per year upon completion of the full deployment. These climate impacts are societal benefits in excess of the customer savings that will be realized.

SoCalGas' proposed gas AMI will collect hourly gas meter reads and transmit 2-3 times per day back to utility data servers. This timely gas usage data can be used to project the customer's monthly gas bill and as a result, SoCalGas can proactively provide this information to

[4] PG&E has requested an additional $623 million of funding to upgrade the PG&E AMI electric meter to solid state technology with integrated AMI communications in application, A.07-12-009. PG&E later revised the upgrade costs to $572 million.

customers to alert them to increased gas usage, out-of-pattern usage and potentially significantly higher bills if the customer does not take some action to reduce gas usage.

A. SoCalGas' AMI Proposal is Supportive of the State's Energy Policy

The State's EAP and EAP II have clearly articulated sets of actions of critical importance that need to be undertaken immediately. The first priority is to meet California's energy growth needs while optimizing energy conservation and resource efficiency.[5] Energy conservation applies to natural gas as well as electric usage. As with electricity, current gas customers receive a monthly bill showing monthly usage (consumption). The monthly consumption information displayed on the customer's bill is an "after the fact" statement, sometimes as much as 30-34 days after the actual customer behavior or action that may have caused an increase in their gas usage. PG&E and SDG&E's AMI deployment will allow their respective customers to have access to timely electric as well as gas energy usage information. In both cases, customers will have greater capabilities to manage their gas and electric energy usage with information tools and automated controls.

With the State's commitment to gas AMI in the PG&E and SDG&E service territories, almost 5.1 million of the State's gas meters will be on a gas AMI system by the time SoCalGas begins deployment in 2011. SoCalGas customers should have the same opportunity as other customers to benefit from energy management and savings opportunities that may result from the availability of timely customer gas usage information.

A clear void will occur if SoCalGas' customers are not able to access the same information on daily and hourly gas usage as PG&E and SDG&E gas customers. This lost opportunity will therefore have adverse impacts on the following goals stated in the EAP:

- Encouraging and promoting energy conservation and efficiency as the first priority[6]

[5] Energy Action Plan II, Implementation Roadmap for Energy Policies, September 21, 2005, State of California, California Public Utilities Commission and Energy Commission, pp.3.

[6] IBID, pp. 5.

- Providing alternative solutions in the face of anticipated rising natural gas prices[7]
- Reducing greenhouse gas emissions.[8]

B. SoCalGas AMI Provides Substantial Operating Benefits

Relative to the other California IOUs that have already received Commission approval to implement an AMI solution, SoCalGas has the highest portion of AMI costs covered through tangible operating benefits. Specifically, over the project life cycle, approximately ~~84.5%~~ 85.0% of the costs are covered by operating benefits. This level of operating benefits is substantially greater than the AMI business cases put forth by PG&E, SCE and SDG&E. These operating benefits are returned to SoCalGas customers in future years and represent decreases in future utility revenue requirements.

C. SoCalGas AMI Provides Other Societal Benefits

In September, 2006, Governor Schwarzenegger signed Assembly Bill ("AB") 32, which establishes the State's leadership role in the effort to reduce GHG emissions.[9] The bill sets the ambitious goal of reducing statewide GHG emissions to 1990 levels by 2020. Over 6.3 million vehicle miles and over 3,000 tons of carbon dioxide emissions (CO_2) will be eliminated annually upon full deployment of the SoCalGas AMI. Although these benefits are societal in nature and difficult to quantify, SoCalGas notes these benefits support high-priority State policies, and a range for the value of the estimated CO_2 reductions is calculated in Mr. Martin's testimony (Chapter VI).

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[7] Energy Action Plan II, Implementation Roadmap for Energy Policies, September 21, 2005, State of California, California Public Utilities Commission and Energy Commission, pp. 10, "Because natural gas is becoming more expensive, and because much of electricity demand growth is expected to be met by increases in natural gas-fired generation, reducing consumption of electricity and diversifying electricity generation resources are significant elements of plans to reduce natural gas demand and lower consumers' bills. California must also promote infrastructure enhancements, such as additional pipeline and storage capacity, and diversify supply sources to include liquefied natural gas (LNG).

[8] IBID, pp. 2. "In addition, EAP II highlights the importance of taking actions in the near term to mitigate California's contributions to climate change from the electricity, natural gas and transportation sectors."

[9] Assembly Bill (AB) 32 (Stats. 2006, Ch. 488).

D. SoCalGas AMI System Will Be Capable of Integrating Water Meters

SoCalGas recognizes the State's priority and urgency in encouraging and enabling water conservation.[10] SoCalGas' request for proposal included a requirement for an AMI technology capable of reading water meters. The State's aggressive water conservation goal of 20% reduction in per capita water consumption by 2020[11] is providing impetus for many water agencies to evaluate AMI systems for water meters. AMI technology would allow for the identification of leaks and speed their repair, resulting in potentially significant water savings.

SoCalGas has actively communicated its interest in working with the major Southern California water agencies as the SoCalGas' AMI system is deployed. Many of the technical challenges faced by gas AMI are similar to those of water AMI. Specifically, gas and water communication modules require a battery power source. SoCalGas has approximately 200,000 meters located in underground (curb) vaults, similar to many water meters. Although water AMI has not been identified as a cost or a benefit in SoCalGas' AMI business case, the capability to extend the SoCalGas AMI system to water meters has the potential to provide significant operational benefits to water agencies and their customers in the SoCalGas service territory.

IV. SUMMARY OF SOCALGAS AMI DEPLOYMENT PLAN

SoCalGas urges the Commission to approve its request for expedited pre-deployment funding of $12.7~~12.4~~ million so that project planning, vendor selection and initial critical path IT activities can proceed without delay. SoCalGas' proposed deployment will start in 2009 (or as soon as the Commission authorizes) with the initial 18-24 months required for AMI software development and SoCalGas information systems integration. Mass deployment of AMI gas modules will begin in 2011. SoCalGas plans to install approximately 6.0 million gas modules and replace almost 1.1 million AMI incremental gas meters by year-end 2015.

[10] CPUC Water Action Plan, December 15, 2005, pp. 7-11.
[11] Governor Arnold Schwarzenegger, February 28, 2008, Letter to State Senate.

V. CONCLUSION

SoCalGas requests that the Commission authorize and approve the SoCalGas AMI proposal. SoCalGas' proposal supports and is consistent with Commission direction for integrated electric, gas and water management. Specifically, the SoCalGas AMI system will complete the deployment of AMI for the major California IOUs. The deployment of SoCalGas' AMI is cost effective for ratepayers and provides additional societal benefits. Leveraging effective use of technology to enable the State's policies regarding electric, gas and water end-use management with customers, major utilities and municipalities will not be possible if AMI is not deployed with the base of almost 6.0 million meters in SoCalGas' service territory.

VI. WITNESS QUALIFICATIONS

My name is Michelle M. Mueller. My business address is 555 West Fifth Street, Los Angeles, California 90013-1011.

I am employed by the utilities as the Vice President of Customer Operations in the Customer Services Department for SoCalGas and SDG&E. I hold a Bachelor of Arts degree in Communications from Eastern Michigan University. I have a Master of Arts degree in Mass Communications from Morehead State University in Kentucky. I have a Masters of Business Administration from Syracuse University.

I have been employed by the utilities since 1999, and have held positions of increasing responsibilities in the customer service departments. I have been in my current role as Vice President of Customer Operations since January of 2008. In my current position, I am responsible for meter reading, billing, credit and collections, remittance processing and related groups for both utilities.

Prior to working for the utilities I held positions in management and technical services for QUALCOMM, The Titan Corporation, Linkabit and other technical firms.

I have not previously testified before the Commission.

This concludes my prepared direct testimony.