

KEEPING THE LIGHTS AND HEAT ON:

COVID-19 UTILITY DEBT

IN COMMUNITIES SERVED BY
PACIFIC GAS AND ELECTRIC COMPANY

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As a land grant institution, UCLA and the Center for Neighborhood Knowledge and the Luskin Center for Innovation acknowledge the Gabrielino and Tongva peoples as the traditional land caretakers of Tovaangar (Los Angeles basin, Southern Channel Islands) and that their displacement has enabled the flourishing of UCLA.

DISCLAIMER

The views expressed herein are those of the authors and not necessarily those of the University of California, Los Angeles as a whole. The authors alone are responsible for the content of this report.

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EXECUTIVE SUMMARY

THE COVID-19 PUBLIC HEALTH CRISIS has deepened existing economic and environmental justice crises in the United States. Previous research by the UCLA Center for Neighborhood Knowledge and its partners shows that the pandemic has exacerbated pre-pandemic health and economic inequalities for disadvantaged neighborhoods. Communities of color in particular have shouldered a disproportionate share of interrelated health and economic risks due to widespread job and income loss, increased housing vulnerability and food insecurity, a lack of basic resources to shelter in place, and less access to critical utilities such as broadband Internet service. The pandemic's economic impacts have also exacerbated the unaffordability of basic environmental service utilization, like trash collection, for many households.

In this brief, we study household utility debt burden as another measure of the economic pressure facing low-income neighborhoods, with an emphasis on the impacts on racial equity. We define utility debt burden in this brief as the share of households in arrears (i.e., with past-due utility bills) within a zip code. Our findings highlight the reproduction of racial and economic inequality during the pandemic. We use data from Pacific Gas and Electric Company (PG&E), an investor-owned utility that provides electricity and gas service to much of the population in Northern and Central California, about 40% of the state's residents, to examine the prevalence and degree of residential past-due accounts and debt. Utility debt levels serve as a useful proxy to track households that are facing difficulties paying their rent or mortgage, because these two types of debt are likely to be highly correlated during economic crises. Further, when families are unable to pay their bills, they face difficult trade-offs, including skipping meals, delaying or avoiding medical treatment, and risking eviction. While the April 2020 statewide moratorium on utility shut-offs has provided

continued utility access for many families, debt on residential accounts has not been forgiven; thus, residential utility debt has accumulated and will be due when the moratorium ends, which is set for June 30, 2021.

We provide findings for two analyses on residential utility debt in neighborhoods served by PG&E during the second quarter of 2020, the most recently available data, which captures the California Public Utility Commission's (CPUC) April 2020 order to suspend service disconnections. First, we provide an overview of the spatial distribution of housing units with past-due utility bills in PG&E service areas and then identify neighborhoods facing the greatest debt burden. Second, we use bivariate analysis to examine economic, housing, and ethnoracial characteristics in areas with the highest burden. Overall, our focus on neighborhoods enables elected officials to understand how utility debt relief distribution impacts their constituents; encourages advocacy for an equitable distribution of utility debt relief that is on its way from the federal stimulus and state budget surplus aid; and informs thoughtful long-term solutions as we move into a phase of recovery.

► Our main findings are:

1. Roughly 6% households served by PG&E are facing financial difficulties paying for the most essential services.
2. Utility debt burden is higher across historically underserved rural areas and urban areas left behind more broadly during the COVID-19 pandemic. For instance, one in five households are behind on their utilities in high-heat exposure areas in Fresno, Stockton, Bakersfield in the San Joaquin Valley, and in the unincorporated Hoopa Valley home to the Natinnoh-hoi People.
3. Black, Latinx, and economically vulnerable neighborhoods face the greatest utility debt burden.

► **Based on our findings, we recommend:**

1. Targeted allocation of existing COVID-19-related federal, state, and local aid and further new short-term and long-term commitments of aid to develop and implement utility debt-forgiveness programs for low-income households and severely impacted neighborhoods.
2. Continued improvement in the value, quality, and availability of debt and shut-off data collected and publicly reported by utilities throughout California to better understand the depth and breadth of utility burden on low-income residents and residents of color. Improved data will allow for targeted and relevant policy that addresses the distinct needs of these residents as they reflect broader patterns of housing and climate insecurity.
3. Replication in non-PG&E service areas of this type of analysis, ideally using spatial data on the combined impact of energy and water bill debt so that state and local governments can better develop and target policies and programs to more holistically protect renters and homeowners.

INTRODUCTION

THE SPREAD OF COVID-19 has created upheavals not seen since the 1918 Spanish flu pandemic. By the end of May 2021, the nation reported over 33.2 million confirmed cases and over 597,000 deaths.¹ In California, the death toll reached more than 62,000 and cases reached more than 3.69 million;² the state was the epicenter of the crisis in the U.S. in late 2020. In addition to the direct health costs of illness and death, the indirect impacts on the economy have been tremendous. To flatten the curve and prevent the number of new cases from overwhelming the healthcare system, public officials took dramatic actions to limit person-to-person interactions by restricting group gatherings, encouraging social distancing, and ordering people to shelter in place. These direct and indirect disruptions have created

enormous financial hardships for workers, families, businesses, and communities.

The pandemic has also exacerbated pre-pandemic health and economic neighborhood inequalities, including widespread job and income loss,³ housing vulnerability,⁴ food insecurity,⁵ and tap water precarity.⁶ People of color have been disproportionately affected by COVID-19-related layoffs and barriers to accessing a variety of essential services — for instance, a digital divide impacts virtual learning⁷ and remote work opportunities.⁸ The pandemic's economic impacts have also made access to critical utilities less affordable for many. Furthermore, the pandemic has led to an increase in residential energy consumption as people spent much more time at home due to shelter-in-place orders and associated closures. Not only are economic conditions for low-income households worse, but residential electricity consumption and therefore bills also increased as a direct result of people spending more time at home due to the pandemic, further exacerbating the economic burden of utility bills on low-income households.

According to the California Public Utilities Commission (CPUC), residential electric usage increased about 15% to 20% for Californians sheltering at home.⁹ To put this in context, the mean combined monthly household expenditure for electricity and natural gas service in California was \$166 in 2019, before the pandemic, and generally should be below 6% of income to be considered affordable.^{10,11} In this brief, we study unpaid residential gas and electric bills to measure the economic pressure facing neighborhoods served by Pacific Gas & Electric (PG&E), with a focus on racial disparities in utility debt.

In April 2020, the CPUC ordered PG&E and other investor-owned utilities to suspend service disconnections due to non-payment for both residential and commercial customers until April 16, 2021 and later extended these COVID-19

emergency protections through June 30, 2021.¹² As a result of the moratorium, PG&E has paused service disconnections for non-payment for residential and small, medium, and large business customers; paused income verification and re-enrollment requirements for California Alternate Rates for Energy (CARE) and Family Electric Rate Assistance (FERA) bill discount programs to make it easier for customers to enroll or stay enrolled in these rate assistance programs that can help to lower bills; waived security deposits for small commercial customers; and paused on Medical Baseline program recertification.¹³

Although the statewide moratorium on utility shut-offs has ensured continued energy access for many families, accumulating debt levels are a crisis that has yet to be resolved. Utility debt can lead to difficult trade-offs for disadvantaged communities, like paying utility bills to keep the lights on rather than buying groceries, making unsafe housing decisions such as coping with inadequate cooling systems, and accumulating debt.¹⁴ However, utility debt is not a new problem. In 2015, one-third of American households faced challenges in meeting their energy needs.¹⁵ Energy insecurity in the United States disproportionately affects households with children, households of color, and low-income and fixed-income households.¹⁶ At the start of the pandemic in 2020, an estimated 4.8 million low-income American households were unable to pay an energy bill, an issue that intensified in the early months of the pandemic.¹⁷

PG&E is one of the largest combined natural gas and electric energy companies in the United States, and easily the largest combined retail energy utility in California. Based in San Francisco, the company provides natural gas and electric service to about 16 million people spanning from Santa Barbara County in Central California to Humboldt County in Northern California and extending almost to the Nevada State border.¹⁸ Map 1 illustrates PG&E's electricity and gas service territory. PG&E provides both gas and electricity

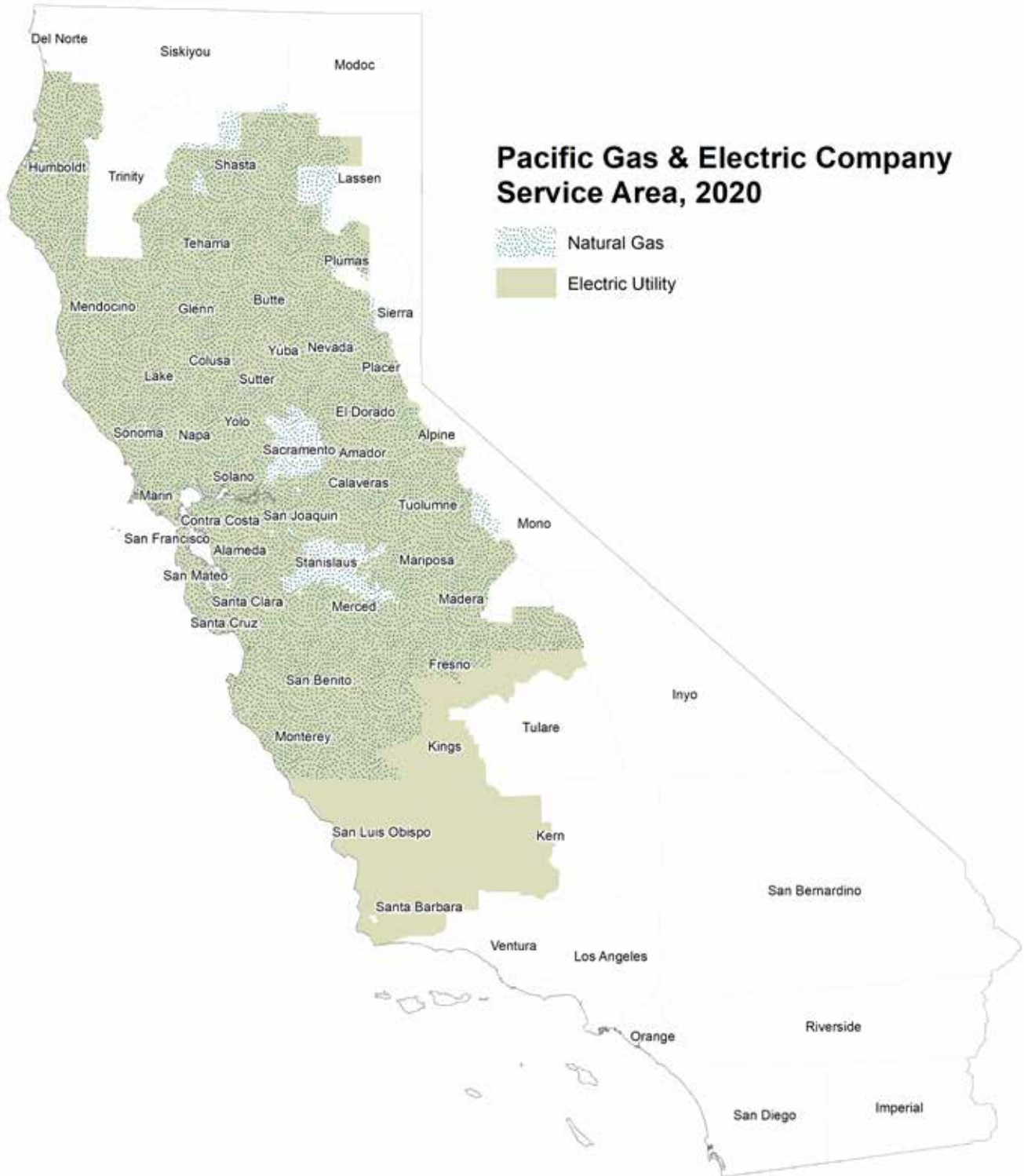
to areas in brown with blue dots on the map, electricity only to the areas in brown, and gas only to areas with blue dots (many of which receive their electricity from publicly owned utilities like the Sacramento Municipal Utility District).

We examine the extent of utility bill debt defined as the share of households in arrears in PG&E's service territory in this brief. Specifically, we analyze the disparities in utility debt across neighborhoods. Using publicly available data provided to the CPUC by PG&E, we conduct two analyses on residential utility debt. We assess areas served by PG&E during the second quarter of 2020, which captures the CPUC's April 2020 order to suspend service. First, we provide an overview of the spatial distribution of housing units with past-due utility bills in PG&E service areas and identify neighborhoods facing the greatest debt burden. Second, we use bivariate analysis to examine economic, housing, and ethnoracial characteristics in areas with the highest burden. We conclude with a discussion of policy recommendations to address utility debt burden. The results of this study can serve as an early warning system that can assist state and local governments to develop better and targeted policies and programs to assist households and neighborhoods most at-risk when the eviction moratorium expires.

METHODOLOGY

OUR UNIT OF ANALYSIS in this study is census zip code tabulation areas (ZCTAs), which we use as a proxy for neighborhoods. We used two data sources to construct our research dataset. The first source is zip code level data submitted by PG&E to the CPUC in response to Resolution M-4849:19. This is a part of PG&E's COVID-19 Emergency Customer Protections Transition Plan, dated April 1, 2020, which includes information on arrearage on utility bills. The information includes the "number and percent of unique customers, by ZIP code, who are more than 90 days in arrears, not enrolled

PG&E'S SERVICE AREA



Shapefiles: Pacific Gas and Electric Company service area boundaries (2020).

in a Recent Applicable Payment Plan or conventional extended payment plan, and in a Recent Applicable Payment Plan or conventional extended payment plan, and more than \$250 in total arrears.” The data are for accounts with outstanding debt during the second quarter of 2020, capturing the months after the CPUC’s April 2020 order to suspend service disconnections.

Residential account data were then merged with the second data source, ZCTA-level economic and housing information from the 2015 to 2019 five-year American Community Survey (ACS). For the statistical analysis, we categorized ZCTAs into three utility burden categories ranked by the percent of households that are past due on their utility bills in the ZCTA: lowest burden (bottom 25% quartile), highest burden, (top 25% quartile), and the remainder representing the middle (roughly 50%). The share of households in debt is the sum of past-due accounts in a ZCTA divided by the number of residential customers. Each of the three categories is weighted by the number of customers in the neighborhood so that the lowest quartile contains a quarter of PG&E’s customers, the middle half contains half of the customers, and the top quartile contains the rest.

UTILITY DEBT IS UNEVENLY DISTRIBUTED

WE FIND THAT HOUSEHOLDS who are burdened by utility debt are unevenly distributed across the PG&E service area. Roughly 6% households served by PG&E are facing financial difficulties paying for the most essential services. We find disproportionately high debt in historically underserved rural areas and urban areas left behind more broadly during the COVID-19 pandemic. Map 2 shows the estimated share of households behind on their gas and electric bills. The neighborhoods with the greatest share of households behind on their utility bills (roughly 20%) are high-heat exposure areas in Fresno (93701); Stockton (95202) and Bakersfield (93305)

in the San Joaquin Valley; and in northwestern California in the unincorporated Hoopa Valley (95546), which is located on the federally designated tribal area of the Natinnoh-hoi People.

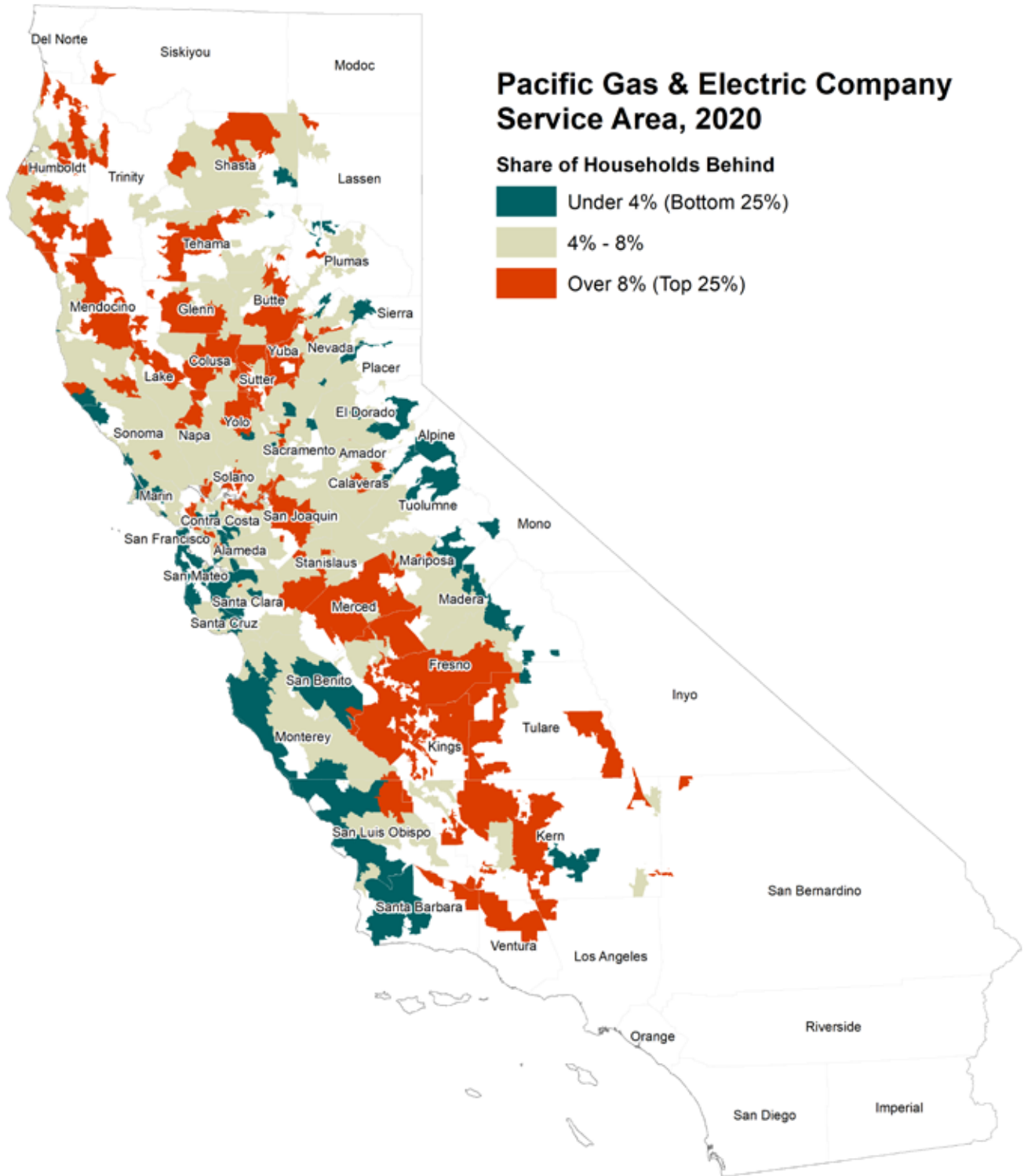
The neighborhoods with the greatest absolute number of households behind on their bills (at least 3,000) are also in Bakersfield (93307 and 93306) and Fresno (93722), as well as Pittsburgh (94565). Neighborhoods with the fewest households behind on utility bills include affluent and less heat-exposed coastal communities such as Pismo Beach (93449) and Palo Alto (94305).

Map 3 provides a snapshot of the neighborhoods in the greater San Francisco Bay Area. Areas in the top 25% of households in debt include historically segregated neighborhoods. For instance, more than 4,100 households are behind on their bill payments in zip codes 94601, 94621 and 94603, which span Fruitvale and East Oakland. These predominantly Latino and Black, as well as low-income, neighborhoods were among the hardest hit during the first peak of the pandemic.²⁰ Other impacted communities include zip code 95116, which encompasses part of Alum Rock, one of San Jose’s most notable Chicano/Mexican-American districts.

RACIAL AND INCOME DISPARITIES IN UTILITY DEBT RATES

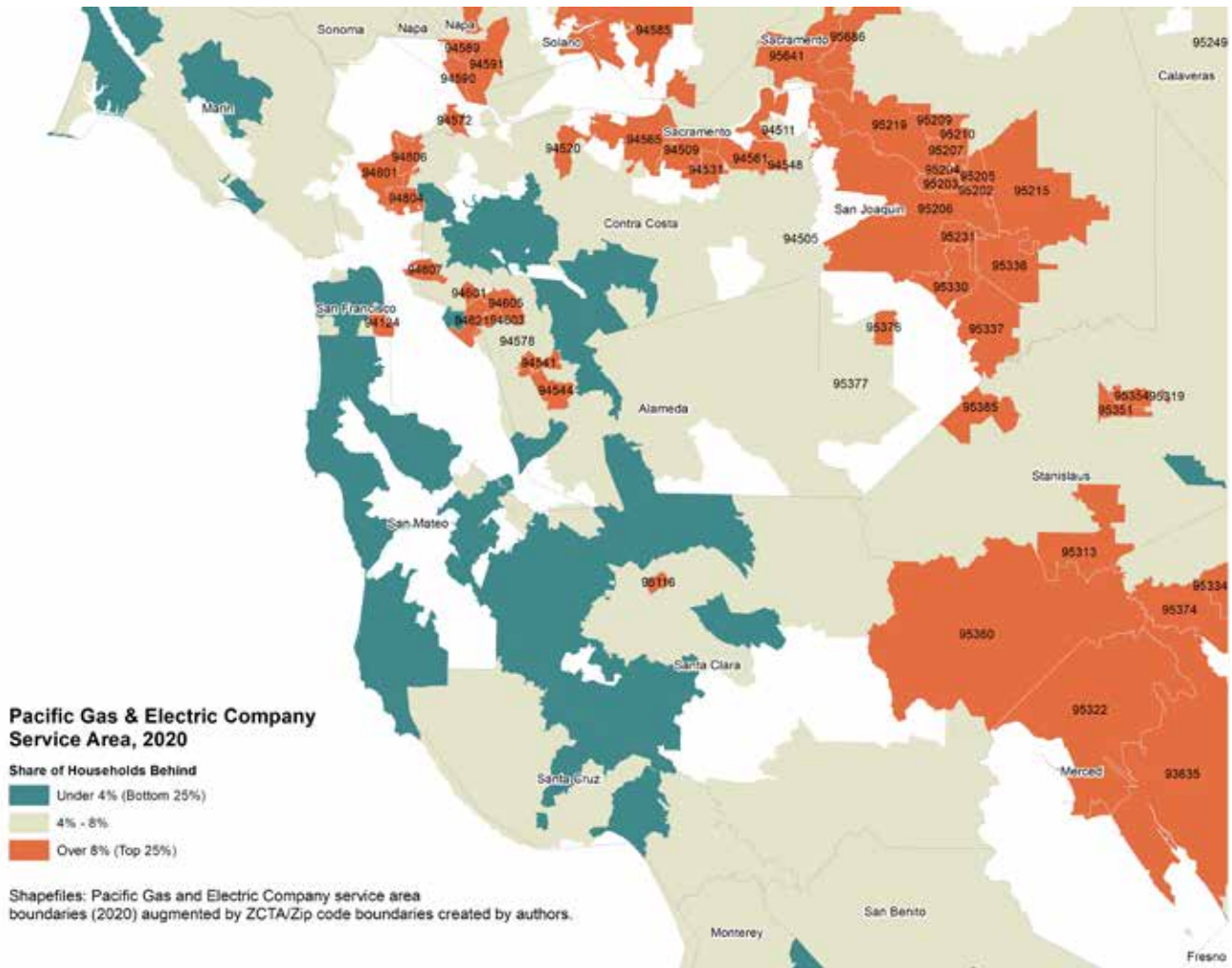
TABLE 1 SHOWS the average profile of neighborhoods served by PG&E by their utility debt rate. Utility debt rate is defined as the share of households with past due account balances. The utility debt rate is twice that in the highest-debt neighborhoods compared to the lowest-debt neighborhoods. There are also variations by the type of utility. Among the neighborhoods with the highest debt, roughly 5% of households with gas-only accounts are in debt compared to only 3% of households with electricity-only accounts. Households in the lowest-debt neighborhoods served by one utility have a greater chance of holding debt.

SHARE OF HOUSEHOLDS IN COVID-19 UTILITY DEBT, 2020 Q2



Shapefiles: Pacific Gas and Electric Company service area boundaries (2020) augmented by ZCTA/Zip code boundaries created by authors.

BAY AREA NEIGHBORHOODS BY COVID-19 UTILITY DEBT BURDEN, 2020 Q2



We find that utility debt rates vary inversely with economic vulnerability. On average, neighborhoods with highest debt rates have lower incomes and higher poverty rates. For instance, the neighborhoods with the highest rates (those in the top 25% quartile) have a poverty rate — 20% — that is two-and-a-half times higher than the neighborhoods with the lowest rates (bottom 25%) — 8%. The COVID-19 pandemic had a significant effect on every labor market indicator across all states and sectors in the nation,²¹ and we show utility debt is correlated with unemployment rates — neighborhoods with the lowest burden have lower unemployment rates.

The lowest burdened areas also experienced lower job displacement levels than the state as a whole (12% unemployment compared to over 15% for the state²²). These findings highlight widening racial and socioeconomic disparities through the job displacement caused by pandemic.²³ As it relates to housing characteristics, high-debt neighborhoods have a larger share of renters — 49% on average compared to 45% in lower-debt neighborhoods. Black and Latinx neighborhoods face the highest utility debt rates. On average, neighborhoods with greater debt rates have a larger share of Black and Latinx residents and fewer white residents.

While the analysis does not account for the fact that PG&E does not provide gas and electricity to all customers, the findings of the uneven geographic distribution of the debt rate are robust. In a separate analysis of the ZCTAs covered by both gas and electricity service not presented in this brief, we find that low-income and minority neighborhoods have higher debt rates. There is also a potential confounding factor: The energy account is occasionally held by the landlord of an apartment complex rather than tenants, in particular for low-income renters. We used a multivariate model to account for this occurrence, and we still find that low-income and minority neighborhoods have higher debt rates.

CONCLUSIONS AND POLICY RECOMMENDATIONS

THE EMPIRICAL ANALYSES presented in this research brief suggest that 6% households served by PG&E are facing financial difficulties paying for the most essential services. There are also variations by the type of service with a greater share of households with PG&E’s gas-only accounts in debt compared to households with electricity-only accounts. Our findings also highlight the reproduction of racial and economic inequality during the pandemic. We find disproportionately high debt in areas left behind more broadly during the COVID-19 pandemic, including neighborhoods with a larger share of residents of color, economically disadvantaged individuals, and unemployed workers. These findings likely mirror systematic patterns of racial

TABLE 1

PROFILE OF UTILITY DEBT BY NEIGHBORHOODS

	Average	Lowest Debt (Bottom 25%, n=136)	Middle Half (n=369)	Highest Debt (Top 25%, n=189)
Households Behind on Utility Bills				
Average all neighborhoods	6%	2%	5%	11%
Natural gas service only	9%	5%	13%	5%
Electricity service only	2%	4%	1%	3%
Economic Characteristics				
Poverty rate	12%	8%	10%	20%
Average household income	\$90k	\$124k	\$89k	\$56k
County unemployment rate		12%	14%	15%
Housing Characteristics				
Renters	42%	45%	38%	49%
Do not pay utility separately	3%	5%	3%	2%
Demographic				
Asian	17%	29%	14%	11%
Black	5%	3%	4%	9%
Latinx	29%	16%	25%	48%
Non-Latinx White	45%	47%	51%	28%

and income disparities in households facing difficulties paying housing costs. Some households may end up being evicted, while others will have a huge debt to repay, compounding the impact on financial credit, as well as on physical and mental health impact due to electricity and gas rationing.

In addition to one-time funds allocated through the budget surplus in California (\$2 billion for water and electricity),²⁴ we recommend further prioritization of long-term financial support and systemic reform in financing for essential services and infrastructure improvements to ensure that the most vulnerable residents have access to vital public services and housing. Support should include the generous allocation of COVID-19-related federal, state, and local aid to develop and implement utility debt-forgiveness and avoidance programs for low-income households and severely burdened neighborhoods.

While the analysis focuses on utility debt, the findings in this brief can likely assist in understanding the geographic pattern of the housing crisis created by the pandemic and the growing number of renters and homeowners behind in their monthly rents and mortgages. To better understand the depth and breadth of utility

burden on low-income residents and residents of color, utilities throughout California need to continue to improve the value, quality, and availability of debt and shut-off data. This will allow for targeted and relevant policy that addresses the distinct needs of these populations.

We also recommend that the analysis of PG&E be replicated for other utilities using spatial data on electricity, gas, and water debt. Moreover, to further understand the role of utility debt on housing cost burden, it is desirable to differentiate the impact on renters separately from homeowners. The results can serve as an early warning system that can assist state and local governments to develop better and targeted policies and programs to assist households and neighborhoods most at risk when the eviction moratorium expires. This type of system will be even more necessary as utility bills may further increase as we work to make the necessary transition from carbon-dependent to renewable fuels, and seek to provide heat, smoke, and pollution-exposed households with energy-intensive but health protective in-home technologies such as air conditioning and air filtration.

ENDNOTES

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