



CPUC Docket: A.22-05-015/A.22-05-016

Exhibit Number: TURN-3

Witness: Adria Tinnin

**PREPARED TESTIMONY OF
ADRIA TINNIN**

**ADDRESSING EQUITY ISSUES RELATED TO SAN DIEGO GAS &
ELECTRIC COMPANY AND
SOUTHERN CALIFORNIA GAS COMPANY IN THEIR
TEST YEAR 2024 GENERAL RATE CASE**

Submitted on Behalf of

THE UTILITY REFORM NETWORK

785 Market Street, Suite 1400
San Francisco, CA 94103

Telephone: (415) 929-8876
E-mail: atinnin@turn.org

TABLE OF CONTENTS

I. OVERVIEW

II. RATE INCREASES CAUSE DISPROPORTIONATE HARM TO PEOPLE OF COLOR

A. Introduction

B. People of Color Have Lower Wages and Higher Burdens

III. SCG'S ADDITIONAL REFUELING STATIONS MEAN ADDITIONAL BURDENS ON VULNERABLE POPULATIONS (SCG-19 & SCG-20)

A. INTRODUCTION

B. SCG'S REFUELING STATIONS IMPACT VULNERABLE POPULATIONS

C. SCG'S PROPOSED REFUELING STATIONS CONFLICT WITH CPUC'S ESJ ACTION PLAN 2.0

IV. HYDROGEN BLENDING IN NATURAL GAS PIPELINES IS PREMATURE AND REDUCES SAFETY AND RISKS HARM TO VULNERABLE COMMUNITIES

LIST OF TABLES, FIGURES AND MAPS

Figure 1: Median Hourly Wage by Race (2020)

Figure 2: Percent of People Below 100% of the Federal Poverty Level, By Race (1980 – 2019)

Figure 3: Percent of People Below 200% of the Federal Poverty Level, By Race (1980 – 2019)

Table 1: Median Household Income by Race – California Statewide and Sempra Counties

Table 2: Changes in the Affordability Gap, By Race

Table 3: Proposed Refueling Stations in High Pollution Communities

Table 4: NREL Table of “Challenges of Associated with Hydrogen Blending”

Map 1: Santa Maria RNG Refueling Station – Satellite View

Map 2: Santa Maria RNG Refueling Station – Population Density

Map 3: Santa Maria RNG Refueling Station – Median Household Income

Map 4: Santa Maria RNG Refueling Station – Percent Latino

Map 5: Santa Maria RNG Refueling Station – Percent non-Latino white

Map 6: Visalia RNG Refueling Station – Satellite View

Map 7: Visalia RNG Refueling Station – Population Density

Map 8: Visalia RNG Refueling Station – Median Household Income

Map 9: Visalia RNG Refueling Station – Percent Latino

- 1 Map 10: Visalia RNG Refueling Station – Percent non-Latino white
- 2 Map 11: Pico Rivera Hydrogen Refueling Station – Satellite View
- 3 Map 12: Pico Rivera Hydrogen Refueling Station – Population Density
- 4 Map 13: Pico Rivera Hydrogen Refueling Station – Median Household Income
- 5 Map 14: Pico Rivera Hydrogen Refueling Station – Percent Latino
- 6 Map 15: Pico Rivera Hydrogen Refueling Station – Percent non-Latino white
- 7 Map 16: Honor Rancho Hydrogen Refueling Station – Satellite View
- 8 Map 17: Honor Rancho Hydrogen Refueling Station – Population Density
- 9 Map 18: Honor Rancho Hydrogen Refueling Station – Median Household Income
- 10 Map 19: Honor Rancho Hydrogen Refueling Station – Percent Latino
- 11 Map 20: Honor Rancho Hydrogen Refueling Station – Percent non-Latino white
- 12 Map 21: SCG Pipelines and Percent Latino
- 13 Map 22: SCG Pipelines and Population Density
- 14 Map 23: SCG Pipelines and Median Household Income

I. Overview

In the rate cases of Southern California Gas Company (SoCal Gas or SCG) and San Diego Gas and Electric (SDG&E) currently before the California Public Utilities Commission (CPUC or the Commission), each company is asking for approval to increase their rates to cover their increased costs. However, some of these costs are due to new proposed projects, some of which cause specific harm to vulnerable communities. This testimony focuses on three areas of concern. First, I discuss the inequitable impact increased rates will have on ratepayers of color, who generally have lower annual wages, and therefore higher energy burdens. Second, I discuss the impacts of SCG's proposal to build four new refueling stations, all of which are in communities that have existing pollution burdens in the 80th and 90th percentiles. Finally, I provide a brief discussion addressing the dangers of SCG's proposal to begin mixing hydrogen into natural gas pipelines, most of which run through communities of color. I conclude by urging the Commission to adopt the cost reduction recommendations made throughout TURN's various testimonies and to reject or reduce some of SCG's and SDG&E's forecasts in accordance with those recommendations.

II. Rate Increases Cause Disproportionate Harm to People of Color

A. Introduction

The testimony of The Utility Reform Network (TURN) analyst, Jennifer Dowdell, (Ex. TURN-2) provides a detailed analysis of each company's proposed rate increases and evaluates the true impacts for ratepayers' bills. In this testimony I show how any amount of rate increase will particularly harm ratepayers of color. As required by the CPUC, SCG and SDG&E conducted an affordability analysis using the Commission's Affordability Ratio metric and associated calculator.¹ The Affordability Ratio (AR), is a calculation of the percentage of a household's budget, after paying for housing, that is spent on energy bills.² A higher AR value

¹ A summary of the metrics adopted in D.20-07-006 can be found here:

<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability>.

² [https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability/affordability-ratio#:~:text=The%20Affordability%20Ratio%20\(AR\)%20describes,plus%20other%20essential%20utility%20services](https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability/affordability-ratio#:~:text=The%20Affordability%20Ratio%20(AR)%20describes,plus%20other%20essential%20utility%20services)

means a larger share of the household’s budget is being used solely for energy expenses, meaning the household has a higher energy burden.³

$$\frac{\text{energy bill}}{(\text{income} - \text{housing})}$$

The metric is a very useful tool to understand affordability and energy burdens generally. However, because the model escalates inflation and income at the same rate, it fails to capture an accurate portrayal of the affordability crisis for people of color in California. This section of testimony will demonstrate that people of color are particularly harmed by the affordability crisis and that the Commission has a duty to protect vulnerable ratepayers by adopting the forecast reductions and other recommendations made by TURN throughout its various testimonies.

B. People of Color Have Lower Wages and Higher Burdens

California is one of the most expensive places to live in the country.⁴ By many measures, Los Angeles and San Diego – served by SCG and SDG&E respectively – are two of the most expensive cities in the country.⁵ In fact, data compiled by the National Association of Realtors shows that counties in the southern California and San Diego regions have some of the highest median home prices in the nation.⁶ These high housing costs have a particular impact on people of color, who have lower average incomes than their white counterparts, leaving them with a smaller budget from which to pay the ever-increasing price of energy.

According to the National Equity Atlas, and shown in Figure 1 below, in 2020 the nationwide median hourly wage for Black workers was \$19, and the median hourly wage for Latino workers was \$18, the lowest of any single group. In contrast, the median hourly wage for white workers in the same year was \$25.

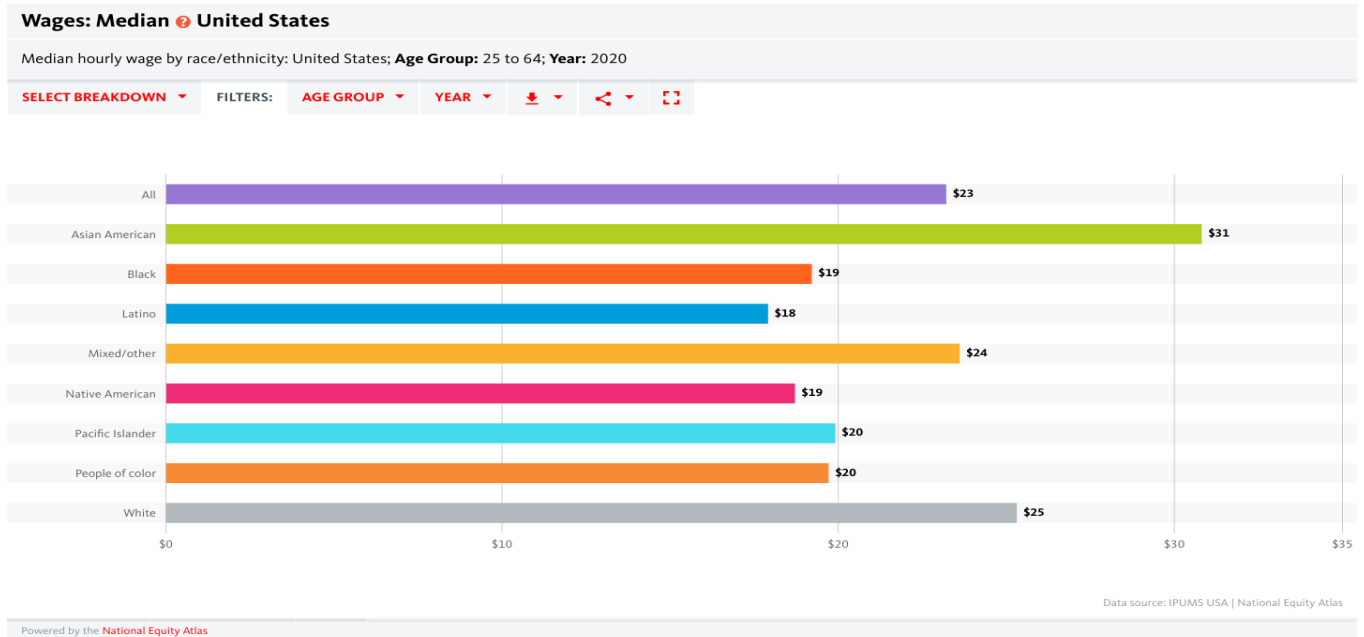
³ The CPUC’s Affordability Ratio is the same formula used to calculate an “energy burden.” While the terms are nearly synonymous, Affordability Ratio (or AR) is a specific CPUC adopted metric developed in the Affordability Rulemaking, so I will use “energy burden” when discussing the application of the idea beyond the Affordability Rulemaking.

⁴ DePietro, Andrew, “Most and Least Expensive States To Live In 2022,” *Forbes*. February 9, 2022. <https://www.forbes.com/sites/andrewdepietro/2022/02/09/most-and-least-expensive-states-to-live-in-2022/?sh=1428e86e1289> (Accessed March 20, 2023)

⁵ Burrows, Dan, “11 Most Expensive Cities in the U.S.” *Kiplinger*. December 21, 2022. <https://www.kiplinger.com/real-estate/605051/most-expensive-cities-in-the-us> (Accessed March 20, 2023)

⁶ <https://www.nar.realtor/research-and-statistics/housing-statistics/county-median-home-prices-and-monthly-mortgage-payment>

1

Figure 1: Median Hourly Wage by Race (2020)

2

3

4

5

6

7

8

9

Table 1 provides another look at racial income inequality at the state and county levels, with specific figures for each of the counties served by SCG and/or SDG&E. The data shows the same that Black and Latino households have significantly lower incomes than their white and Asian counterparts, in every geography.

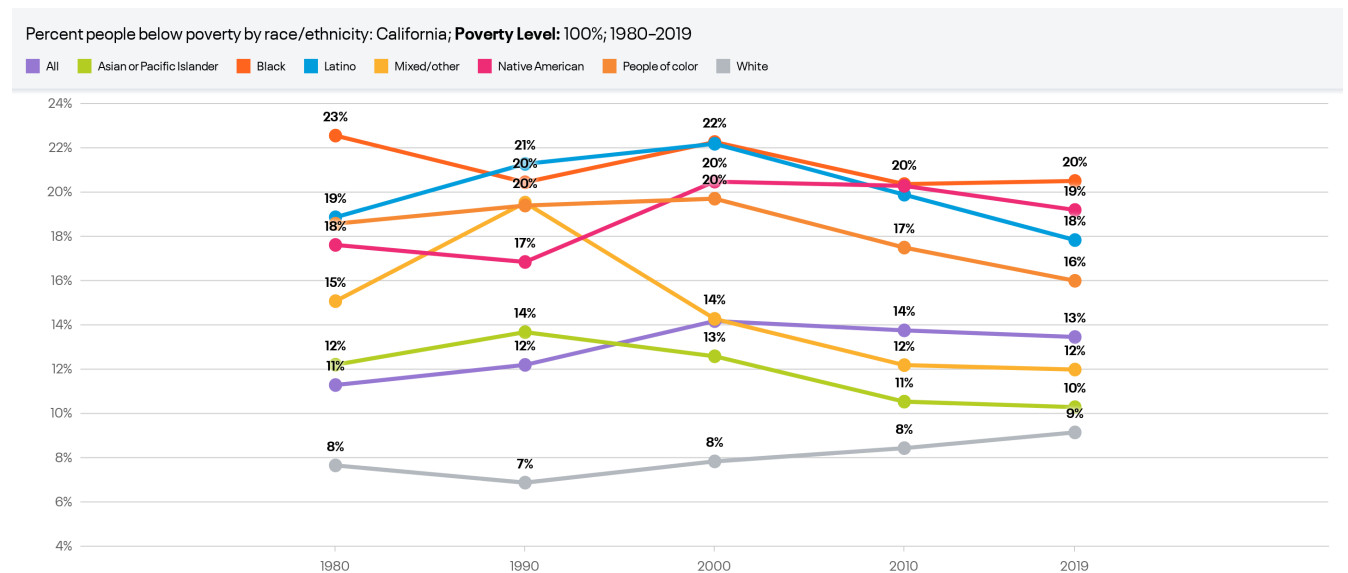
Table 1: Median Household Income by Race – California Statewide and Sempra Counties

	Median Household Income by Race - Statewide and in Sempra Counties														
SE:A14007:Median Household Income by Race (In 2021 Inflation Adjusted Dollars)	California	Fresno County	Imperial County	Kern County	Kings County	Los Angeles County	Monterey County	Orange County	Riverside County	San Bernardino County	San Diego County	San Luis Obispo County	Santa Barbara County	Tulare County	Ventura County
Median Household Income (In 2021 Inflation Adjusted Dollars):	\$84,097	\$61,276	\$49,078	\$58,824	\$63,267	\$76,367	\$82,013	\$100,485	\$76,066	\$70,287	\$88,240	\$82,514	\$84,356	\$57,394	\$94,150
White Alone Householder	\$88,616	\$64,858	\$54,016	\$61,506	\$67,714	\$85,016	\$93,457	\$105,514	\$80,491	\$72,109	\$91,626	\$83,336	\$87,897	\$58,511	\$94,494
Black or African American Alone Householder	\$58,958	\$44,721		\$41,466	\$54,882	\$54,241	\$77,740	\$86,117	\$73,278	\$55,229	\$57,347	\$73,307	\$80,212	\$49,600	\$83,873
American Indian and Alaska Native Alone Householder	\$66,904	\$57,064	\$51,528	\$52,586	\$45,144	\$70,759	\$77,207	\$82,700	\$74,107	\$65,539	\$63,960	\$60,833	\$65,650	\$52,625	\$86,250
Asian Alone	\$108,477	\$73,027	\$100,558	\$79,667	\$83,815	\$89,080	\$90,313	\$102,754	\$95,678	\$88,325	\$107,832	\$80,028	\$98,657	\$77,289	\$120,695
Native Hawaiian and Other Pacific Islander Alone Householder	\$87,066	\$61,128		\$76,304		\$86,302	\$102,500	\$104,024	\$81,272	\$75,924	\$88,936	\$86,500			\$110,529
Some Other Race Alone Householder	\$63,975	\$49,926	\$42,150	\$52,112	\$54,092	\$61,323	\$63,316	\$72,533	\$61,207	\$67,781	\$68,636	\$71,653	\$72,118	\$51,822	\$81,790
Two or More Races Householder	\$79,777	\$56,440	\$50,091	\$53,067	\$58,235	\$76,105	\$89,017	\$100,441	\$79,842	\$72,124	\$80,507	\$78,058	\$73,905	\$61,393	\$85,452
Hispanic or Latino Householder	\$67,327	\$50,935	\$46,452	\$50,799	\$51,966	\$64,557	\$68,058	\$79,636	\$67,532	\$68,175	\$69,724	\$68,804	\$68,499	\$50,807	\$77,458
White Alone Householder, Not Hispanic or Latino	\$96,449	\$74,821	\$68,411	\$71,103	\$79,727	\$96,794	\$100,483	\$111,528	\$83,842	\$75,797	\$99,131	\$85,345	\$98,161	\$68,243	\$104,013
Note: For data sources, citations and notes please take a look at sheet in this workbook titled "Sources & Notes."															
© Social Explorer 2005-2023															

10

Furthermore, Black, Latino and Native Americans have the highest percentages of any racial group living in poverty. Figure 2 shows the figures for the percentages of people living at the Federal Poverty Line, by race.⁷ The data shows that Blacks and Latinos have the highest percentage of people in poverty, and that this poverty rate has been persistent for nearly forty years.

Figure 2: Percent of People Below 100% of the Federal Poverty Level, By Race (1980-2019)

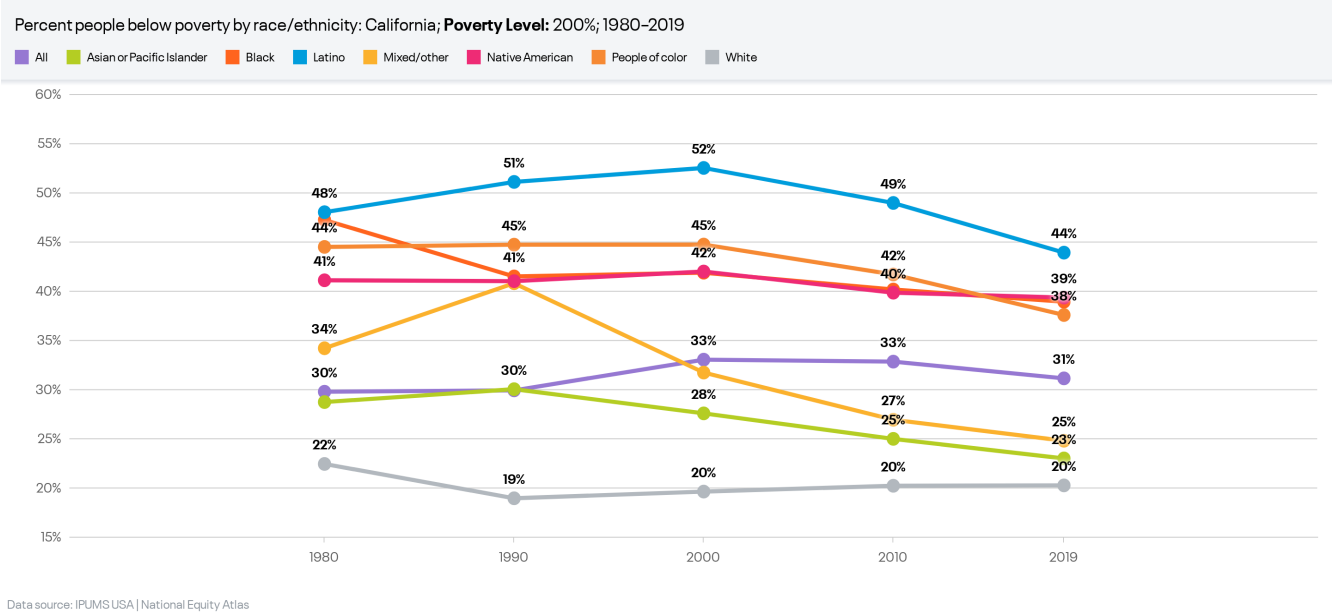


Data source: IPUMS USA | National Equity Atlas

Additionally, Figure 3 shows the percentage of people living with an income 200% of the Federal Poverty Line (FPL). Here, Latinos consistently have the largest percentage of people at 200% of FPL. At this level of poverty, a family of four will find themselves with an income that is too high to qualify for CARE, but too low to make ends meet each month, particularly in an expensive state like California.

⁷ <https://nationalequityatlas.org/indicators/poverty#/?geo=020000000000006000>

Figure 3: Percent of People Below 200% of the Federal Poverty Level, By Race (1980 – 2019)



As mentioned, the CARE and FERA subsidy programs provide discounts, of 30% and 18% respectively, for qualifying low-income customers. For a family of four to qualify for CARE, the household annual income must not exceed \$55,500.⁸ To receive the FERA benefit, a family of four must have an annual income between \$55,501 and \$69,375.⁹ However, as the cost of living outpaces wage growth for people of color, an increasing number of people are falling into an “affordability gap.” In other words, there has been an increase in the number of households that have incomes too high to qualify for assistance, but too low to make ends meet.

The University of Washington’s Self-Sufficiency Standard offers a more realistic understanding of affordability than the current version of the CPUC’s Affordability Ratio, in that it considers all essential costs of living including childcare, transportation, housing, food, healthcare, taxes and even provides for the reimbursement of monies through the Child Care Tax Credit, the Child Tax Credit and the Earned Income Tax Credit.¹⁰ These costs are calculated for

⁸ <https://www.sdge.com/residential/pay-bill/get-payment-bill-assistance/assistance-programs?keywords=CARE#overview>

⁹ <https://www.sdge.com/FERA>

¹⁰ <https://selfsufficiencystandard.org/california/>

over 700 family types across every county in California.¹¹ This testimony uses a household consisting of two adults, one school age child and one high school age child, to represent the average costs of a family or household of four.¹² As shown in Table 2, the percentage of people in the affordability gap has increased for most people of color throughout SCG and SDG&E territories.

Table 2: Changes in the Affordability Gap, by Race

County	Race	2018 Percent Below Standard and Above Poverty	2021 Percent Below Standard and Above Poverty	Change in Affordability Gap
Fresno	Total	20.31%	23.83%	3.51%
Fresno	White	12.61%	13.91%	1.30%
Fresno	American Indian or Alaskan Native	28.37%	26.81%	-1.56%
Fresno	Asian or Pacific Islander	15.94%	18.18%	2.24%
Fresno	Black	26.80%	18.56%	-8.25%
Fresno	Latinx	25.76%	32.09%	6.32%
Imperial	Total	10.91%	25.64%	14.74%
Imperial	White	4.02%	7.70%	3.68%
Imperial	American Indian or Alaskan Native	0.00%	34.78%	34.78%
Imperial	Asian or Pacific Islander	25.93%	5.13%	-20.79%
Imperial	Black	58.12%	0.00%	-58.12%
Imperial	Latinx	11.17%	29.29%	18.12%
Kern	Total	22.48%	24.00%	1.52%
Kern	White	12.02%	14.38%	2.36%
Kern	American Indian or Alaskan Native	12.21%	20.07%	7.86%
Kern	Asian or Pacific Islander	15.46%	9.61%	-5.85%
Kern	Black	16.94%	18.48%	1.54%
Kern	Latinx	32.88%	32.51%	-0.36%
Kings	Total	29.14%	32.12%	2.98%
Kings	White	11.22%	21.69%	10.47%
Kings	American Indian or Alaskan Native	24.32%	17.35%	-6.98%
Kings	Asian or Pacific Islander	38.56%	50.67%	12.11%

¹¹ Center for Women’s Welfare, University of Washington School of Social Work. “Technical Brief: The Family Needs Calculator for California 2021.” *Technical Appendix*. Prepared for the Insight Center for Community Economic Development. October 2020.

¹² The dataset available for download for 2021 refers to this as family type 228.

Kings	Black	51.17%	25.36%	-25.81%
Kings	Latinx	39.88%	38.02%	-1.86%
Los Angeles	Total	26.97%	30.24%	3.26%
Los Angeles	White	14.88%	16.57%	1.68%
Los Angeles	American Indian or Alaskan Native	27.13%	35.50%	8.37%
Los Angeles	Asian or Pacific Islander	21.25%	23.59%	2.34%
Los Angeles	Black	25.95%	28.43%	2.48%
Los Angeles	Latinx	38.99%	43.98%	4.99%
Monterey	Total	32.60%	35.68%	3.08%
Monterey	White	15.70%	16.00%	0.29%
Monterey	American Indian or Alaskan Native	35.33%	100.00%	64.67%
Monterey	Asian or Pacific Islander	16.27%	20.90%	4.63%
Monterey	Black	21.44%	48.45%	27.01%
Monterey	Latinx	50.59%	49.68%	-0.91%
Orange	Total	23.62%	26.22%	2.61%
Orange	White	14.98%	16.10%	1.12%
Orange	American Indian or Alaskan Native	14.40%	32.39%	17.99%
Orange	Asian or Pacific Islander	19.29%	23.88%	4.59%
Orange	Black	26.75%	38.44%	11.69%
Orange	Latinx	41.80%	43.55%	1.75%
Riverside	Total	22.65%	23.18%	0.53%
Riverside	White	13.68%	15.45%	1.77%
Riverside	American Indian or Alaskan Native	16.95%	21.74%	4.79%
Riverside	Asian or Pacific Islander	12.60%	18.24%	5.64%
Riverside	Black	22.45%	16.43%	-6.03%
Riverside	Latinx	32.31%	30.98%	-1.34%
San Bernardino	Total	23.21%	24.87%	1.66%
San Bernardino	White	14.23%	18.67%	4.45%
San Bernardino	American Indian or Alaskan Native	20.71%	12.54%	-8.16%
San Bernardino	Asian or Pacific Islander	15.04%	18.77%	3.72%
San Bernardino	Black	23.86%	21.93%	-1.93%
San Bernardino	Latinx	30.84%	30.44%	-0.39%
San Diego	Total	26.17%	27.18%	1.01%
San Diego	White	18.24%	19.13%	0.88%
San Diego	American Indian or Alaskan Native	17.02%	16.00%	-1.03%

San Diego	Asian or Pacific Islander	22.69%	20.31%	-2.38%
San Diego	Black	34.88%	33.69%	-1.19%
San Diego	Latinx	41.39%	43.17%	1.78%
San Luis Obispo	Total	19.91%	20.66%	0.75%
San Luis Obispo	White	14.71%	19.07%	4.37%
San Luis Obispo	American Indian or Alaskan Native	0.00%	0.00%	0.00%
San Luis Obispo	Asian or Pacific Islander	12.63%	29.13%	16.50%
San Luis Obispo	Black	60.23%	0.00%	-60.23%
San Luis Obispo	Latinx	38.66%	24.48%	-14.18%
Santa Barbara	Total	30.52%	34.99%	4.47%
Santa Barbara	White	19.62%	24.14%	4.52%
Santa Barbara	American Indian or Alaskan Native	34.83%	0.00%	-34.83%
Santa Barbara	Asian or Pacific Islander	13.20%	11.17%	-2.03%
Santa Barbara	Black	36.19%	6.04%	-30.14%
Santa Barbara	Latinx	45.93%	52.87%	6.95%
Tulare	Total	26.87%	28.07%	1.20%
Tulare	White	13.59%	20.49%	6.90%
Tulare	American Indian or Alaskan Native	24.96%	0.00%	-24.96%
Tulare	Asian or Pacific Islander	21.44%	5.04%	-16.40%
Tulare	Black	53.11%	46.17%	-6.94%
Tulare	Latinx	32.96%	32.72%	-0.24%
Ventura	Total	25.15%	24.48%	-0.67%
Ventura	White	14.82%	15.06%	0.24%
Ventura	American Indian or Alaskan Native	6.77%	0.00%	-6.77%
Ventura	Asian or Pacific Islander	15.66%	13.70%	-1.96%
Ventura	Black	29.68%	8.80%	-20.88%
Ventura	Latinx	43.34%	41.27%	-2.07%

1
2 California is a particularly expensive state in which to live, and affordability is especially
3 difficult for people of color, who on average have lower incomes and more persistent poverty.
4 Approving the application in this case means disproportionately harming people of color, so I
5 urge the Commission to adopt TURN's cost reduction recommendations made throughout its
6 various testimonies.

III. SoCal Gas' Additional Refueling Stations Mean Additional Burdens on Vulnerable Populations (SCG-19 & SCG-10)

A. Introduction

In Exhibit SCG-19 SoCalGas proposes the construction of two new renewable natural gas (RNG) refueling stations, one in Santa Maria (Santa Maria RNG Refueling Station) and one in Visalia (Visalia RNG Refueling Station).¹³ SCG also proposes two new hydrogen refueling stations, one in Pico Rivera (Pico Rivera Hydrogen Refueling Station)¹⁴ and one at the site of the Honor Rancho Compressor station, located in Santa Clarita.¹⁵ These refueling stations will be constructed at existing SCG facilities, all of which are in census tracts with already high pollution burdens. Furthermore, three of the four station locations are in census tracts that meet the definition of an “ESJ community,” thus further harming already vulnerable communities and running afoul of the CPUC’s Environmental and Social Justice Action Plan (ESJ Action Plan). Although the Honor Rancho station is not located in an ESJ community, its proximity to Valencia High School risks exposing a different type of vulnerable population to increased pollution. This section of my testimony will provide the Commission with details about the vulnerable communities surrounding each of the four proposed refueling stations. To prevent further harming ratepayers and to uphold the ESJ Action Plan, I urge the Commission to reject the addition of these stations in their entirety.¹⁶

¹³ Ex. SCG-19-R, p. BKG-37.

¹⁴ Ex. SCG-19-R, pp. BKG-37-38.

¹⁵ Ex. SCG-10, p. LTB SH-23. See also SoCalGas Response to TURN-SEU-42, Q 4 & 6 and TURN-SEU-62, Q1.

¹⁶ TURN only specifically addresses the Honor Rancho Hydrogen refueling station in the Ex. TURN-SCGC-05. TURN consulted with CEJA during the development of this testimony and supports CEJA’s recommendations to deny funding for the Pico Rivera hydrogen refueling station and the two RNG refueling stations. See CEJA’s concurrently filed testimony.

B. SCG's Refueling Stations Impact Vulnerable Populations

Table 3

Proposed Refueling Stations in High Pollution Communities¹⁷

	Santa Maria RNG Refueling Station	Visalia RNG Refueling Station	Pico Rivera Hydrogen Refueling Station	Honor Rancho Hydrogen Refueling Station	Honor Rancho Adjacent
Address	3138 Industrial Pkwy, Santa Maria, CA 93455	404 N. Tipton St., Visalia, CA 93292	8101 Rosemead Blvd., Pico Rivera, CA 90660	Brady Parkway, Santa Clarita, CA 91355	Adjacent to Brady Pkwy
County	Santa Barbara County	Ventura County	Los Angeles County	Los Angeles County	Los Angeles County
Census Tract	20.11	13.05	5025	9201.21	9202
Population Total	5851	2766	4038	10391	5850
Population density (per sq. mile)	825.2	1772	2821.1	2208.2	1452.1
Tract Median income	\$86,066.00	\$48,103.00	\$68,917.00	\$142,176.00	Not available
County Self-Sufficiency Standard (2021)	\$86,737.72	\$55,664.27	\$78,100.55	\$78,100.55	\$78,100.55
Tract Percent Latino	60.49%	66.70%	94.08%	17.83%	60.50%
Percent Non-Latino White	30.42%	21.98%	4.01%	39.46%	14.14%
Cal EnviroScreen 4.0 (overall score)	56	81	91	18	No score
Pollution Burden	80	90	98	82	41
PM2.5	11	98	88	45	37
Traffic Impacts	33	23	71	86	94

Table 3 provides important demographic information about the location of each of the proposed refueling stations and provides some important insights. First, all four locations have high pollution burdens indicating that people living in each of these census tracts currently have high levels of exposure to pollution in the air, soil, and water. Second, all refueling stations will be in, or near to, a majority Latino community. While the Honor Rancho station appears to be an exception to that pattern, a closer look at Maps 16-20 reveals that SCG's proposed location is on the border of two census tracts, one of which is majority Latino, and which would be equally exposed to increased air pollution as the other. Third, three out of four of the targeted census tracts have median household incomes below the Self-Sufficiency Standard, meaning that many households in these tracts are unable to make ends meet financially. Honor Rancho is an outlier in this regard, since it is in a high-income census tract, however the adjacent tract has no reported household income data, so a fuller comparison of this metric was not possible using a table. For this reason, I have provided a series of maps to help the Commissions visualize the impacts these refueling stations would have if approved.

¹⁷ Locations provided in response to TURN-SEU-42, Q 5 & 6 and TURN-SEU-62, Q1.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

2
3
4
5
6
7
8
9
10
11
12

13



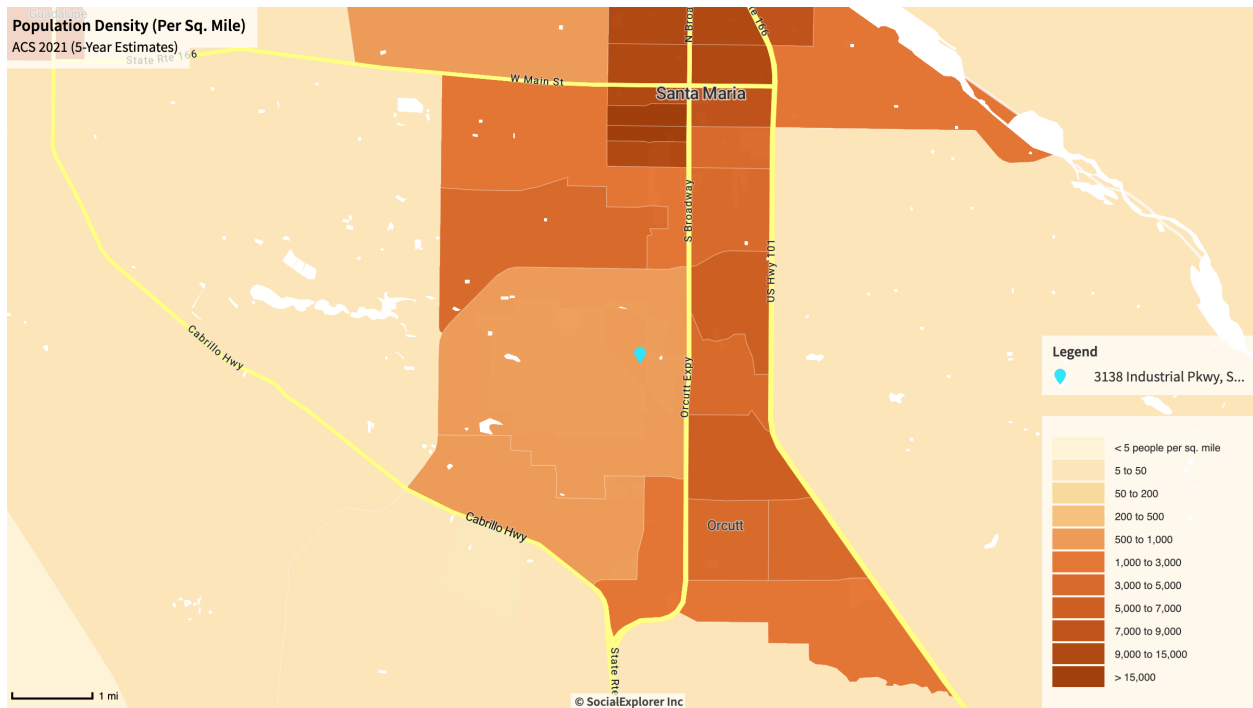
¹⁹ Santa Maria Percent Latino map with highlighted primary and secondary streets: <https://www.socialexplorer.com/c65fd7e03b/view>

²⁰ CalEnviroScreen 4.0

²¹ Attachment #: CA 2021 All Families. For TURN's analysis, we selected a family of two adults, one school age child, and one high school age child.

²² <https://www.socialexplorer.com/92cf423dd9/view>

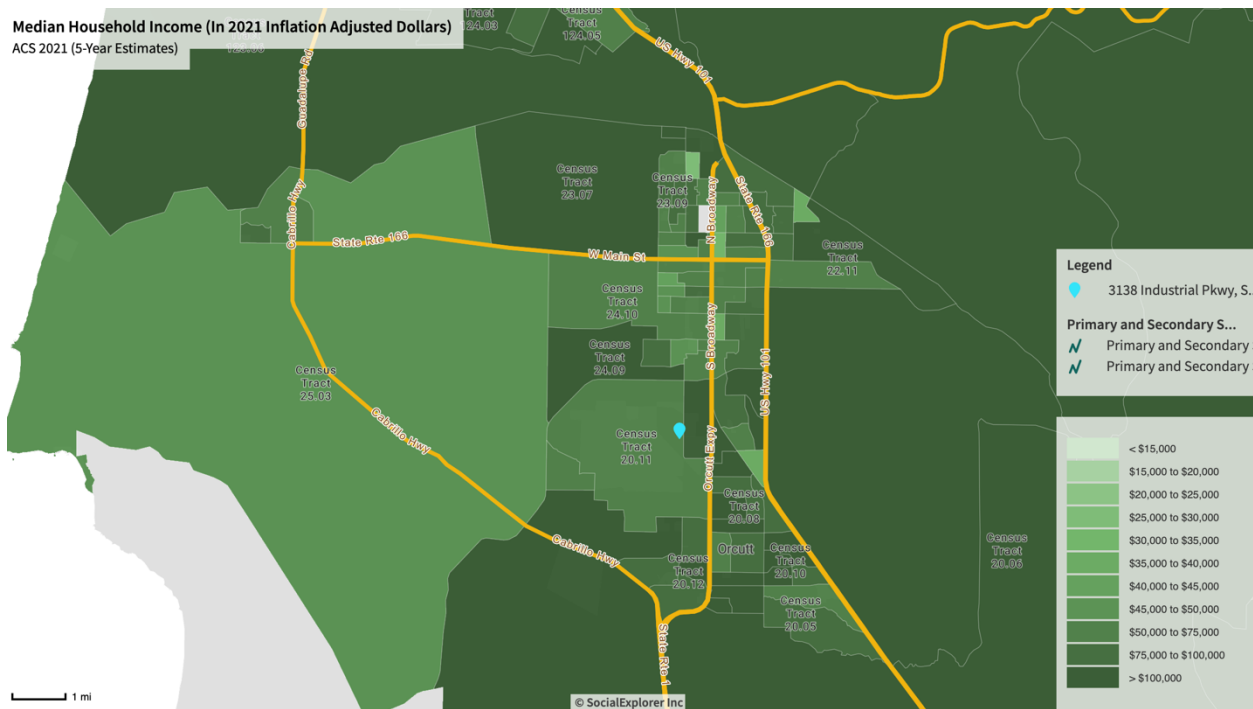
1 Map 2: Santa Maria RNG Refueling Station – Population Density²³



2

3

4 Map 3: Santa Maria RNG Refueling Station – Median Household Income²⁴

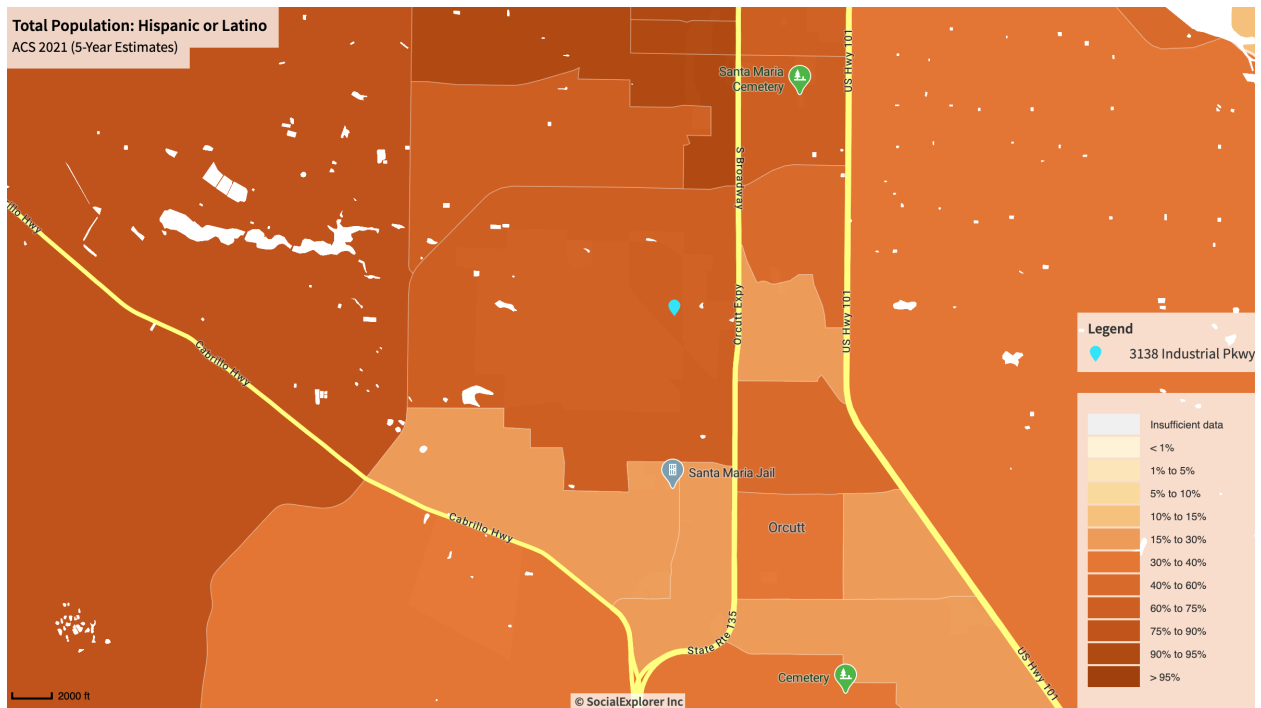


5

²³ <https://www.socialexplorer.com/defc195d30/view>

²⁴ <https://www.socialexplorer.com/84260f7c74/view>

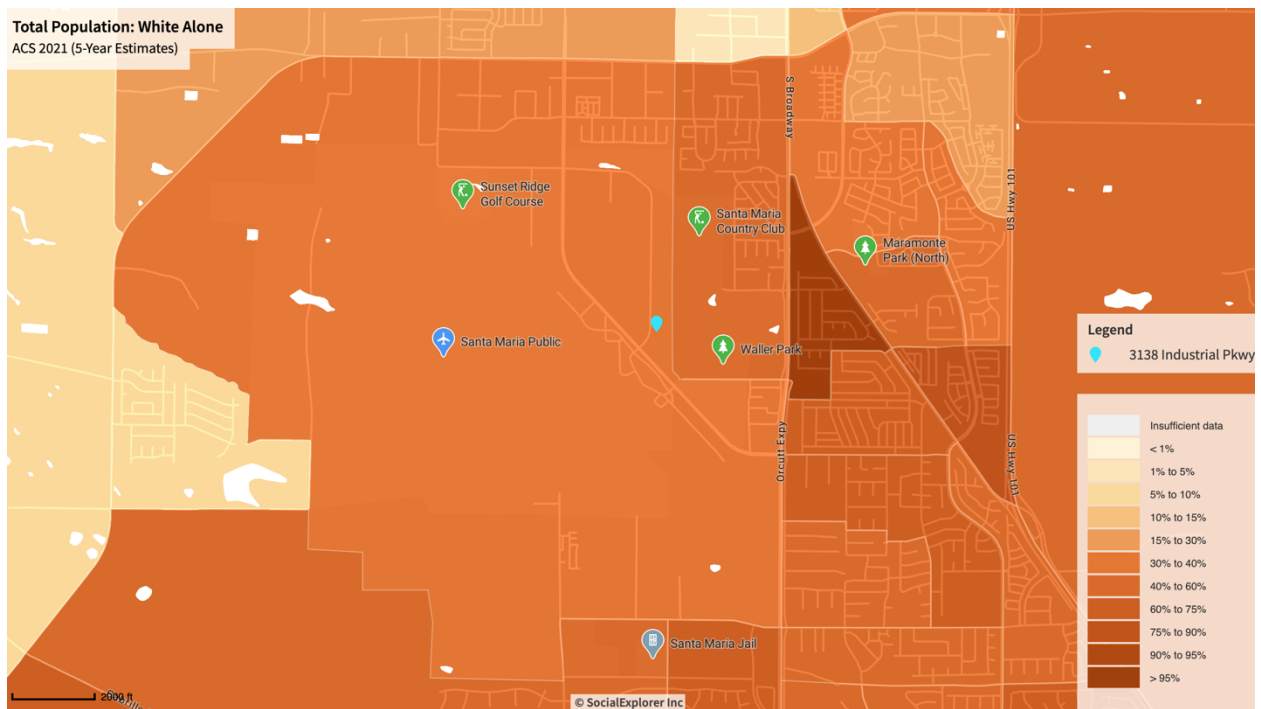
1 **Map 4: Santa Maria RNG Refueling Station – Percent Latino²⁵**



2

3

4 **Map 5: Santa Maria RNG Refueling Station – Percent non-Latino white²⁶**



5

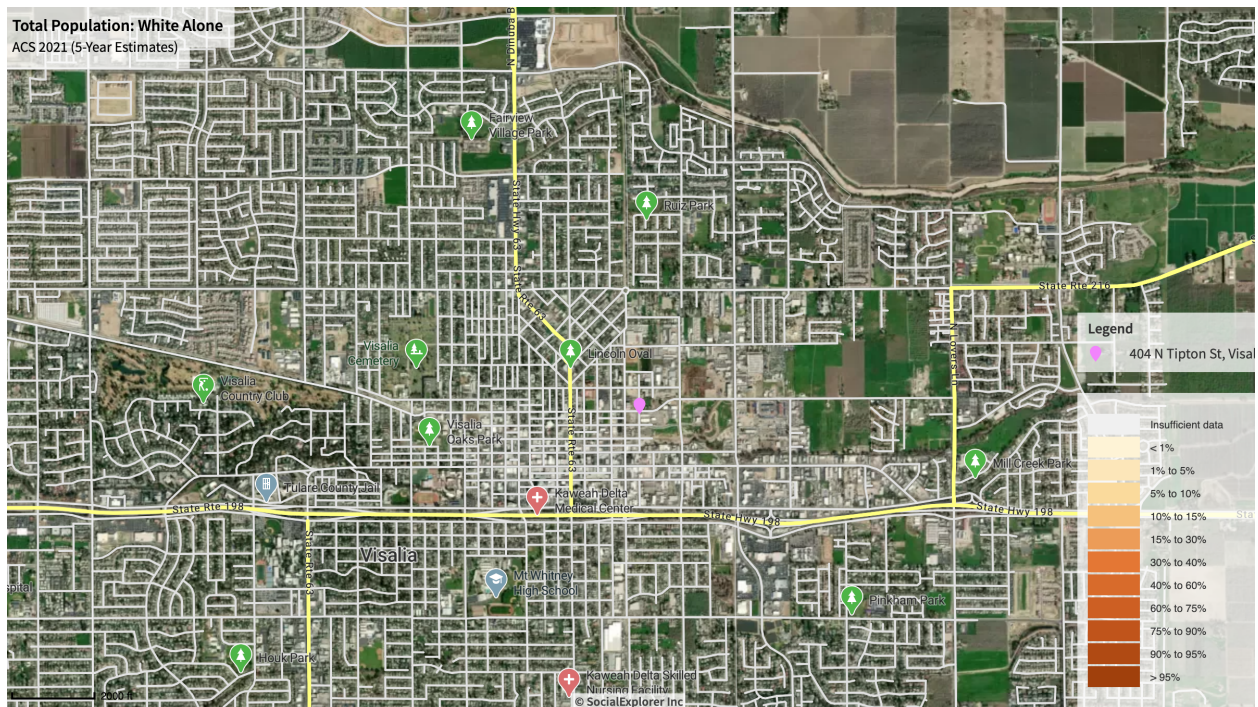
²⁵ <https://www.socialexplorer.com/55e57dbb10/view>

²⁶ <https://www.socialexplorer.com/969e6eaa71/view>

Visalia RNG Refueling Station

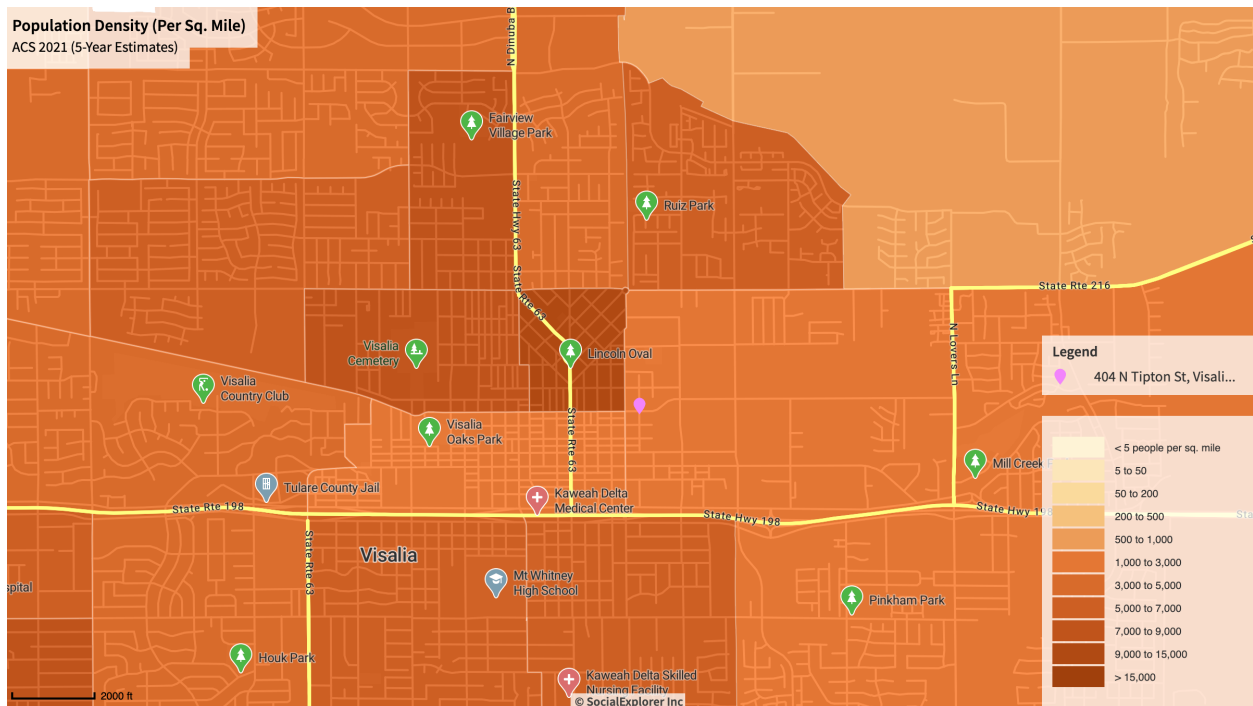
The Visalia RNG refueling station, if approved, will be in a densely populated tract in central Visalia. Map 6 highlights the primary roads surrounding the proposed station, providing a visual understanding of the pollution exposure risks to the residents of Visalia. If approved, additional vehicles will be routed through the community – using roads like State Route 198 and N. Court St. – to access the refueling station and increasing traffic problems as a result.

Map 6: Visalia RNG Refueling Station – Satellite View²⁷



²⁷ <https://www.socialexplorer.com/3e34d348b3/view>

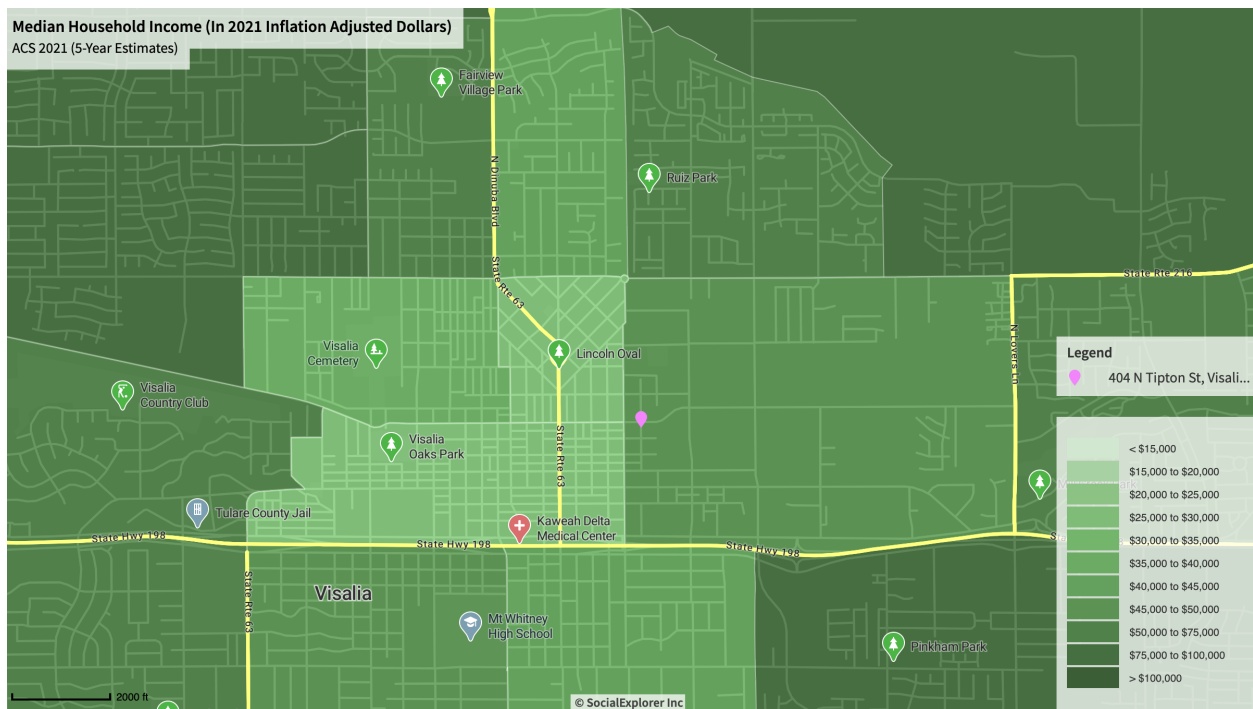
1 Map 7: Visalia RNG Refueling Station – Population Density²⁸



2

3

4 Map 8: Visalia RNG Refueling Station – Median Household Income²⁹



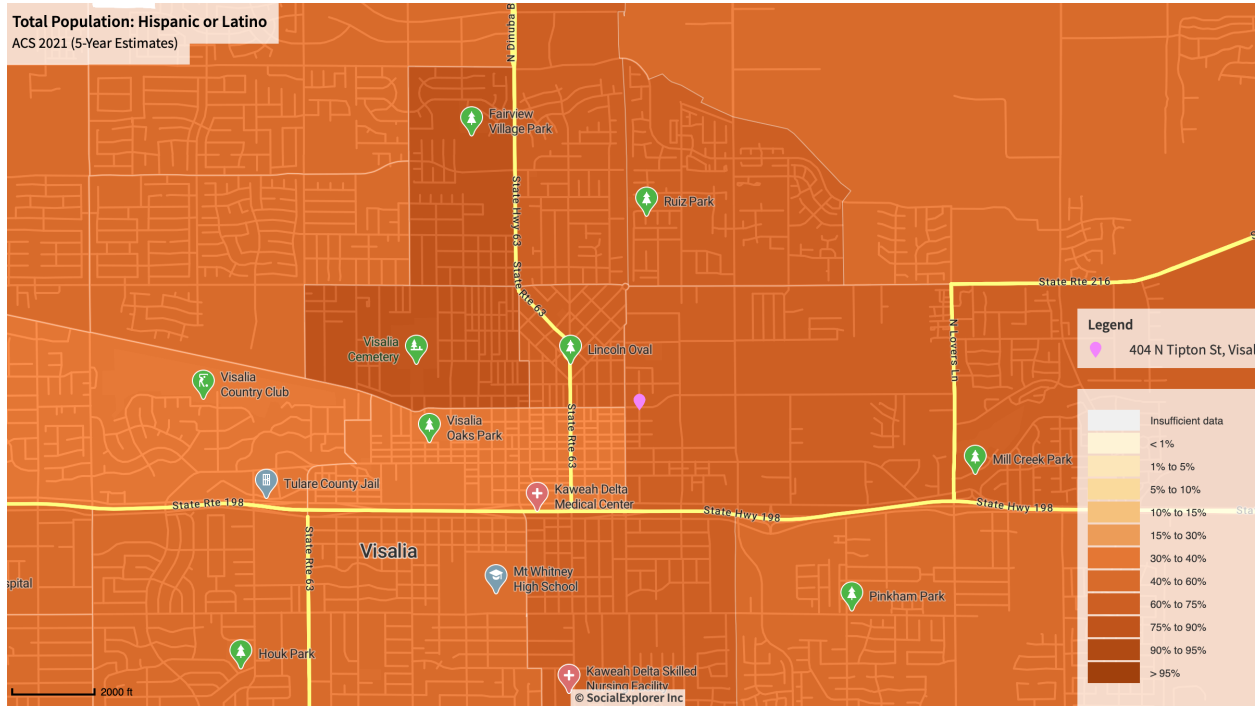
5

²⁸ <https://www.socialexplorer.com/93196cfe40/view>

²⁹ <https://www.socialexplorer.com/9204472ed4/view>

1

2 **Map 9: Visalia RNG Refueling Station – Percent Latino³⁰**

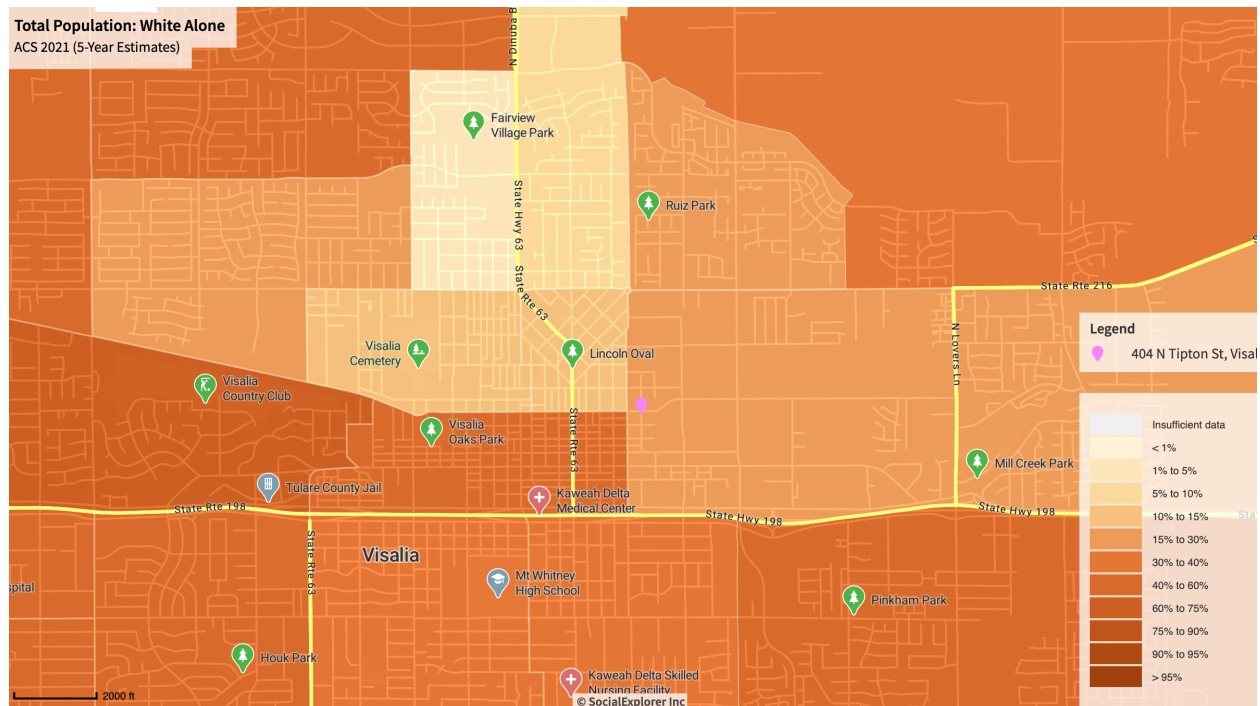


3

4

³⁰ <https://www.socialexplorer.com/94135b2a4a/view>

1 Map 10: Visalia RNG Refueling Station – Percent non-Latino white³¹

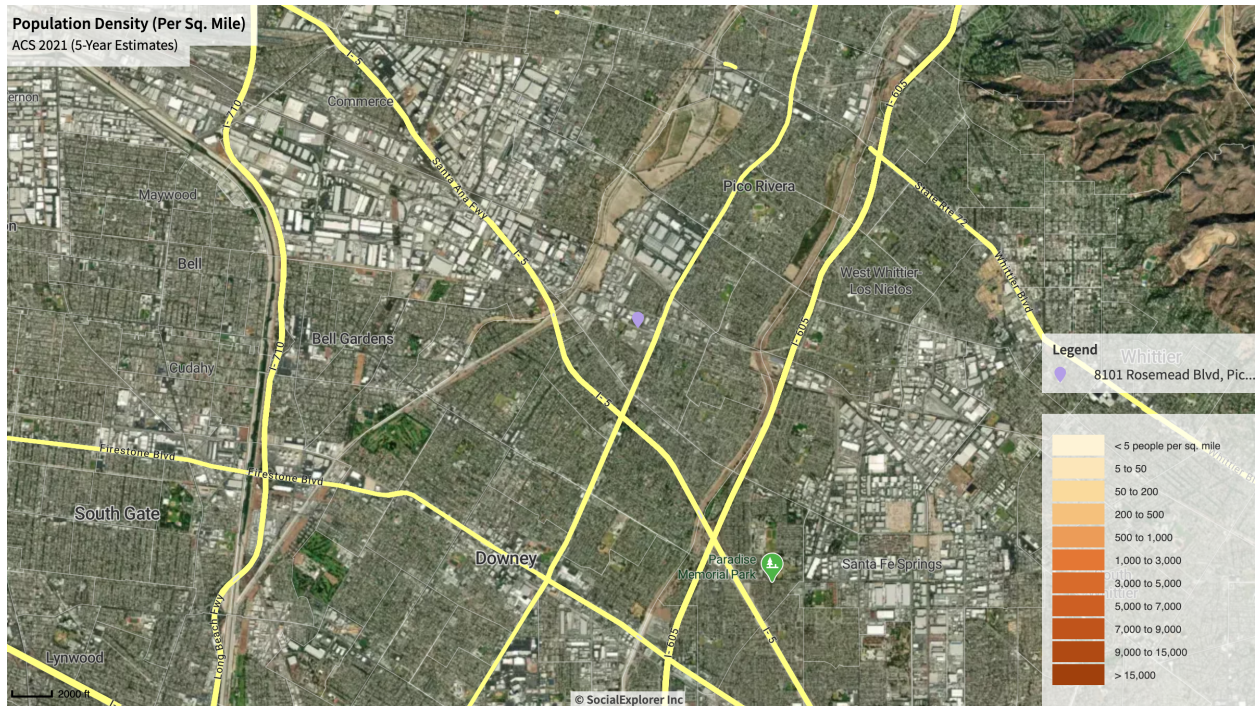


4 Pico Rivera Hydrogen Refueling Station

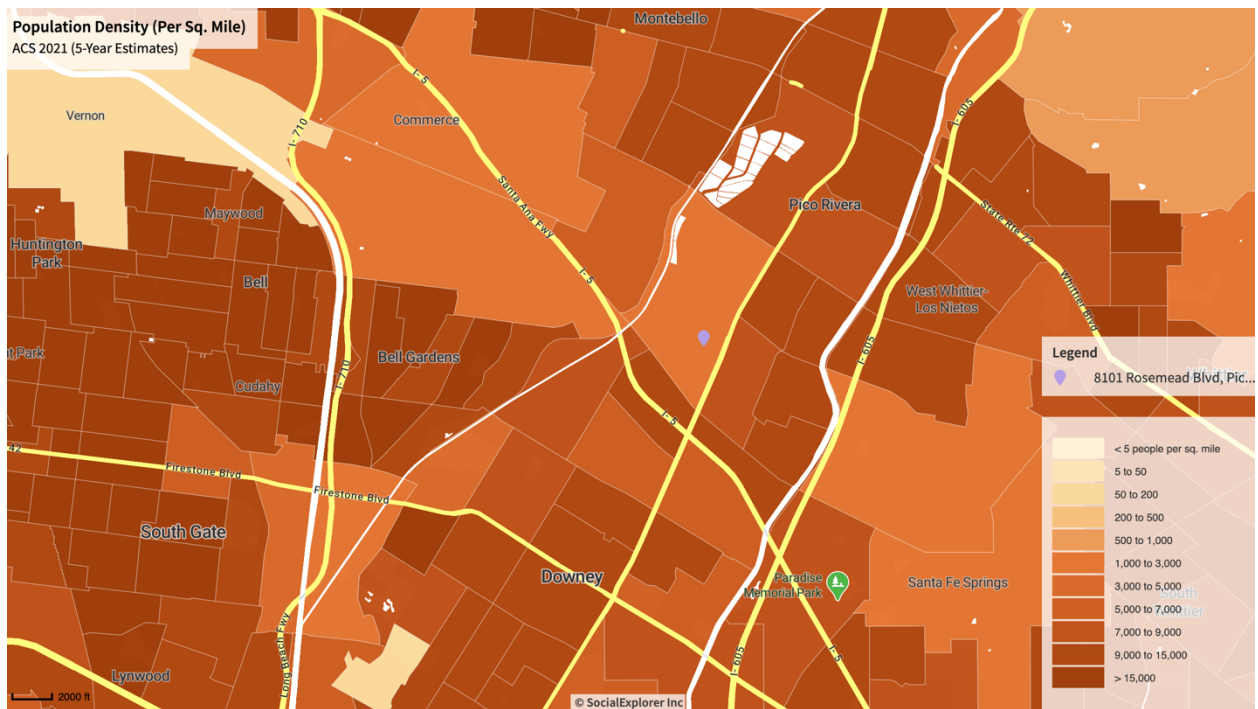
Pico Rivera is a historically Latino part of Los Angeles County, just east of the city, and already faces pollution burdens from the heavy traffic on numerous roads and highways, as well as spillover air pollution from heavy industry in surrounding cities like Vernon. Map 11 provides a satellite image of the proposed location, its proximity to residential areas and the surrounding freeways, on which traffic would be increased. Maps 12 and 14 shows that the census tracts surrounding the tract containing the refueling station, are extremely densely populated and are predominantly Latino, indicating that the increases to traffic and air pollution caused by the additional refueling station would be specifically harming large numbers of residents of color.

³¹ <https://www.socialexplorer.com/9647fae2c8/view>

1 **Map 11: Pico Rivera Hydrogen Refueling Station – Satellite View³²**



2
3
4 **Map 12: Pico Rivera Hydrogen Refueling Station – Population Density³³**



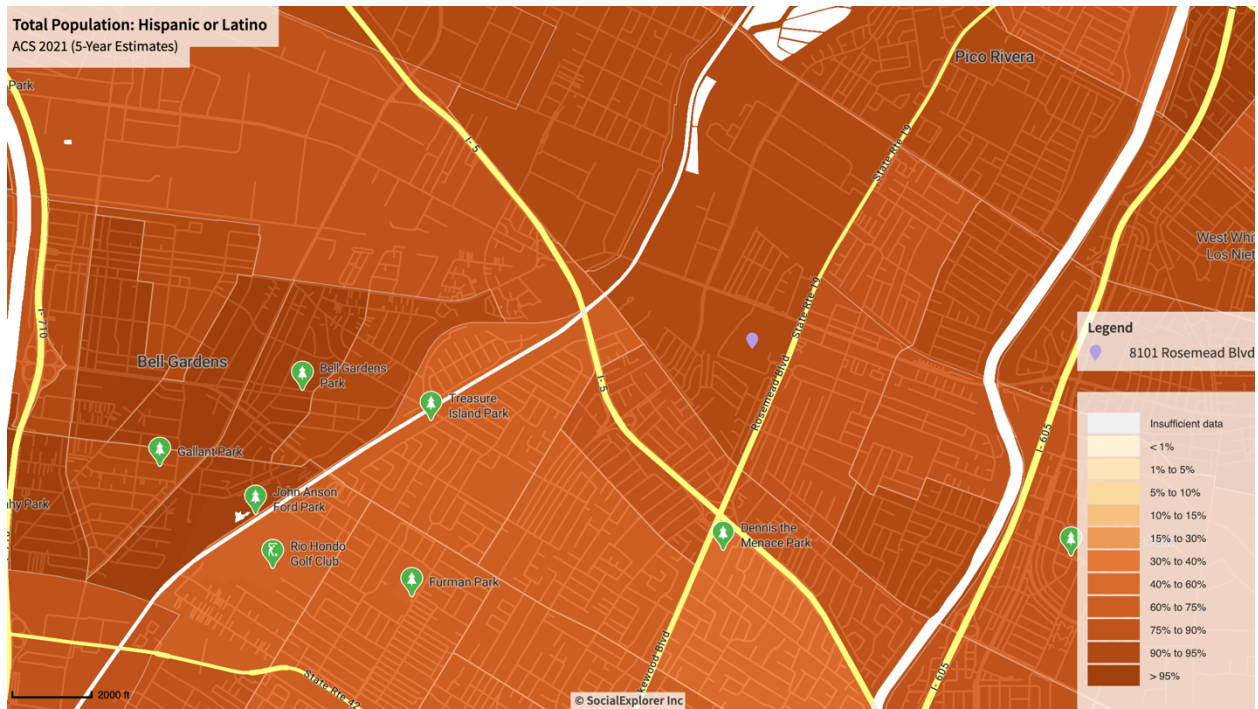
32 <https://www.socialexplorer.com/78247483a1/view>

33 <https://www.socialexplorer.com/65a3bc2ce6/view>

1 **Map 13: Pico Rivera Hydrogen Refueling Station – Median Household Income³⁴**



4 **Map 14: Pico Rivera Hydrogen Refueling Station – Percent Latino³⁵**



³⁴ <https://www.socialexplorer.com/66deccc33b/view>

³⁵ <https://www.socialexplorer.com/6efb7d6111/view>

1 **Map 15: Pico Rivera Hydrogen Refueling Station – Percent non-Latino white³⁶**



2
3
4 **Honor Rancho Hydrogen Refueling Station**

5 The Honor Rancho hydrogen refueling station is the only station proposed to be
6 constructed in a census tract with a high median income (see Map18). A review of Maps 16-20
7 reveals a community like the Los Angeles neighborhood of Porter Ranch, where SCG’s Aliso
8 Canyon natural gas storage facility is located. Like Aliso Canyon, Honor Rancho is located on an
9 oil field in the hills above an upper-middle income residential community. Specifically, In
10 addition to shopping centers and apartment buildings, Map 16 reveals that the Honor Rancho site
11 is in close proximity to Valencia High School, meaning a particularly vulnerable segment of the
12 population – children – will be most affected by the increased pollution from the new refueling
13 station.

³⁶ <https://www.socialexplorer.com/df5c267031/view>

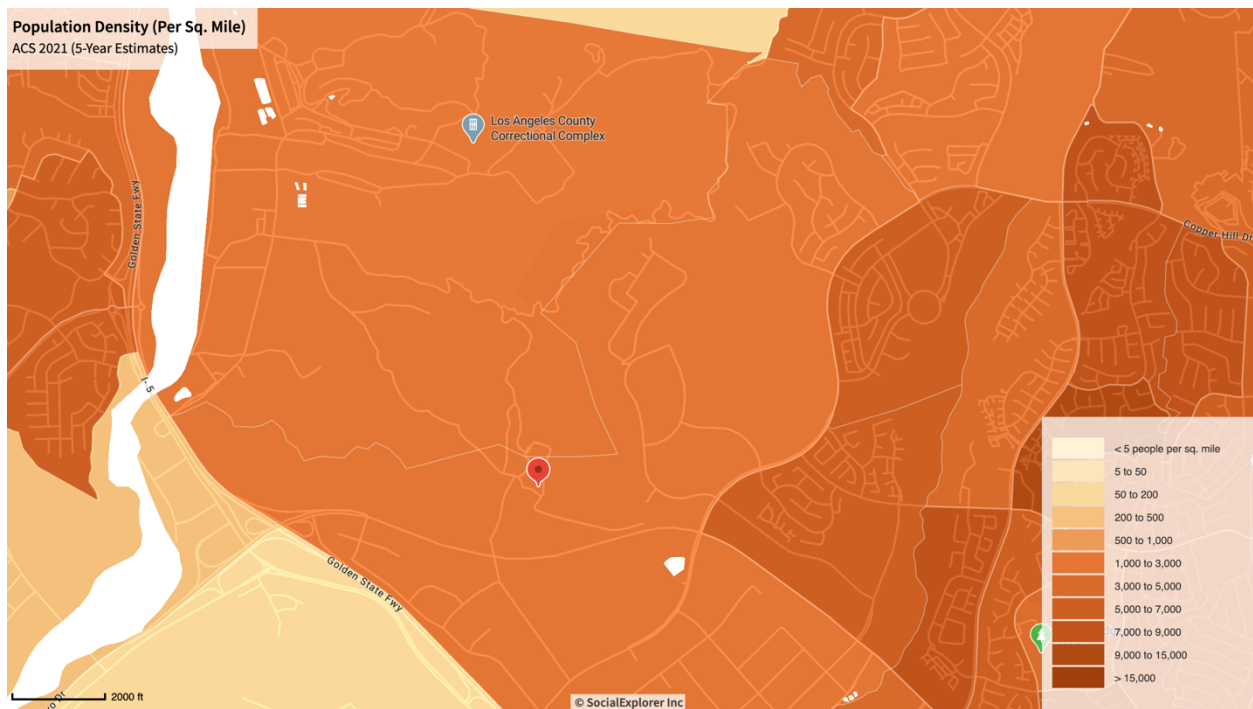
1 **Map 16: Honor Rancho Hydrogen Refueling Station – Satellite View**³⁷



2

3

4 **Map 17: Honor Rancho Hydrogen Refueling Station – Population Density**³⁸

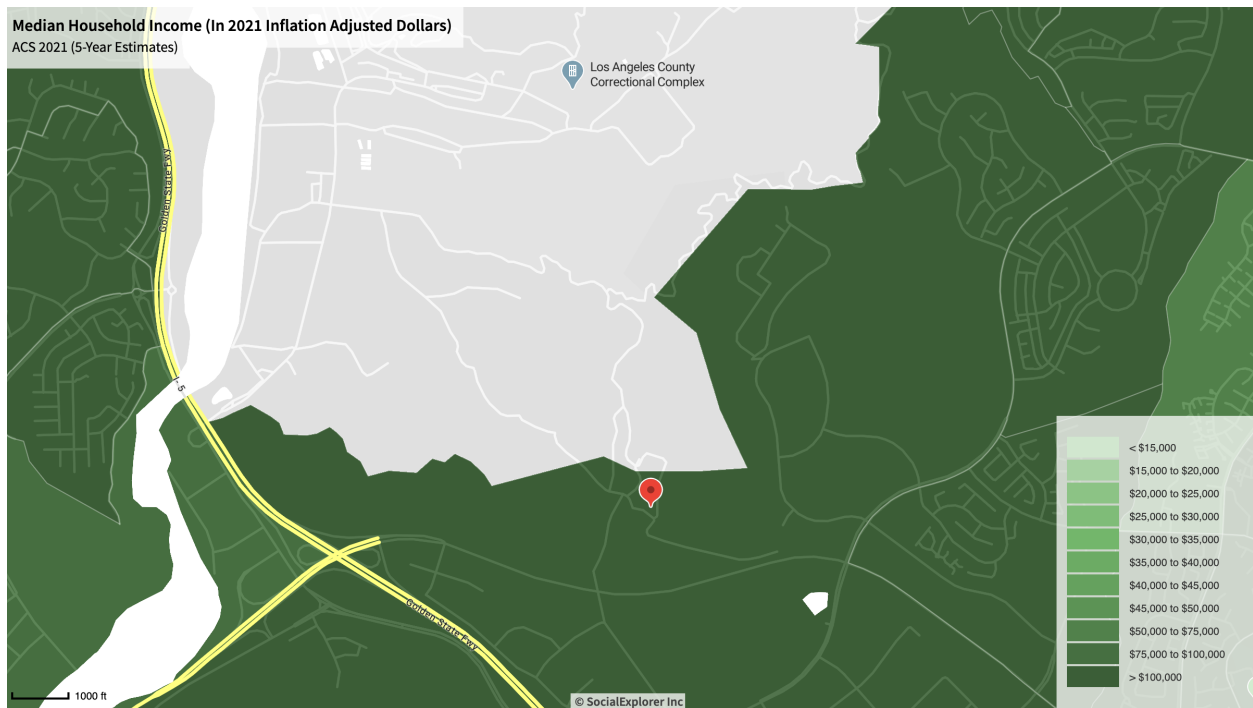


5

³⁷ <https://www.socialexplorer.com/ea996104ea/view>

³⁸ <https://www.socialexplorer.com/70cd64e229/view>

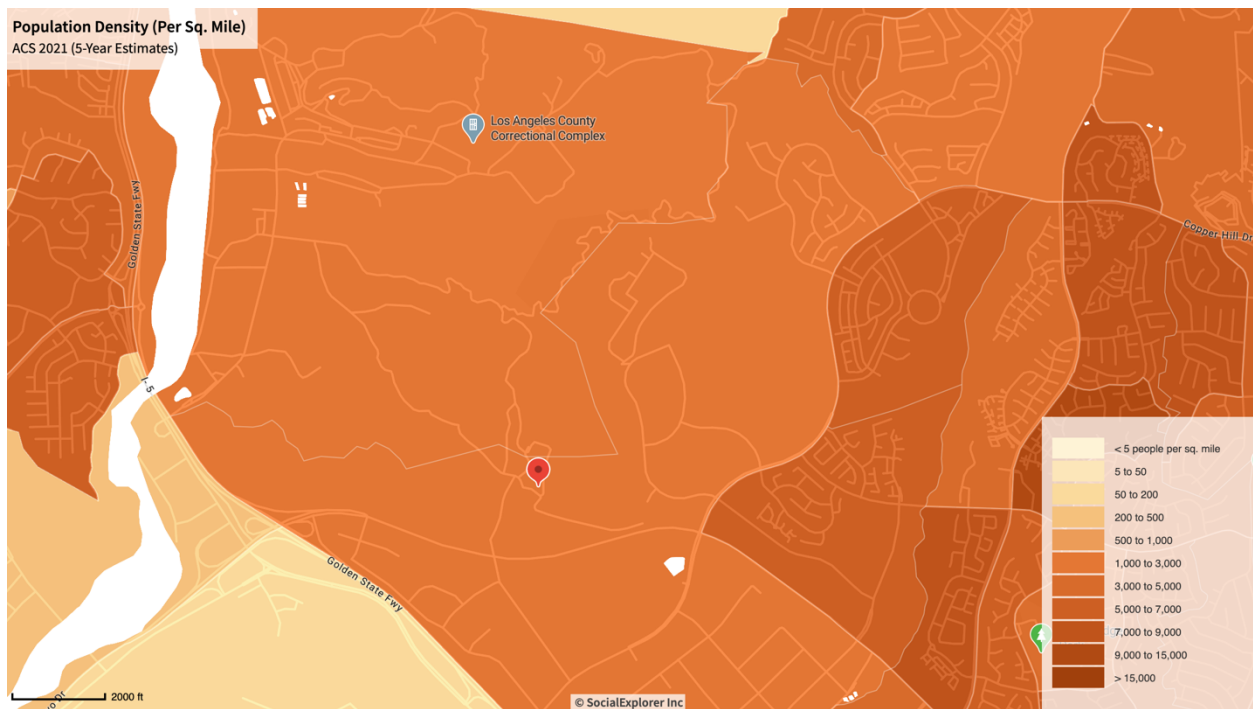
1 **Map 18: Honor Rancho Hydrogen Refueling Station – Median Household Income³⁹**



2

3

4 **Map 19: Honor Rancho Hydrogen Refueling Station – Percent Latino⁴⁰**

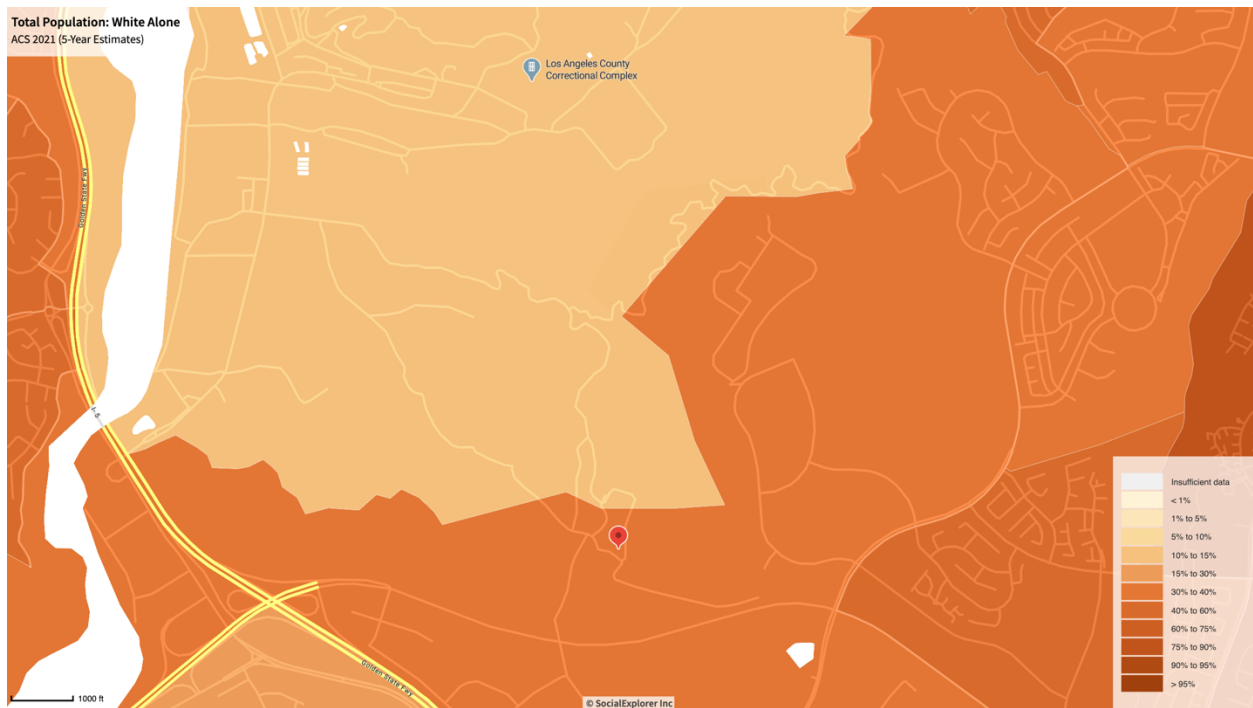


5

³⁹ <https://www.socialexplorer.com/85d6d8bdd4/view>

⁴⁰ <https://www.socialexplorer.com/5a4007806c/view>

1 **Map 20: Honor Rancho Hydrogen Refueling Station – Percent non-Latino white⁴¹**



2
3 **C. SCG’s Proposed Refueling Stations Conflict with CPUC’s ESJ Action Plan 2.0**

4 The ESJ Action Plan 2.0 (Action Plan) firmly establishes the Commission’s commitment
5 to environmental and social justice and provides an actionable plan and guide for how to
6 incorporate that commitment into all proceedings in a meaningful way. The ESJ Action Plan
7 consists of nine goals, and 93 action items to achieve those goals. The first goal of the Action
8 Plan is to “consistently integrate equity...considerations throughout CPUC regulatory activities,”
9 and the sixth goal is to “enhance enforcement to ensure safety and consumer protection for all,
10 especially for ESJ communities.”⁴² The approval of the proposed refueling stations would run
11 afoul of both goal one and goal six.

12 The Action Plan defines Environmental and Social Justice communities (ESJ
13 communities) as

14 “...predominantly communities of color or low-income
15 communities that are underrepresented in the policy setting or
16 decision-making process, subject to a disproportionate impact from
17 one of more environmental hazards and are likely to experience

⁴¹ <https://www.socialexplorer.com/789baf7936/view>

⁴² ESJ Action Plan 2.0, (2021) page 2

disparate implementation of environmental regulations and socioeconomic investment in their communities.”⁴³

Bearing this definition in mind the CPUC specifically targets

“census tracts that score in the top 25% of CalEnviroScreen 3.0,⁴⁴ along with those that score within the highest 95% of CalEnviroScreen 3.0’s Pollution Burden but do not receive an overall CalEnviroScreen score; all tribal lands; low-income households (household incomes below 80% of the area median income (AMI)); an low-income census tracts (census tracts where aggregated household incomes are less than 80% of area or state median income).”⁴⁵

Under the current definition, three of four census tracts would qualify as ESJ communities⁴⁶ because they are majority minority communities, and disproportionately Hispanic or Latino.⁴⁷ Furthermore, the Visalia and Pico Rivera locations have overall scores above the 75th percentile, meaning they qualify as census tracts intended to be specifically addressed by the Action Plan. Given that Goal 1 requires the Commission to consider equity issues throughout its regulatory work, the refueling stations must be rejected because they produce and exacerbate racial inequality in pollution exposure and negative health outcomes. In addition, Goal 6 of the Action Plan specifically addresses ESJ communities and mandates the Commission to ensure safety and consumer protection. Because the construction of new refueling stations will exacerbate the pollution that causes negative health outcomes, approving them would diminish the safety of nearby residents and provides no consumer protection benefits in return.⁴⁸ For these

⁴³ ESJ Action Plan 2.0, (2021) page 1

⁴⁴ Top 25% means the overall CalEnviroScreen score is in the 75th percentile or above.

⁴⁵ ESJ Action Plan 2.0, (2021) page 1

⁴⁶ Although the Honor Rancho site does not qualify as an ESJ community, with a pollution burden of 82, it only fails to do so because of the tract’s high median income (see Table 3).

⁴⁷ In California, Hispanic or Latino people comprise 39.52% of the population. In contrast the census tracts targeted for refueling stations are as much as two and half times that aggregate figure. (American Community Survey 2021, 5-Year Estimates)

⁴⁸ Regarding the two proposed hydrogen refueling stations (Pico Rivera and Honor Rancho), see Ex. TURN-SCGC-05, Section 3, for a discussion of how SoCalGas has not demonstrated that it is necessary or cost effective to build its own hydrogen fueling stations.

1 reasons, the Commission should uphold the Action Plan by rejecting the proposed refueling
2 stations.

3 IV. Hydrogen Blending in Natural Gas Pipelines Is Premature and 4 Reduces Safety and Risks Harm to Vulnerable Communities

5 This portion of my testimony is in response to SCG's plans to mix hydrogen fuel with
6 natural gas in existing natural gas pipelines, as described in Ex. SCG-02. Because SCG failed to
7 provide information as to which pipelines will carry the blended fuel, my analysis here is about
8 the general inequity of risk exposure resulting from carrying hydrogen through gas pipelines,
9 rather than about harms to a specific census tract or community.⁴⁹ The maps included in this
10 section of testimony show the natural gas pipelines owned by SCG and SDG&E⁵⁰, according to
11 data collected from FERC Form 567, company web pages and industry press.⁵¹

12 Studies have shown that blending of hydrogen and natural gas can result in
13 "embrittlement" and "fatigue crack"⁵² in pipelines. In fact, a recent study conducted for the
14 National Renewable Energy Laboratory reports the numerous dangers to pipeline safety posed by
15 hydrogen blending. In Exhibit TURN-SCGC-05, TURN Witness Catherine Yap addresses the
16 current state of hydrogen blending at the Commission:

17 "Significant safety issues surround the possible inclusion of hydrogen in the utility
18 delivery system, particularly at concentrations greater than five percent.⁵³ In R.13-02-
19 008, the Commission has directed SoCalGas and the other gas utilities to conduct pilot

⁴⁹ Responses to TURN-SEU-42, Q1 & Q2.

⁵⁰ While SDG&E did not propose hydrogen blending, its pipelines are included in the underlying data generating the map and thus cannot be excluded. Additionally, it should be noted that two of the three pipelines running through the Mojave Desert are not owned by a Sempra company. All other pipelines in the map are Sempra owned.

⁵¹ Data compiled by Social Explorer in 2020. A full description of the data used can be found at www.socialexplorer.com. More information is available from the U.S. Energy Information Administration <https://www.eia.gov/>

⁵² Topolski, Kevin, Evan P. Reznicek, Burcin Cakir Erdener, Chris W. San Marchi, Joseph A. Ronevich, Lisa Fring, Kevin Simmons, Omar Jose Guerra Fernandez, Bri-Mathias Hodge, and Mark Chung. 2022. "Hydrogen Blending into Natural Gas Pipeline Infrastructure: Review of the State of Technology." Golden, CO: National Renewable Energy Laboratory. NREL/TP5400-81704. <https://www.nrel.gov/docs/fy23osti/81704.pdf>.

R.13-02-008, "Hydrogen Blending Impacts Study." Final Report prepared by University of California, Riverside. July 18, 2022. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M493/K760/493760600.PDF

⁵³ D.22-12-057, at 7.

projects to evaluate the myriad safety issues associated with hydrogen blending.⁵⁴ It will take years for the pilot programs to be conducted and the results of those pilots to be evaluated by non-utility experts.⁵⁵ The examination of hydrogen blending safety issues will take up much of the GRC cycle. The Commission should avoid prejudging the hydrogen blending issues in this proceeding.”⁵⁶ (footnotes included)

Accordingly, it is premature to consider hydrogen blending projects in this GRC.

Table 4: NREL Table of “Challenges Associated with Hydrogen Blending”⁵⁷

Table 5. Challenges associated with hydrogen blending in transmission and distribution networks

Challenges With Hydrogen Blending	Natural Gas Pipeline System Section Impacted
Enhanced fatigue crack growth in pipeline steel	Transmission and distribution networks
Reduced fracture resistance in pipeline steel	Transmission and distribution networks
Reduced energy transmission capacity	Transmission and distribution networks
Increased pressure drop when meeting energy demand	Transmission and distribution networks
Increased gas velocities	Transmission and distribution networks
Increased required compression power	Transmission networks
Increased centrifugal compressor rotational speed	Transmission networks
Shifted centrifugal compressor operating envelope	Transmission networks
Increased NO _x emissions for prime movers and end users	Transmission and distribution networks
Excessive combustion dynamics, flame lift-off, flashback	Transmission and distribution networks
Fuel pre-ignition in internal combustion engines	Transmission networks
Meter accuracy and durability	Transmission and distribution networks
Valve leakage and durability	Transmission and distribution networks
Gas composition analysis accuracy	Transmission and distribution networks
Hydrogen leakage in polymer piping	Distribution networks
Biochemical hydrogen conversion in underground storage	Transmission networks
Hydrogen loss through cap rock in underground storage	Transmission networks

Lastly, there are equity concerns with hydrogen blending. In reviewing Maps 21-23, some general observations can be made. First, pipelines tend to run through census tracts with relatively low white populations, and the tracts that are predominantly white but contain pipelines, have low population densities. Taken together, this means that in general there are more Latinos living near pipelines than there are white people living near pipelines, thereby making Latinos particularly vulnerable to the health hazards posed by pipeline leaks. The overexposure of people of color to pipelines means that any action taken which possibly reduces

⁵⁴ D.22-12-057, at Ordering Paragraph 7.

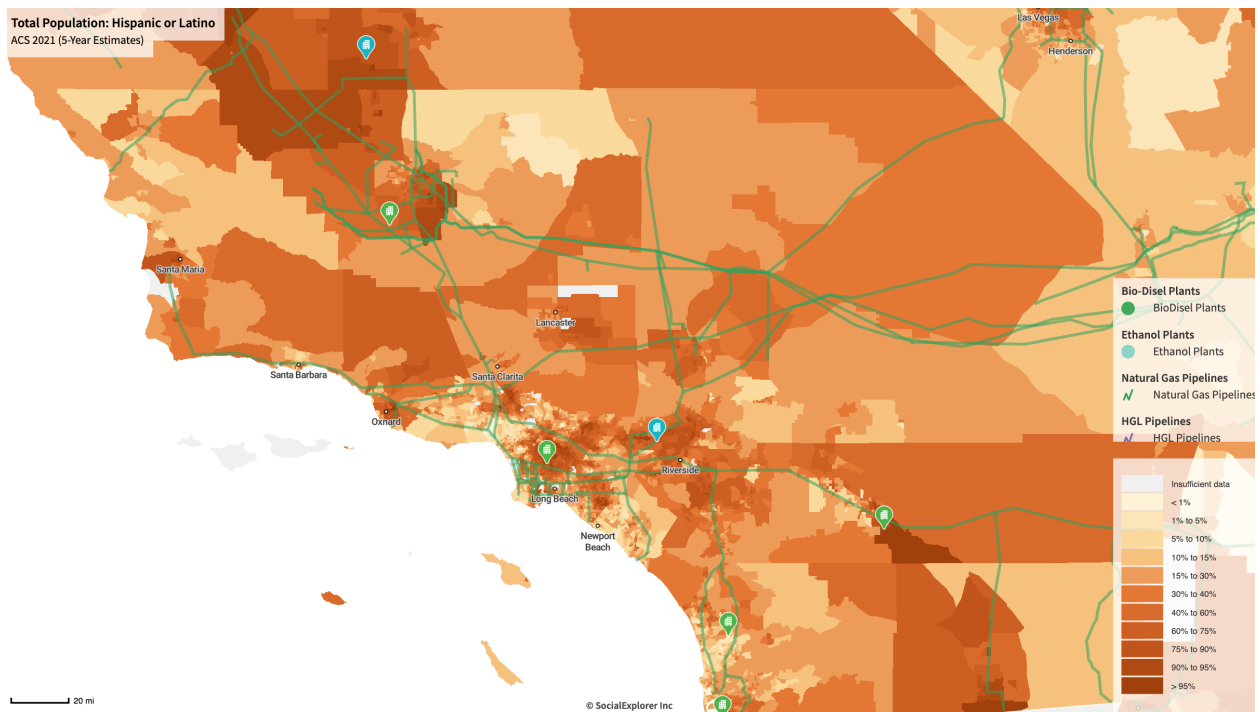
⁵⁵ D.22-12-057, at Ordering Paragraph 8.

⁵⁶ Ex. TURN-SCGC-05, p. 4.

⁵⁷ Topolski, Kevin, Evan P. Reznicek, Burcin Cakir Erdener, Chris W. San Marchi, Joseph A. Ronevich, Lisa Fring, Kevin Simmons, Omar Jose Guerra Fernandez, Bri-Mathias Hodge, and Mark Chung. 2022. Hydrogen Blending into Natural Gas Pipeline Infrastructure: Review of the State of Technology. Golden, CO: National Renewable Energy Laboratory. NREL/TP5400-81704. page 10.

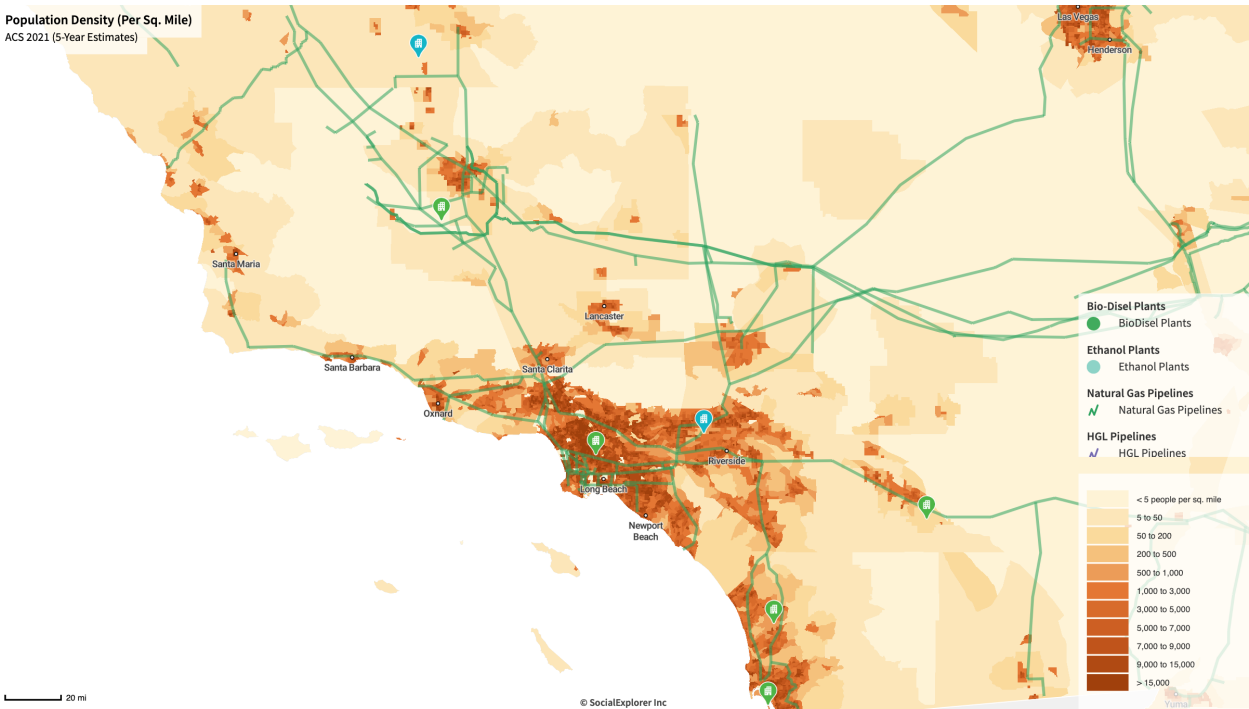
- 1 pipeline safety – such as hydrogen blending – is both inequitable and inconsistent with the ESJ
- 2 Action Plan.

3 **Map 21: SCG Pipelines and Percent Latino⁵⁸**



⁵⁸ <https://www.socialexplorer.com/01e7c13000/view>

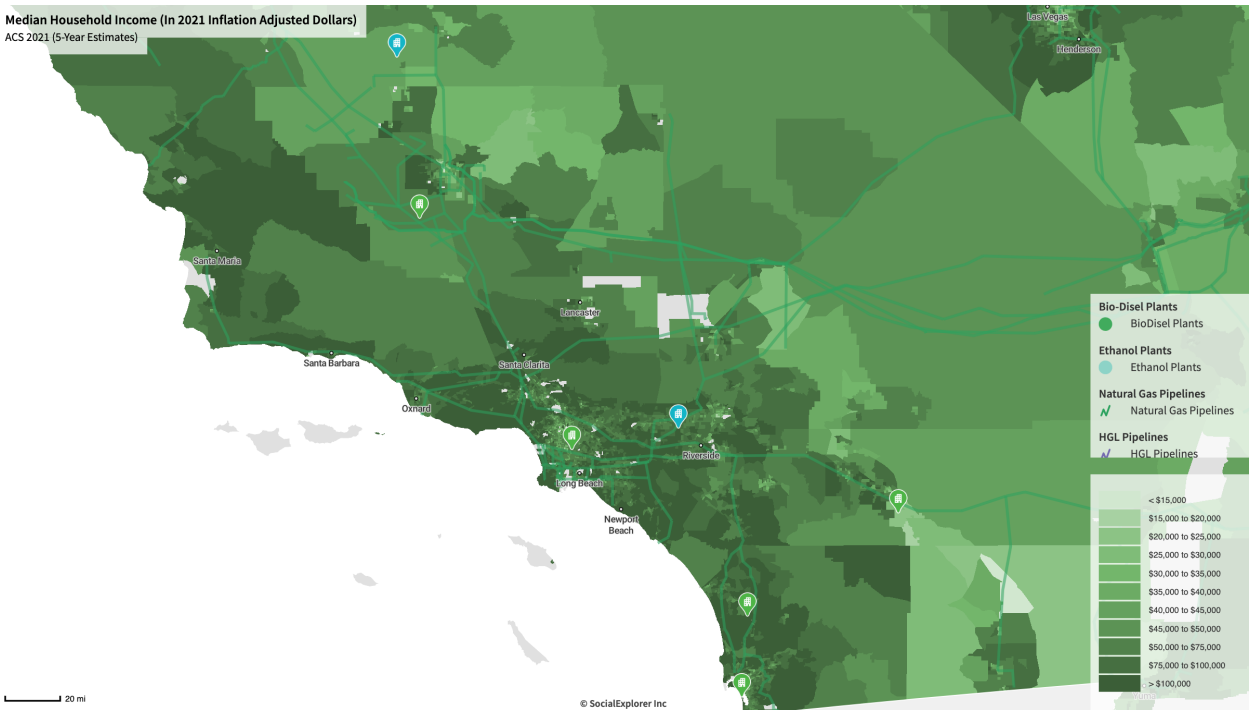
1 **Map 22: SCG Pipelines and Population Density⁵⁹**



2

3

4 **Map 23: SCG Pipelines and Median Household Income⁶⁰**



5

⁵⁹ <https://www.socialexplorer.com/de9d34051a/view>

⁶⁰ <https://www.socialexplorer.com/c16563dfad/view>

Qualifications of Adria Tinnin

My name is Adria Tinnin, and my business address is 2333 Harrison Street, Oakland, CA 94612. I hold a PhD in Political Science from the University of California, Los Angeles (UCLA), with a concentration in Race and Ethnic Politics (REP). My dissertation research focused on how communities respond to industrial environmental disasters, and how state legislators and state regulatory bodies responded to impacted communities. One of the case studies analyzed in the dissertation was the natural gas well blowout, which occurred at SCG's Aliso Canyon Natural Gas Storage Facility in late 2015.

Prior to joining TURN in March 2022 as the Race Impact Policy Analyst, I worked as an adjunct professor in UCLA's Political Science Department. In the role of professor, I had the opportunity to teach a course titled, "The Politics of American Suburbanization," which focused on the political, social, economic and cultural evolution of the American suburb, particularly in the post-WWII era. Dominant themes focused broadly on the historical patterns and implications of public-private partnerships in suburban development; inclusionary/exclusionary housing policies; racial/ethnic, class and gender conflicts; classical and contemporary theories of suburban politics and governance; as well as growth and decline for select suburban areas.

I also taught another course titled, "The Politics of Environmental Justice." This course explored the ways in which communities and governments respond to instances of industrial pollution disasters by taking an in-depth look at the forms and functions of industrial pollution, environmental justice, and collective action frameworks both domestically and internationally.

Prior to becoming a Lecturer, I worked as a Teaching Assistant – giving lectures, creating syllabi, and grading student work – for a variety of courses including Introduction to American Politics, the Political Economy of Development, and the American Presidency.

I am sponsoring Exhibit TURN-3, Equity. This material was prepared by me, and I believe it to be correct. Furthermore, this material represents my best judgement. This concludes my qualifications and prepared testimony.