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Decarbonization through use of Natural Gas and Pipeline Systems

California Public Utilities Commission

Dear CPUC/Commissioner:

California has proposed significant measures to reduce greenhouse gas (GHG) by 2045 through the use of clean and renewable energy. This pledge to have a zero carbon footprint within 26 years is aggressive and challenging. However, natural gas and California's natural gas system should and will play a significant role in reaching the GHG targets.

The potential of current and developing technologies cannot be overlooked when moving to a neutral carbon footprint. Examples of these technologies may include carbon capture/sequestration, methane capture and using excess 'green' energy (solar photovoltaic and wind, principally) for electrolysis of water which results in creation of oxygen and hydrogen and from whence hydrogen can be collected and injected into the vast storage capacity of an existing pipeline system. The latter technology is already in use in Canada, Germany, Japan and other nations as a method to capture a usable energy source from the clean energy of wind or solar power.

Additional concerns should be raised related to having an available storage source for 'clean' energy. Several studies have shown that lithium-ion battery storage is good in short-term use, but may not be viable as a longer term solution. Additionally, the volume of lithium and other rare-earth elements required for creating enough storage to ensure a steady supply of renewable electricity may be well beyond the volume of those materials currently available worldwide. After consideration of the materials, energy to produce and lifespan of battery storage of 'clean power', one must also consider the disposal and hazardous by-products these storage options may bring.

If the existing natural gas transmission and distribution systems can continue to supply a balanced portfolio of energy to meet the needs of the state while new technologies develop to take advantage of the existing infrastructure, California will be far better suited to achieve its long-term goals of carbon neutrality in the most efficient and cost-effective manner as the GHG goals are achieved.