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**Re: SoCalGas Comments to the Climate Change Investments Third Investment Plan for Fiscal Years 2019-20 through 2021-22**

To Whom It May Concern:

Thank you for the opportunity to comment on the Climate Change Investments Third Investment Plan for Fiscal Years 2019-20 through 2021-22 (Investment Plan). The state is faced with many challenges in meeting its climate goals, and incentives play a critical role in helping to achieving them. Incentives have the unique ability to get immediate emission reductions, as well as spur innovation to achieve future emission reductions. SoCalGas commends the Climate Investments team on its successes to date and would like to offer the following comments to help guide the investments moving forward.

**BALANCED ENERGY IS THE MOST EFFECTIVE WAY TO MEET STATE GOALS**

To reach the state's climate and environmental goals, California must prioritize policies and programs that maximize emissions reductions in ways that are effective, affordable, and reliable. The best way to ensure a sustainable future is a balanced approach that maintains a diverse energy portfolio and decarbonizes existing energy supplies and infrastructure.

The state should view different sources of energy as multiple systems working together to provide essential services for all its citizens, businesses, and municipalities. The state should not look to only one energy source, as all of these systems can be transformed into low and zero carbon sources of energy. For example, renewable natural gas obtained from organic sources such as dairies, wastewater, and diverted organic waste would otherwise create methane emissions to the atmosphere. Once conditioned, the Renewable Natural Gas can be injected into the pipeline and used like traditional natural gas. Hydrogen can be created from excess wind and solar power from the grid, providing a long-term and flexible alternative to battery storage. Additionally, this natural gas derived hydrogen can be a zero-emissions fuel that can be used to power vehicles, fuel cell electric generators, and even injected into a pipeline. There are many pathways where all energy sources can be decarbonized and integrated into a low and zero carbon energy system.

Relying on one energy source drives up the cost to end users, many of whom are already struggling to afford their energy bills. California has the highest effective poverty rate in the nation<sup>1</sup>, and low-income families pay 20% of their income or more on energy costs<sup>2</sup>. Additionally, relying on one energy source

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<sup>1</sup> The United Way, *Real Cost of Living Report* (2018)

<sup>2</sup> Adam Chandler, *"Where the Poor Spend More Than 10 Percent of Income on Energy,"* (2016)

can decrease reliability and comfort for users. A balanced energy approach can achieve our goals and preserve choice, while minimizing disruption and cost. Along with climate impacts, cost and reliability should be critical factors when modernizing the state's energy system.

AB 1532 includes seven "investment priority areas," including "Lessening the Impacts of Climate Change." AB 398 outlines seven "priority investment areas" including "Climate Adaptation and Resiliency." The Legislature clearly sees the need for being resilient to climate change, which is particularly important in the energy sector. Energy during natural disasters, such as flooding and wildfires, is imperative for public welfare and emergency services. Relying on one single energy source reduces the state's ability to be resilient in the face of natural disasters, as well as external threats like terrorist attacks. By maintaining a diverse energy supply and delivery system - rather than focusing on only one form of energy - we can minimize interruptions to the health, safety, and comfort of Californians.

**RECOMMENDATION:** Climate investments should prioritize and support an integrated energy system that is strong and resilient.

#### **RENEWABLE GAS IS AVAILABLE TODAY AND CAN PROVIDE IMMEDIATE CLIMATE BENEFITS**

Renewable natural gas should be prioritized for achieving immediate emission reductions. Renewable Natural Gas (RNG) has an average carbon intensity 60-80 percent lower than diesel. Based on the source, RNG can have a carbon intensity (CI) up to 400 percent lower than diesel. Furthermore, RNG can be carbon negative, as RNG mitigates emissions that would have occurred without being captured for use as an energy source. The California Air Resources Board (ARB) awarded the company, AMP Americas, a renewable energy company, a CI score of -254.94 grams of carbon dioxide per megajoule (g CO<sub>2</sub>e/MJ) for its renewable gas, which is the lowest ever issued by CARB. In comparison, the California electric grid has an energy efficiency ratio corrected CI value of approximately 20 gCO<sub>2</sub>e/MJ. As a co-benefit, natural gas engines are now certified to the ARB Optional Low Nitrogen Oxide (NO<sub>x</sub>) Standard of 0.02 grams per brake horsepower hour (g/bhp-hr), which can significantly assist regions in meeting criteria pollutant federally mandated requirements.

**RECOMMENDATION:** The state should prioritize renewable natural gas as an available option to achieve immediate greenhouse gas emission reductions.

#### **COST EFFECTIVENESS**

As the Investment Plan states, "AB 1532 requires that funds facilitate the achievement of feasible and cost-effective GHG emission reductions, and the Legislature and the public need to know whether investments are a good value (page 32)." However, the Investment Plan quickly dismisses the need to spend funds cost effectively. The Investment Plan continues, "GHG reduction cost-effectiveness is an important metric, but comparing projects based solely on cost-effectiveness per GHG emission reduction does not give a complete picture of project value (page 32)." Cost Effectiveness is a key metric to determine if public funds are being spent appropriately. Without this important metric, there are no protections from impropriety around the funding.

It is quite distressing that cost effectiveness would be dismissed as the Los Angeles Times recently reported (July 23, 2018) that transportation greenhouse gas emissions have increased since 2013. This is an alarming trend considering the Air Resources Board has invested \$1.7 billion of Low Carbon

Transportation Incentives since its inception, specifically to reduce transportation emissions. With funding amounts uncertain in future years, it is imperative that the funds be spent cost effectively.

SoCalGas used a third-party consultant to assess the cost-effectiveness of transportation investments. The preliminary results showed that for many of the programs, cost-effectiveness has been decreasing (getting worse) for some programs. For example, cost effectiveness for the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) has been on a continual decline since 2010. The assessment found that cost-effectiveness of incentives for battery electric vehicles funded by HVIP in 2010 was \$100 per metric ton of carbon dioxide equivalent (CO<sub>2</sub>e). In 2017, the cost effectiveness for BEVs funded by HVIP was over \$500. Therefore, the state is paying five times more for the same amount of emission reductions under the program.

**RECOMMENDATION:** SoCalGas recommends that, consistent with AB 1532, cost effectiveness should be prioritized to ensure that public funds are being spent appropriately.

#### **ALTERNATIVES TO PROPOSED FUNDING PLANS**

The details of each of the funding programs, including the funding allocations, are developed and approved by the respective Administering Agencies. For example, ARB recently released a draft funding plan for Low Carbon Transportation Incentives. ARB staff presented the funding plan to the public and is now soliciting comments prior to ARB consideration. However, the funding plan did not provide any alternative allocation scenarios. It is important to provide the public detailed, alternative scenarios to truly inform the public when soliciting comments. This is particularly important when there are a number of investment priorities outlined in AB 1532 and AB 398, as discussed in the Investment Plan.

**RECOMMENDATION:** SoCalGas recommends that the Investment Plan require Administering Agencies provide stakeholders alternatives when developing funding programs. At a minimum, a “maximum emission reduction alternative” should be presented to the public to show the public what emissions can be reduced if funds focused on maximizing emission reductions.

#### **BALANCE BETWEEN IMMEDIATE EMISSION REDUCTIONS AND TRANSFORMATIONAL TECHNOLOGIES**

As stated above, over \$1.7 billion have been spent to reduce transportation emissions, yet transportation emissions have increased. While there are cost effective, available solutions such as renewable natural gas, ARB has focused its funding on technology advancement with the hope that in future years the technologies will be deployed in mass and there will be “backloaded” emission reductions. While it is important to make heavy investments into transformational technologies, it cannot be at the expense of what can and should be accomplished in the near term. There have been public discussions on the need for balanced funding investments, particularly at the May ARB Meeting when the VW Mitigation Settlement was being considered by the ARB. Several commenters expressed the need for balance and to ability to demonstrate balance. ARB staff responded that there is balance, however staff was unable to quantify how they came to that determination. Developing a methodology to quantify investments and demonstrate balance would provide insight and transparency into how funding allocation decisions are made.

**RECOMMENDATION:** SoCalGas recommends that ARB staff develop a methodology to demonstrate that there is balance between funding cost effective, immediate emission reductions, and transformational technologies. This methodology would also be used to inform future funding allocation decisions.

### **PRIORITY POPULATION INVESTMENTS**

SoCalGas agrees with the prioritizing investments into disadvantaged communities (DACs). It is widely proven that DACs are disproportionately impacted by climate change. However, disproportionate funding into long-term technology advancement projects, does not yield near-term benefits to DACs. Therefore, DACs are being asked to wait for technologies to be developed before experiencing any air quality and climate benefits. Additionally, investing into technology advancement and demonstration projects that are not cost effective will achieve less emission reductions than cost-effective alternatives.

**RECOMMENDATION:** SoCalGas recommends that investments into DACs should focus on available, cost effective technologies to ensure that there will be immediate, maximized emission reductions for DACs.

### **ADDITIONAL TRANSPARENCY AND ACCOUNTABILITY**

The California Climate Investments Annual Reports are good tools to track how funding is spent. It provides metrics that are useful to agencies and the public. However, there are additional metrics that should be included to provide additional transparency into the investments.

**RECOMMENDATION:** The Annual Reports should include additional metrics to track progress and increase transparency. These include, but are not limited to:

- Emission reductions achieved to date. The Annual Reports include the anticipated emission reductions for investments. However, it would be helpful for the public to know how much reductions of both GHG and criteria pollutant emissions have already been achieved. This is particularly important for DACs as immediate benefits should be realized within these communities.
- Quantified co-benefits. The Annual Reports to date have not included the quantified co-benefits. Co-benefits, such as the reduction of criteria pollutants, such as NOx and particulate matter have direct and immediate effects on public health. Therefore, it is important for the public to know what reductions are expected to be achieved over the life of the project and achieved to date.
- Lessons Learned/Areas of Improvement. The amount of funding for climate investments is unprecedented. It would be useful for the public to understand what has been working well for the funding program and what can be improved upon. This will give the public the assurance that the programs are being constantly reviewed, and the confidence that the funds will be spent effectively.

Thank you again for the opportunity to comment on the Investment Plan. If you have any questions, please feel free to contact me.

Respectfully submitted,



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