SUPPORTING HOUSEHOLD ACCESS

TO COMPLEX LOW-INCOME ENERGY ASSISTANCE PROGRAMS

Adapting Outreach and Enrollment Strategies in the San Joaquin Valley

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EXECUTIVE SUMMARY

Since 2019, the emPOWER campaign has been facilitated by Liberty Hill Foundation and Valley Clean Air Now (Valley CAN) to reduce endemic barriers associated with low-income and disadvantaged community (DAC) household enrollment in clean transportation and environmental incentive programs that aim to enhance affordability and just transition outcomes (Pierce & Connolly, 2020b). The emPOWER campaign builds the capacity of community-based organizations to deliver available income-qualified incentive programs to the communities with the greatest need. These incentives include the programs of Southern California Edison (SCE), a large investor-owned electric utility serving much of central and southern California.

This report analyzes an adaptation of the original emPOWER approach to provide more targeted support to SCE-served households in Kings and Tulare counties in the San Joaquin Valley (SJV) of California, a region in which residents experience substantial environmental inequities. We refer to this specific emPOWER campaign as the SCE-SJV Pilot (or "pilot" hereafter). This pilot effort assisted households served by SCE in applying for new and longstanding incentives. Other novel features of the pilot were its employment of a new procedural equity approach utilizing a distributed call center, as well as its focus on connecting households with the Arrearage Management Plan (AMP), a debt forgiveness program, and OhmConnect, Inc., a demand response program, in addition to other incentive programs. Using data on applicant households and program enrollment status sourced from Valley CAN's Salesforce platform, as well as information from structured discussions with Valley CAN staff, we describe outreach adaptation, analyze program interest and household characteristics, and identify potential barriers to participation and enrollment.

The adaptive outreach approach and emphasis on debt forgiveness piloted by Valley CAN aimed to help alleviate the acute financial impacts of the COVID-19 pandemic on low-income communities in the SJV. Interested households could call Valley CAN's direct support line seven days a week and receive information on household eligibility for available income-based incentive programs. The Valley CAN staff team provided guidance, information, and support to submit direct applications for available utility incentives.

The original outreach approach was adjusted quickly based on an initial period of low interest. This transformation yielded consistent levels of household interest during the remaining six months of the pilot. Social media efforts to promote AMP were particularly successful in communicating the message and gaining the trust of households seeking financial assistance to pay their utility bills, compared to outcomes from follow-up with households who enrolled in other Valley CAN programs (e.g., Tune In & Tune Up, a smog repair incentive program). While there was a considerable amount of attrition between initial calls from interested households to completed program applications, the pilot helped a higher proportion of very low-income households apply for assistance than previous Valley CAN efforts, with a median participating household income of $25,000 (an average of 105 percent of the Federal Poverty Level).

The most novel distributive impact of the pilot was connecting households to AMP, which assists low-income households in paying off their debt. There was an unprecedented degree of concern around utility debt and disconnections in disadvantaged communities, much of which stemmed from the COVID-19 pandemic. In fact, 90 percent of households seeking assistance through the pilot reported trouble in paying their utility bills, with an average of $1,400 in SCE utility debt. Many households were affected by the pandemic, and many individuals lost their

jobs or had working hours reduced, causing them to fall behind on their payments. More than 200 individuals received assistance to sign up for AMP through Valley CAN, 100 percent of whom reported trouble paying utility bills.

On one hand, the scale of the effort required to enroll households suggests that the resources needed to reach and support households in DACs with assistance and incentive programs remain inadequate and that more streamlining of meaningful benefits is needed. Overall uptake after attrition was also very limited for complex, low-initial payoff opportunities such as smart thermostats. On the other hand, the more than 200 households that did apply may not have accessed AMP or other services had Valley CAN not offered this approach. Lessons learned from this pilot can be applied to similar and expanded efforts in the SJV and elsewhere to assist low-income households in overcoming barriers to accessing the benefits of assistance and incentive programs.

1. INTRODUCTION

Since 2019, the emPOWER campaign has been facilitated by Liberty Hill Foundation and Valley Clean Air Now (Valley CAN) with the aim of reducing endemic barriers associated with low-income and disadvantaged community (DAC) household enrollment in clean transportation and environmental incentive programs that enhance affordability and just transition outcomes (Pierce & Connolly, 2020b). The emPOWER campaign builds the capacity of community-based organizations to deliver available income-qualified incentive programs to the communities with the greatest need. These incentives include the programs of Southern California Edison (SCE), a large investor-owned electric utility serving much of central and southern California.

Even when significant effort is put into streamlining assistance and incentive program

designs and when nonprofit organizations are contracted to assist in administration, many programs can be challenging to enroll in from a procedural equity[1] standpoint (for instance, see Pierce et al., 2021 and Pierce & DeShazo, 2017). These programs often require significant documentation, including printed and mailed applications, and even direct contact with the agencies operating the programs to discuss application questions and issues. Additionally, households are often eligible for more than one assistance program, but simultaneous or bundled enrollment has not traditionally been offered by utilities.

In this study, we analyze the efforts of Valley CAN in 2021 to build on the original emPOWER model (see Pierce and Connolly, 2020) to expand the scope and means of outreach in its household intake process to assess eligibility for bundled programs. This includes simultaneous smog repair and clean vehicle incentive programs, in-person food assistance events initiated during the onset of the COVID-19 pandemic, and an extension to core energy affordability assistance and demand management opportunities. Over the past seven months, with funding from SCE, Valley CAN explored new ways to deliver bundled cost savings and assistance programs to low-income households, building on a unique history of accomplishments in household-centered adaptation and refinement dating back to at least 2012 (Connolly et al., 2020; Pierce & Connolly, 2018, 2019, 2020a).

This pilot effort is focused on Kings and Tulare counties in the San Joaquin Valley (SJV)

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1   Procedural justice encompasses the fair involvement of populations or communities who are impacted by an environmental process or event, including respecting and elevating community perspectives, facilitating participation, and involving them in decision-making, to the extent the latter is possible. We refer to procedural "equity" instead of justice here because as government-run programs with specific eligibility requirements, equity goals can be achieved, but certain dimensions of justice are not applicable (see Pierce et al., 2021).

of California, a region of the state in which residents experience substantial environmental inequities (Office of Environmental Health Hazard Assessment, 2021). The pilot has provided interested households with the opportunity to assess eligibility and submit applications for utility incentives offered by SCE, including the new Arrearage Management Plan (AMP), as well as a smart thermostat and associated electric demand management program.

Via household-level and pilot program data provided by Valley CAN for the period of March 2021 to September 2021, along with structured discussions with Valley CAN staff, we examined adaptation in Valley CAN's outreach approach and the potential degree of household interest in and benefits from simultaneously offering a range of energy incentives across agencies to low-income households (prioritizing SCE's offerings). This approach might be expanded to other regions in California (California Public Utilities Commission, 2022).

2. BACKGROUND

2.1. Motivation for the Pilot and Promoted Programs: Arrearage Management Plan and OhmConnect

Valley CAN, in conjunction with the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the California Air Resources Board (CARB), operates multiple programs for both reducing emissions from older vehicles and providing newer clean vehicles to low-income households in the SJV of California. Valley CAN has been managing a longstanding smog repair program, Tune In & Tune Up (TI&TU), since 2012 (Pierce and Connolly, 2018). Since 2015, Valley CAN has piloted and now manages Clean Cars 4 All (CC4A, formerly named EFMP Plus-Up and referred to as "Drive Clean in the San Joaquin" within the SJVAPCD), which is a vehicle

retirement and replacement program funded by CARB and administered by SJVAPCD. It focuses on California's low- to moderate-income population and currently operates through several air districts in California (see Pierce and DeShazo, 2017 and Pierce et al. 2021).

Through operating these programs, Valley CAN has focused on adapting and improving outreach methods to reach communities in the SJV that are most in need of support. For example, the CC4A outreach team holds weeknight clinics in rural regions of the SJV that are outside of the main population hubs where the larger TI&TU events are held. As described in more detail in this report, in recent years, Valley CAN has incorporated energy offerings into their work, expanding the focus from solely transportation.

The pilot revamped an existing phone bank process, dramatically expanded at the outset of the COVID-19 pandemic for TI&TU (Pierce & Connolly, 2020a); once smog repair vouchers were issued for TI&TU participants, the Valley CAN team followed up with the SCE households to introduce them to the emPOWER eligibility form and offer assistance with the submission of SCE program applications, or provide them with the necessary tools to do so themselves. The pilot also included two new types of household assistance and incentive programs in the emPOWER approach: debt relief and demand response. These two interventions are growing in importance and deployment by electric utilities across the U.S. to address multiple goals, including to relieve pandemic-exacerbated economic inequalities; reduce pressure on the grid as it increasingly relies on temporally sensitive, carbon-free energy sources (wind and solar); and more broadly ensure a just transition to clean energy.

2.1.1. Debt Forgiveness: Overview of the Arrearage Management Plan Program

As residential utility debt has grown during the pandemic, conversations and policy have dramatically shifted to focus more on utility debt relief and shutoff prevention. When the COVID-19 pandemic began and shelter-in-place orders were instated, energy and water utilities across many states issued shutoff moratoria to ensure that those who were facing economic hardships could continue to receive essential utility services. However, these moratoria did not erase pre-existing debt or debt accrued during the pandemic. As a result, many low-income and vulnerable households accumulated utility debt as they were unable to pay their bills. This debt is distributed unevenly across communities; a recent policy brief (Ong et al., 2021) found that utility debt in the Northern California investor-owned utility's (PG&E) territory disproportionately affects low-income communities, communities of color and communities with high shares of renters.

The total amount owed by all residential accounts as of December 2021 was $646,463,099 (California Public Utilities Commission, 2022). Over half a million SCE households were more than 90 days in arrears, representing about 12 percent of SCE's total customer base. Additionally, 20 percent of households enrolled in one of the state's low-income rate assistance programs were more than 90 days in arrears, and 10 percent of these households owe more than $500 (California Public Utilities Commission, 2022). The state's two low-income rate assistance programs are the California Alternative Rates for Energy (CARE) and Family Electric Rate Assistance (FERA), which give households that meet certain income requirements a percentage discount on their bill. The shutoff moratorium lasted through the fall of 2021 for many California energy utilities, with other moratoria expiring soon, thus leaving many households needing to pay their accumulated

debt. However, SCE did not disconnect any households in 2021.

To address this utility debt, SCE, along with other investor-owned utilities regulated by the California Public Utilities Commission, initiated the AMP program to forgive past-due utility debt for qualifying households. AMP began enrollment in February 2021. To qualify for AMP, a household must meet the following requirements:

» Be enrolled in CARE or FERA (low-income rate assistance programs);

» Owe more than $500, and have that debt be more than 90 days past due; and

» Make on-time payments for a year[2] (California Public Utilities Commission, 2020).

Households who meet these qualifications and successfully enrolled in AMP would have "1/12 of their eligible utility debt [forgiven] after each on-time payment of [their] current bill. After 12 on-time payments of individual monthly bills, the debt is fully forgiven (up to $8,000 per customer)" (Southern California Edison, 2022a). Enrollment in AMP was not automatic among eligible customers, though SCE removed a requirement for physical signatures on the application, reducing one barrier to enrollment. In part due to the potential for significant financial benefits and in part due to the newness of the program, this report focuses on Valley CAN's novel efforts to connect low-income households with this nascent program.

2.1.2. Demand Response: Overview of OhmConnect

Peaks in electricity demand — often during heat waves when air conditioning use is above normal — put stress on the electrical grid and can result in blackouts. The need to relieve pressure on the

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2 Enrollees can miss up to two non-consecutive payments and remain enrolled.

electric grid during peak periods is only growing as utilities decarbonize their energy supplies, and renewable sources such as wind and solar often are not readily available during periods of peak demand.

Utilities and their partners are thus increasingly offering programs for households to reduce their electricity consumption during these critical times; this can alleviate the stress on the grid, and in turn, households can receive financial benefits in the form of bill savings from reduced consumption as well as performance-based incentives for participation. Third party providers like OhmConnect Inc. work with utilities and dynamically compensate ratepayers for their consumption reduction efforts during specific time periods. These efforts are commonly known as "demand response incentive programs," and the specific time periods when consumption reductions are requested are known as "demand response events."

Once signed up with the program, households receive notifications from OhmConnect through SMS or email alerting them at times when they should reduce their electricity consumption. Participants are then compensated for how much they reduce their electricity usage. The rate at which customers are rewarded is typically between $1 and $2 per kWh they reduce their consumption by but can vary; for example, OhmConnect rewards customers more for consistently reducing their consumption in sequential events or for reducing their consumption by large amounts (OhmConnect Participants, 2017). This is calculated based on how much electricity a participant would have been expected to use had OhmConnect not notified them to reduce their consumption.

In order to participate in the program, households need to proactively sign up and register. The requirements to sign up for demand response programs like OhmConnect can be a barrier to participation. "Signing up" includes making an account with OhmConnect and "registering" requires giving permission to the company to access a household's electricity consumption data. This step is necessary to allow OhmConnect to make the calculation necessary for compensation, but it can be challenging and time consuming for participants.

OhmConnect sometimes offers additional incentives to encourage households to complete registration, such as distributing free smart thermostats (OhmConnect, 2022). Households can choose to connect their smart thermostats to OhmConnect so that they automatically respond to demand response events. In other words, the smart thermostat will turn down a few degrees during a demand response event, thereby reducing electricity consumption without any effort taken on behalf of the participant. These thermostats can be manually overridden. Research has found that participants with smart thermostats achieve larger and more consistent savings, resulting in higher rewards (Gattaciecca et al., 2020). Other research has found that customers with time-of-use electricity rates can save money with smart thermostats that automatically adjust to reduce usage when electricity is most expensive (Blonz et al., 2021). However, these smart thermostats can be expensive, which can prevent low-income households from accessing the benefits that smart thermostats provide. Furthermore, although they are free, OhmConnect participants are required to provide a valid credit card number to receive the device.

Lowering the barriers to participation in demand response events by assisting in registration and offering free smart thermostats can make demand response programs more equitable for low-income households. Valley CAN's efforts to connect low-income households to OhmConnect, Inc. are a means to help all households access the financial benefits of participation.

2.1.3. Benefits of Utilizing a Third Party (i.e., Valley CAN): Program Bundling

While SCE conducts some level of outreach and assists households in enrolling in the programs it administers, there are advantages to utilizing third party groups like Valley CAN. First, there are programs beyond SCE's remit that are relevant to low-income households, such as SoCalGas's[3] parallel income assistance programs (also called CARE and FERA), as well as state and federal assistance programs, such as Clean Cars 4 All and the Low Income Home Energy Assistance Program (LIHEAP).

In addition, SCE has acknowledged its limited ability and positionality to effectively provide comprehensive outreach and assistance to potentially interested households, as is done via the general emPOWER approach facilitated by Liberty Hill Foundation, Valley CAN, and community partners. Procedural justice in household-benefit program administration involves targeted outreach to particularly vulnerable communities, along with additional information sharing and technical assistance to households (Smith & Lipsky, 2009). Programs offered without targeted outreach and enrollment assistance have historically seen low rates of enrollment among eligible households (for instance, Pierce et al., 2020). This means that many programs are not effectively making households aware of, much less delivering, benefits to the vulnerable households they are designed to serve. Even programs that have high enrollment rates, such as SCE's CARE, represent further opportunities to reach targeted populations (Southern California Edison, 2019).

This limited adaptability and customer responsiveness by SCE acting alone to support enrollment in its programs was also demonstrated over the course of the pilot. Customers reported having difficulties connecting to a SCE representative and instead were re-directed by an automated system to other forms of communication, such as email or Facebook. SCE was only staffed to respond to urgent calls regarding program assistance, and even these had wait times of several hours to reach a live person. There were also some missing AMP applications within the SCE system resulting from an apparent glitch; this was resolved, and Valley CAN and SCE took efforts to ensure no other applications went missing, including assigning a confirmation number to each application to assist in tracking and reference.

2.2. Background on Kings and Tulare: Reaching the Most Overlooked Areas

As noted above, one of the unique aspects of the pilot effort and Valley CAN's partnership with SCE was its targeting to residents and SCE households in Tulare and Kings counties, which represent a relatively small sub-region within the SJV's eight counties.[4] This sub-region does not typically get targeted environmental justice support, compared to the SJV as a whole or the most populated counties of Kern and Fresno counties, where environmental justice inequities are relatively and increasingly well documented. Most environmental justice studies, and environmental equity-focused planning and policy efforts are focused on the Central Valley or the SJV as a whole, even when they feature examples from Tulare (Alkon et al., 2013; Flores-Landeros et al., 2021) or Kings (Bullard, 1993) counties.

SCE serves the majority of Tulare County and a small part of northern Kings County that includes the City of Hanford, Kings County's largest city (population 57,990) (US Census Bureau, 2022).

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3   SoCalGas is the natural gas utility that serves households in a service territory that overlaps with much of SCE's territory.

4   The SJV includes Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties.

FIGURE 1

Map of Southern California Edison's Service Territory

Source: Southern California Edison. "Our Service Territory." Accessed January 2022.

Figure 1 illustrates SCE's service territory in yellow. The remainder of these two counties receive their power from another investor-owned utility, Pacific Gas & Electric Company (PG&E). The pilot in this study focused only on households in SCE's territory. This service territory border does not follow administrative boundaries like county lines; SCE and PG&E expanded their service territories outward over time, and this border is likely the result of this territory expansion. PG&E and SCE offer different electricity rates, so there are implications for those who live in one part of the county versus another. For example, as of February 2022, SCE's baseline residential rate was 26.38 cents per kilowatt hour (kWh) while PG&E's was 28.24 cents per kWh (Pacific Gas & Electric Company, 2021; Southern California Edison, 2021). The rate at which net energy metering (solar) customers are paid for the excess electricity they produce, known as the Net Surplus Compensation Rate, also varies by utility. In February 2022, SCE's Net Surplus Compensation Rate was 3.969 cents per kWh while PG&E's was 4.501 cents per kWh (Pacific Gas & Electric Company, 2022; Southern California Edison, 2022b).

TABLE 1

Sociodemographic Characteristics of Kings and Tulare Counties, the SJV, and the State of California

	Kings County	Tulare County	SJV	California
Total Population	150,691	461,898	4,197,363	39,283,497
Number of Households	43,452	138,238	1,287,232	13,044,266
Ethnicity and Race				
American Indian and Alaska Native alone	0.9%	0.6%	0.5%	0.4%
Asian alone	3.7%	3.2%	7.8%	14.3%
Black or African American alone	5.8%	1.3%	4.3%	5.5%
Hispanic or Latino (of any race)	54.5%	64.6%	52.1%	39.0%
Native Hawaiian and Other Pacific Islander alone	0.2%	0.1%	0.3%	0.4%
Other Races	2.8%	1.7%	2.5%	3.3%
White alone	32.2%	28.5%	32.5%	37.2%
Income (2019 Inflation adjusted $)				
Median Household Income	$57,848	$49,687	$52,386	$75,235
Per Capita Income	$22,373	$21,380	$23,893	$36,955
Less than $25,000	19.0%	25.2%	21.6%	16.4%
$25,000 to $34,999	10.5%	10.6%	10.1%	7.5%
$35,000 to $49,999	14.2%	14.5%	13.2%	10.5%
$50,000 or more	56.3%	49.7%	55.1%	65.6%
Average CalEnviroScreen 4.0 Percentile	74.7	76.6	70.1	50.0

Source: U.S. Census Bureau, American Community Survey 5-year Estimates (2015-2019) (US Census Bureau, 2019) and California Office of Environmental Health Hazard Assessment's CalEnviroScreen 4.0 (Office of Environmental Health Hazard Assessment, 2021)

Using U.S. Census American Community Survey data, Table 1 displays the population, ethnic and racial demographics, and household income levels for residents of Kings and Tulare counties compared to the SJV and the State of California as a whole. The median household and per capita incomes in these counties are notably less than those for California, but not for the SJV. Compared to the broader SJV region, Kings County has a slightly higher median household income, but lower per capita income, while Tulare County has a lower median household income and per capita income than the SJV. The two counties have higher shares of Hispanic or Latino residents than the state, as does the SJV.

Table 1 also reports CalEnviroScreen percentiles, which represent environmental health and justice vulnerability; a higher percentile indicates higher levels of burden and vulnerability (Office of Environmental Health Hazard Assessment, 2021). Census tracts in Kings and Tulare counties also have a higher average CalEnviroScreen percentile than the SJV, all of which are considerably higher than the baseline statewide percentile of 50.

3. DATA AND METHODOLOGY

The participant- and program-level data analyzed in this report regarding the pilot effort were provided to the research team by Valley CAN and sourced from Valley CAN's emPOWER Salesforce database; additional details on the emPOWER database development are provided in (Pierce & Connolly, 2020b). The data cover the period of March 2021 through September 2021. These data were cleaned and analyzed using Microsoft Excel.[5] There were 3,016 interest calls, 2,011 of which represent unique households from the two counties, and 380 household emPOWER applications (referred

to as "applicant households" throughout the report). In this report, when providing statistical percentages of response profiles, the total number of respondents to each particular question is used to calculate those statistics, not the total number of participants overall.

These quantitative data are supplemented by multiple structured discussions with Valley CAN and SCE staff on program operation and adjustments throughout the seven-month pilot.

Several other administrative data sources were joined to applicant household data and used throughout this assessment to provide context for the effectiveness of the emPOWER model in reaching the most vulnerable communities. CalEnviroScreen 3.0 and 4.0 data (OEHHA, 2018, 2021) were joined with the participant-level data to determine the Senate Bill 535 DAC status of the participants' tracts (only available in CalEnviroScreen 3.0 as of the development of this report), as well as the overall CalEnviroScreen percentiles. American Community Survey (ACS) 5-year census data for the region (US Census Bureau, 2019) were extracted and used to contextualize the results (Table 1).

This study has several limitations. One is that the analysis only includes households that self-select into the application process; due to a lack of available data, the characteristics of interested households who called but did not ultimately apply cannot be reported. This is an area for future research. Additionally, this report only includes descriptive analysis, so causal mechanisms are not fully assessed.

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5   The following respondents were removed from the dataset: one household with a reported income of $1.00 and respondents with reported average monthly utility bills of <$10 and ≥$600.

4. PILOT PROGRAM RESULTS AND APPLICANT HOUSEHOLD CHARACTERISTICS

In our analysis of the pilot program's reach and impact, we first characterize changes in Valley CAN's procedure of outreach to households within the two counties, both at the start and within the pilot period. We next analyze the quantitative scale and scope of outreach and household interest in comparison to Valley CAN staff input effort. We then summarize high-level trends in top programs of interest, applicant household characteristics, and progress through the enrollment process. Finally, by combining data points on interested and applying households, we explore reasons for varying levels of household interest in major programs, and potential impact of enrollment.

4.1. Outreach Procedure and Adaptation

The pilot launched in the last week of February 2021 but was adapted at the beginning of March 2021, based on lower-than-expected levels of household interest and response to outreach. The original concept was that interested households from Kings and Tulare counties who called the TI&TU voucher phone line and expressed an interest in additional money-saving opportunities were flagged in Salesforce and received an automated text with Valley CAN's direct phone line. Initially, the goal was for interested households to call the benefit and incentive line directly, which was staffed throughout the week Monday through Friday 8:00 a.m. to 6:00 p.m. and weekend days 8:00 a.m. to 4:30 p.m. However, households were either unmotivated or unclear about what they would be calling for, so even though almost 70 TI&TU households expressed interest in the first week of the pilot in February 2021, the Valley CAN team did not receive any calls or submit
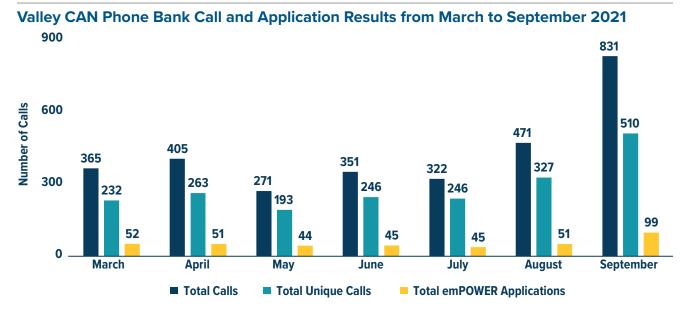
any emPOWER applications in the initial week. There were also logistical issues with the phone bank in receiving incoming calls which had to be investigated and addressed. Even once changes were made, with TI&TU participants who were subsequently directed to the pilot opportunities, the Valley CAN team often had to re-direct the conversation toward a focus on energy assistance. There was relatively less success with TI&TU callers overall.

The following adjustments were made to address these challenges from the second week on:

» making targeted social media advertisements, which wound up attracting approximately 90 percent of calls throughout the pilot;

» calling households rather than relying solely on incoming calls;

» scheduling calls to complete an eligibility form with households who were interested but wanted Valley CAN to call back at a different time;

» completing a follow up call to each household expressing interest; and

» accommodating households who were more comfortable sending email inquiries before calling the phone line.

Valley CAN subsequently reported households being more interactive and asking more questions about the program, as well as the staff phone team becoming more expert in answering program questions, directing participants to the appropriate resources, and providing application support. Along with providing benefits to participants, the pilot facilitated an increase in organizational capacity and targeting of strategy for Valley CAN by enabling it to hire additional staff members to support broader outreach and enrollment assistance efforts for SJV communities.

Given the personal information required to assess assistance program eligibility, the Valley CAN phone team had to ensure households were comfortable

FIGURE 2

Valley CAN Phone Bank Call and Application Results from March to September 2021

and trusted the staff requesting their information. Households often asked Valley CAN staff several questions before completing the eligibility form and providing personal information. Households often talked more broadly about their financial situation on calls with the Valley CAN team and reached out to Valley CAN for program updates after the initial call to complete the eligibility form. The initial calls typically lasted about 30 minutes.

Some factors outside of Valley CAN's control also affected levels of interest and follow through. For instance, the pilot saw an increase of calls and applications the week of June 30th, when the end of the shutoff moratorium was announced and there was a greater sense of urgency to submit applications from individuals fearing utility service shutoff (although the moratorium was ultimately extended to September 30th).

4.2. Scale of Outreach and Household Interest Over Time

As described in Section 4.1, the original outreach approach evolved after the initial period of low interest. For the subsequent six months, the pilot yielded consistent levels of household interest (about 200 to 300 unique calls and 300 to 400

total calls per month) and follow through on applications (15 to 22 percent) (Table 2, Figure 2). From March to September 2021, there were a total of 3,016 total calls to the Valley CAN phone bank, 2,011 of which represented unique households, resulting in 380 emPOWER applications.[6] In other words, approximately 1 percent of all households in the counties of Kings and Tulare engaged with the pilot in the 7-month period. In the last month of the pilot, calls and applications nearly doubled, likely due to the expiration of the shutoff moratorium at the end of September.

Following the end of the pilot in September, Valley CAN kept the SCE phone line operational but no longer promoted it.. Notably, households are calling back for AMP updates, and some are expressing a new interest in AMP, reflecting the need for third-party communication support.

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6   Some interested households called more than once, resulting in the total calls exceeding the total unique calls. Households often called back to ask questions about AMP and confirm the legitimacy of the program. Some households also needed to wait to meet AMP eligibility requirements (such as enrolling in CARE or having debt more than 90 days old and over $500) before proceeding with an application, so they called back at a later date to confirm eligibility.

TABLE 2

Valley CAN Phone Bank Calls and Response Outcomes by Month

Month	Total Calls	Total Unique Calls	Total emPOWER Applications	Percentage of Unique Calls Resulting in Applications
March	365	232	52	22.4%
April	405	263	51	19.4%
May	271	193	44	22.8%
June	351	246	45	18.3%
July	322	240	38	15.8%
August	471	327	51	15.6%
September	831	510	99	19.4%
Total	**3,016**	**2,011**	**380**	**18.9%**

TABLE 3

Applicant Household Program Status in Pilot Period

Program	Lack of Interest Expressed	Already Enrolled	Applying with Support	Will Apply on Own	Total
Arrearage Management Plan (AMP)	37	2	233	55	327
California Alternate Rates for Energy (CARE-SCE)	31	300	5	13	349
California Alternate Rates for Energy (CARE-SCG)	162	155	2	28	347
Energy / Gas Assistance Fund	271	2	1	39	313
Energy Savings Assistance (SCE)	236	3	0	13	252
Energy Savings Assistance (SCG)	241	0	0	11	252
LIHEAP Efficiency	323	1	0	24	348
LIHEAP Financial Assistance	311	3	1	31	346
OhmConnect	222	1	0	36	259
Grand Total	**1,834**	**467**	**242**	**250**	**2,793**

4.3. Top Program Interest and Application Support Trends

Across the programs featured in the pilot, there was highly variable interest among households. There was also notable drop-off in interest beyond a few key programs, similar to the original emPOWER pilot; thus, only programs of most interest are shown in Table 3.[7] Overall, there was more interest from households in applying on their own to programs than applying with ongoing support from Valley CAN. Virtually all of the interest in ongoing Valley CAN support was focused on AMP enrollment, speaking to the program's recency and complexity.

By contrast, CARE is the only program with high pre-existing levels of household enrollment, especially the version offered by SCE as opposed to SoCalGas (SCG), which provides sizable, recurring monthly bill discounts for low-income households. Unsurprisingly, households did not express an interest in enrollment support given its simplicity and longstanding offering.

Other programs were more mixed in terms of household interest and desire for support. There was very little interest from households in getting help enrolling in the Energy Savings Assistance (ESA) programs or enrolling on their own. There was also very little interest in assistance in enrolling in LIHEAP, but moderate interest in applying on their own. This is potentially problematic as LIHEAP is the primary (if not the only) existing federal program with growth potential to provide direct assistance (through state and county intermediaries) to low-income households to increase energy efficiency and reduce utility bill burden. It may also reflect the limits of emPOWER in bundling programs that are offered by agencies not working directly with Valley CAN. Staff facilitating the pilot reported that it was difficult to support LIHEAP enrollment

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7   A full list of programs featured in the pilot is included in Appendix A, Table A-1.

FIGURE 3

Valley CAN AMP Social Media Advertisement

beyond providing households with very general program and contact information.

4.3.1. AMP Interest and Enrollment Analysis

Most of the generated calls and emails in the pilot were from households interested in enrolling in the SCE AMP program for debt forgiveness and concerns around utility disconnections. Households responded directly to Valley CAN's AMP social media ads (see Figure 3), which aimed to make the financial opportunity more intuitive than the program name itself suggests. Advertisements focused on utility debt forgiveness, rather than "arrearage management."

The AMP program received the most interest and resulting applications during the pilot,

reflecting the fact that 90 percent of applicant households reported having trouble paying their utility bills. Out of 380 total applicant households, 86 percent were eligible for AMP and not yet enrolled. More than 70 percent of those households — approximately 230 — ultimately applied with support from Valley CAN during the pilot or were currently in the process of applying when the pilot ended (though 36 of those households were determined to not be eligible for AMP and did not receive benefits). The effort also provided 55 households with the AMP website link to complete the application on their own. As of September 2021, 184 households confirmed a finalized program application or receipt of benefits through the pilot.

4.3.2. OhmConnect Interest and Enrollment Analysis

In contrast to household interest in AMP, interest in and follow through on OhmConnect's demand response program was quite low. Moreover, among applicant households, there was slow progress in enrolling, as it was difficult to ensure that participants complete the sign-up process. Figure 4 shows the social media advertisement for OhmConnect used by Valley CAN. Although Valley CAN did advertise that it would assist households in signing up, progress was slower for this program. Valley CAN data showed that 24 households "signed up" for OhmConnect, but only 12 successfully completed the full registration, which requires granting access to electricity data.

This low number of signups appears attributable to a few key factors. First, fully completing the sign-up process for demand response programs like OhmConnect requires several steps, including connecting household utility data to the OhmConnect system. Second, because this step takes time, it is difficult to ensure that participants complete the sign-up process. Third, households who reached out to Valley CAN tended to be

FIGURE 4

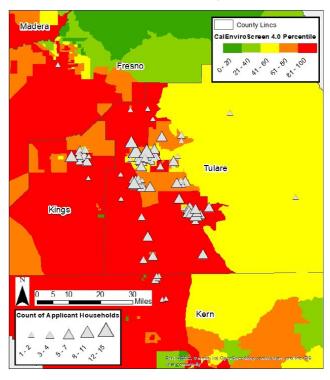## Valley CAN OhmConnect Social Media Advertisement

more concerned about their utility bills and did not perceive that direct relief or bill savings would come from signing up for OhmConnect. In other words, the financial benefits of enrolling in demand response programs may be less immediately tangible to households in paying for utility bills, and the social media advertisement by Valley CAN offering $25 savings (see Figure 4) reinforces an apparent limited nature to the opportunity. This also stands in contrast to the highlighting in advertisements of more than $500 in potential debt relief via AMP.

4.4. Applicant Household Constraints and Opportunities Analysis

This section summarizes broad trends in the characteristics of applicant households (who completed the the emPOWER pilot application). The median household income among applicant households was $25,000 (105 percent of the

FIGURE 5

Map of Applicant Households and CalEnviroScreen Percentiles by Census Tract

Source: Office of Environmental Health Hazard Assessment, 2021

Federal Poverty Level) and the mean was $28,270). This suggests that pilot applicant households had lower incomes than the broader pool of past participants in Valley CAN programs

(Pierce & Connolly, 2019). Figure 5 illustrates the number of applicant households per census tract, along with each tract's CalEnviroScreen percentile. For context, the CalEnviroScreen percentiles for the surrounding census tracts in the broader SJV are included.

Table 4 shows the profile of self-reported monthly expenditures on electric, water, and gas bills, as well as how this compares to median income levels. Households reported a median expenditure on all utilities of $320 per month, which equates to over 15 percent of their reported income. While recognizing the limitations of percent income-based affordability thresholds, it is still notable that the median household expenditure reported nearly doubles affordability thresholds for energy (6 percent) and for water (2 to 2.5 percent) proposed by the California Public Utilities Commission and Water Board, as well as the broader utility affordability literature. Unsurprisingly, 90 percent of applicant households reported trouble paying their utility bills. Moreover, among those reporting SCE utility debt, the average was $1,420. For context, about 20 percent of CARE and FERA customers in arrears in SCE owed more than $1,000 in December 2021 (California Public Utilities Commission, 2022).

TABLE 4

Monthly Applicant Household Utility Expenditures, Affordability Impact and Utility Debt

Category	Average	Median	Median expenditure as % of median income
Monthly Electric Bill	$191	$180	8.6%
Monthly Gas Bill	$65	$50	2.4%
Monthly Water Bill	$93	$90	4.3%
Average combined utility expenditure	$349	$320	15.3%
Average SCE utility debt (N = 76)	$1,420	$1,050	--

TABLE 5

Relevant Applicant Household Characteristics

Characteristic	Percent (N)
Preferred Language	
English	78% (295)
Spanish	22% (85)
Own Smartphone*	
No	8% (19)
Yes	92% (206)
Housing Ownership Status	
Own	31% (119)
Rent	69% (260)
Household Characteristics	
Average % of Federal Poverty Level	105% (--)
Average Household Size	4 (--)
DAC Status	
No	52% (198)
Yes	48% (182)
Trouble Paying Bill?	
No	10% (39)
Yes	90% (336)
Someone Elderly (Over 62) in Household?	
Elderly Household Member	16% (59)

*155 applicant households did not answer this question.

Table 5 presents several other characteristics of emPOWER applicant households. Of these households, 78 percent identified English as their preferred language and 22 percent identified Spanish as their preferred language. The average household size was four people. Over two-thirds (69 percent) of applicant households were renters, while 31 percent owned their home. Nearly all households who reported having solar panels were homeowners, and those with solar panels also reported lower electric bills, about $30 per month. Despite having very low incomes, 91.5 percent of respondents answering the question reported owning a smartphone. Only about half (52 percent) of households lived in DAC-designated census tracts, but tracts still had a high average CalEnviroScreen score of 78. Notably, 90 percent of respondents reported having trouble paying their utility bills.

4.5. Motivation for and Potential Impact of AMP Enrollment

Finally, we explore motivating factors and potential impact of AMP on applicant households (Table 6). For the 233 households applying to AMP with Valley CAN support, the average income was $26,798 — around the median for all applicant households. Interestingly, the two households already enrolled had the highest incomes, whereas those applying with support had the lowest, compared to both households applying on their own and those uninterested. Unsurprisingly, households that were uninterested in applying through Valley CAN or on their own (with no status reported) had significantly lower SCE utility debt than households that applied during the pilot. Electricity bills were similar regardless of household application status, with an average of $192 a month for applicant households eligible for AMP.

The maximum forgiveness amount for the AMP program is $8,000 over the course of a year. This could result in savings of up to $261,000 just for pilot participants if they successfully

TABLE 6

Average Income, Bill, and Debt by AMP Status for All Applicant Households Eligible for AMP

AMP Household Status	Average of Total Household Income (N)	Average Electric Bill (N)	Average SCE Utility Debt (N)
No Status Available	$28,783 (36)	$186 (35)	$966 (8)
Already Enrolled	$36,500 (2)	$190 (2)	$748 (1)
Applying with Support	$26,798 (233)	$191 (227)	$1,305 (35)
Will Apply on Own	$27,675 (51)	$198 (52)	$1,688 (27)
All Applicant Households Eligible for AMP	$27,219 (322)	$192 (316)	$1,405 (71)

complete the program (given the average SCE utility debt of $1,420 for applicant households, and the 184 households that have confirmed program application or receipt of benefits during follow-up with Valley CAN). However, in the first six months of SCE's AMP program, 48 percent of all AMP enrollees were involuntarily removed from the program, likely as a result of missing two consecutive payments (Southern California Edison, 2022); therefore, actual benefits will likely be significantly less than expected if this removal rate persists.

5. IMPLICATIONS AND CONCLUSIONS

With electrification goals on the horizon in California, need for transportation and energy assistance, especially electricity assistance, will only grow. The findings presented in this report demonstrate that there is strong interest among very low-income households for support in these spaces, particularly in the SJV. The COVID-19 pandemic has exacerbated the need for financial assistance. Additionally, as transportation and building electrification efforts continue, households' energy burdens will increase further unless specifically addressed by affordability support.

Throughout the pilot period, Valley CAN's adaptive outreach approach yielded consistent levels of household interest in assistance and incentive programs offered by SCE. While there was a considerable amount of attrition between initial calls from interested households to completed program applications, the pilot helped a high proportion of very low-income households apply for assistance, with a median participating household income of $25,000. This equates to an average of 105 percent of the Federal Poverty Level, and these households reported an average of $1,400 in existing SCE utility debt.

The most novel distributive impact of the pilot was connecting households to AMP to assist in resolving existing debt. However, based on the initial pilot results presented in this report, we find that enrolling households in programs continues to be a challenge. Despite existing meaningful and high levels of interest in programs such as AMP, programs other than CARE do not have sufficiently high levels of enrollment. The interest in CARE and AMP suggests that households are primarily interested in programs that offer direct and significant assistance in lowering or paying off bills. Given the hurdles associated with enrolling

in programs, households likely will not pursue many different programs on their own. Focusing on supporting households to enroll in fewer, more meaningful financial assistance programs can help overcome these application barriers.

Furthermore, connecting low-income households with non-bill assistance energy programs like OhmConnect remains challenging. These programs do ultimately provide financial benefits, as well as support the adoption of valuable technology (e.g., smart thermostats) that could otherwise be cost-prohibitive. However, household interest and enrollment in this program throughout the pilot remained low, suggesting that program incentives do not appear worthwhile to potential participants. Potential solutions include reducing barriers

in the application process and increasing the benefits of enrollment and participation.

Future research in this space is needed, including work to identify means to further reduce barriers to enrollment in complex technology adoption or payment assistance programs. The need for these are only increasing in light of building and transport electrification efforts and due to post-shutoff moratoria debt policy reforms. Considering this analysis only includes households that self-select into the application process, additional analyses on methods to interest and assist other harder-to-reach households could further support program enrollment, access to program benefits, and broader just transition efforts.

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APPENDIX A. LIST OF PROGRAMS INCLUDED IN PILOT OFFERINGS

TABLE A-1

List of Programs Included in the Pilot

Arrearage Management Plan (AMP)	LIHEAP Efficiency
California Alternate Rates for Energy (CARE-SCE)	LIHEAP Financial Assistance
California Alternate Rates for Energy (CARE-SCG)	Low-Income Fare is Easy (LIFE)
Clean Fuel Rewards	Medical Baseline Allowance
Clean Vehicle Assistance Program (CVAP)	Mobile Home Upgrade
Clean Vehicle Rebate Program (CVRP)	OhmConnect
Clothes Washer Rebate	Replace Your Ride
Consumer Assistance Program	Residential EV Charging Incentive Program
Electric Lawn Mower Rebate	Single Family Affordable Solar Housing (SASH)
Energy / Gas Assistance Fund	SMART Energy Program / Summer Discount Program
Energy Savings Assistance (SCE)	SMART Thermostat Rebate
Energy Savings Assistance (SCG)	Turf Replacement Program
Family Electric Rate Assistance (FERA)	

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