

DOCKETED

Docket Number:	19-ALT-01
Project Title:	2020-2021 Investment Plan Update for the Clean Transportation Program
TN #:	233791
Document Title:	Comments of the Clean Transportation Program's 2020-2023 Investment Plan Update, Docket #19-ALT-01
Description:	N/A
Filer:	Cody Goldthrite
Organization:	SoCalGas
Submitter Role:	Public
Submission Date:	7/7/2020 10:10:46 AM
Docketed Date:	7/7/2020



Matt Gregori
Technology Development Manager

555 West Fifth Street
Los Angeles, CA 90013

tel: 213-244-2052
email: Mgregori@socalgas.com

July 6, 2020

California Energy Commission
Docket #: 19-ALT-01
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Comments of the Clean Transportation Program's 2020-2023 Investment Plan Update, Docket #19-ALT-01

Dear Commissioner Patty Monahan,

As an Advisory Committee member, I appreciate the opportunity to comment on the Lead Commissioner Draft of the 2020-2023 Investment Plan Update. There were some great additions to this draft regarding High Road employers, but unfortunately this draft could result in more significant health and environmental impacts to the state and its inhabitant as compared to the previous staff draft. I urge the Energy Commission not to put long-term 2045 aspirational goals above the greenhouse gas (GHG) emission reductions – especially Short-Lived Climate Pollutant emissions, which are the most urgent climate pollutants to reduce – and air quality improvements that are needed today, particularly in our disadvantaged communities. I ask the Energy Commission to make the following two changes to the Investment Plan which will significantly decrease GHG emissions and air pollution, particularly diesel (Black Carbon) Particulate Matter (PM) 2.5 and Nitrogen Oxides (NOx) emissions:

1. Add back the \$10 million in funding for zero and near-zero fuel supply and production
2. Add \$5 million to hydrogen refueling funding in the last six months of the plan

The rationale for requesting these changes are as follows:

1. Compliance with Assembly Bill 8
2. Jobs and Economic Stimulus
3. Greenhouse Gas Emission Reductions
4. Air Quality Impact Reductions

1. Compliance with Assembly Bill 8

a) The Energy Commission must follow a portfolio approach when making funding allocations

The Energy Commission must not favor any one technology over another. By allocating all the technology funds to zero emission vehicle infrastructure technologies (and overwhelmingly (up to 85 percent) for electric vehicle charging), the Energy Commission is clearly favoring that technology and therefore not adhering to the intent of the Legislature. When creating the Alternative and Renewable Fuel and Vehicle Technology Fund, the Legislature specifically charged the Energy Commission with funding projects that “promot[e] a transition to a diverse portfolio of alternative transportation fuels and reduced petroleum dependency in California” (emphasis added, Cal. Health & Safety Code Section 44273). An investment plan that funds a single technology subverts the intended purpose of the program.

Moreover, when assessing project eligibility, the Energy Commission must consider additional criteria, including the project’s alignment with state climate change policy and low-carbon fuel standards, the project’s ability to reduce criteria and toxic air pollutants, the project’s economic benefits for California, and whether the project drives new technology advancement (Cal. Health & Safety Code Section 44272(c)). As we will describe later in these comments, electric vehicle charging infrastructure is not the most cost-effective way to reduce GHG and criteria and toxic air pollutant emissions. Many of the low-carbon fuel production projects the CEC has recently funded are highly negative carbon intensity projects.¹

The Energy Commission is also required to explain its rationale when submitting its draft update to the investment plan. The Energy Commission is required to “highlight and explain the rationale for any year-over-year changes to the program’s strategy and policy priorities, *particularly with respect to specific technologies or policy initiatives*” (emphasis added, Cal. Health & Safety Code Section 44272.7(d)(2)). The Investment Plan points to a desire to provide funding to support job creation and economic stimulus and yet doesn’t cite any references demonstrating that their shift in funds will actually result in positive impacts on the desired outcome. We contend that the Plan will have the opposite effect and will reduce high-quality sustainable jobs and economic stimulus (local tax revenues) in search of lower quality jobs.

b) Assembly Bill 8 mandates that 20 percent of the funds are dedicated to Hydrogen Refueling Stations

The current funding allocation for the last six months of the Investment Plan only includes about 10 percent of the approximately \$50 million of funding or \$5 million. Instead, compliance with AB 8 requires an investment of 20 percent or \$10 million. Health and Safety Code Section 43018.9(e)(1) states: “The [Energy] [C]ommission shall allocate twenty million dollars annually to fund the number of stations identified pursuant to subdivision (d), not to exceed 20 percent of the moneys appropriated by the legislature from the Alternative and Renewable Fuel and Vehicle Technology Fund, established pursuant to Section 44273, until there are at least 100 publicly available hydrogen-fueling stations in operation.” Notably, the Legislature has specified that the 100 publicly available hydrogen-fueling stations must be operational. According to the California Fuel Cell Partnership’s website, there are currently only 41 hydrogen refueling stations that are open retail.²

¹ At an April Business Meeting, the Energy Commission approved \$800,000 for the Lakeside Pipeline Cluster Project that when complete will result in GHG emission reductions 150,000 MT CO₂e per year and the project has a carbon intensity of about -300 gCO₂e/MJ.

² https://cafcp.org/sites/default/files/h2_station_list.pdf

AB 8 also requires the Air Resource Board to evaluate the need for hydrogen-fueling stations (Cal. Health & Safety Code Section 43018.9(d)(1)). The ARB's 2019 Annual Evaluation of Fuel Cell Electric Vehicle Deployment & Hydrogen Fuel Station Network Development report states: "in order to meet the goals of AB 8 and EO B-48-18, a significant number of stations beyond those currently funded must be developed. With the Energy Commission's grant solicitations and the LCFS HRI program as the primary State funding mechanisms available to drive towards these goals, it is plainly evident that the continued expenditure of the full \$20 million available per year for light-duty hydrogen fueling stations through AB 8 should continue." Accordingly, the commission is obligated to continue to fund hydrogen fueling stations and may not reallocate moneys to other projects (See Cal. Health & Safety Code Section 43018.9(d)(2)).

Further, GFO-19-602 is a grant solicitation released on December 26, 2019 announcing the availability of up to \$115.7 million for hydrogen refueling infrastructure projects. By our calculation, this funding amount includes previously allocated dollars as well as an assumption of 20 percent of future funding through the life of the Clean transportation Program (including \$10 million in funding during the last six months). The Clean Transportation Program 2020-2023 Investment Plan is therefore inconsistent with this GFO that is currently open for submissions. Having an open grant solicitation for funding at the same time as cutting the funding that could be offered through the GFO seems to suggest that funding offered through this GFO is not guaranteed to go to hydrogen refueling, which is a devastating signal to the hydrogen refueling market. The funding offered in the GFO should not be redirected.

Therefore, the Clean Transportation Program's 2020-2023 Investment Plan Update is inconsistent with the commission's state law obligations and should be revised to include the full \$20 million per year (\$10 million for the last six months).

2. Jobs and Economic Stimulus

We commend the Energy Commission for prioritizing job creation and economic stimulus during these unprecedented times. We support this category and the Commission's intentions but question the lack of data included in the Plan. The 2020-2023 Investment Plan Update provides no data to demonstrate that moving money out of the zero and near-zero fuel supply and production tranche and into a Recovery and Reinvestment tranche will result in more jobs or any additional economic stimulus beyond the tranche suggested by the staff draft. The Energy Commission provides no details on the numbers of jobs or quality of jobs created in the light-duty electric vehicle charging infrastructure and e-mobility tranche which account for 63 percent of all the funding allocation. In fact, Thomas Enslow, representing the California State Labor Management Cooperation Committee for the International Brotherhood of Electrical Workers and the National Electrical Contractors Association, states that the Energy Commission's long-standing support for workforce training is "undermined by the CEC's current position that incentives programs funded by the Clean Transportation Program cannot, in fact, require participants to employ properly trained workers."³

Furthermore, not all training programs are effective. The Energy Commission sponsored report by RAND, *Process and Outcome Evaluation of the Alternative and Renewable Fuel and Vehicle Technology Program* states:

³ Thomas Enslow Comments dated April 1, 2020, TN #232616, <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-ALT-01>

[P]roject grants did support some employment both in California and elsewhere and did result in some hiring for the projects. Many of the hired workers were retained after grant expirations; however, the magnitude of employment and hiring appeared to be modest. It is likely that the ARFVTP-funded projects have addressed some of the ARFVT industry's needs. However, without more evaluative information, we cannot determine the extent. We do note that most awardees did not report that skilled labor presented a barrier, and most said that it is getting easier over time to find skilled labor for their projects.⁴

Biofuel projects create high-paying sustainable jobs as well as local economic support through tax revenues. One example of this is CR&R biomethane facility. It is designed for a 30-year life supported by long term municipal contractors to provide waste and recycling services. It will create 75 full time construction jobs and 25 long-term operation and maintenance jobs. These are extremely high-quality jobs like chemists, engineers, and biologists that are mostly graduates from the California State University system from Riverside and San Bernardino. It will also provide property tax revenues for the local economy of about \$15 million over the life of the project. These communities are among the hardest hit economically due to the novel coronavirus pandemic and electric vehicle charging infrastructure will not provide anywhere near these property tax revenues to support the local economy.

3) Greenhouse Gas Emission Reductions

ARB's California Greenhouse Gas Emissions for 2000-2017 – Trends of Emissions and Other Indicators shows that the transportation sector total GHG emissions have increased every year since 2013. Transportation sector emission reductions are more critical now than ever. The Clean Transportation Plan should include some funding for projects that have very high cost-effectiveness ratings at reducing GHG emissions. The Zero and Near-Zero Fuel Supply and Production projects will create significant emission reductions now. During the July 2nd, 2020 Integrated Energy Policy Report Update workshop "Status of Hydrogen and Fuel Cell Electric Vehicle Markets," Shane Stephens of First Element noted all of the agricultural and food waste in California would be excellent feedstock for renewable hydrogen production. The zero and near-zero fuel production grants that supported these types of projects won't be feasible if the CEC provides zero dollars to them in the 2020/2021 fiscal year.

According to the LAO report from 2016, dairy digesters are 50 times more cost-effective at reducing carbon than modernization of public fleets.⁵ Further, the Commission's NREL report showed that for every dollar spent on diesel substitutes, 30 times more GHG emission reductions occurred than if that dollar were spent on EV infrastructure.⁶ By investing a modest amount of money in these projects (\$10 million), the Clean Transportation Program can provide real significant GHG savings in the near term (and going forward), whereas the Lead Commissioner draft will actually result in less GHG emission reductions.

⁴ https://www.rand.org/pubs/research_reports/RR1948.html

⁵ <https://lao.ca.gov/handouts/resources/2016/Cap-and-Trade-Report-Provides-New-Information-042016.pdf>

⁶ <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-IEPR-04>

A recent report by Lawrence Livermore National Laboratory on how California can achieve carbon neutrality also underscores the cost-effectiveness of investments in biofuels. The report found that biomass energy can provide two-thirds of all the carbon negative emissions needed to reach carbon neutrality by mid-century.⁷ It found that biofuels generated from organic waste can reduce carbon at an average cost of less than \$64 per ton of carbon reduction.⁸ That is less than one-third the average cost of carbon reductions under the Low Carbon Fuel Standard where LCFS credits, equal to one ton of carbon reduction, have been selling for more than \$200.⁹

It is important to note that the Low Carbon Fuel Standard (LCFS) is a large driver for all of the transportation related projects. As of 2019, electricity was the third largest creator of carbon credits behind ethanol, a fuel that the Energy Commission no longer supports. Electricity soon will be the largest generator of LCFS credits and so EV infrastructure has a very viable revenue source outside of CTP, utility programs, and other investments. However, LCFS also drives a lot of the biofuels that enter the California market; although it merely supports the least cost approach. This results in most of the biofuels entering from outside of California. Since the intention of the Energy Commission is to drive jobs and economic stimulus in California, it would be foolish to take money away from this tranche which would guarantee those fuels come from within California and put them into tranches that already are well funded under this plan.

4. Air Quality Impact Reductions

California has two of the most polluted air basins in the entire United States. By not pursuing a laser-like focus to clean up the air today, we are continuing to place a very correctable burden on our healthcare system. The air districts and ARB have shown that NOx emission reductions today from the heavy-duty trucking sector are the most necessary to achieve to attain federal and state Clean Air Act standards. Replacing diesel trucks with biomethane powered trucks is a key strategy to achieve those necessary NOx reductions. To provide a little perspective, medium and heavy-duty trucks consume about 3,200 million Gasoline Gallon Equivalent (GGE) of Diesel annually, 290 million GGE of natural gas annually (note that 60 percent of this gas is biomethane), and 1 million GGE of electricity annually. If we could increase the electric trucks by 100-fold in the next 5 years (note the Energy Commission's reach projections are around a 20-fold increase in 10 years), it still would only result in a 3 percent displacement of diesel. However, if a more reasonable increase of 10-fold in the next 5 years were achieved on the NG/RNG side, it would result in a 90 percent reduction of diesel consumption.¹⁰ This is the magnitude of the problem we are facing.

NOx, as a precursor to ozone, and PM are leading causes of asthma. Diesel PM 2.5 can penetrate deep into lungs and cause serious health problems. USC's Erika Garcia found that reductions of NO₂ between 1993-2006 led to a 20% lower rate of asthma and reductions of PM 2.5 lead to 19% lower rate.¹¹ These results indicate if we reduced NOx and diesel PM 2.5 now,

⁷ Lawrence Livermore National Laboratory, *Getting to Neutral – Options for Negative Carbon Emissions in California*, January 2020, at page 2.

⁸ Id. at page 8.

⁹ <https://ww3.arb.ca.gov/fuels/lcfs/credit/lrtweeklycreditreports.htm>.

¹⁰ Staff calculation of MD/HD (Class 6-8 vehicle) fuel consumption based on Department of Energy data, <https://afdc.energy.gov/states/ca>

¹¹ https://jamanetwork.com/journals/jama/fullarticle/2733972?guestAccessKey=1dd7b496-e0c1-4822-8ea1-b0d2ef03f0f7&utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_content=tf1&utm_term=052119

it would have an immediate effect on asthma rates. Let's not delay diesel reductions providing immediate health benefits to a later date for elitist policies that will only see results a decade or more into the future.

The Natural Gas Vehicle Partnership studied the NOx reductions per dollar spent¹² and found that \$100 million spent on low-NOx vehicles like RNG powered class 7 and 8 trucks results in a reduction of 140 tons of NOx while that same investment in Battery-Electric trucks only results in a reduction of 22 tons. Appendix A is the fact sheet showing these savings. Therefore, by reallocating \$10 million from zero and near-zero fuel supply and production to fund EV infrastructure, the Lead Commissioner Investment Plan could result in an increase of 12 tons of NOx over the staff draft.

Conclusion

1. Include \$10 million in funding for zero and near-zero fuel supply and production for the 2020/2021 fiscal year that helps to meet the requirements of Senate Bill 1383 (Lara, 2016)
2. Include \$10 million in funding hydrogen refueling infrastructure during the last 6 months of the plan

Sincerely,



Matt Gregori
Technology Development Manager

¹² [https://cngvp-7f8e.kxcdn.com/pdf/cngvp-how-much-clean-air-could-\\$100-million-buy.pdf](https://cngvp-7f8e.kxcdn.com/pdf/cngvp-how-much-clean-air-could-$100-million-buy.pdf)