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Additional submitted attachment is included below.

From: Anthony Thomas
To: [Energy - Docket Optical System](#)
Cc: Campagna.Jennifer@Energy
Subject: Docket Number 17-IEPR-04 Workshop & Public Comment
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Attachments: [CEC Comment Letter FINAL 102317.pdf](#)
[Attachment to CNGPA CEC Comment Letter FINAL 102317.pdf](#)

Members of the California Energy Commission:

Pursuant to the Natural Gas Workshop held on October 9, 2017, at the California Energy Commission (CEC). The following attachments are comments submitted on behalf of CNGPA to the CEC in reference to Docket No. 17-IEPR-04. Additionally, we have included an attached document with answers to questions for review by the CEC staff. If you are in need of any further information or clarification, please do not hesitate to contact me at anthony@cipa.org or 916 447-1177. Thank you.

P. Anthony Thomas
Director of Government Affairs
California Independent Petroleum Association
Executive Director
California Natural Gas Producers Association

1001 K. Street, 6th Floor
Sacramento, CA 95814
916-447-1177 P
916-447-1144 F
anthony@cipa.org



1001 K Street, 6th Floor, Sacramento, CA 95814
(916) 447-1177

October 19, 2017

Ms. Jennifer Campagna
California Energy Commission
Dockets Office, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

RE: Docket No. 17-IEPR-04

Dear Ms. Campagna:

On behalf of the California Natural Gas Producers Association (CNGPA), I want to thank you for allowing CNGPA to provide our thoughts and suggestions throughout the Natural Gas Workshop held on October 9, 2017, at the California Energy Commission (CEC). The following are comments submitted on behalf of CNGPA to the CEC in reference to Docket No. 17-IEPR-04. Additionally, we have included an attached document with answers to questions from CEC staff.

California natural gas production plays an absolutely critical, often unappreciated role, in our state's energy diversity. Natural gas production in California currently satisfies less than 10 percent of our state's demand, down from about 15 percent in the mid-1990s; however, we import more than 90 percent of our natural gas by interstate pipelines from Texas, the Rockies and Canada.

California natural gas production is developed under the most stringent environmental regulations in the country, and probably the world, including the Air Resources Board's methane rule and the cap-and-trade program under which California producers address their greenhouse gas emissions. In addition, the close proximity of California natural gas production to market saves a thousand miles of transportation over out-of-state sources. Collectively, these features result in California natural gas production having the lowest net carbon intensity of any natural gas consumed in California.

With such an inequity of importing, it is clear that California has a demand for natural gas. It is the affordable and reliable backbone of California's energy supply that powers our homes, farms and businesses and its in-state production should be actively encouraged by the CEC and other agencies. Natural gas comprises 30 percent of the state's energy portfolio and generates 60 percent of the state's electricity supply, providing energy security to the world's sixth largest economy.

Natural gas is also the slingshot for renewable energy growth and serves as an optimal partner with renewables. CNGPA would like to see an equal partnership between natural gas and the growing support for renewable energy, and we believe there is compelling proof that the two can, and indeed must, co-exist.

Natural gas is the optimal partner for renewables because it provides on-demand energy, even when the sun doesn't shine and the wind doesn't blow. Unlike renewable sources, natural gas power plants can ramp up rapidly to full operation. Natural gas also contributes affordability to a diverse energy mix. The

U.S. Energy Information Administration (EIA) estimates the cost of electricity for new solar technology in 2022 will be 37 percent higher than new natural gas plants.

Given the vast natural gas resources, the investments in natural gas infrastructure and its affordability and reliability, it should not be surprising that the EIA projects natural gas will meet a growing share of domestic energy needs in the coming decades, even as renewables continue to receive substantial government subsidies and regulatory support.

As a global environmental leader, California is committed to implement achievable strategies to reduce greenhouse gas emissions (GHG) and improve air quality. The record unequivocally shows that natural gas has delivered substantial GHG emission reductions and has been far more effective in cutting U.S. greenhouse gas emissions than renewables, while maintaining affordability and reliability for consumers. As a transportation fuel in widespread fleet service, natural gas provides vehicle emission reductions of up to 30 percent for carbon dioxide, 75 percent for nitrogen oxides, and over 90 percent for particulate matter. Natural gas must remain an essential backbone of California's energy mix in order to attain the state's aggressive environmental goals.

If I can be of any further assistance, please do not hesitate to contact me at (916) 859-4720 or CNGPA's Executive Director, P. Anthony Thomas, at (916) 447-1177. Thank you.

Sincerely,



Derek Jones
President, CNGPA

Attachment to CNGPA Comments RE: Docket No. 17-IEPR-04

• **Where do you see the market for natural gas going in the next 10 years?**

Across the country, natural gas has been America's leading energy success story. Natural gas has delivered sustained affordability, both in California and nationwide, for more than 15 years, fueled by the dramatic increase in associated gas production from America's prolific billion-barrel fields, including the California's Elk Hills field, that surpassed longstanding dry gas production in the Sacramento Basin. Across the country, natural gas electricity generation and feedstocks have transformed once-shrinking American industries back into world-leading competitive exporters.

Natural gas has delivered substantial GHG emission reductions in California and nationwide, and perfectly complements renewable energy. To sustain California's role as a leader in reducing greenhouse gas emissions in a way that is both affordable and reliable, demand for natural gas will grow. With the phase-out of nuclear power and the uncertainty year-to-year of hydroelectric power, natural gas is California's only dependable and flexible power supply that is available 24 hours per day, 365 days per year, even when the sun doesn't shine or the wind doesn't blow.

• **Are there issues of significance that are not included in the *Natural Gas Outlook or 2017 Integrated Energy Policy Report (2017 IEPR)* relating to California's natural gas infrastructure, along with future natural gas supply and demand?**

We recognize and applaud the hard work of Commission staff in preparing the draft report. CNGPA suggests that the report should be updated to reflect six points:

- (1) Recognizing that California's dependence on energy imports has increased dramatically;*
- (2) the critical, long-term role of natural gas in helping California achieve its greenhouse gas emission goals in a way that is affordable to working families;*
- (3) the tremendous efficiency of natural gas powered equipment and appliances, which are 10 times cheaper per BTU than their electric counterparts in industrial settings and 4 times cheaper in residential settings,*
- (4) the opportunity and the need for the State to streamline permitting of local natural gas production, given the proposed impediments to natural gas storage that currently supports efficient on-demand delivery to homes, farms and businesses;*
- (5) recognizing the serious risk of future energy shortages and price spikes if proposed natural gas power plants employing proven technology are rejected in favor of speculative and costlier battery storage experiments; and*
- (6) incorporating the latest findings from NASA research, which confirms that over 80% of methane emissions in California result from agricultural activity and landfills, with only a minor portion associated with natural gas production.*

Natural Gas Production

- **Over the next 10 years, what is the future of natural gas production in California?**

California is blessed with substantial natural gas resources, comprising dry natural gas in the Sacramento Basin and associated natural gas that is co-produced with crude oil in the San Joaquin, Ventura and Los Angeles Basins. Most of the natural gas produced in California is associated gas, so its production generally tracks oil production in the state. As oil prices rebound from historic lows, both oil production and associated gas production are expected to increase.

However, California has become increasingly dependent on imported energy in recent years, with 67% of California's crude oil demand and over 90% of its natural gas demand last year coming from other states or countries. The State can and should do far more to encourage local natural gas production as part of a sustainable energy mix that is affordable, reliable and secure for all Californians. Re-establishing predictable permitting processes will ensure that working Californians enjoy the economic, social and environmental benefits from local production.

- (1) Local natural gas is produced under the most stringent safety, labor and environmental standards in the United States.*
- (2) Local production means jobs for Californians, investments in local energy infrastructure, and tax revenues for essential government services, instead of paying for those benefits in Texas, the Rockies and Canada through our energy imports.*
- (3) Local natural gas production increases California's resiliency in the event of disruption of natural gas imports, curtailment of gas storage or natural disasters.*

California's natural gas producers believe that we can and should produce more energy supplies in California from all sources – traditional oil and natural gas and renewables – under California's leading safety, labor and environmental standards to ensure a vibrant, sustainable future for all Californians.

- **Please describe the economic impact of natural gas production in California. Where in California is the strongest economic impact of natural gas production and which part of the state has the highest number of jobs in this sector?**

California's oil and natural gas industry supports more than 368,000 jobs throughout the state with an average wage of about \$84,500 according to a recent study by the Los Angeles Economic Development Corporation. This wage level is more than 35% above the average wage and provides a path to the middle class for a diverse workforce with a range of industrial jobs that don't require a college degree. California's oil and natural gas industry also contributed \$26 billion in state and local taxes in 2015, supporting critical government programs and public sector jobs.

Employment and tax payments from the oil and natural gas industry are highest overall in the LA Basin and the Bay Area, where larger facilities are located. Our industry's greatest proportionate economic contributions occur in the Central Valley, where CNGPA member companies are among the highest property taxpayers. We are also seeing an uptick in drilling in the Ventura and Sacramento Basins. This increased activity benefits not only our employees, but also the building and construction trades, local manufacturing and service businesses, royalty owners and state and local governments.

- **How do California natural gas producers control greenhouse gas emissions at existing and at capped production wells?**

Natural gas producers are in the business of capturing and selling methane from our wells. Methane emissions are controlled through well design and construction, well integrity testing, surface equipment that contains and captures vapors, leak detection and repair programs and plugging and abandonment at the end of the well's productive life. The operations of California natural gas producers are closely regulated by the California Air Resources Board (CARB), air districts throughout the state, and the Division of Oil, Gas, and Geothermal Resources (DOGGR), applying the world's most stringent safety and environmental standards. Actions taken by natural gas producers to prevent or reduce emissions from production wells include:

- (1) Surface casing and production casing are installed in the wellbore with cement layers in between each and the surrounding rock layer to provide isolation and prevent fluids from migrating from the rock formation to shallower zones or the surface.*
- (2) After drilling, the integrity of the wellbore is established by hydrostatic pressure testing and cement bond logs on production casing.*
- (3) Wells are inspected at regular intervals to assure no leaks are present.*
- (4) In producing wells, natural gas is captured through the casing and routed to a gas collection system for processing. Gas that cannot be sold is safely flared, rather than being vented. Gas collection systems, flares and other equipment are regulated and permitted by air districts.*
- (5) CARB has recently adopted its methane rule, imposing significant additional leak detection, monitoring and repair requirements on California natural producers.*
- (6) Further, production wells typically operate at low pressure and often require artificial lift to draw fluids to the surface. Without applying that energy to pump the fluids through the production well, the oil and natural gas typically remains in the underground formation.*
- (7) After their useful life, wells are plugged and abandoned using procedures specified by the California Division of Oil, Gas, and Geothermal Resources (DOGGR). During plugging, wells are pumped full of cement, and the work is witnessed by DOGGR.*

Studies like NASA's recent research on methane sources show that natural gas production does not generate significant emissions.

Natural Gas Demand

- **How does natural gas fit into the current and future energy needs of agricultural, industrial, and other large customers over the next 10 years?**

Low cost natural gas is instrumental to the success of agriculture and manufacturing industries given its price relative to electricity and other energy sources, as well as its efficiency, versatility and environmental benefits. The U.S. Energy Information Administration (EIA) reported this year that natural gas is about 10 times cheaper than electricity on a cost per BTU basis in the industrial sector and 4 times cheaper in the residential sector. The EIA projects the demand for natural gas in the U.S. to continue to expand, and the Commission and other state leaders should not deprive Californians of the proven benefits of natural gas.

- **For large customers, which fuels are realistic alternatives for natural gas heating and power generation? Do these substitutes include renewable gas or power to gas?**

There are no alternative fuels that are as abundant, versatile and inexpensive as natural gas. The land constraints, intermittent nature and lower efficiency of solar and wind power are significant drawbacks for facilities with significant heating and power needs. Biogas has very limited supply and higher cost, and would typically need to be blended with natural gas to provide consistent quantity and quality.

- **Recently, portions of California’s natural gas infrastructure have received repairs and upgrades with the aim of enhancing safety and reducing natural gas leakage. How have recent changes in additional state and federal regulations regarding natural gas infrastructure affected the market for natural gas customers’ costs and reliability?**

The safety of natural gas infrastructure is paramount and CNGPA believes that resources should be applied to ensure the safety and reliability of natural gas transmission systems, in populated areas. While implementing needed upgrades to transmission systems, regulators should encourage utilities to preserve operational flexibility and access points for their customers and producers to avoid imposing unnecessary costs or reducing local natural gas supplies. Sustaining local production is particularly important, since proposals to reduce natural gas storage would impact reliability and increase costs to residents and businesses, especially during high demand periods.

Some regulatory proposals would expand transmission system requirements to gathering lines which have lower pressures and are often located within oil and gas fields and remote areas. It is important to recognize that expansion of those programs beyond transmission systems to additional types of lines would add significant costs for producers and consumers and reduce available in-state production, making California even more dependent on imported energy.