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Comments on Draft AB 1257 report

Please see attached comments.

Additional submitted attachment is included below.

**STATE OF CALIFORNIA
BEFORE THE CALIFORNIA ENERGY COMMISSION**

In the matter of:)	Docket No. 15-IEPR-04
)	
<i>2015 Integrated Energy Policy Report (2015 IEPR)</i>)	SMUD Comments On: <i>Draft AB 1257 Natural Gas Act Report</i>
)	
)	October 1, 2015

**Comments of the Sacramento Municipal Utility District on the
*Proposed Amendments to the Enforcement Procedures for the
Renewable Portfolio Standard for Local Publicly Owned Utilities***

Thank you for the opportunity to provide comments on the topic of the *Draft AB 1257 Natural Gas Act Report (NG Report)* in connection with the *2015 IEPR*. SMUD appreciates the hard work and clear writing that is found in the *NG Report*, and has the following brief comments for consideration.

A. Consideration of Long-Term GHG Emissions From Natural Gas Power Plants

At the September 21st workshop, Commissioner McAllister stated interest in the question of how the GHG emissions from the combustion of natural gas in power plants and other stationary venues should be evaluated in the long run, with respect to state policy goals to reduce statewide GHG emissions to 80% below 1990 levels by 2050. SMUD's Governing Board has adopted a goal of reducing the GHG emissions to serve our retail electric customers to 90% below our 1990 emissions, and hence SMUD shares the interest in understanding the role of natural gas power plants for serving our customers and meeting our GHG goals in the long run.

In the short run, SMUD shares the common view, supported by historical experience, that natural gas power plants are essential tools for providing various ramping and other system requirements of maintaining a stable electricity service to customers around the clock and throughout the year. In the long run, however, we are examining scenarios for continuing this essential and reliable electricity service while using less natural gas in our power plants. Options for replacing some of the role of natural gas for the reliable operation of the grid include:

- Various flexible demand-side resources, which have promise but require more development and experience to prove cost-effective at the scale needed;
- Various flexible GHG-free supply-side resources, such as dispatchable or curtailable renewable generation that can be ramped as needed to meet net load; and
- Storage resource development, so that non-dispatchable renewable or other GHG-free generation can be separated from the time of generation and delivered at the times needed by customers.

The *NG Report* does not broach this subject, focusing instead on the significant near-term question of natural gas related GHG emissions in the form of leakage of methane, or non-combusted natural gas. SMUD understands that there is significant research ongoing on this important question, as summarized in the *NG Report*. SMUD recommends that the *NG Report* also raise the long-term question of the contribution of natural gas resources to the state's goal of reducing GHG emissions to 20% of 1990 emissions by 2050.

SMUD recommends including text to address and start the discussion of this long-term issue in Chapters 8 and 9 of the *NG Report*. Chapter 8 covers biogas and biomethane resources, and added text here should include a discussion of the significant current restrictions on biomethane use in power plants in California. While some progress has been made to open up California's pipelines in the state for injection of biomethane, policy still imposes significant costs and barriers on the development of these sources. Biomethane is considered an eligible renewable resource for the Renewable Portfolio Standard (RPS) in California, and early development of this resource was being pursued for the RPS, but state policy since April 2012 has prevented any further development of this resource for the RPS. This zero-GHG eligible renewable resource has the distinct advantage of providing the exact dispatchability and ramping resources we depend on today from the natural gas fleet, using the existing natural gas infrastructure, and so should be considered a desirable long-run resource for the state. In the long run, we should be examining the feasibility of removing or reducing the costs and barriers, so that we can significantly increase the use of biomethane to help provide reliable, low-GHG electricity in California.

Chapter 9 covers GHG emissions in the natural gas system, and here added text should begin raising the long run issue of the contribution of the combustion of natural gas to GHG emissions and the impact of that on the ability to cost-effectively achieve our 2050 goals. There is the potential for stranded infrastructure and costlier than necessary power if this issue is not considered relatively soon, given the long-lifetime of natural gas fired power plants. Plants built today may very likely still be in operation in 2050.

B. Natural Gas And End Use Appliances And Zero-Net Energy Buildings

Chapters 6 and 7 of the *NG Report* cover the use of natural gas in our home appliances, buildings, and industries, as well as how that natural gas use interacts with the policy goals of achieving zero-net energy new homes by 2020 and commercial buildings by 2030. These topics are appropriate for the *NG Report*, and SMUD suggests adding text to consider how fuel switching to efficient electric options may again help to achieve our long run GHG goals. Many academic studies of pathways to achieving the 2050 goals point to the need for significant electrification of space and water heating – the primary uses of natural gas in our homes and businesses. Very efficient electric heat pumps and heat pump water heaters make such electrification viable on a thermodynamic balance basis, as well as on cost-effectiveness and GHG emissions balance bases. However, policy barriers to including these options in new homes and businesses exist today. These barriers, such as the specific time-dependent value assumptions and structures in the building standards, should be reexamined with respect to how fairly they consider the advantages and disadvantages of efficient electric options in these basic end-uses.

C. Definition Of “Biogas” and “Biomethane”

The *NG Report* defines the term “biogas” as “... the gas generally produced during the anaerobic decomposition of biomass ...” While accurate, this definition does not cover all sources of biogas, and so should be expanded. In particular, SMUD believes that the definition should be expanded to at least include the gaseous product of direct biomass gasification in addition to the typical anaerobic decomposition source. SMUD believes that an even broader definition would also leave room for any biologically or non-fossil derived gas to be considered in the biogas fold. For example, in the long run, biogas may be produced by industrial processes designed to mimic the production of biomass in the natural world – by artificial photosynthesis. Or, synthetic gas may be created using hydrogen derived from electrification using surplus solar power on spring days. A significant amount of research money is being spent in California on this long-term basic research and developing technological alternatives.

The definition of “biomethane” in the *NG Report* as “... the treated product of biogas where carbon dioxide and other contaminants are removed ...” is also correct. SMUD recommends that this definition of biomethane be included in the next Renewable Portfolio Standard Eligibility Guidebook and that a definition of biogas, as recommended to be expanded here, be returned to that guidebook. These changes can help to improve the accuracy and reduce unnecessary reporting requirements in the RPS arena.

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Thank you again for the opportunity to comment.

/s/

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cc: Corporate Files (LEG 2015-0807)