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Additional submitted attachment is included below.



October 1, 2015

Rachel McDonald
Supply Analysis Office
California Energy Commission
Sacramento, CA 95814

Subject: Docket Number 15-IEPR-04

Dear Rachel McDonald:

On behalf of Sierra Club and its more than 380,000 members and supporters in California, I submit the following comments on the AB 1257 Natural Gas Act Report: Strategies to Maximize the Benefit Obtained from Natural Gas as an Energy Source published on September 16, 2015.

AB 1257 signed in 2013, requires that the California Energy Commission (CEC), on an ongoing four-year cycle, to identify in a report opportunities to explore the strategies and options for using natural gas in order to realize its environmental and societal benefits.

Considering the fact that California ranks among the largest consumers of natural gas in the union, identifying improvements to the current natural gas infrastructure or, more importantly, a means of transitioning away from heavy dependence on the fuel source quickly is critical to meeting California greenhouse gas reduction goals as well as improving air quality for all Californians.

Comments on AB 1257: Natural Gas Act Report

Natural Gas for Electric Generation

About 40% of our use of natural gas in this state is dedicated to energy generation. Sierra Club would like to see that number decrease significantly as we approach 2030. Reducing the consumption of natural gas in this sector would lead to significant opportunities to improve air quality and mitigate the effects of climate disruption. California has the specific goal of achieving a 40% reduction of greenhouse gas (GHG) emission below 1990 levels by 2030. To reach that goal, an ambitious effort to increase the percentage of clean renewable energy generation is essential. The state understands the urgency and in the 2015 session, Senator Kevin de Leon introduced SB 350. Though it is currently awaiting the governor's signature, the bill, among other things, requires that the state to meet at least 50% of its energy needs from renewable energy generation by 2030.

The issue associated with bringing more renewables online lies in integration. For example, as renewable energy generation decrease and load does not, other generating sources must be used. Right now the strategy is to deploy natural gas power plants, which have the ability to start up and shut down relatively quickly to meet local reliability needs. We cannot reach our goals in a timely and meaningful manner if we continue to deploy natural gas. Investments made today will be used for decades to come, so the state

should be very wary of the decision to invest in natural gas as a part of its long-term carbon reduction strategy.

California must develop and invest in alternative low-carbon technologies to provide greater grid reliability services. This creates a foundation to bring more renewable energy online. There are a number of ways to accomplish that today. These include the implementation of demand response technologies that shift electricity demand to align with peak renewable output. Diversifying our portfolio of renewable sources also reduces the need for the flexible nature of natural gas energy generation and lowers integration costs. The utilization of storage technology allows the grid to store electricity generated from renewables and deploy it instantly when it is needed. Additionally, technologies like batteries and pumped hydropower do not compete with renewables, which leads to curtailment.

The state must also seriously consider increase coordination between regional grid operators if we want to take full advantage of the potential flexibility of the grid. Pooling generation across large areas makes it easier to obtain flexible generation reserves. This makes it possible to lower costs and reduce renewable curtailment by allowing the state to export excess renewable generation to other regions in need of the electricity.

Natural Gas and End-use Efficiency Applications

33 percent of the natural gas consumed in this state is by the residential and commercial sector. A significant majority of that 33% comes from space and water heating. There are number of strategies employed by the state in an effort to reduce the consumption of end-use natural gas for these purposes. This is done largely through the development of more efficient technology as well as electrification of the technology all together. Energy efficiency regulations at the CEC, such as Title 20 and Title 24 have successfully resulted in a flat growth for natural gas consumption over the last two decades. And the next decade is expected to bring about greater energy savings. The club has been a long-time supporter of the CEC when it comes to their energy efficiency regulation efforts.

However, concerns have arisen from opponents of California's energy efficiency programs claiming there is not enough assurance that the promised energy savings and other benefits have been realized. The Club has helped the CEC to develop more ways to facilitate the demonstration of advanced technologies and measures that show actual savings, benefits and reliable performance to provide confidence in consumers. The legislature has also provided some direction. In 2015, for example, SB 350, as mentioned earlier, would require that the state double its energy efficiency in existing buildings by 2030. This creates a drive to achieve our energy efficiency goals on every level including energy consumption data and measurement.

Assemblymember Bill Quirk introduced AB 793, which would enable customers to manage and optimize their energy consumption by identifying conservation opportunities and shifting or reducing peak hour demand to achieve savings on their energy bills. Assemblymember Das Williams introduced AB 802, which would allow building owners access to the monthly energy usage information of their buildings to manage use in their properties, but also to pursue greater energy efficiency and renewable investments to the property. The bill also allows the CEC to establish a new benchmarking program to replace the confusing, ineffective existing one.

These bills are still awaiting a signature from the governor, but they represent an urgent need to move forward with energy efficiency efforts for the sake of the climate and for quantifiable real savings to justify further efforts. Sierra Club has supported all of them through the legislative process and looks forward to working with the CEC on their implementation.

Greenhouse Gas Emissions and Natural Gas.

Natural gas is comprised mostly of methane, a highly potent, short-lived climate pollutant. This gas is only second to carbon dioxide when it comes to greenhouse gases present in the atmosphere. As mentioned earlier, continued investment in natural gas over renewable energy for energy generation and electrification of gas-powered appliances in the home is a problem for California.

However, there is second problem with natural gas investment. The state's natural gas system and its infrastructure are plagued by inefficiency and leakage. Studies have shown that the emissions of associated with these issues are enough to offset any benefit provided by the burning of natural gas. In order to understand the full impact of GHG emissions associated with natural gas, we need to determine how much methane is escaping from the entire system, which includes production, transmission, storage, and distribution.

The state must also look at the impact of super emitters and other point source polluters. The Air Resources Board is currently working to target methane emissions at dairies and landfills, with possible regulation for new dairies by 2018. This is a crucial step in curbing methane emissions, as the agricultural sector and landfills make are responsible for a majority of the methane emissions in this state.

Sierra Club understands that there are a number variables that make quantifying and identifying point source methane emissions difficult. Those include the fact that there are many sources both natural and anthropogenic, there is a time variable and there are different methodologies, data and devices used.

Despite the difficulties associated with measuring emission, the state must move forward aggressively to reduce methane emissions. Some of the great minds in the legislature are heeding that call. In 2015, Assemblymember Tony Thurmond introduced AB 1496, which will help reinforce the efforts at the California Air Resources Board to improve ability to quantify emissions using the best available scientific and technical methods. It would also help determine who the biggest polluters are in the natural gas system through carrying out life-cycle greenhouse gas emissions analyses of natural gas produced and imported to the state. With this new legislation, Sierra Club California looks forward to working the CEC as well as CARB on curbing methane emissions in an effort to reach the states emissions reductions goals.

California is the largest consumers of natural gas in the country. Any way in which the state can cut emissions through improvements to the current natural gas infrastructure will provide significant benefits on a scale this large. More importantly, Sierra Club knows that the best course of action is to ultimately transition away from heavy dependence on natural gas altogether. Only then are we likely to meet California greenhouse gas reduction goals and improve air quality for all Californians in a meaningful and timely manner.

Thank you for the opportunity to provide comments.

Sincerely,



Edward Moreno
Policy Advocate