CLEAN ENERGY ALLIANCE

Energy Programs Plan

FY 2025/26 - FY 2030/31

Contents

Introduction

Clean Energy Alliance (CEA) is the local, not-for-profit electricity provider serving North San Diego County. In addition to offering residents and businesses renewable energy at competitive rates, CEA is committed to developing local energy programs that reflect community needs. This Energy Programs Plan (the Plan) serves as a strategic roadmap, shaped by community feedback, to guide the implementation of local energy programs. The plan directly supports the third Guiding Principle in CEA's Strategic Plan.[1]

Provide Beneficial Customer Programs – Offer a variety of programs that serve the needs of our customers, promote affordability and further reduce greenhouse gas emissions.

About Clean Energy Alliance

CEA serves approximately 255,000 customers across the cities of Carlsbad, Del Mar, Escondido, Oceanside, San Marcos, Solana Beach and Vista. CEA operates as a community choice aggregator (CCA), allowing the organization to purchase electricity on behalf of residents and businesses. As a locally governed entity, CEA empowers its member cities to meet their Climate Action Plan goals by offering higher renewable energy content than traditional investor-owned utilities, setting competitive rates and reinvesting revenues into local energy programs. As a joint powers authority, CEA functions independently from its member cities and is funded by ratepayers, not taxpayer dollars. CEA officially began serving customers in May 2021.

About the Energy Programs Plan

Purpose

CEA's Energy Programs Plan is designed to identify energy programs that reflect the diverse needs of CEA customers. This strategic plan provides a general framework for the implementation of programs that support CEA's mission and align with the organization's strategic goals.

Because CEA operates in a space that is rapidly and continuously evolving, this plan is intended to remain adaptive and responsive to changing conditions. As regulatory requirements, market dynamics and customer needs evolve, CEA may adjust its programs strategy accordingly to ensure it remains relevant, effective and aligned with the organization's strategic direction. All future programs and their associated budgets will be subject to approval by the Board of Directors.

1. https://thecleanenergyalliance.org/strategic-plan/

The plan's primary objective is to establish a general framework that enables CEA to

Promote Clean Energy Adoption
Encourage the adoption of renewable energy sources across all customer segments.

Promote the Development of a Wide Range of Energy Programs
Pursue energy efficiency, demand response programs, and energy consumption reduction goals.

Support Low to Moderate-Income Households
Connect customers to specialized programs that address the unique needs of low to moderate-income residential customers.

Facilitate Economic Development
Support commercial customers with energy programs that reduce costs and foster job creation and local development.

Increase Awareness and Participation
Develop effective marketing strategies to increase awareness and participation in CEA's energy programs.

Promote Rate Stability and Cost Savings
Promote or develop programs that reduce costs for customers and improve rate stability for CEA customers.

Methodology

To develop the Energy Programs Plan, CEA followed a comprehensive, multi-phase process designed to produce a framework that is both actionable and responsive to community needs. The development process included two phases.

Phase 1	CEA assessed and cataloged existing CCA customer programs, state and federal funding and grant opportunities, reviewed member cities' Climate Action Plans and conducted outreach through surveys and workshops.
Phase 2	Building on the information collected in Phase 1, CEA refined and evaluated potential offerings using community feedback, customer energy use data and their potential impact on CEA procurement, financial feasibility and sustainability.

This methodology helps ensure that CEA's energy programs are community-driven and aligned with CEA's strategic goals.

Understanding Community Needs

CEA exercised a multi-faceted approach to understand customer needs and priorities to inform the development of the Plan. CEA partnered with a research firm to conduct a scientific survey across its service territory, collaborated with a local community-based organization to host community workshops and gathered feedback from member agencies. These efforts ensure the Plan reflects real community needs.

Community Needs Survey

CEA partnered with True North Inc. to conduct a survey targeting a random sample of 509 residential and commercial customers across its seven member cities. The sample was proportionally balanced by geography and account type to ensure the results reflected insights from a broad and diverse customer base.

The survey employed a mixed-method design, using multiple recruitment channels, including email, text and phone with both online and phone response options available. The survey was conducted in both English and Spanish between April 9 and April 18, 2025.

Key Findings Summary

The survey was designed to provide CEA with a reliable understanding of customer awareness, opinions, priorities and behaviors related to energy issues, initiatives and programs. A summary of the key findings is available below, with the full report available in **Appendix A**.

- CEA customers are sensitive to issues of cost and affordability. This could partially reflect the economic climate at the time of the survey and uncertainty related to tariffs.
- The most important energy-related issues for customers are reducing their home/business energy costs, followed by having cleaner air to breathe in their home/building and avoiding power outages at their home/business.
- Customers are generally supportive of most initiatives that can be taken to produce cleaner, greener energy and improve the reliability of North County's energy supply. They tend to prioritize initiatives that provide broad benefits as opposed to those that have more targeted benefits or involve new regulations/requirements.
    - At the other end of the spectrum, customers were less inclined to prioritize requiring all new construction to be all-electric, increasing the number of public access charging stations for electric vehicles (EV), increasing the number of EVs to reduce emissions and improving access to technical experts to advise on energy saving programs in the home/business.
- Most CEA customers have made modest energy-related improvements to their homes/businesses, with the most common being the use of energy efficient lighting and weatherization improvements such as improved insulation, windows and/or roofs.
- Energy-related programs that have broad application find the most interest among customers, especially rebates or incentives to install energy efficient lighting, appliances and equipment, discounted rates for energy used during off-peak times, free energy audits and incentives to install solar and battery storage.
    - At the other end of the spectrum, programs that garnered less interest include discounted rates for those who have medical equipment in their home, rebates and incentives to install EVs charging equipment and discounted rates for low-income households.
- Most survey respondents were aware of their status as a CEA customer prior to taking the survey. When asked to rate various ways CEA could communicate with them, customers identified email, the CEA website, direct mail, electronic newsletters and utility bill inserts as the most effective methods.

Community Workshops

To deepen understanding of customer needs, particularly among historically underrepresented groups, CEA partnered with Universidad Popular, a trusted grassroots organization in North San Diego County, to host a series of bilingual community workshops. The workshops served as open forums to gather input from priority communities while remaining open and broadly promoted to all customers.

Universidad Popular was selected for its longstanding relationships and successful engagement with the local Spanish-speaking community, which represents approximately 21% of CEA's service area. Workshop locations were chosen based on the organization's recommendations, focusing on areas with high community participation. Two of the workshops were held during Universidad Popular's ongoing Citizenship Classes, which regularly draw large audiences.

	Date	Location	Language	Attendees
Workshop #1	Sept. 8, 2025	Escondido	English, Spanish	36
Workshop #2	Sept. 16, 2025	San Marcos	English, Spanish	88
Workshop #3	Sept. 17, 2025	Carlsbad	English, Spanish	19
Workshop #4	Sept. 24, 2025	Zoom	English, Spanish	14
Workshop #5	Oct. 20, 2025	Vista	English, Spanish	22
Workshop #6	Nov. 5, 2025	Oceanside	English, Spanish	19
Workshop #7	Nov. 6, 2025	Solana Beach/Del Mar	English	13

Key Findings Summary

During these workshops, participants consistently identified affordability as their top priority, alongside concerns about energy efficiency, reliability, sustainability and equitable access to programs.

Participants shared common energy-related barriers, including high energy costs, outdated or landlord-controlled appliances, financial constraints and limited awareness of available resources. Renters faced unique challenges due to tenancy restrictions, while many participants reported difficulty qualifying for assistance programs and expressed skepticism about the benefits of upgrades. Most attendees were unfamiliar with their energy bills and did not actively track energy use, citing confusing information and time constraints as barriers. Although interest in improvements such as LED lighting, solar panels, battery storage and electrification was high, upfront costs and information gaps remained major obstacles.

Participants generally emphasized a need for financial incentives, multilingual resources, renter-friendly options and hands-on education to make upgrades more accessible.

*A full report is available in **Appendix B**.*

Member City Insights

Staff from CEA's member agencies also provided input on their top priorities and ideas for programs that would best serve their communities. Several common themes emerged.

- Programs that help member agencies meet Climate Action Plan (CAP) goals: agencies emphasized the need for programs that directly support CAP objectives, including building electrification, energy efficiency upgrades, renewable energy adoption and municipal infrastructure improvements such as EV charging and solar installations.
- Programs that are easy to navigate and include educational components: streamlined application processes, clear explanations of benefits and concierge-style assistance were highlighted as critical for increasing participation as educational resources and in-person support can help customers understand available options and overcome barriers.
- Programs that complement existing efforts: agencies want CEA programs to align with and enhance offerings from San Diego Gas & Electric (SDG&E) and San Diego Regional Energy Network (SDREN), avoiding confusion for customers.
- Programs that prioritize equity and access: member agencies stressed the importance of targeting low-income households, renters, seniors and other hard-to-reach populations. Recommendations included tenant protections, translation and interpretation services and outreach strategies tailored to vulnerable communities.
- Programs that address affordability: energy affordability remains a top concern for residents. Agencies expressed strong interest in rebates and incentives for electrification technologies such as heat pump water heaters and HVAC systems, induction cooktops, electric dryers and electric panel upgrades paired with appliance installations. Solar and battery storage incentives were also noted as priorities.

Overall, member agencies want programs that are simple, equity-focused and education-supported with affordability solutions and clear alignment with local climate goals.

Service Area Analysis

CEA also conducted internal research to better understand those who live in the organization's service area and how they use energy. Our seven member cities, Carlsbad, Del Mar, Escondido, Oceanside, San Marcos, Solana Beach and Vista, each have distinct populations, housing types, income levels and energy needs. By analyzing data from the U.S. Census Bureau, CEA's customer database and local energy use patterns, staff formed a clearer picture of member communities and what type of energy programs might be most beneficial.

Demographics

Unless otherwise noted, the data in the demographics charts below are from the U.S. Census Bureau's Profile[2] for each city as of September 2025.

Population

Oceanside is the most populous member city in CEA, with 174,068 residents, followed by Escondido (151,038) and Carlsbad (114,746). These three cities together account for a significant portion of the total service area population. San Marcos (94,833) and Vista (98,381) have similar population sizes; each just shy of 100,000 residents. On the other end of the spectrum, Solana Beach (12,941) and Del Mar (3,954) are the smallest member cities with populations significantly smaller than the other five cities.

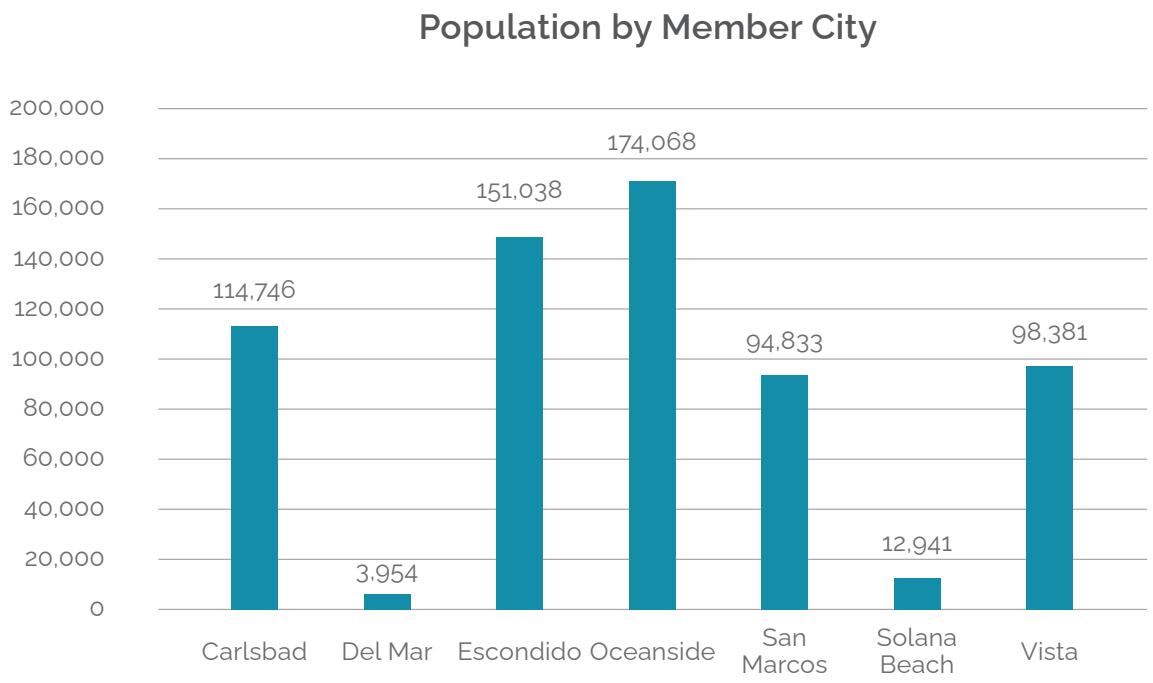


Figure 1 Population comparison of CEA member cities.

2 U.S. Census Bureau Profiles:
Carlsbad: https://data.census.gov/profile/Carlsbad_city,_California?g=160XX00US0611194
Del Mar: https://data.census.gov/profile/Del_Mar_city,_California?g=160XX00US0618506
Escondido: https://data.census.gov/profile/Escondido_city,_California?g=160XX00US0622804
Oceanside: https://data.census.gov/profile/Oceanside_city,_California?g=160XX00US0653322
San Marcos: https://data.census.gov/profile/San_Marcos_city,_California?g=160XX00US0668196
Solana Beach: https://data.census.gov/profile/Solana_Beach_city,_California?g=160XX00US0672506
Vista: https://data.census.gov/profile/Vista_city,_California?g=160XX00US0682996

Housing

Housing in each member city generally reflects population size. The largest housing inventories are in Oceanside (approximately 68,000 units), Carlsbad (47,500 units) and Escondido (49,000 units). Vista (roughly 36,000 units) and San Marcos (about 32,000 units) represent the middle tier in terms of housing volume. Solana Beach and Del Mar have the least housing units, with approximately 6,300 and 2,500 units, respectively.

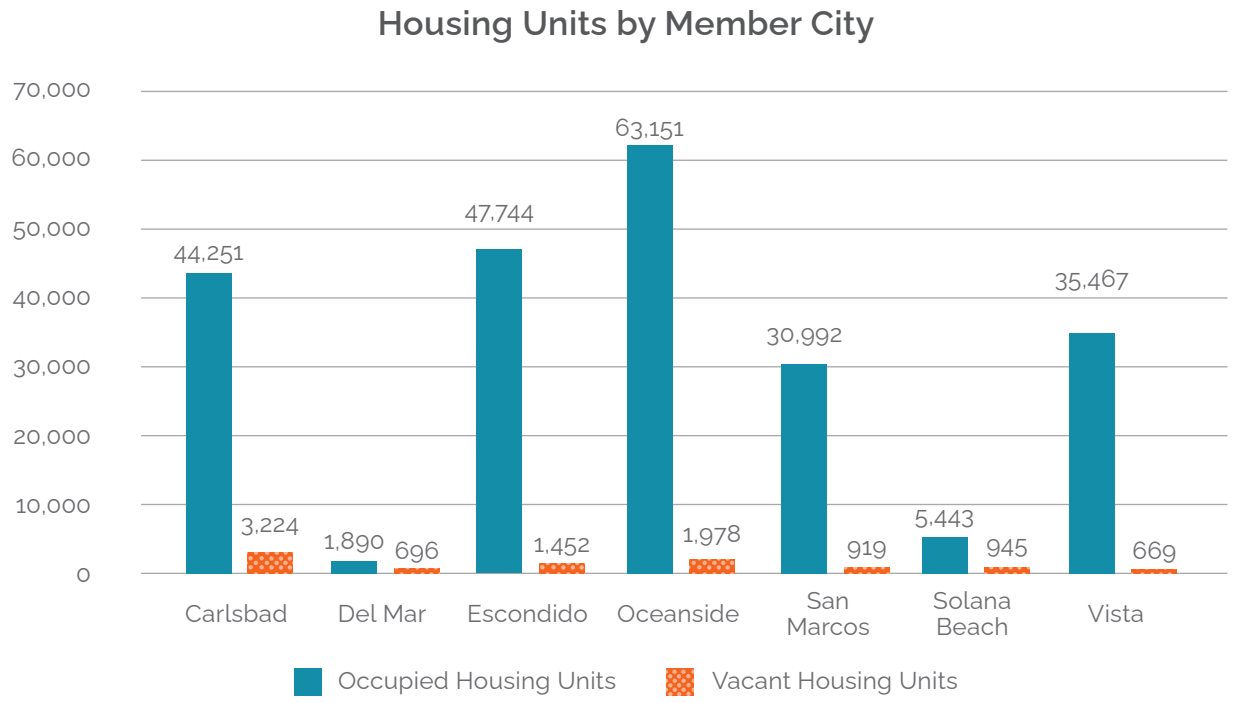


Figure 2 Total number of occupied and vacant housing units in each CEA member city.

Income

Income levels vary across the region. Del Mar has the highest median annual household income at $192,845, followed by Solana Beach ($150,820) and Carlsbad ($144,444). Escondido ($102,145) and Oceanside ($104,809) have comparatively lower median incomes within CEA's service area, with San Marcos ($109,520) and Vista ($105,671) falling slightly higher but within a similar range. Overall, the income distribution groups CEA's member cities into two broad economic categories: higher-income communities (Del Mar, Carlsbad, Solana beach) and moderate-income communities (Escondido, Oceanside, San Marcos, Vista).

Language

Language diversity is a defining characteristic of several communities in CEA's service area. In Escondido, Oceanside, Vista and San Marcos, a significant portion of residents speak a language other than English at home, primarily Spanish. In contrast, Del Mar, Solana Beach and Carlsbad tend to have higher proportions of English-only households.

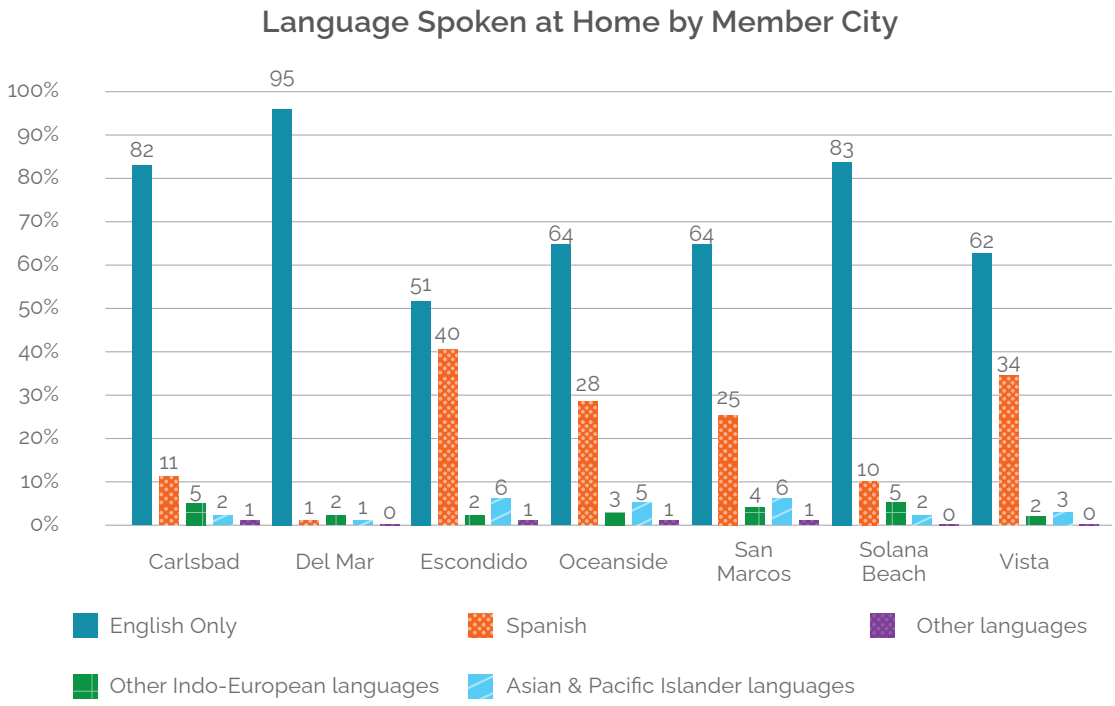


Figure 3 Percent distribution of language spoken at home in each CEA member city.

Education

Education levels are highest in Del Mar where approximately 85% of residents hold a bachelor's degree or higher, followed by Solana Beach (~72%) and Carlsbad (62%). Vista (~33%) and Escondido (~34%) have the lowest rates while San Marcos (~46%) and Oceanside (~39%) fall in the middle.

Age

Age profiles vary widely in CEA's service area. At the upper end of the age range, Del Mar has the oldest population, with a median age of 55.5 years, reflecting a community that is likely home to many retirees. Solana Beach follows with a median age of 47.9 and Carlsbad with a median age of 45. On the younger end, Escondido (35.7), San Marcos (36.4) and Vista (37.9) represent cities with younger households. Oceanside, with a median age of 42, sits in the middle, reflecting a mix of younger and older residents.

Customer Profile

CEA's customer base reflects a diverse mix of residential, commercial and industrial accounts across multiple cities and climate zones. The data presented in this section provides insight into participation trends, program enrollment and characteristics that influence energy use and program adoption[3].

General Participation

CEA serves seven member cities with approximately 274,000 eligible customers. Participation in CEA is strong across all cities, with approximately 93% of eligible customers enrolled in CEA service. Oceanside has the largest customer share with roughly 74,100 eligible customers and about 69,200 participating, followed by Carlsbad and Escondido, each with over 50,000 participating customers. Vista and San Marcos fall into the middle tier, both with more than 35,000 participating customers. Solana Beach and Del Mar represent smaller segments, consistent with their smaller populations.

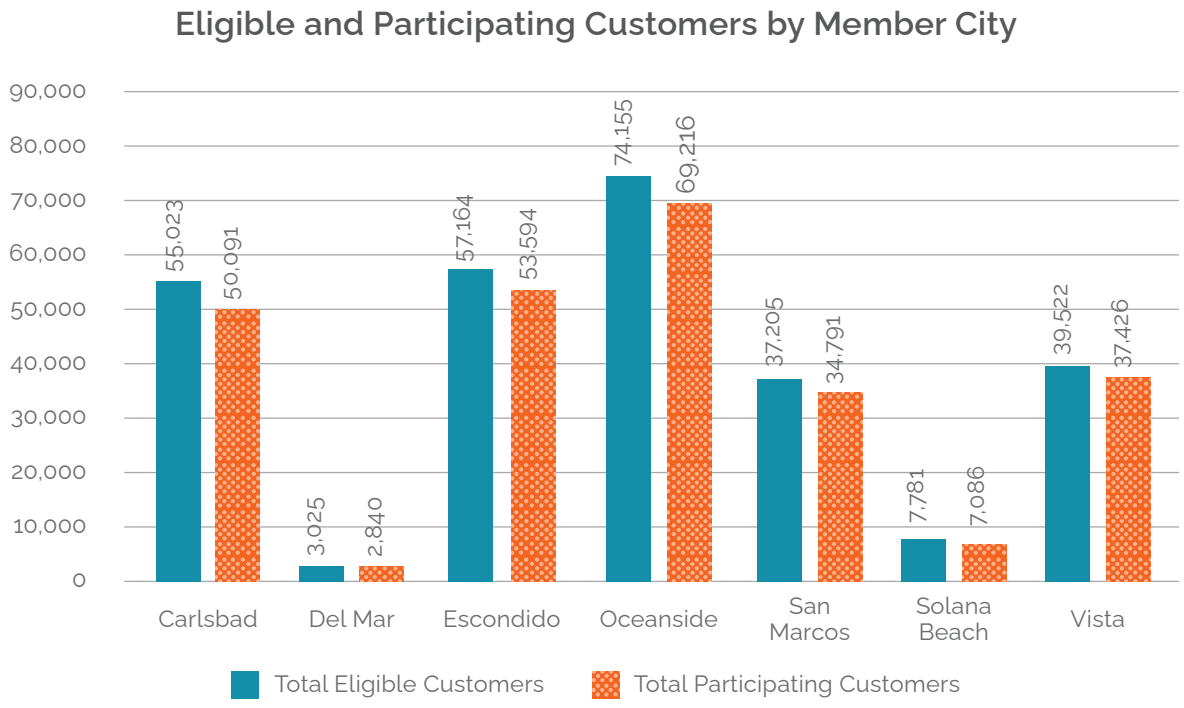


Figure 4 Comparison of total eligible customers and participating customers across member cities.

3 Unless otherwise stated, the customer profile data included in this section is from July 2025.

Customer Category

CEA's customer base is predominantly residential across all member cities, with residential customers consistently representing between 84% and 91% of total customers. Commercial customers represent a smaller but consistent share, averaging 13% overall across member cities. Solana Beach and Del Mar, though smaller in size, have the highest proportion of commercial customers at 16% and 15%.

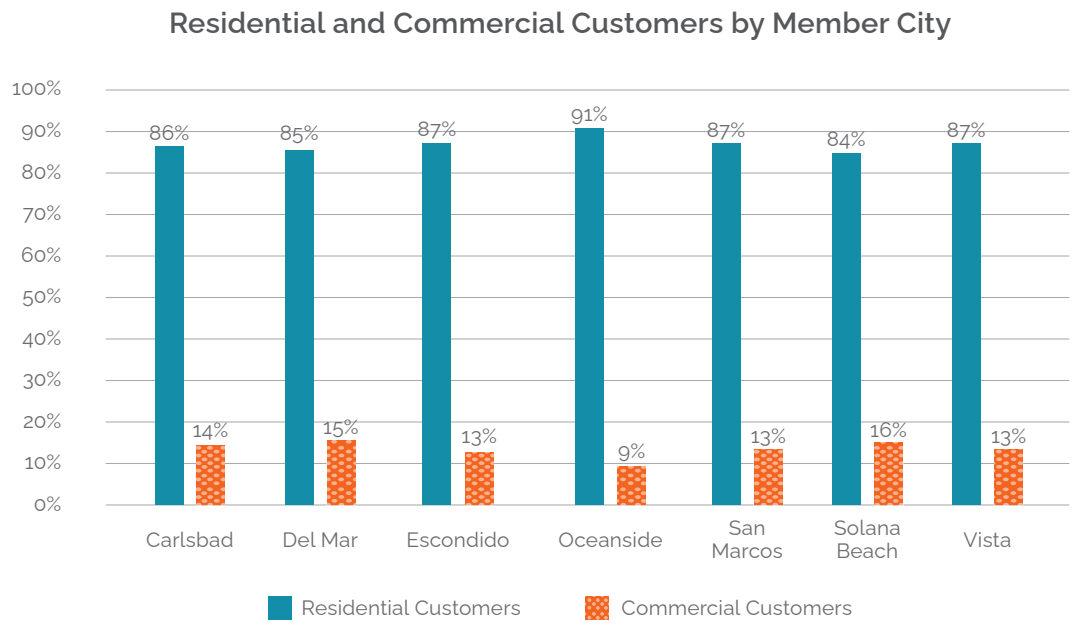


Figure 5 Percent of residential and commercial customers in each member city.

Solar Customers

Customer participation in self-generation, such as onsite solar and battery storage, varies across CEA's member cities. On average, customers with solar systems represent about 20% of all customers. Solar adoption is highest in San Marcos and Escondido, where warmer temperatures and higher seasonal use contribute to larger utility bills, making self-generation particularly attractive in these communities.

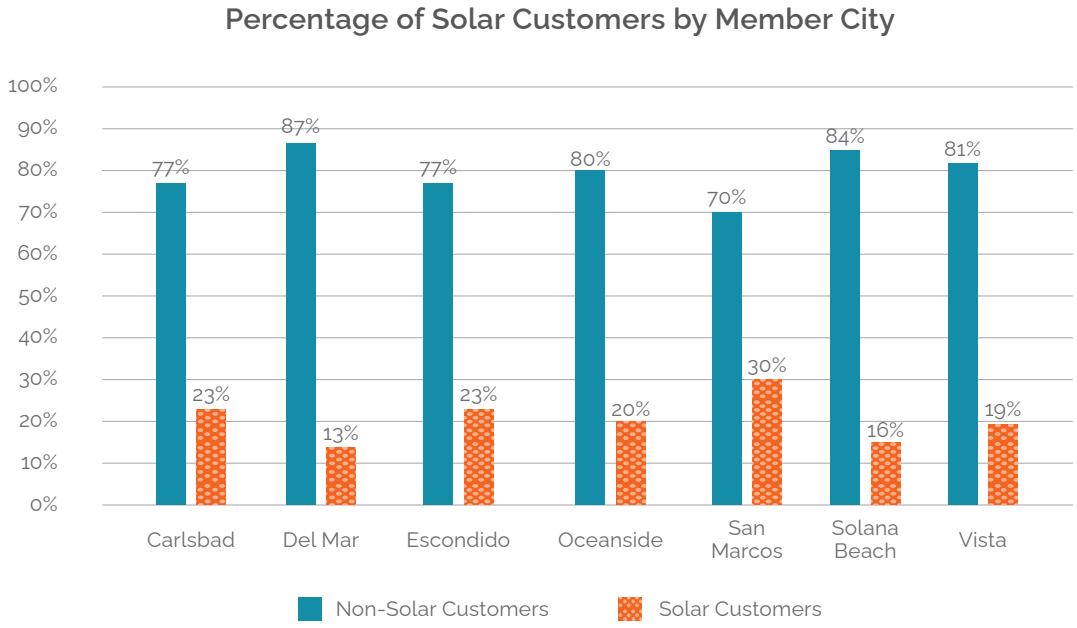


Figure 6 Percentage of customers with solar systems in each member city.

Energy Plan Enrollment

CEA offers customers three energy plans: Clean Impact (50% renewable energy content), Clean Impact Plus (75% carbon-free and 50% renewable energy) and Green Impact (100% renewable energy). Across all member cities, most customers are enrolled in CEA's default product Clean Impact Plus, accounting for over 98% of customers. Optional products show less adoption with Clean Impact representing 0.5% and Green Impact representing about 1-2% of customers in most cities. Opt ups have occurred at a higher rate than opt downs, driven in part by some member cities choosing to transition their municipal facilities to the 100% renewable Green Impact plan.

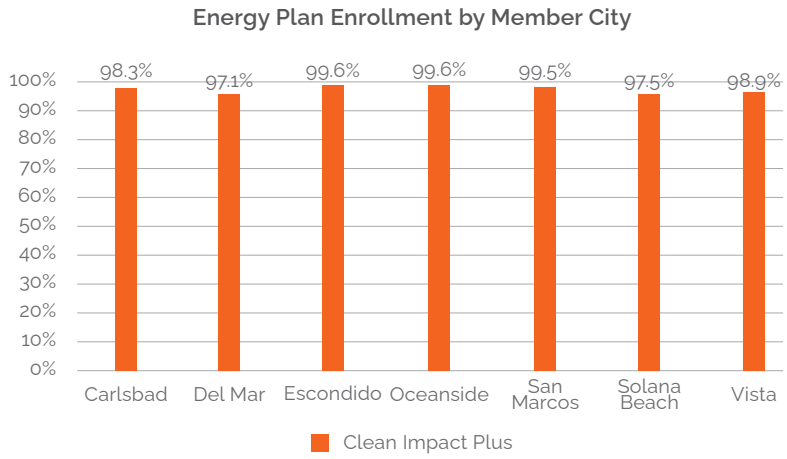


Figure 7 Percentage of customers enrolled in each energy plan by member city.

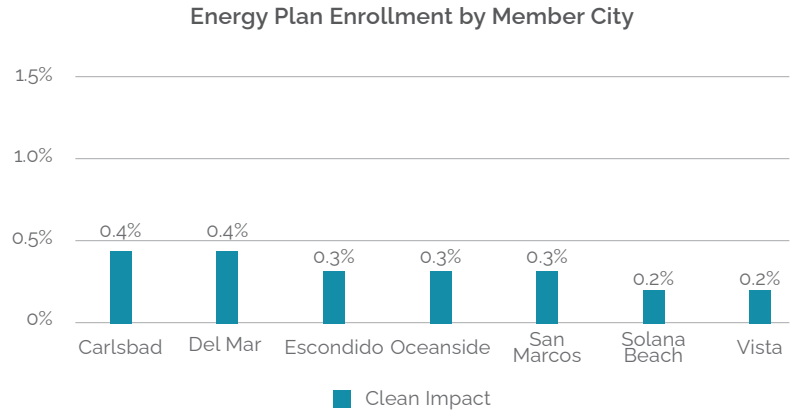


Figure 7 Percentage of customers enrolled in each energy plan by member city.

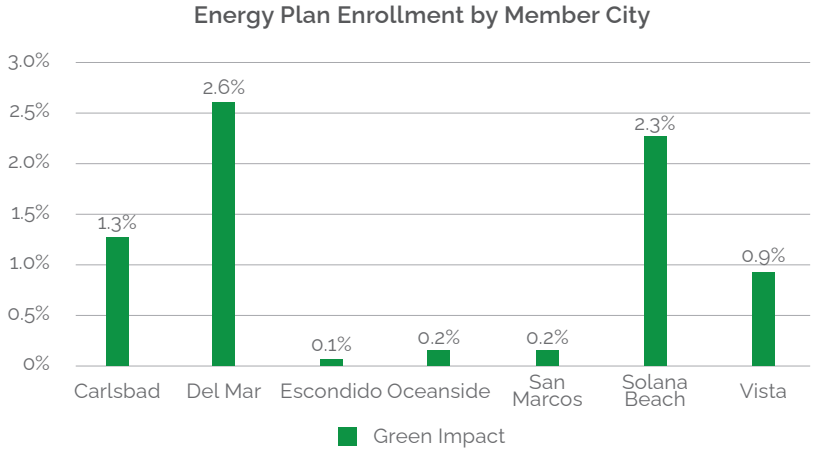


Figure 7 Percentage of customers enrolled in each energy plan by member city.

Climate Zones

The California Energy Commission has established 16 climate zones across California, which provide standardized weather data used for energy-efficiency analysis, equipment sizing, baseline allowances and related applications. Most CEA accounts are in Coastal zones, totaling about 65% of all accounts. Mountain zones account for approximately 35% of CEA accounts[4]. Desert zones, with only three outlier accounts, have virtually no representation in CEA territory and were therefore excluded from the chart below.

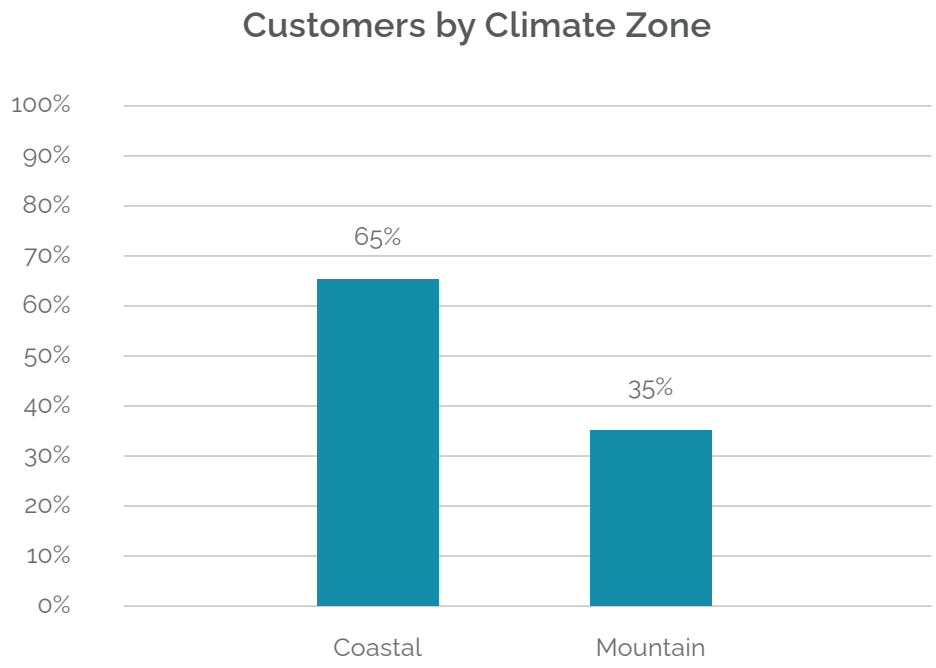


Figure 8 Percentage of total customers by climate zone.

4. Based on data from November 2025.

CARE, FERA and Medical Baseline Participation

Across all member cities, California Alternate Rates for Energy (CARE) represents the largest share of income-qualified customer enrollment, but the level of participation varies widely based on each community's socioeconomic profile. CARE customers account for 3% to 28% of all customers across the region. Escondido has the highest share at about 28%, reflecting its larger proportion of income-eligible households. Oceanside and Vista also show relatively high participation at around 19% each. San Marcos and Carlsbad fall in the mid-range with approximately 16% and 9% respectively, while the more affluent coastal communities of Solana Beach and Del Mar remain below 5%, consistent with higher household incomes and fewer qualifying customers.

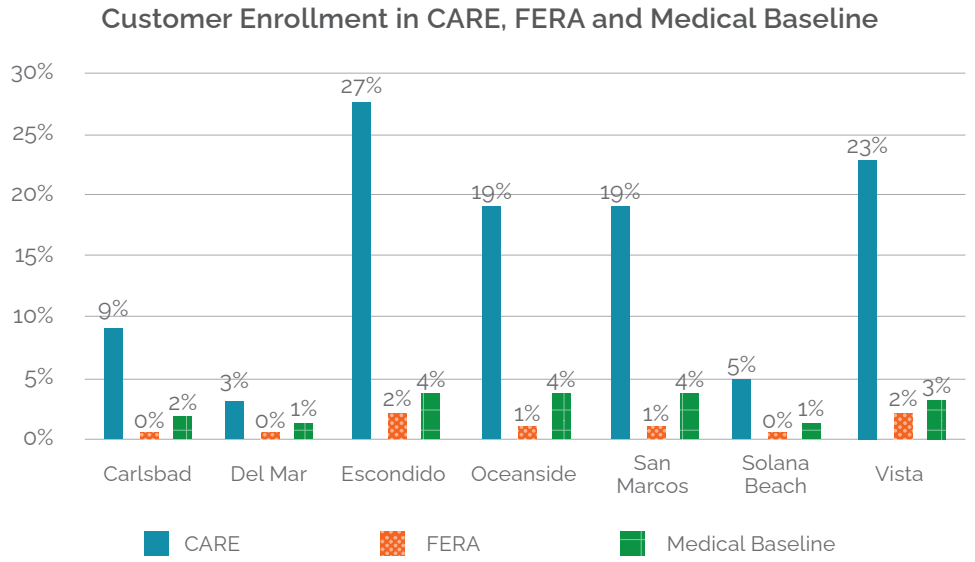


Figure 9 Percent of each member city's total customers enrolled in CARE, FERA or Medical Baseline programs.

Payment Plans

Participation in payment plans is relatively low across member cities, averaging about 2% of all customers. Escondido shows the highest enrollment at approximately 4%. Oceanside, Vista and San Marcos each report participation of around 3%. In contrast, Carlsbad and the higher-income communities of Solana Beach and Del Mar have the lowest payment plan enrollment rates.

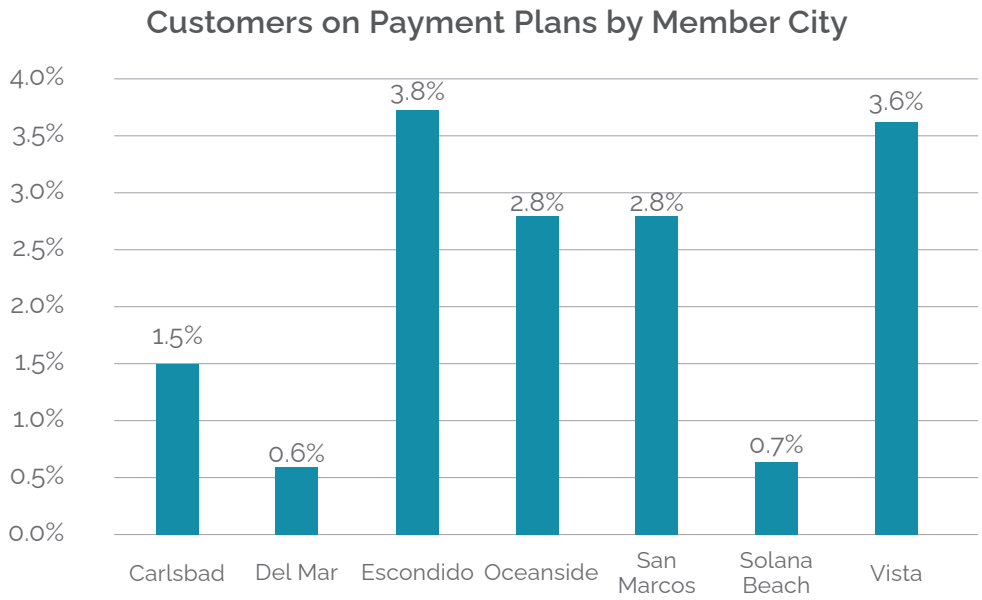


Figure 10 Percent of each member city's customers on a payment plan.

Energy Use Patterns

Energy Use by City

Energy use across CEA's member cities varies, shaped by differences in population size, customer mix and presence of high-demand commercial facilities. Carlsbad stands out in terms of the energy load distribution, representing 32% of total energy use, despite not having the largest number of customers. This is primarily due to the presence of large commercial customers. Oceanside (23%), Escondido (18%), Vista (13%) and San Marcos (11%) reflect more balanced profiles that mix residential use with moderate commercial activity. The smallest contributions come from Solana Beach (2%) and Del Mar (1%), consistent with their smaller, largely residential populations and limited commercial load.

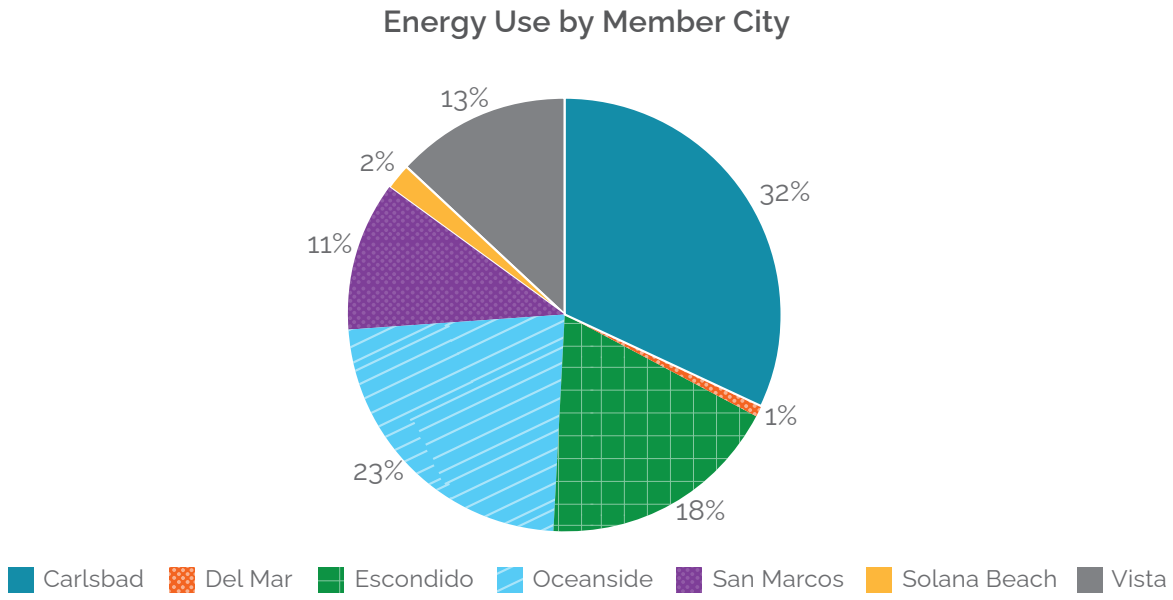


Figure 11 Percentage share of total energy use by customers in each member city.

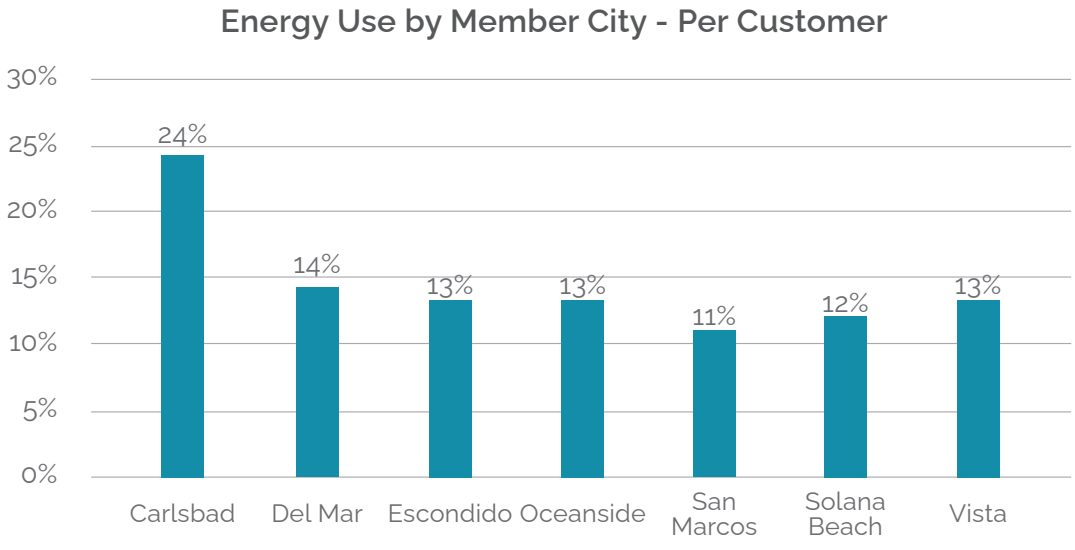


Figure 12 Percentage share of total energy use by customers in each member city, per customer.

While the total energy use distribution in Figure 11 shows which member cities contribute most to CEA's overall load, it does not reflect how that usage is distributed across individual customers. When looking at average energy use per customer, Carlsbad still ranks highest, reinforcing the influence of its large commercial users on overall demand. Del Mar and Solana Beach, despite their small shares of total load, show higher per-customer consumption, possibly due to their closer balance between commercial and residential accounts, relatively lower solar adoption and larger properties. Escondido, Oceanside and Vista fall into a moderate range, consistent with their mix of residential customers and small to medium business activity. San Marcos exhibits slightly lower per-customer use, reflecting its higher adoption of solar and energy storage, which helps reduce average grid consumption.

Energy Use by Customer Type

CEA customer energy use patterns vary by season, reflecting shifts in weather, daylight hours and customer energy-use behavior. Changes by season are evident when looking at energy use during the months of January, April and September, representative months that highlight seasonal energy demand trends in CEA's service area.

In January, energy use is moderate but shows two daily peaks, one in the morning and another in the evening, likely due to heating, lighting and appliance needs, with a midday dip when solar power comes online. With few daylight hours and more cloudy days in winter months, there is less solar generation and fewer solar generating hours.

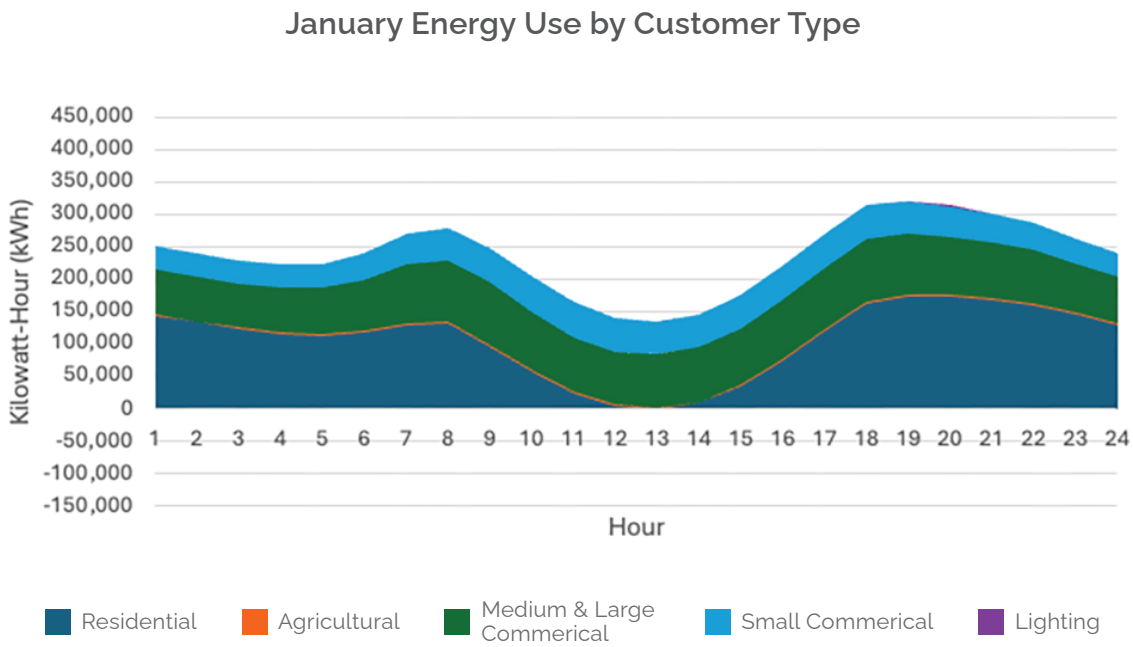


Figure 13 Average hourly energy use by customer type over a 24-hour period in January.

In April, overall energy use is at its lowest. Mild temperatures mean most homes and businesses don't need much heating or cooling. During the middle of the day, electricity use drops sharply because rooftop solar panels are producing a lot of power; daylight hours are longer than winter months (which allows for more hours of solar generation) and many days in the spring are sunny, leading to some of the periods where behind-the-meter solar from CEA's own customers can service essentially all of CEA's load. At these times, many customers use very little electricity from the grid and some customers (especially residential customers) even send excess solar energy back to the grid, creating a noticeable midday dip in grid demand before use rises later in the day.

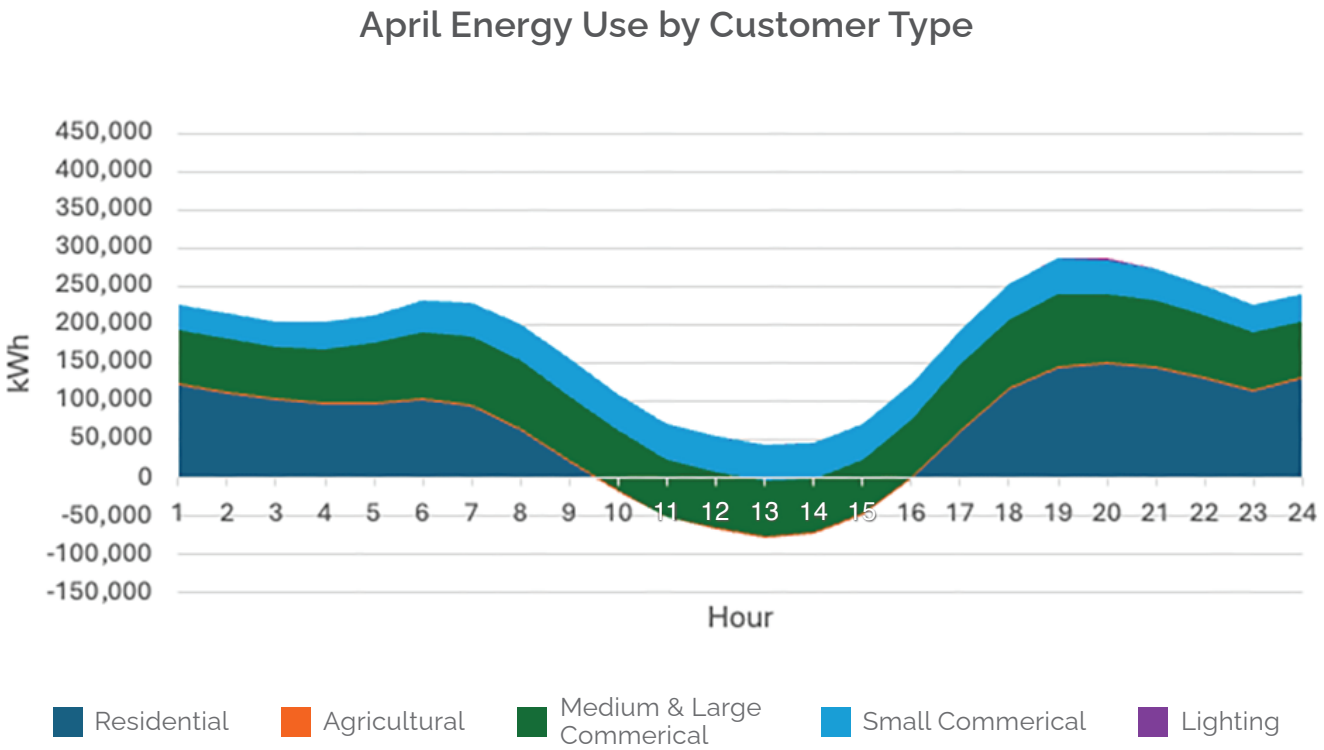


Figure 14 Average hourly energy use by customer types over a 24-hour period in April.

In September, energy use is at its highest. Hot weather leads to heavy air-conditioning use throughout the day and there's a strong increase in net load in the late afternoon when temperatures are still high and air conditioning is running but solar generation is decreasing.

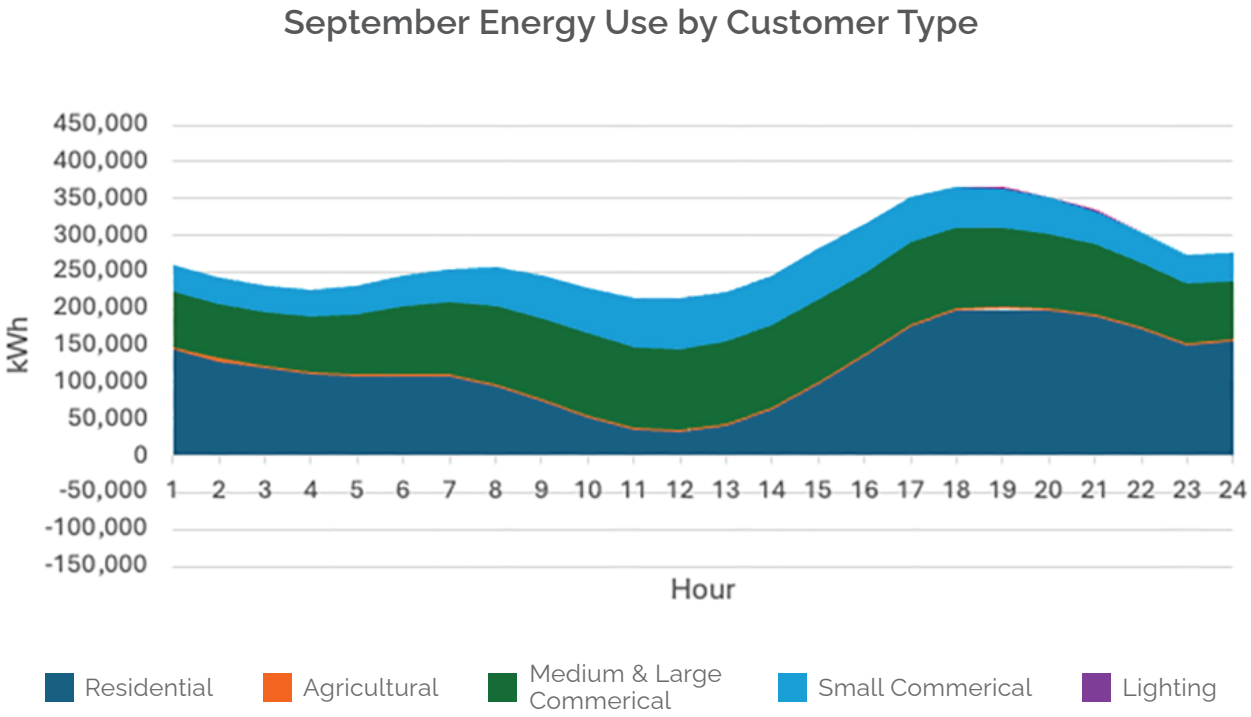


Figure 15 Average hourly energy use by customer types over a 24-hour period in September.

CEA can also gather insights by looking at smaller segments of the customer base. For example, CARE and FERA households make up a small segment of CEA's overall total energy load, but their hour-by-hour energy use closely matches the overall energy use patterns. Although these customers represent a relatively small portion of total load, they tend to use energy at the same times of day as the broader customer base, showing similar evening peaks and midday lows.

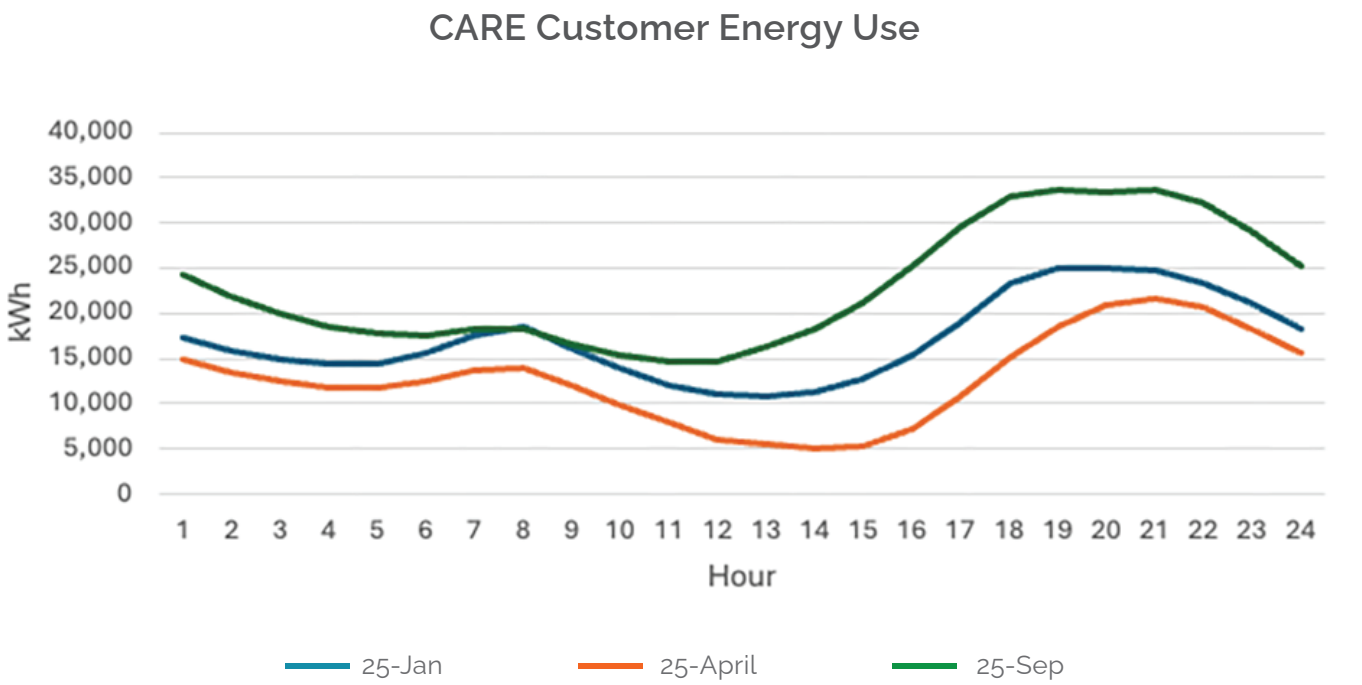


Figure 16 Comparison of average hourly energy use of CARE customers over a 24-hour period in various months.

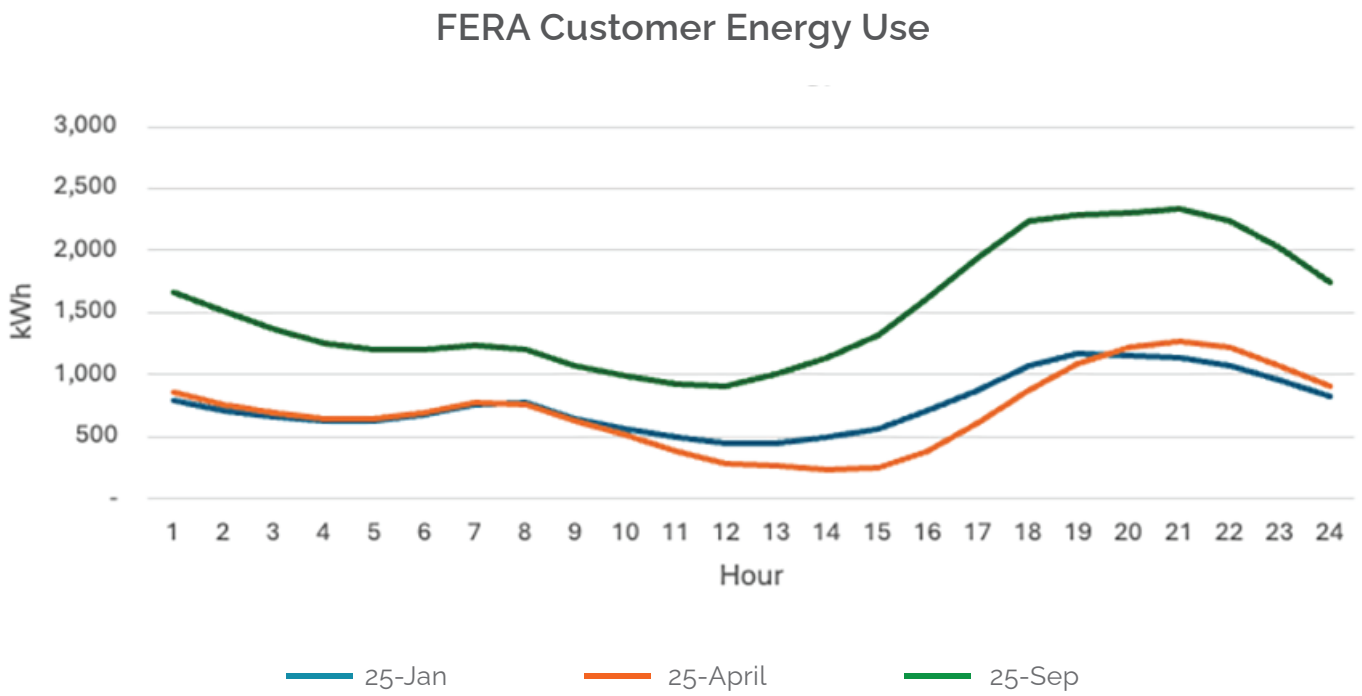


Figure 17 Comparison of average hourly energy use of FERA customers over a 24-hour period in various months.

Program Recommendations

Current Programs

CEA began offering customer programs in 2024 with the launch of Solar Plus, a solar and battery storage program for single-family residential customers. Since then, CEA has introduced and actively operates a variety of programs that primarily serve residential customers, with some offerings available to commercial customers.

CEA's initial suite of programs was intentionally selected to prioritize offerings that could be deployed with low or no cost to CEA, require limited administrative support from CEA's lean staff and support peak load reduction. All programs offered to date have been provided at no cost to CEA and no discretionary CEA funds have been used to support their implementation.

The programs recommended in this plan are intended to complement existing options and provide a roadmap for future initiatives.

SOLAR PLUS Residential

Solar Plus Residential

Offers residential customers on-bill financing for solar and battery storage. For a limited time, CEA also offered **Solar Plus Connect**, which used Self-Generation Incentive Program (SGIP) funds to partially cover the cost of solar and battery systems for income-qualified customers. As of January 2026, the Solar Plus program has eight participants with operational systems and 23 participants with active applications. The Solar Plus Connect program has 34 customers with pending system installations with $1,053,458 in secured SGIP funding.

BATTERY BONUS

Battery Bonus

Offers residential customers with existing solar on-bill financing for battery storage. For a limited time, CEA also offered Battery Bonus Connect, which used SGIP funds to provide no-cost battery systems for income-qualified customers. The Battery Bonus program currently has no active applicants, in part because the income-qualified Battery Bonus Connect program launched at the same time. Battery Bonus Connect has 58 customers with pending system installations and $1,174,853 in secured SGIP funding.

SOLAR PLUS Business

Solar Plus Business

Offers commercial, multi-unit residential and municipal customers on-bill financing for solar and battery systems as well as storage only systems. Launched most recently in November 2025, the Solar Plus Business program does not yet have active applicants.

Current Programs Continued

PeakSmart Savers

A residential demand response program that incentivizes customers to reduce energy use during peak hours on high-demand days. The program currently has less than 100 participants.

Local Solar

A feed-in tariff program that encourages small-scale front-of-the-meter renewable energy projects in CEA's service area. CEA has received inquiries from project developers regarding this program but has yet to receive a formal submission at the program's current price offer level.

Program Portfolio Overview (2026-2031)

CEA's Energy Programs Plan is structured around four strategic pillars, each designed to accelerate the transition to clean energy, enhance resilience and deliver equitable benefits to the communities we serve. Each pillar includes key initiatives phased across five years, with CEA acting as the direct implementor or supporter of external initiatives.

Programs Pillars

1. **Clean Energy Supply and Grid Resilience:** Expand clean energy resources, increase midday load and strengthen community resilience through distributed energy solutions.
2. **Building Electrification and Energy Efficiency:** Focus on reducing emissions and energy costs by transitioning buildings from fossil fuels to clean electricity sources and improving overall energy performance.
3. **Transportation Electrification:** Aims to accelerate the shift to zero-emission transportation by expanding EV adoption and charging infrastructure.
4. **Local Workforce and Community Education:** Focus on preparing the region for a clean energy future by investing in local talent and empowering communities through education.

CEA's role is not limited to creating programs; it also includes supporting and connecting customers to resources and opportunities, including supporting outreach for programs offered by other entities like the San Diego Regional Energy Network (SDREN) and California Energy Commission (CEC).

Business Case Analysis

In addition to community feedback, programs have been analyzed based on their potential impact to CEA procurement, financial feasibility and sustainability of each proposed program offering. Each program initiative was evaluated on the following Impact Types and was rated using a stoplight-style scorecard to show its overall impact.

Impact Types	Description	Why It Matters	Example: Solar and Battery Storage Programs
Peak Value Reduction	How a program affects electricity use during the busiest hours of the day.	Reducing peak use helps CEA lower overall power costs and makes the electric grid more reliable when it's under the most stress.	Energy stored in batteries can be used during busy, high-demand times, reducing peak demand.
Renewable Content Value	How a program affects CEA's ability to provide 100% renewable energy.	Staying aligned with renewable energy goals supports CEA's mission.	Solar energy aligns with CEA's renewable energy goals, but extra midday renewable isn't always needed[5]. Storage allows customers to use solar energy later in the day, leading to a moderate positive benefit.
Anticipated Revenue Impact	How a program may affect the amount of money CEA receives from customers using electricity.	Understanding revenue changes helps CEA maintain financial stability.	Customers with solar and battery storage will buy less electricity from CEA, but the overall revenue impacts are anticipated to be low.
Anticipated Administrative Costs	How many resources and expenses it might take for CEA to run a program.	Programs requiring fewer resources cost less to operate.	Existing solar and battery storage programs require limited staff time and funding to run.

Legend

Color	Description	What It Means
	Strong Positive Effect	The program may have a strong and direct positive effect on the Impact Type.
	Moderate Positive Effect	The program may have a moderate or indirect positive effect on the Impact Type.
	Moderate Negative Effect	The program may have a moderate or indirect negative effect on the Impact Type.
	Strong Negative Effect	The program may have a strong and direct negative effect on the Impact Type.
	No Effect	The program is not expected to have any effect on the Impact Type.

5. See Figure 15 - April Energy Use by Customer Type.

The Program Initiative tables below display timing that is general and subject to change. Timing is organized into three general phases for program implementation: Near-Term (2026-2027), Mid-Term (2028) and Long-Term (2029-2031). Some programs are also listed as Ongoing due to their continuous nature.

Pillar 1: Clean Energy Supply & Grid Resilience

Program Initiative	Timing	Description	Target	Peak Reduction Value	Renewable Content	Revenue/Sales Impact	Administrative Costs
Residential Behind-the-Meter Solar & Battery Storage/ Battery Storage Only	Ongoing	Provide access to rooftop solar and storage or battery-only systems.	Residential single family	●	●	●	●
Commercial Behind-the-Meter Solar & Battery Storage/ Battery Storage Only	Near-Term	Provide access to rooftop solar and storage or battery-only systems.	Small businesses, school districts and critical facilities	●	●	●	●
Community Resilience Hubs	Long-Term	Collaborate with member cities and school districts to equip municipal facilities with behind-the-meter solar and storage to support resiliency.	Public agencies	●	●	●	●
Demand Response	Near-Term	Expand PeakSmart Savers program to commercial customers and support compliance with Load Management Standards.	Commercial customers	●	●	●	●
Load Flexibility + Virtual Power Plant	Mid-Term	Incentives for customers to shift load and aggregate distributed energy resources (DERs) into a Virtual Power Plant for grid support.	Residential and commercial customers	●	●	●	●
Discounted Green Impact Rate for Income-Qualified Customers	Long-Term	Design a discounted rate for income-eligible customers to participate in 100% renewable energy.	Low-income customers	○	●	●	●
Plug-In Solar	Long-Term	Monitor California legislation related to plug-in solar and prepare to connect residential customers with external incentive opportunities.	Residential customers	○	●	●	○

Pillar 2: Building Electrification & Energy Efficiency

Program Initiative	Timing	Description	Target	Peak Reduction Value	Renewable Content	Revenue/Sales Impact	Administrative Costs
Electrification Incentives	Mid-Term	Incentives for switching from gas to high-efficiency electric heat pumps, water heaters, induction cooktops, etc.	Residential income-qualified customers	🔴	🟡	🟢	🟡
Energy Efficiency Kits	Near-Term	Free or low-cost kits filled with simple equipment for self-service energy efficiency upgrades.	Income-qualified and/or residential	🟡	🟢	🔴	🟡
Refrigeration Efficiency	Near-Term	Support energy-efficient refrigeration upgrades to reduce energy costs.	Small commercial	🟡	🟢	🔴	🟡
Building Electrification Navigator	Mid-Term	Technical assistance for medium-sized businesses and public agencies, including energy assessments.	Medium commercial	🔴	🟡	🟢	🟢

Pillar 3: Transportation Electrification[6]

Program Initiative	Timing	Description	Target	Peak Reduction Value	Renewable Content	Revenue/Sales Impact	Administrative Costs
EV Charger Rebate	Mid-Term	Rebates for smart Level 2 chargers integrated with time-of-use optimization.	Residential customers	🟡	🟢	🟢	🟡
Multi-Unit Dwelling (MUD) Charging	Long-Term	Support turnkey solutions for multi-family buildings lacking EV infrastructure.	Renters	🟡	🟢	🟢	🔴
EV Managed Charging and Virtual Power Plant	Mid-Term	Leverage advanced technology to integrate EV's into CEA's VPP and incentive charging to maximize savings and renewable energy.	EV owners	🟢	🟢	🟢	🟡
Municipal & Fleet Electrification Partnerships	Long-Term	Vehicle fleet advisory services and/or incentives for member cities, school districts and public agencies.	Public agencies	🟡	🟢	🟢	🟡

6. For the programs in Pillar 3, Peak Reduction Value and Renewable Content could lean further positive with systems that incentivizes midday charging rather than evening or overnight charging.

Pillar 4: Local Workforce and Community Education

Program Initiative	Timing	Description	Target	Peak Reduction Value	Renewable Content	Revenue/Sales Impact	Administrative Costs
Clean Energy Equity Fund	Long-term	Establish dedicated funding for grants supporting income-qualified programs, financing pilots and community-led clean energy projects.	Low-income customers, non-profits, community partners	●	●	●	●
Workforce Training & Pre-Apprenticeship Programs	Long-Term	Support workforce training programs, including efforts by the California Energy Commission's Equitable Building Decarbonization grant and the San Diego Regional Energy Network.	Educational institutions and community partners	○	○	○	○
Community Innovation Grants	Long-Term	Annual competitive grants to pilot new climate solutions and education programs.	Non-profits and member agencies	○	○	○	○
Energy Literacy and Education	Ongoing	Leverage partnerships for multilingual outreach, including workshops, to engage hard-to-reach communities, focusing on general topics like CEA awareness and specific topics like bill payment assistance options	Non-profits and community partners	○	○	○	○

What's Next

CEA's Energy Programs Plan establishes a framework for prioritizing program development over the next five years. The Plan serves as a foundational resource, providing baseline information to support informed decision-making around programs. While the Plan outlines recommendations, implementation will ultimately depend on available funding, regulatory requirements, market conditions and emerging technologies.

The Plan represents a significant milestone in CEA's commitment to its customers and the region. As technology evolves and customer needs change, CEA will continue to build upon this foundation, introducing new programs and partnerships that drive progress toward a cleaner, more resilient energy future for North County San Diego.

At the end of FY 2030/31, CEA will review and update the Plan to measure progress and guide planning for the following five years. CEA will also review and refresh the Plan at the mid-cycle point in FY 2028.

Appendices

Appendix A – True North Community Survey

Customer Opinion Survey
Summary Report

Prepared for
Clean Energy Alliance

April 2025

TrueNorth Research
1592 N Coast Highway 101
Encinitas CA 92024
760.632.9900 www.tn-research.com

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

List of Tables

List of Figures

INTRODUCTION

Clean Energy Alliance (CEA) is a Joint Powers Authority comprised of seven cities in north San Diego County—the cities of Carlsbad, Del Mar, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. CEA follows a community choice aggregation (CCA) model that allows local governments to purchase power to meet their community's electricity needs, offering an alternative to investor-owned utilities. Although CEA is locally operated, it works in partnership with the region's existing investor-owned utility (San Diego Gas & Electric - SDG&E). CEA purchases electricity directly from energy suppliers, while SDG&E continues to deliver energy, maintain the grid, provide billing services, and handle all new service requests and emergencies.

By pooling energy demand across multiple cities, CEA is able to leverage more purchasing power and ensure a higher renewable content, thus providing local residents and businesses with cleaner energy. Locally controlled and supported by ratepayers with no taxpayer subsidies, CEA ensures that revenues are reinvested in local energy infrastructure and energy efficiency programs for customers.

MOTIVATION FOR RESEARCH

Fulfilling its mission to empower local residents and businesses to participate in a cleaner, greener energy future requires that CEA have reliable information about customers' energy-related perceptions, opinions, priorities, and behaviors. What are the major challenges and issues that CEA customers face? How do they prioritize among energy issues and initiatives? What energy improvements have they made and/or are interested in making to their residences or businesses? To what extent are customers aware of the energy programs and solutions that are available, and which programs capture their interest? Answers to questions like these provide CEA with information that can be used to make sound, strategic decisions in a variety of areas—including performance management, planning, program development/evaluation, marketing, and customer engagement.

OVERVIEW OF METHODOLOGY

A full description of the methodology used for this study is included later in this report (see *Methodology* on page 39). In brief, the survey was administered to a stratified random sample of 509 residential and commercial customers within CEA's service area. The sample was balanced to proportionately represent the distribution of customers geographically across the seven member cities, as well as by account type (residential or commercial). The survey followed a mixed-method design that employed multiple recruiting methods (email, text, and phone) and multiple data collection methods (online and phone). Administered in English and Spanish between April 9 and April 18, 2025, the average interview length was 16 minutes.

ORGANIZATION OF REPORT

This report is designed to meet the needs of readers who prefer a summary of the findings as well as those who are interested in the details of the results. For those who seek an overview of the findings, the section titled *Key Findings* is for you. It provides a summary of the most important factual findings of the survey in a Question & Answer format. For the interested reader, this section is followed by a more detailed question-by-question discussion of the results from the survey by topic area (see *Table of Contents*), as well as a description of the methodology employed for collecting and analyzing the data. And, for the truly ambitious reader, the questionnaire used for the interviews is contained at the back of this report, and a complete set of crosstabulations for the survey results is contained in Appendix A.

ACKNOWLEDGEMENTS True North thanks Clean Energy Alliance for the opportunity to conduct the study and for contributing valuable input during the design stage of this study. The collective experience, insight, and local knowledge provided by CEA staff improved the overall quality of the research presented here.

DISCLAIMER The statements and conclusions in this report are those of the authors (Dr. Timothy McLarney and Richard Sarles) at True North Research, Inc. and not necessarily those of Clean Energy Alliance. Any errors and omissions are the responsibility of the authors.

ABOUT TRUE NORTH True North is a full-service survey research firm that is dedicated to providing public agencies with a clear understanding of the values, perceptions, priorities, and concerns of their residents and customers. Through designing and implementing scientific surveys, focus groups, and one-on-one interviews, as well as expert interpretation of the findings, True North helps its clients to move with confidence when making strategic decisions in a variety of areas—such as planning, policy evaluation, performance management, establishing fiscal priorities, passing revenue measures, and developing effective public information campaigns. During their careers, Dr. McLarney (President) and Mr. Sarles (Principal Researcher) have designed and conducted over 1,500 survey research studies for public agencies—including more than 100 studies for public utilities in California.

KEY FINDINGS

As noted in the *Introduction*, this study was designed to provide CEA with a statistically reliable understanding of customers' awareness, opinions, priorities, and behaviors with respect to energy-related issues, initiatives, and programs. Whereas subsequent sections of this report are devoted to conveying the detailed results of the survey, in this section we attempt to 'see the forest through the trees' and note how the collective results of the survey answer some of the key questions that motivated the research.

What issues are most importance to CEA customers?

CEA customers are sensitive to issues of cost and affordability. Although this could partially be a reflection of the current economic climate and uncertainty related to tariffs, it is clear that issues of cost and affordability factor prominently among customers' concerns and motivations.

When asked in an *open-ended* manner to identify the most important issue or challenge facing their community today, customers were most apt to cite the high cost of living/affordability (20%), high cost of electricity (11%), government/political issues (9%), high utility rates in general (5%), housing availability/affordability (4%), and climate change/environmental issues (4%). Consistent with their open-ended responses, customers ranked cost-related issues as the most concerning when offered a specific list of issues, including cost of living in general (91% very or somewhat concerned), cost of electricity (90%), and paying for essentials like food, gas, and electricity (82%). Addressing homelessness (75%), protecting the environment (75%), and traffic congestion (74%) were at least somewhat concerning to three-quarters of respondents, whereas two-thirds rated air pollution (70%), climate change (69%), and greenhouse gas emissions (66%) as very or somewhat concerning.

When their focus was narrowed to energy-related issues, reducing their home's/business's energy costs was rated as the most important energy issue (81% extremely or very important), followed by having cleaner air to breathe in their home/building (77%), avoiding power outages at their home/business (75%), and receiving a discount on their energy bill if they use less energy during peak periods (69%). Issues that didn't tie directly back to a respondent's home or business were rated as somewhat less important, including generating more electricity locally through rooftop solar and other small installations (65%), addressing climate change by reducing greenhouse gas emissions (64%), ensuring that low-income households and underserved populations have the same opportunities to transition to clean energy (63%), and creating good-paying jobs in the energy sector (52%). For more on this topic see *Importance of Issues/Initiatives* on page 6.

How do CEA customers prioritize energy actions and initiatives?

Although CEA customers are generally supportive of most actions and initiatives that can be taken to produce cleaner, greener energy and improve the reliability of North County's energy supplies, they tend to prioritize initiatives that provide *broad benefits* as opposed to those that have more targeted benefits or involve new regulations/requirements. Among the 13 actions tested, customers assigned the highest priority to upgrading the electric grid and infrastructure including undergrounding utility wires, expanding grid capacity, and replacing outdated equipment (86% high or medium priority), followed by improving the energy efficiency of buildings so they use less energy and have lower energy bills (83%), creating more back-up power systems that can operate during a power outage (80%), installing more small-scale renewable energy systems like solar on home rooftops and parking lots (77%), and providing job training and certification programs to fill the need for skilled workers in the clean energy sector (76%).

At the other end of the spectrum, CEA customers were less inclined to prioritize requiring all new construction to be all-electric to improve indoor air quality (46%), increasing the number of public access charging stations for electric vehicles (52%), increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution (57%), and improving access to technical experts who can advise on energy saving projects in the home/for businesses (58%). For more on this topic see *Priority Energy Initiatives & Actions* on page 12.

To what extent have CEA customers made energy improvements to their homes/businesses?

Most CEA customers have made *modest* energy-related improvements to their homes/businesses, with the most common being the use of energy efficient lighting (78%) and weatherization improvements such as improved insulation, windows, and/or roof (55%). Approximately four-in-ten customers also indicated their home/building has solar panels (44%) and a smart home energy/building management system that monitors and controls heating/air conditioning, lighting and appliances to optimize performance and reduce energy use (43%). All remaining improvements tested in the survey were far less common, including an electric stove (26%), electric heat pump water heater (22%), EV charging station (21%), electric furnace (20%), and back-up battery storage (18%). For more on this topic see *Energy Improvements at Home/Business* on page 17.

Are CEA customers aware of available energy-related programs and services?

Despite most CEA customers initially describing themselves as well-informed (15%) or somewhat informed (38%) about the programs and services that are available to help residents/businesses with energy-related improvements, only a few programs enjoy widespread awareness: discounted rates for energy used during off-peak hours (79% aware), discounted rates for low-income households (67%), and rebates/incentives to install solar panels and battery storage (61%).

Less than half of CEA customers indicated they were aware of the remaining programs prior to taking the survey, including rebates/incentives to make energy-efficiency improvements to your home/business, such as improved insulation and windows (46%) and to install energy efficient lighting, appliances, and equipment (44%), discounted rates for those who have medical equipment in their home (44%), and free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills (44%). When compared to the other programs tested, CEA customers were substantially less aware of rebates/incentives to install electric vehicle charging equipment (35%), rebates and incentives to replace gas appliances and equipment with electric appliances and equipment (31%), and programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere (23%). For more on this topic see *Awareness of Specific Programs* on page 21.

How interested are CEA customers in participating in energy-related programs?

Energy-related programs that have broad application tend to find the most interest among CEA customers, especially rebates and incentives to install energy efficient lighting, appliances, and equipment (64% very or somewhat interested), discounted rates for energy used during off-peak hours (61%), and rebates and incentives to make energy-efficient improvements to their home/business's building, such as improved insulation and windows (61%). Free energy audits and technical assistance on how to improve their household's/business's energy efficiency and lower bills (55%) and rebates and incentives to install solar panels and batter storage (48%) were also popular with many customers.

At the other end of the spectrum, programs that had a narrow target audience or purpose tended to garner less interest, including discounted rates for those who have medical equipment in their home (26%), rebates and incentives to install electric vehicle charging equipment (31%), and discounted rates for low-income households (35%). For more on this topic see *Interest in Programs* on page 25.

What are the best methods for communicating with CEA customers?

The vast majority of respondents (78%) who participated in the survey were aware of their status as a CEA customer prior to taking the survey. When asked to rate various ways CEA could communicate with them, customers identified email (79% very or somewhat effective), the Clean Energy Alliance website (73%), direct mail (69%), electronic newsletters (68%), and utility bill inserts (66%) as the most effective methods. That said, preferred communication methods varied considerably across subgroups, with pronounced differences based on respondent age, income, and ethnicity. For more on this topic see *Communication* on page 30.

IMPORTANCE OF ISSUES/INITIATIVES

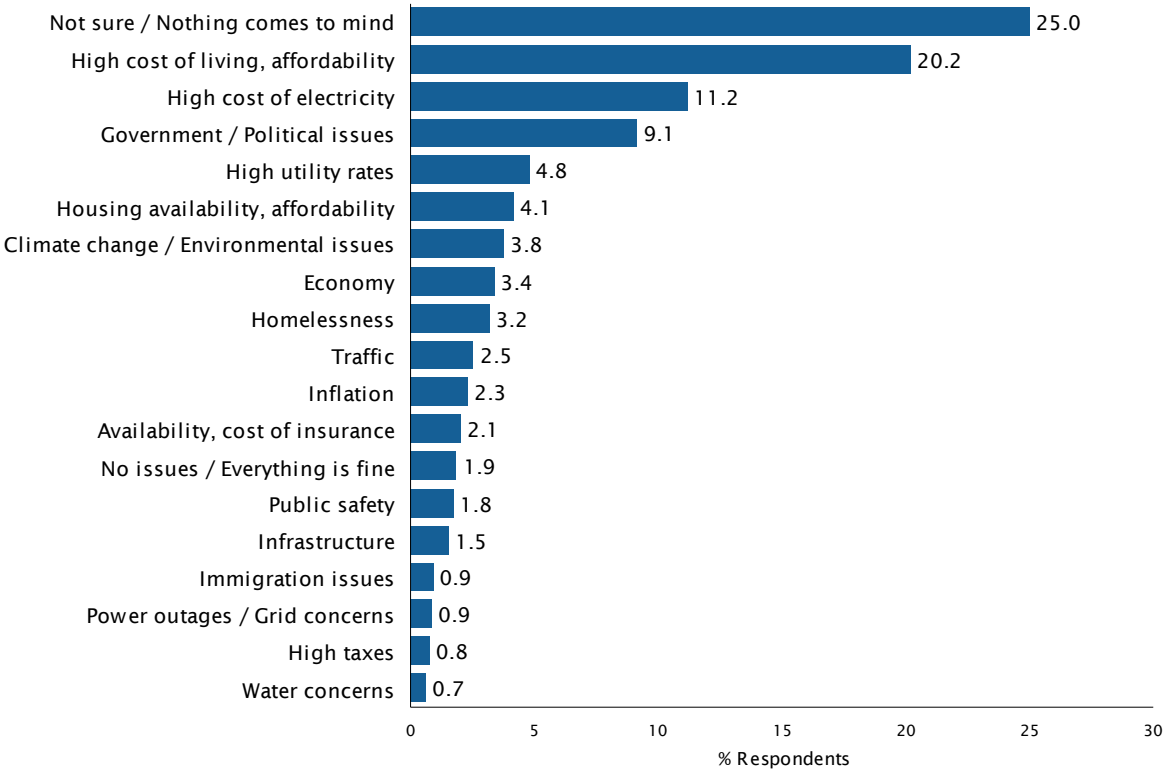
The opening section of the survey profiled customers' opinions regarding the most important issues or challenges facing their community *in general*, the relative importance of various energy-related issues/objectives, and how they would prioritize among a series of energy-related initiatives for their community.

MOST IMPORTANT ISSUE OR CHALLENGE

The first question in this series asked customers to identify the most important issue or challenge facing their community today. Question 1 was presented in an open-ended manner, thereby allowing respondents to mention any issue or challenge that came to mind without being prompted by or constrained to a particular list of options. True North later reviewed the verbatim responses and grouped them into the categories shown in Figure 1 below.

Question 1 *To begin, what would you say is the most important issue or challenge facing your community today?*

FIGURE 1 MOST IMPORTANT ISSUE FACING COMMUNITY

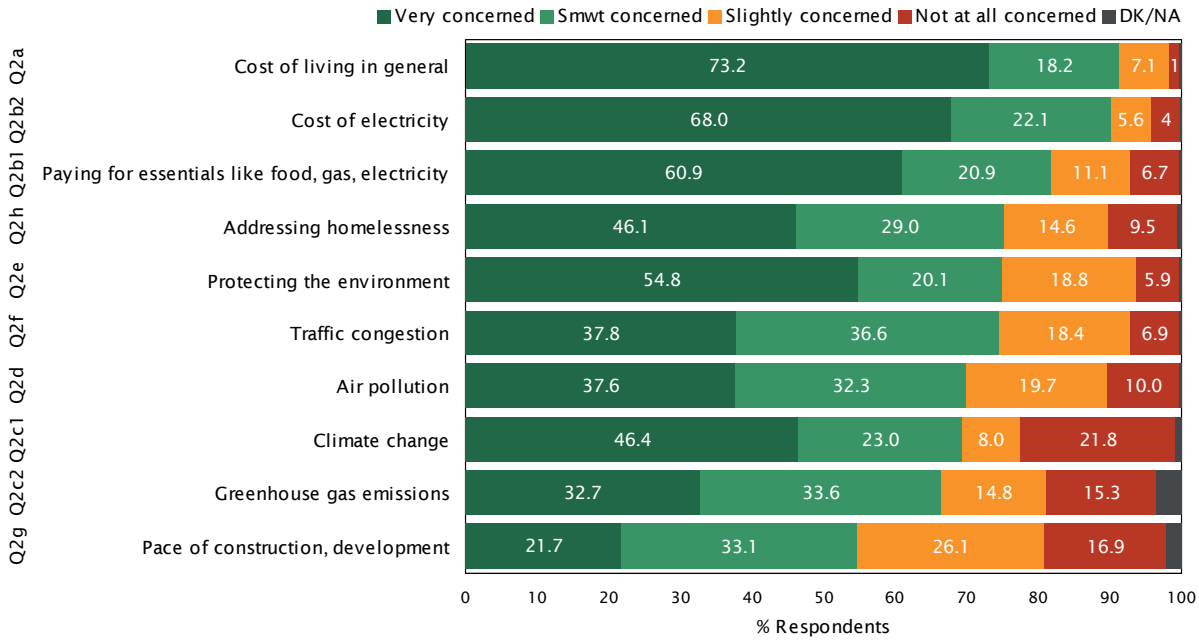


One-in-four respondents (25%) were unsure or could not think of any important issues or challenges facing their community. Among the specific responses, issues of cost and affordability dominated the top mentions. Overall, customers were most apt to cite the high cost of living/affordability (20%), high cost of electricity (11%), government/political issues (9%), high utility rates in general (5%), housing availability/affordability (4%), and climate change/environmental issues (4%) as the most important issue or challenge facing their community.

RANKING OF ISSUES Whereas Question 1 was administered in an open-ended manner to capture customers' top-of-mind response, Question 2 presented respondents with the list of issues shown in Figure 2 and asked customers to describe the extent to which they are concerned about each issue. Consistent with their open-ended responses, customers ranked cost-related issues as the most concerning, including cost of living in general (91% very or somewhat concerned), cost of electricity (90%), and paying for essentials like food, gas, and electricity (82%). Addressing homelessness (75%), protecting the environment (75%), and traffic congestion (74%) were at least somewhat concerning to three-quarters of respondents, whereas two-thirds rated air pollution (70%), climate change (69%), and greenhouse gas emissions (66%) as very or somewhat concerning. When compared to the other issues tested, CEA customers were less concerned about the pace of construction and development (55%).

Question 2 *Next, I'm going to read a list of specific issues. For each one, please tell me how concerned you are about the issue.*

FIGURE 2 RANKING ISSUES OF CONCERN



For the interested reader, tables 1-6 display the percentage of customers who expressed being *very* concerned with an issue according to customer age, location, home type, home ownership, household income, ethnicity, customer type, gender, CARE status, and whether they have rooftop solar.[1] To ease comparisons, the top three issues within each subgroup are highlighted in green. With few exceptions, cost of living in general and cost of electricity were among the top three most concerning issues across CEA customer subgroups.

1. Demographic subgroups (age, ethnicity, home ownership, etc.) were constructed for residential customers only. CARE and Rooftop solar status was classified based on information in the customer database provided by CEA.

TABLE 1 ISSUES OF CONCERN BY AGE (SHOWING % VERY CONCERNED)

	Age (QD1)			
	Under 45	45 to 54	55 to 64	65 or older
Cost of living in general	84.6	89.8	67.0	63.2
Cost of electricity	63.5	87.7	60.3	69.6
Paying for essentials like food, gas, and electricity	68.8	74.1	56.4	57.4
Protecting the environment	52.1	57.7	50.7	64.4
Climate change	44.8	39.1	45.3	60.7
Addressing homelessness	33.1	61.9	35.6	48.4
Traffic congestion	25.0	42.0	30.1	38.3
Air pollution	21.7	23.1	39.4	50.9
Greenhouse gas emissions	25.1	15.6	50.7	43.4
The pace of construction and development	12.7	22.0	19.1	21.1

TABLE 2 ISSUES OF CONCERN BY CUSTOMER CITY (SHOWING % VERY CONCERNED)

	Customer City					
	Carlsbad	Escondido	Oceanside	San Marcos	Solana Beach / Del Mar	Vista
Cost of living in general	65.8	67.3	74.6	70.6	55.1	93.2
Cost of electricity	68.7	82.2	56.2	58.0	55.6	77.4
Paying for essentials like food, gas, and electricity	53.8	51.8	69.2	59.3	30.3	73.1
Protecting the environment	63.8	39.7	56.5	55.3	69.8	57.3
Climate change	56.4	49.1	33.9	47.9	70.8	47.9
Addressing homelessness	44.2	48.0	41.1	44.3	54.4	53.5
Traffic congestion	38.6	27.3	35.2	42.9	27.4	52.5
Air pollution	45.3	32.0	30.4	39.8	34.1	46.7
Greenhouse gas emissions	53.8	23.8	24.1	25.3	59.2	37.8
The pace of construction and development	20.5	19.8	21.0	25.8	13.3	24.6

TABLE 3 ISSUES OF CONCERN BY HOME TYPE & OWNERSHIP STATUS (SHOWING % VERY CONCERNED)

	Home Type (Q8)				Ownership Status (QD2)	
	Single family	Apartment	Condo/ Townhome	Mobile home	Own	Rent
Cost of living in general	68.1	83.0	85.7	92.2	70.9	80.6
Cost of electricity	63.6	63.4	78.3	87.1	64.2	76.5
Paying for essentials like food, gas, and electricity	58.5	70.4	72.8	79.3	61.3	64.2
Protecting the environment	52.4	65.3	57.0	56.8	54.8	58.6
Climate change	42.1	62.3	50.5	56.2	44.4	51.9
Addressing homelessness	43.6	51.8	40.1	62.6	43.1	52.2
Traffic congestion	39.5	39.7	30.0	17.1	38.2	36.3
Air pollution	36.9	34.1	35.2	49.0	40.9	32.1
Greenhouse gas emissions	35.6	27.2	25.4	40.7	35.9	28.1
The pace of construction and development	20.0	23.4	27.6	16.4	20.4	24.5

TABLE 4 ISSUES OF CONCERN BY HOUSEHOLD INCOME (SHOWING % VERY CONCERNED)

	Household Income (QD5)				
	<$50K	$50K to <$99K	$100K to <$149K	$150K to <$199K	$200K+
Cost of living in general	82.2	81.7	70.7	61.8	69.5
Cost of electricity	93.4	67.5	60.9	52.3	53.4
Paying for essentials like food, gas, and electricity	70.6	72.3	59.7	72.4	54.4
Protecting the environment	60.1	63.1	51.3	63.8	39.5
Climate change	51.2	48.5	47.5	57.2	38.6
Addressing homelessness	61.2	41.2	30.5	34.7	39.9
Traffic congestion	50.8	38.8	18.3	31.6	32.9
Air pollution	42.9	42.0	25.2	33.1	33.7
Greenhouse gas emissions	30.6	34.2	20.4	39.9	28.2
The pace of construction and development	26.3	15.7	19.1	25.4	15.4

TABLE 5 ISSUES OF CONCERN BY ETHNICITY & CUSTOMER TYPE (SHOWING % VERY CONCERNED)

	Ethnicity (QD4)				Customer Type	
	Asian American	Caucasian / White	Latino / Hispanic	Mixed / Other	Residential	Commercial
Cost of living in general	80.5	65.8	86.5	81.2	74.4	64.9
Cost of electricity	65.9	62.1	75.6	83.6	66.9	74.8
Paying for essentials like food, gas, and electricity	68.3	48.5	78.0	83.2	63.4	42.5
Protecting the environment	48.4	53.9	62.7	57.9	55.1	52.6
Climate change	41.1	52.5	45.6	60.4	47.6	37.8
Addressing homelessness	39.9	43.7	52.0	50.3	45.3	51.8
Traffic congestion	40.7	35.6	40.8	44.7	37.5	40.3
Air pollution	56.4	37.3	34.4	33.2	36.9	42.7
Greenhouse gas emissions	52.3	40.6	12.4	26.6	31.6	40.0
The pace of construction and development	12.1	27.5	12.2	34.8	21.5	22.7

TABLE 6 ISSUES OF CONCERN BY GENDER, CARE CUSTOMER IN DATABASE & ROOFTOP SOLAR CUSTOMER IN DATABASE (SHOWING % VERY CONCERNED)

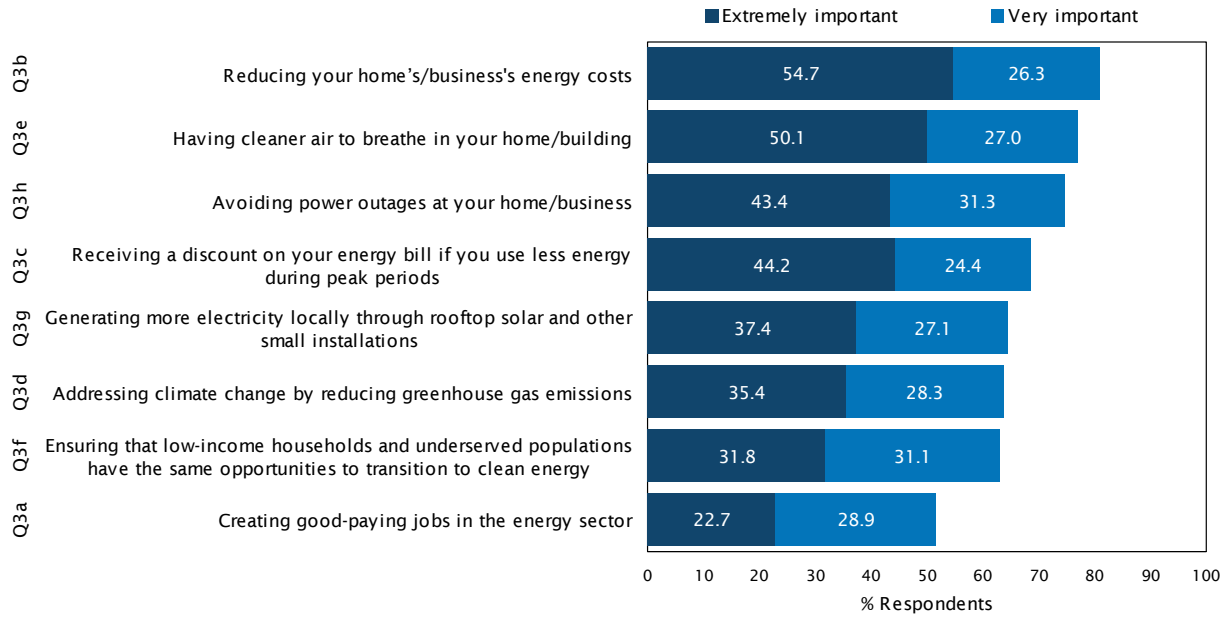
	Gender (QD3)		CARE Customer in Database		Rooftop Solar Customer in Database	
	Male	Female	Yes	No	Yes	No
Cost of living in general	72.5	76.0	87.4	69.0	70.1	74.6
Cost of electricity	64.5	68.3	74.8	66.3	59.6	72.2
Paying for essentials like food, gas, and electricity	67.8	58.1	72.9	56.9	59.1	61.7
Protecting the environment	50.4	58.2	59.2	53.5	60.4	52.2
Climate change	45.0	50.2	38.8	48.3	52.8	43.2
Addressing homelessness	43.2	48.7	56.7	43.0	49.4	44.6
Traffic congestion	38.4	36.2	44.4	35.9	45.6	34.3
Air pollution	37.5	37.5	33.4	38.9	43.6	34.9
Greenhouse gas emissions	36.2	26.3	27.8	34.4	39.5	30.0
The pace of construction and development	16.8	26.1	21.6	21.7	20.2	22.3

IMPORTANCE OF ENERGY ISSUES & OBJECTIVES

Question 3 next narrowed customers' focus to the topic of energy, asking that they rate the importance of each energy issue or objective shown in Figure 3 to them/their business.

Question 3 *Turning now to the topic of energy, I'm going to read a list of specific issues. For each one, please tell me how important this issue is to you/your business.*

FIGURE 3 IMPORTANCE OF ENERGY ISSUES



Among the issues tested, reducing their home's/business's energy costs was rated as the most important energy issue (81% extremely or very important), followed by having cleaner air to breathe in their home/building (77%), avoiding power outages at their home/business (75%), and receiving a discount on their energy bill if they use less energy during peak periods (69%). Issues that didn't tie directly back to a respondent's home or business were rated as somewhat less important, including generating more electricity locally through rooftop solar and other small installations (65%), addressing climate change by reducing greenhouse gas emissions (64%), ensuring that low-income households and underserved populations have the same opportunities to transition to clean energy (63%), and creating good-paying jobs in the energy sector (52%).

Tables 7-12 show how the percentage rating each issue as extremely or very important varied across CEA customer subgroups, with the top three issues in each subgroup highlighted green to ease comparisons.

TABLE 7 IMPORTANCE OF ENERGY ISSUES BY AGE (SHOWING % EXTREMELY & VERY IMPORTANT)

	Age (QD1)			
	Under 45	45 to 54	55 to 64	65 or older
Reducing your home's/business's energy costs	93.2	98.4	78.4	77.4
Having cleaner air to breathe in your home/building	84.0	82.9	71.9	85.8
Avoiding power outages at your home/business	79.7	71.6	71.2	77.0
Receiving a discount on your energy bill if you use less energy during peak periods	85.7	91.8	68.2	69.8
Generating more electricity locally through rooftop solar and other small installations	67.7	71.6	70.8	68.7
Addressing climate change by reducing greenhouse gas emissions	59.1	74.2	70.9	73.1
Ensuring that low-income hslds, underserved populations have same opportunities to transition to clean energy	81.9	66.0	54.6	71.1
Creating good-paying jobs in the energy sector	53.5	69.3	49.2	53.5

TABLE 8 IMPORTANCE OF ENERGY ISSUES BY CUSTOMER CITY (SHOWING % EXTREMELY & VERY IMPORTANT)

	Customer City					
	Carlsbad	Escondido	Oceanside	San Marcos	Solana Beach / Del Mar	Vista
Reducing your home's/business's energy costs	84.0	83.7	77.6	78.9	64.4	85.1
Having cleaner air to breathe in your home/building	78.8	76.0	72.8	67.0	83.0	91.0
Avoiding power outages at your home/business	82.3	70.9	75.4	69.3	84.5	72.5
Receiving a discount on your energy bill if you use less energy during peak periods	70.8	68.2	71.3	60.7	60.6	71.6
Generating more electricity locally through rooftop solar and other small installations	67.7	63.8	65.7	64.7	68.3	59.1
Addressing climate change by reducing greenhouse gas emissions	67.2	59.6	62.4	54.6	68.3	74.4
Ensuring that low-income hslds, underserved populations have same opportunities to transition to clean energy	58.2	66.3	65.8	54.0	45.8	71.4
Creating good-paying jobs in the energy sector	54.8	43.9	55.1	48.5	56.0	54.0

TABLE 9 IMPORTANCE OF ENERGY ISSUES BY HOME TYPE & OWNERSHIP STATUS (SHOWING % EXTREMELY & VERY IMPORTANT)

	Home Type (Q8)				Ownership Status (QD2)	
	Single family	Apartment	Condo/ Townhome	Mobile home	Own	Rent
Reducing your home's/business's energy costs	77.9	90.0	90.1	92.2	79.4	86.6
Having cleaner air to breathe in your home/building	76.8	84.2	84.3	82.5	76.6	81.1
Avoiding power outages at your home/business	77.6	62.9	81.7	48.6	77.5	72.1
Receiving a discount on your energy bill if you use less energy during peak periods	67.6	76.4	75.4	88.3	68.6	72.2
Generating more electricity locally through rooftop solar and other small installations	70.1	61.3	58.6	75.0	65.2	64.4
Addressing climate change by reducing greenhouse gas emissions	60.6	81.9	64.7	77.8	61.7	68.6
Ensuring that low-income hslds, underserved populations have same opportunities to transition to clean energy	57.6	85.5	68.8	80.5	61.8	70.5
Creating good-paying jobs in the energy sector	45.4	58.6	66.4	64.7	50.3	55.6

TABLE 10 IMPORTANCE OF ENERGY ISSUES BY HOUSEHOLD INCOME (SHOWING % EXTREMELY & VERY IMPORTANT)

	Household Income (QD5)				
	<$50K	$50K to <$99K	$100K to <$149K	$150K to <$199K	$200K+
Reducing your home's/business's energy costs	95.4	90.3	79.2	88.9	77.6
Having cleaner air to breathe in your home/building	88.5	86.9	76.1	83.7	66.4
Avoiding power outages at your home/business	73.1	87.0	63.6	88.5	68.1
Receiving a discount on your energy bill if you use less energy during peak periods	86.3	77.2	69.4	72.9	54.7
Generating more electricity locally through rooftop solar and other small installations	72.1	71.8	58.3	70.3	62.5
Addressing climate change by reducing greenhouse gas emissions	73.7	68.5	63.2	72.4	52.0
Ensuring that low-income hslds, underserved populations have same opportunities to transition to clean energy	86.0	75.3	64.1	64.1	45.2
Creating good-paying jobs in the energy sector	56.0	72.0	39.9	56.9	36.4

TABLE 11 IMPORTANCE OF ENERGY ISSUES BY ETHNICITY & CUSTOMER TYPE (SHOWING % EXTREMELY & VERY IMPORTANT)

	Ethnicity (QD4)				Customer Type	
	Asian American	Caucasian / White	Latino / Hispanic	Mixed / Other	Residential	Commercial
Reducing your home's/business's energy costs	74.3	78.8	90.6	97.5	82.6	69.5
Having cleaner air to breathe in your home/building	82.4	76.3	83.9	87.2	79.2	61.8
Avoiding power outages at your home/business	82.4	79.1	68.2	84.5	74.5	76.3
Receiving a discount on your energy bill if you use less energy during peak periods	75.7	63.7	87.6	86.8	71.2	50.8
Generating more electricity locally through rooftop solar and other small installations	66.9	69.7	68.0	56.5	66.3	52.5
Addressing climate change by reducing greenhouse gas emissions	67.1	67.1	68.5	64.1	65.6	50.3
Ensuring that low-income hslds, underserved populations have same opportunities to transition to clean energy	70.4	60.9	81.2	68.0	65.2	47.2
Creating good-paying jobs in the energy sector	45.7	50.4	59.1	64.1	52.6	44.7

TABLE 12 IMPORTANCE OF ENERGY ISSUES BY GENDER, CARE CUSTOMER IN DATABASE & ROOFTOP SOLAR CUSTOMER IN DATABASE (SHOWING % EXTREMELY & VERY IMPORTANT)

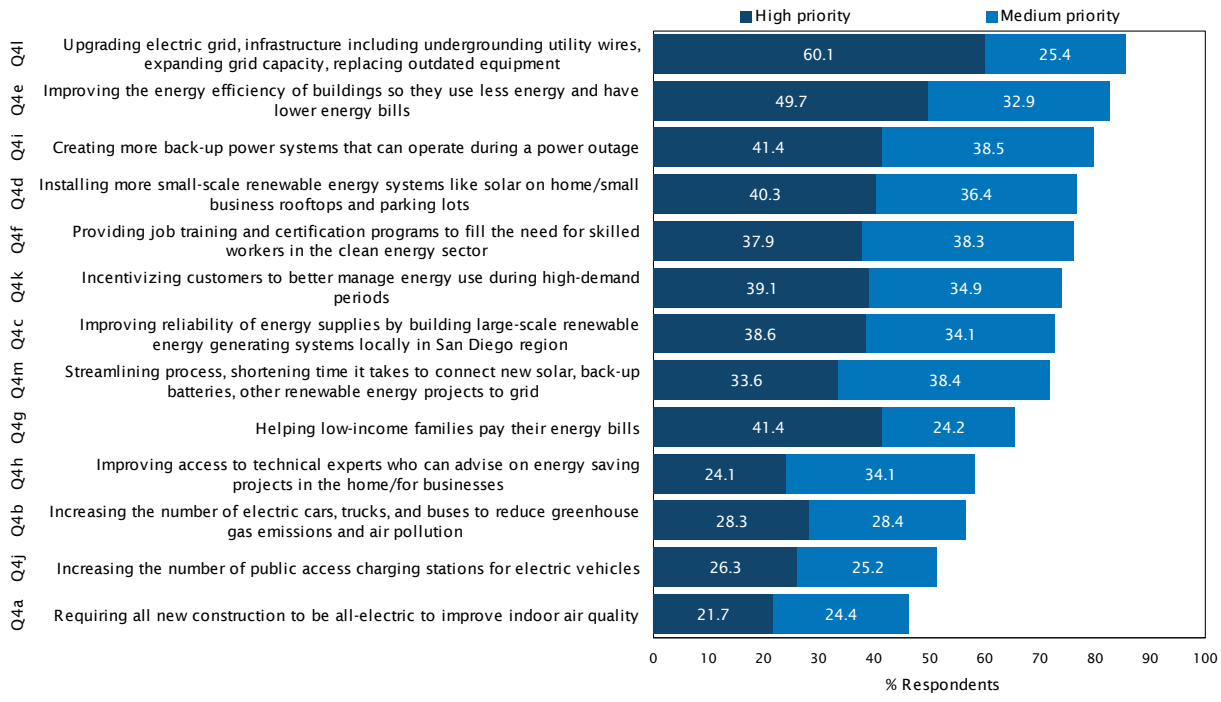
	Gender (QD3)		CARE Customer in Database		Rooftop Solar Customer in Database	
	Male	Female	Yes	No	Yes	No
Reducing your home's/business's energy costs	81.5	84.4	91.0	78.0	76.5	83.0
Having cleaner air to breathe in your home/building	81.9	76.7	85.4	74.6	75.4	77.8
Avoiding power outages at your home/business	73.0	76.3	74.7	74.7	78.3	73.0
Receiving a discount on your energy bill if you use less energy during peak periods	68.4	76.3	82.4	64.6	70.0	68.0
Generating more electricity locally through rooftop solar and other small installations	68.2	65.4	62.4	65.2	80.6	57.2
Addressing climate change by reducing greenhouse gas emissions	62.6	67.8	69.4	62.0	68.7	61.4
Ensuring that low-income hslds, underserved populations have same opportunities to transition to clean energy	60.6	71.9	83.9	56.7	60.3	64.1
Creating good-paying jobs in the energy sector	45.7	61.7	65.4	47.5	52.6	51.1

PRIORITY ENERGY INITIATIVES & ACTIONS

Having measured how CEA customers rank specific energy issues, Question 4 transitioned to a list of initiatives and actions that could be taken in the future. For each of the actions shown in Figure 4, customers were asked to identify whether the action should be a high, medium, or low priority for their community—or if they think the action should not be taken.

Question 4 *Next, I'm going to read a short list of actions that could be taken in the future. As I read each item, please indicate whether you think it should be a high priority, medium priority, or low priority for your community. If you think the action shouldn't be taken, please indicate so. Also, please keep in mind that not all items can be high priorities.*

FIGURE 4 PRIORITY ENERGY ACTIONS



At the top of the list, customers assigned the highest priority to upgrading the electric grid and infrastructure including undergrounding utility wires, expanding grid capacity, and replacing outdated equipment (86% high or medium priority), followed by improving the energy efficiency of buildings so they use less energy and have lower energy bills (83%), creating more back-up power systems that can operate during a power outage (80%), installing more small-scale renewable energy systems like solar on home rooftops and parking lots (77%), and providing job training and certification programs to fill the need for skilled workers in the clean energy sector (76%).

At the other end of the spectrum, CEA customers were less inclined to prioritize requiring all new construction to be all-electric to improve indoor air quality (46%), increasing the number of public access charging stations for electric vehicles (52%), increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution (57%), and improving access to technical experts who can advise on energy saving projects in the home/for businesses (58%).

For the interested reader, tables 13-18 show how the percentage of respondents who rated each as a high or medium priority varied across CEA customer subgroups, with the top five priorities highlighted in green within each subgroup.

TABLE 13 PRIORITY ENERGY ACTIONS BY AGE (SHOWING % HIGH OR MEDIUM PRIORITY)

	Age (QD1)			
	Under 45	45 to 54	55 to 64	65 or older
Upgrading electric grid, infrastructure including undergrounding utility wires, expanding grid capacity, replacing outdated equipment	72.8	88.7	90.6	89.8
Improving the energy efficiency of buildings so they use less energy and have lower energy bills	85.7	81.3	81.7	90.8
Creating more back-up power systems that can operate during a power outage	80.7	80.1	80.1	82.2
Installing more small-scale renewable energy systems like solar on home/small business rooftops and parking lots	72.1	87.3	84.2	77.8
Providing job training and certification programs to fill the need for skilled workers in the clean energy sector	77.4	79.5	78.7	83.2
Incentivizing customers to better manage energy use during high-demand periods	75.9	84.7	79.5	81.8
Improving reliability of energy supplies by building large-scale renewable energy generating systems locally in San Diego region	70.9	85.1	77.7	74.4
Streamlining process, shortening time it takes to connect new solar, back-up batteries, other renewable energy projects to grid	61.9	81.5	87.6	74.3
Helping low-income families pay their energy bills	76.0	53.4	68.5	76.7
Improving access to technical experts who can advise on energy saving projects in the home/for businesses	61.4	64.1	58.8	65.6
Increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution	57.3	59.6	60.0	65.4
Increasing the number of public access charging stations for electric vehicles	42.6	57.8	50.9	58.9
Requiring all new construction to be all-electric to improve indoor air quality	57.3	44.5	43.3	52.2

Table 14 Priority Energy Actions by Customer City (Showing % High or Medium Priority)

	Customer City					
	Carlsbad	Escondido	Oceanside	San Marcos	Solana Beach / Del Mar	Vista
Upgrading electric grid, infrastructure including undergrounding utility wires, expanding grid capacity, replacing outdated equipment	91.7	89.5	82.7	83.4	93.9	77.8
Improving the energy efficiency of buildings so they use less energy and have lower energy bills	84.4	82.6	83.2	74.9	95.4	83.9
Creating more back-up power systems that can operate during a power outage	89.7	85.1	74.4	69.4	86.9	78.7
Installing more small-scale renewable energy systems like solar on home/small business rooftops and parking lots	78.0	81.6	77.6	75.6	83.9	67.0
Providing job training and certification programs to fill the need for skilled workers in the clean energy sector	80.3	76.4	77.8	69.7	62.0	78.1
Incentivizing customers to better manage energy use during high-demand periods	79.9	72.2	75.4	64.5	82.1	74.7
Improving reliability of energy supplies by building large-scale renewable energy generating systems locally in San Diego region	90.2	70.1	62.0	76.1	76.8	68.8
Streamlining process, shortening time it takes to connect new solar, back-up batteries, other renewable energy projects to grid	80.5	69.1	71.7	66.4	66.6	72.8
Helping low-income families pay their energy bills	76.7	65.6	58.1	50.4	69.1	77.6
Improving access to technical experts who can advise on energy saving projects in the home/for businesses	62.2	60.2	55.4	47.6	72.2	62.0
Increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution	69.1	49.0	51.6	54.9	70.6	58.7
Increasing the number of public access charging stations for electric vehicles	58.0	46.9	50.6	47.6	58.9	53.0
Requiring all new construction to be all-electric to improve indoor air quality	49.8	46.4	45.2	37.8	54.2	48.8

Table 15 Priority Energy Actions by Home Type & Ownership Status (Showing % High or Medium Priority)

	Home Type (Q8)				Ownership Status (QD2)	
	Single family	Apartment	Condo/ Townhome	Mobile home	Own	Rent
Upgrading electric grid, infrastructure including undergrounding utility wires, expanding grid capacity, replacing outdated equipment	90.7	64.4	86.6	100.0	91.0	76.9
Improving the energy efficiency of buildings so they use less energy and have lower energy bills	81.2	86.3	88.3	92.2	82.6	84.6
Creating more back-up power systems that can operate during a power outage	77.9	77.4	85.2	91.4	81.6	79.8
Installing more small-scale renewable energy systems like solar on home/small business rooftops and parking lots	77.8	67.1	75.8	92.2	79.2	72.6
Providing job training and certification programs to fill the need for skilled workers in the clean energy sector	77.5	74.4	78.6	88.3	79.0	71.2
Incentivizing customers to better manage energy use during high-demand periods	73.1	77.2	80.3	81.0	75.4	72.9
Improving reliability of energy supplies by building large-scale renewable energy generating systems locally in San Diego region	71.4	72.0	74.1	74.7	72.0	75.5
Streamlining process, shortening time it takes to connect new solar, back-up batteries, other renewable energy projects to grid	76.6	59.3	64.5	87.5	75.9	64.9
Helping low-income families pay their energy bills	57.4	87.4	68.9	93.0	63.1	74.0
Improving access to technical experts who can advise on energy saving projects in the home/for businesses	54.9	58.0	62.3	80.5	59.7	57.4
Increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution	59.0	55.6	53.2	70.1	59.7	52.8
Increasing the number of public access charging stations for electric vehicles	51.6	46.0	53.7	71.9	54.6	45.6
Requiring all new construction to be all-electric to improve indoor air quality	40.9	65.2	41.5	57.6	43.3	54.4

Table 16 Priority Energy Actions by Household Income (Showing % High or Medium Priority)

	Household Income (QD5)				
	<$50K	$50K to <$99K	$100K to <$149K	$150K to <$199K	$200K+
Upgrading electric grid, infrastructure including undergrounding utility wires, expanding grid capacity, replacing outdated equipment	77.7	81.8	88.5	93.4	91.3
Improving the energy efficiency of buildings so they use less energy and have lower energy bills	84.9	82.4	87.0	82.5	77.8
Creating more back-up power systems that can operate during a power outage	81.0	72.3	82.8	91.2	74.0
Installing more small-scale renewable energy systems like solar on home/small business rooftops and parking lots	80.5	73.8	74.4	88.5	62.5
Providing job training and certification programs to fill the need for skilled workers in the clean energy sector	81.4	79.4	75.2	76.8	67.3
Incentivizing customers to better manage energy use during high-demand periods	82.6	73.8	77.5	81.5	75.1
Improving reliability of energy supplies by building large-scale renewable energy generating systems locally in San Diego region	72.3	73.0	69.3	80.2	77.1
Streamlining process, shortening time it takes to connect new solar, back-up batteries, other renewable energy projects to grid	66.3	67.2	74.0	87.9	77.4
Helping low-income families pay their energy bills	82.4	64.0	67.1	68.2	49.9
Improving access to technical experts who can advise on energy saving projects in the home/for businesses	79.1	53.2	56.2	56.4	39.8
Increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution	58.1	53.9	53.4	69.1	62.8
Increasing the number of public access charging stations for electric vehicles	50.3	42.5	54.0	65.7	57.9
Requiring all new construction to be all-electric to improve indoor air quality	64.1	45.2	47.4	45.5	28.3

Table 17 Priority Energy Actions by Ethnicity & Customer Type (Showing % High or Medium Priority)

	Ethnicity (QD4)				Customer Type	
	Asian American	Caucasian / White	Latino / Hispanic	Mixed / Other	Residential	Commercial
Upgrading electric grid, infrastructure including undergrounding utility wires, expanding grid capacity, replacing outdated equipment	86.9	91.7	76.2	89.7	85.0	88.6
Improving the energy efficiency of buildings so they use less energy and have lower energy bills	91.5	84.6	85.6	81.2	83.6	76.2
Creating more back-up power systems that can operate during a power outage	82.9	82.9	78.6	82.9	79.5	82.6
Installing more small-scale renewable energy systems like solar on home/small business rooftops and parking lots	67.7	80.5	73.5	69.9	76.1	81.1
Providing job training and certification programs to fill the need for skilled workers in the clean energy sector	74.1	76.3	82.5	86.4	77.6	66.6
Incentivizing customers to better manage energy use during high-demand periods	83.7	79.1	79.4	67.2	75.2	66.2
Improving reliability of energy supplies by building large-scale renewable energy generating systems locally in San Diego region	86.9	76.5	68.8	79.6	72.2	76.0
Streamlining process, shortening time it takes to connect new solar, back-up batteries, other renewable energy projects to grid	75.7	77.4	67.2	66.6	71.7	73.9
Helping low-income families pay their energy bills	59.3	66.8	74.4	59.6	66.3	60.4
Improving access to technical experts who can advise on energy saving projects in the home/for businesses	54.6	57.2	67.4	50.1	57.7	61.6
Increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution	56.7	60.9	62.4	50.1	57.3	52.0
Increasing the number of public access charging stations for electric vehicles	52.4	55.0	56.4	27.8	51.6	50.7
Requiring all new construction to be all-electric to improve indoor air quality	46.0	46.7	53.1	51.9	45.9	47.6

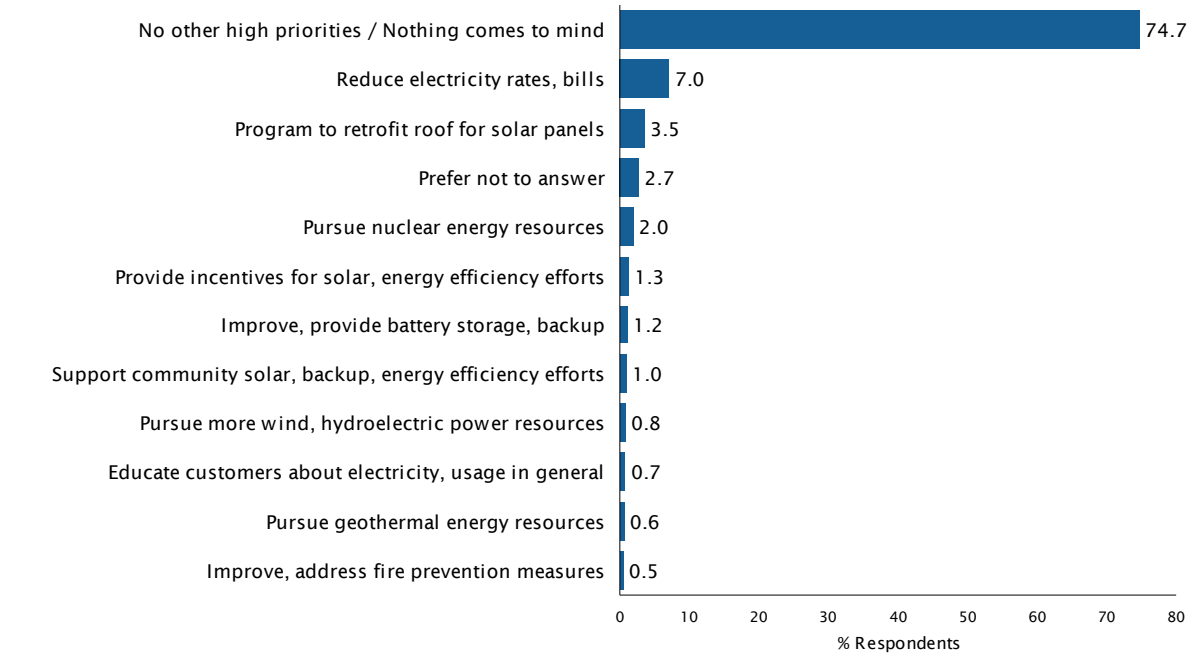
TABLE 18 PRIORITY ENERGY ACTIONS BY GENDER, CARE CUSTOMER IN DATABASE & ROOFTOP SOLAR CUSTOMER IN DATABASE (SHOWING % HIGH OR MEDIUM PRIORITY)

	Gender (QD3)		CARE Customer in Database		Rooftop Solar Customer in Database	
	Male	Female	Yes	No	Yes	No
Upgrading electric grid, infrastructure including undergrounding utility wires, expanding grid capacity, replacing outdated equipment	91.6	78.9	73.5	89.0	90.2	83.3
Improving the energy efficiency of buildings so they use less energy and have lower energy bills	84.9	82.2	77.8	84.1	81.7	83.1
Creating more back-up power systems that can operate during a power outage	79.9	79.3	80.5	79.7	80.3	79.7
Installing more small-scale renewable energy systems like solar on home/small business rooftops and parking lots	79.4	73.0	77.3	76.5	85.8	72.6
Providing job training and certification programs to fill the need for skilled workers in the clean energy sector	76.0	80.2	80.9	74.9	80.3	74.4
Incentivizing customers to better manage energy use during high-demand periods	80.1	73.7	76.3	73.4	76.4	73.0
Improving reliability of energy supplies by building large-scale renewable energy generating systems locally in San Diego region	79.8	62.9	68.6	73.8	75.4	71.4
Streamlining process, shortening time it takes to connect new solar, back-up batteries, other renewable energy projects to grid	76.6	66.9	67.4	73.3	80.8	67.9
Helping low-income families pay their energy bills	64.3	69.1	74.9	62.8	57.1	69.4
Improving access to technical experts who can advise on energy saving projects in the home/for businesses	58.2	60.2	65.8	56.0	57.9	58.4
Increasing the number of electric cars, trucks, and buses to reduce greenhouse gas emissions and air pollution	66.8	47.0	55.0	57.1	62.8	53.8
Increasing the number of public access charging stations for electric vehicles	58.6	42.1	55.7	50.2	58.4	48.3
Requiring all new construction to be all-electric to improve indoor air quality	50.9	40.8	46.6	46.0	47.7	45.4

Recognizing that the list of items in Question 4 was not exhaustive, Question 5 followed-up by providing respondents with the opportunity to identify any energy-related project or program not previously mentioned that they think should be a high priority for their community. Most respondents (75%) did not suggest an additional priority, while 7% mentioned reducing electricity rates/costs and 4% mentioned a program to retrofit roofs for solar panels.

Question 5 *Is there an energy-related project or program not previously mentioned that you think should be a high priority for your community?*

FIGURE 5 OTHER HIGH PRIORITY ENERGY-RELATED PROJECTS OR PROGRAMS



Energy Improvements & Programs

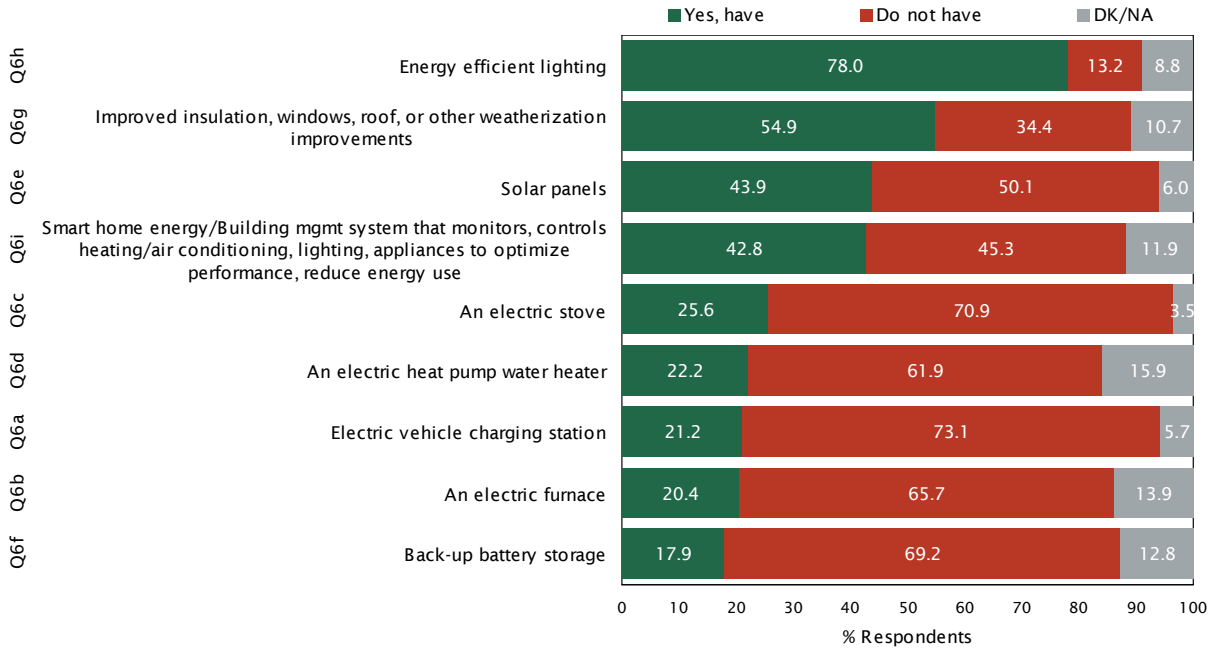
Having measured CEA customer's opinions and priorities with respect to energy issues and initiatives that can impact their community (see prior section), beginning with Question 6 the survey shifted focus to customer-specific topics—including the energy improvements they have made to their home/business building, their awareness of various energy-related programs, as well as their interest in said programs.

Energy Improvements at Home/Business

The first question in this series simply asked respondents to identify the types of energy improvements that are present in their current home/business building. As shown in Figure 6 below, most customers reported their home/business uses energy efficient lighting (78%) and has weatherization improvements such as improved insulation, windows, and/or roof (55%). Approximately four-in-ten customers also indicated their home/building has solar panels (44%) and a smart home energy/building management system that monitors and controls heating/air conditioning, lighting and appliances to optimize performance and reduce energy use (43%). The remaining improvements were far less common, including an electric stove (26%), electric heat pump water heater (22%), EV charging station (21%), electric furnace (20%), and back-up battery storage (18%).

Question 6 *Next, I'm going to read a list of energy improvements that can be made to a home/building. For each, please say 'yes' if your current home/business' building has this improvement - 'no' if not.*

Figure 6 Energy Improvements at Home/Business



Tables 19-24 show how the presence of each improvement in their home/business varied across subgroups of CEA customers, with the top three most common improvements highlighted in green within each subgroup.

Table 19 Energy Improvements at Home/Business by Age (Showing % Yes)

	Age (QD1)			
	Under 45	45 to 54	55 to 64	65 or older
Energy efficient lighting	72.8	89.5	86.7	83.6
Improved insulation, windows, roof, or other weatherization improvements	57.0	58.7	58.4	65.3
Solar panels	28.2	71.1	60.1	44.8
Smart home energy/Building mgmt system that monitors, controls heating/AC, lighting, appliances to optimize performance, reduce energy use	34.5	65.6	52.8	40.6
An electric stove	21.7	25.8	22.6	27.5
An electric heat pump water heater	17.9	27.7	19.6	18.5
Electric vehicle charging station	15.1	36.0	33.9	21.4
An electric furnace	12.8	26.1	25.2	18.1
Back-up battery storage	18.9	31.0	17.5	13.7

Table 20 Energy Improvements at Home/Business by Customer City Showing % Yes)

	Customer City					
	Carlsbad	Escondido	Oceanside	San Marcos	Solana Beach / Del Mar	Vista
Energy efficient lighting	80.2	74.4	75.6	74.6	84.4	85.7
Improved insulation, windows, roof, or other weatherization improvements	55.6	52.2	53.9	53.6	42.7	63.2
Solar panels	54.1	46.0	42.3	43.7	53.3	30.2
Smart home energy/Building mgmt system that monitors, controls heating/AC, lighting, appliances to optimize performance, reduce energy use	55.3	44.5	38.6	51.8	34.7	26.8
An electric stove	21.5	26.5	31.5	14.5	30.8	28.8
An electric heat pump water heater	24.1	15.6	20.1	11.3	28.7	40.4
Electric vehicle charging station	39.5	15.0	18.5	24.9	22.4	9.1
An electric furnace	22.5	18.3	24.2	15.1	40.3	14.7
Back-up battery storage	21.6	18.7	16.6	18.7	19.3	13.9

Table 21 Energy Improvements at Home/Business by Home Type & Ownership Status (Showing % Yes)

	Home Type (Q8)				Ownership Status (QD2)	
	Single family	Apartment	Condo/ Townhome	Mobile home	Own	Rent
Energy efficient lighting	88.9	52.2	78.9	69.3	87.0	57.2
Improved insulation, windows, roof, or other weatherization improvements	68.0	35.6	50.2	70.4	64.9	31.9
Solar panels	64.4	20.7	23.5	13.6	55.3	18.8
Smart home energy/Building mgmt system that monitors, controls heating/AC, lighting, appliances to optimize performance, reduce energy use	58.0	14.8	37.5	17.2	52.6	21.8
An electric stove	18.2	50.1	39.8	8.6	21.4	35.5
An electric heat pump water heater	20.0	27.4	16.4	0.0	20.8	27.5
Electric vehicle charging station	24.8	12.3	20.0	13.2	24.1	13.9
An electric furnace	19.2	16.7	23.4	0.0	21.7	16.9
Back-up battery storage	22.1	11.5	12.0	10.5	20.6	9.9

TABLE 22 ENERGY IMPROVEMENTS AT HOME/BUSINESS BY HOUSEHOLD INCOME SHOWING % YES)

	Household Income (QD5)				
	<$50K	$50K to <$99K	$100K to <$149K	$150K to <$199K	$200K+
Energy efficient lighting	73.6	72.0	82.0	91.7	90.1
Improved insulation, windows, roof, or other weatherization improvements	49.0	65.3	50.2	74.6	65.2
Solar panels	37.5	38.0	41.4	67.8	67.0
Smart home energy/Building mgmt system that monitors, controls heating/AC, lighting, appliances to optimize performance, reduce energy use	30.1	39.2	30.1	69.0	68.4
An electric stove	28.3	29.3	25.5	23.4	26.1
An electric heat pump water heater	24.5	18.5	12.0	15.0	23.4
Electric vehicle charging station	9.4	19.4	18.2	33.0	43.1
An electric furnace	20.3	16.0	25.4	20.3	17.4
Back-up battery storage	14.1	23.5	14.4	22.2	27.0

TABLE 23 ENERGY IMPROVEMENTS AT HOME/BUSINESS BY ETHNICITY & CUSTOMER TYPE

	Ethnicity (QD4)				Customer Type	
	Asian American	Caucasian / White	Latino / Hispanic	Mixed / Other	Residential	Commercial
Energy efficient lighting	96.0	81.2	77.3	70.0	79.6	66.8
Improved insulation, windows, roof, or other weatherization improvements	55.4	62.0	58.2	64.1	59.2	25.2
Solar panels	45.5	45.6	52.8	33.7	47.0	22.5
Smart home energy/Building mgmt system that monitors, controls heating/AC, lighting, appliances to optimize performance, reduce energy use	56.0	43.3	44.2	30.9	44.7	29.6
An electric stove	37.6	25.8	25.9	51.7	27.3	14.4
An electric heat pump water heater	27.7	14.4	26.0	28.6	19.7	39.4
Electric vehicle charging station	28.3	23.3	17.8	24.1	21.8	17.2
An electric furnace	21.1	17.8	22.0	20.8	19.3	27.8
Back-up battery storage	20.6	12.5	23.9	17.5	18.4	14.4

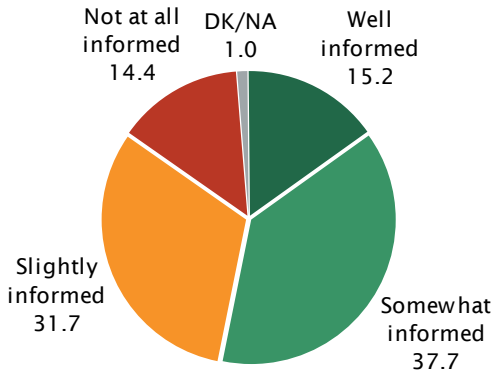
TABLE 24 ENERGY IMPROVEMENTS AT HOME/BUSINESS BY GENDER, CARE CUSTOMER IN DATABASE & ROOFTOP SOLAR CUSTOMER IN DATABASE (SHOWING % YES)

	Gender (QD3)		CARE Customer in Database		Rooftop Solar Customer in Database	
	Male	Female	Yes	No	Yes	No
Energy efficient lighting	92.9	64.1	75.9	78.6	88.3	73.3
Improved insulation, windows, roof, or other weatherization improvements	66.3	53.0	57.0	54.3	69.6	48.2
Solar panels	60.7	33.3	38.5	45.5	95.1	20.5
Smart home energy/Building mgmt system that monitors, controls heating/AC, lighting, appliances to optimize performance, reduce energy use	56.2	33.3	39.5	43.8	64.5	32.9
An electric stove	25.9	30.6	35.6	22.7	19.2	28.6
An electric heat pump water heater	24.9	14.8	26.5	20.9	16.5	24.8
Electric vehicle charging station	30.4	12.7	14.6	23.1	33.1	15.8
An electric furnace	20.1	16.6	19.1	20.8	17.9	21.6
Back-up battery storage	22.7	14.2	21.8	16.8	23.3	15.4

HOW INFORMED DO YOU FEEL? All customers were next asked to describe how informed they felt about the programs and services that are available to help residents/businesses with energy-related improvements. Most customers indicated they felt either well-informed (15%) or somewhat informed (38%) about the available programs and services, whereas one-third described themselves as slightly informed (32%). Approximately 14% of CEA customers indicated they are not at all informed about the programs and services that are available to help customers with energy-related improvements, whereas 1% were unsure or preferred to not answer the question.

Question 7 *In general, how informed do you feel about the programs and services that are available to help residents/businesses with energy-related improvements? Would you say you feel well informed, somewhat informed, slightly informed, or not at all informed?*

FIGURE 7 HOW INFORMED ABOUT ENERGY-RELATED PROGRAMS



When compared to their respective counterparts, seniors, those living in single family homes, home owners, residents of Carlsbad, high-income households, Caucasians, males, those not enrolled in the CARE program, and customers with rooftop solar were the most likely to describe themselves as at least somewhat informed about the programs and services available to help customers with energy-related improvements (see figures 8-10).

FIGURE 8 HOW INFORMED ABOUT ENERGY-RELATED PROGRAMS BY AGE, HOME TYPE & OWNERSHIP STATUS

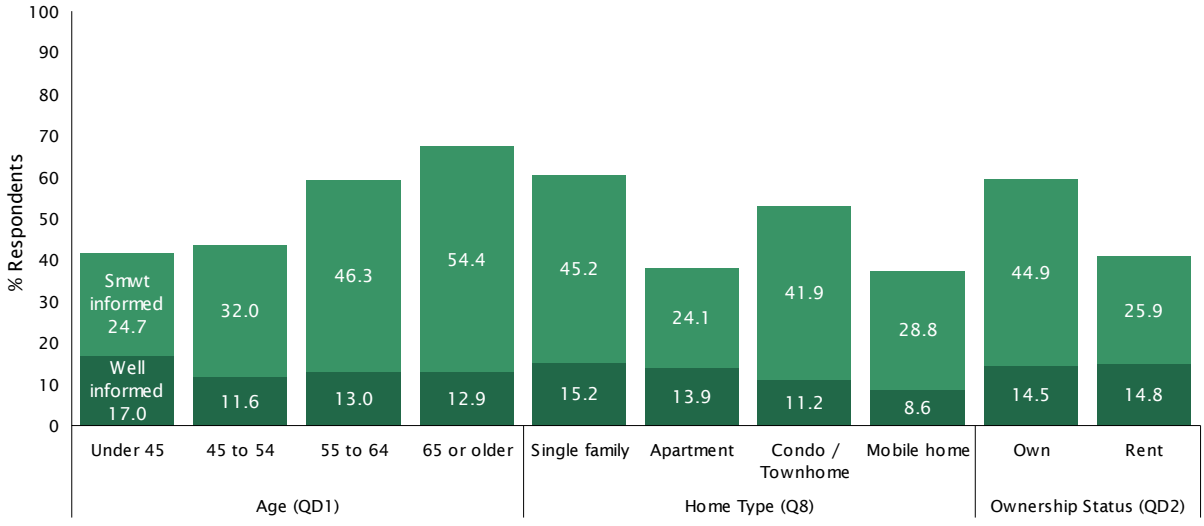


FIGURE 9 HOW INFORMED ABOUT ENERGY-RELATED PROGRAMS BY CUSTOMER CITY & HOUSEHOLD INCOME

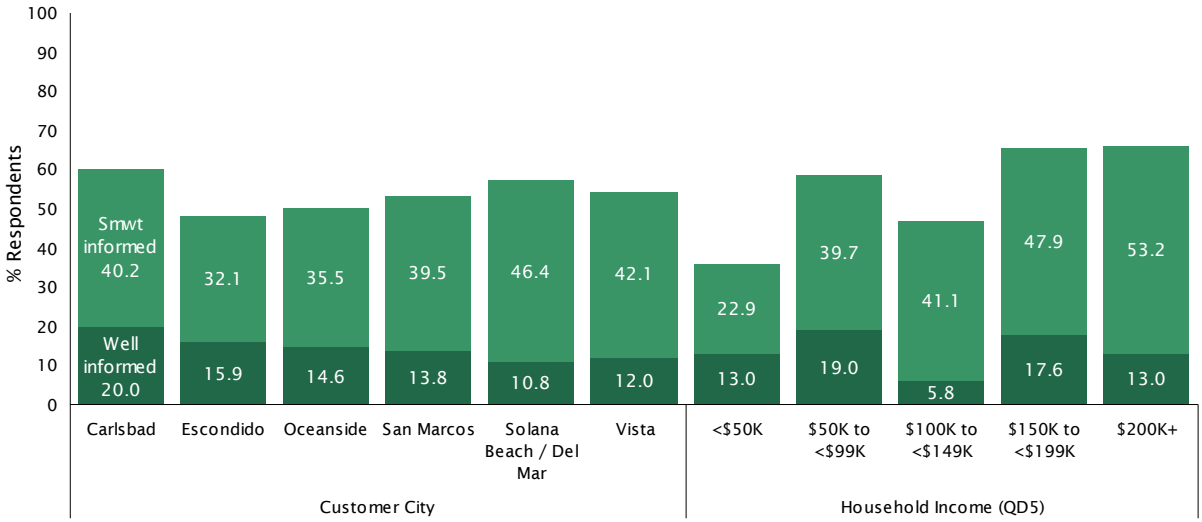
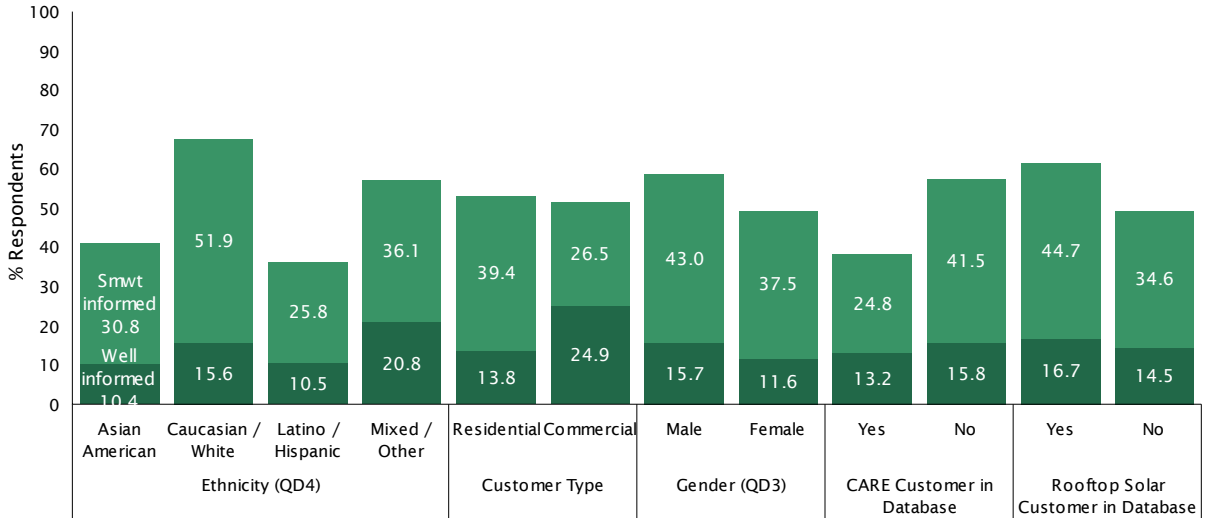


FIGURE 10 HOW INFORMED ABOUT ENERGY-RELATED PROGRAMS BY ETHNICITY, CUSTOMER TYPE, GENDER, CARE CUSTOMER IN DATABASE & ROOFTOP SOLAR CUSTOMER IN DATABASE



AWARENESS OF SPECIFIC PROGRAMS Regardless of how informed customers felt about the availability of energy improvement programs in Question 8, Question 9 presented respondents with a list of 10 specific programs and asked if they were aware of each program prior to taking the survey.[2] Most CEA customers indicated they were aware of discounted rates for energy used during off-peak hours (79%), discounted rates for low-income households (67%), and rebates/incentives to install solar panels and battery storage (61%) prior to taking the survey (see Figure 11). Approximately four-in-ten customers were aware of rebates/incentives to make energy-efficiency improvements to your home/business, such as improved insulation and windows (46%) and to install energy efficient lighting, appliances, and equipment (44%), discounted

2. Programs that only apply to single family homes, condominiums, or townhomes were only asked of customers residing in these types of homes. Similarly, programs that do not apply to commercial customers were not asked of this group.

rates for those who have medical equipment in their home (44%), and free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills (44%).

When compared to the other programs tested, CEA customers were less aware of rebates/incentives to install electric vehicle charging equipment (35%), rebates and incentives to replace gas appliances and equipment with electric appliances and equipment (31%), and programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere (23%). Tables 25-30 show how awareness of each program varied among CEA customer subgroups, with the top three programs highlighted in green for each subgroup.

Question 9 *As I read the following list of programs that may be available in your community, please indicate if you were aware of the program's existence prior to taking the survey.*

FIGURE 11 AWARENESS OF PROGRAMS

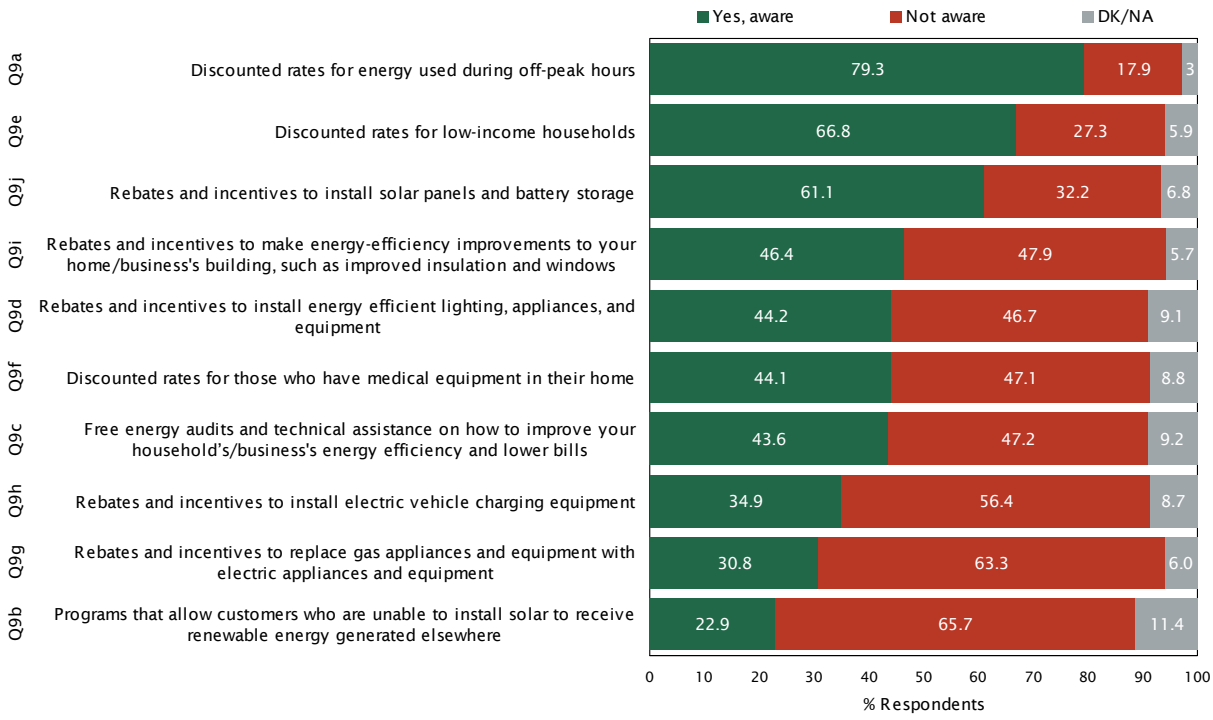


TABLE 25 AWARENESS OF PROGRAMS BY AGE (SHOWING % AWARE)

	Age (QD1)			
	Under 45	45 to 54	55 to 64	65 or older
Discounted rates for energy used during off-peak hours	80.3	79.1	85.1	82.1
Discounted rates for low-income households	73.0	67.9	69.1	67.9
Rebates and incentives to install solar panels and battery storage	55.9	54.8	65.3	64.5
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	32.8	44.8	42.8	57.8
Rebates and incentives to install energy efficient lighting, appliances, and equipment	46.4	23.2	53.3	49.6
Discounted rates for those who have medical equipment in their home	32.5	26.2	57.5	53.7
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	28.4	37.1	54.7	51.0
Rebates and incentives to install electric vehicle charging equipment	58.0	21.9	42.2	35.5
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	41.7	21.6	28.0	32.4
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	40.8	15.7	31.3	17.3

TABLE 26 AWARENESS OF PROGRAMS BY CUSTOMER CITY (SHOWING % AWARE)

	Customer City					
	Carlsbad	Escondido	Oceanside	San Marcos	Solana Beach / Del Mar	Vista
Discounted rates for energy used during off-peak hours	81.7	75.5	85.3	75.4	77.4	75.8
Discounted rates for low-income households	64.8	69.9	61.1	71.3	55.9	72.4
Rebates and incentives to install solar panels and battery storage	67.1	71.3	60.6	56.3	73.1	40.1
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	46.5	44.9	43.7	59.8	57.7	36.1
Rebates and incentives to install energy efficient lighting, appliances, and equipment	48.7	49.5	42.2	48.2	53.5	29.5
Discounted rates for those who have medical equipment in their home	43.7	43.2	43.1	43.1	36.9	49.3
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	53.3	41.7	44.4	44.5	72.7	26.2
Rebates and incentives to install electric vehicle charging equipment	28.0	47.9	34.6	35.5	52.1	20.8
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	23.0	35.9	29.1	35.2	55.0	25.7
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	28.3	23.7	22.0	27.7	21.6	13.4

TABLE 27 AWARENESS OF PROGRAMS BY HOME TYPE & OWNERSHIP STATUS (SHOWING % AWARE)

	Home Type (Q8)				Ownership Status (QD2)	
	Single family	Apartment	Condo/ Townhome	Mobile home	Own	Rent
Discounted rates for energy used during off-peak hours	89.0	65.7	82.5	25.0	85.6	70.5
Discounted rates for low-income households	68.7	67.7	61.8	82.1	70.6	62.2
Rebates and incentives to install solar panels and battery storage	68.2	0.0	45.4	0.0	64.2	44.9
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	49.2	0.0	48.8	0.0	47.6	37.0
Rebates and incentives to install energy efficient lighting, appliances, and equipment	47.7	23.4	48.1	20.3	49.5	30.6
Discounted rates for those who have medical equipment in their home	43.1	41.6	49.8	65.0	45.4	41.4
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	47.3	31.9	46.1	11.7	47.9	33.8
Rebates and incentives to install electric vehicle charging equipment	37.9	0.0	31.2	0.0	36.0	27.0
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	31.1	0.0	29.8	0.0	31.7	22.4
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	24.3	18.3	26.5	13.2	24.0	19.1

TABLE 28 AWARENESS OF PROGRAMS BY HOUSEHOLD INCOME (SHOWING % AWARE)

	Household Income (QD5)				
	<$50K	$50K to <$99K	$100K to <$149K	$150K to <$199K	$200K+
Discounted rates for energy used during off-peak hours	66.7	79.4	88.3	94.1	87.2
Discounted rates for low-income households	66.2	72.7	63.0	62.7	69.4
Rebates and incentives to install solar panels and battery storage	52.6	59.4	68.6	67.7	65.3
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	42.4	30.2	56.9	63.5	49.4
Rebates and incentives to install energy efficient lighting, appliances, and equipment	27.5	42.1	53.1	56.3	53.4
Discounted rates for those who have medical equipment in their home	36.1	51.2	39.4	44.9	46.7
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	29.8	40.3	49.8	48.3	49.1
Rebates and incentives to install electric vehicle charging equipment	28.3	34.5	32.9	30.5	42.0
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	16.9	25.5	38.3	28.0	38.6
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	15.5	19.0	34.3	28.5	21.7

TABLE 29 AWARENESS OF PROGRAMS BY ETHNICITY & CUSTOMER TYPE (SHOWING % AWARE)

	Ethnicity (QD4)				Customer Type	
	Asian American	Caucasian / White	Latino / Hispanic	Mixed / Other	Residential	Commercial
Discounted rates for energy used during off-peak hours	96.0	86.9	73.1	76.5	80.0	74.3
Discounted rates for low-income households	55.7	71.9	60.6	69.1	66.8	0.0
Rebates and incentives to install solar panels and battery storage	39.2	70.7	49.2	47.2	62.5	53.5
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	34.6	54.1	35.1	44.2	49.1	32.1
Rebates and incentives to install energy efficient lighting, appliances, and equipment	36.6	51.5	36.5	34.0	43.1	51.7
Discounted rates for those who have medical equipment in their home	40.1	53.5	27.8	54.2	44.1	0.0
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	51.3	51.5	23.1	47.2	42.6	50.5
Rebates and incentives to install electric vehicle charging equipment	34.6	36.7	24.8	35.3	36.2	28.0
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	35.4	30.3	30.2	15.7	30.7	30.8
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	16.5	24.6	18.9	10.3	22.9	22.8

TABLE 30 AWARENESS OF PROGRAMS BY GENDER, CARE CUSTOMER IN DATABASE & ROOFTOP SOLAR CUSTOMER IN DATABASE (SHOWING % AWARE)

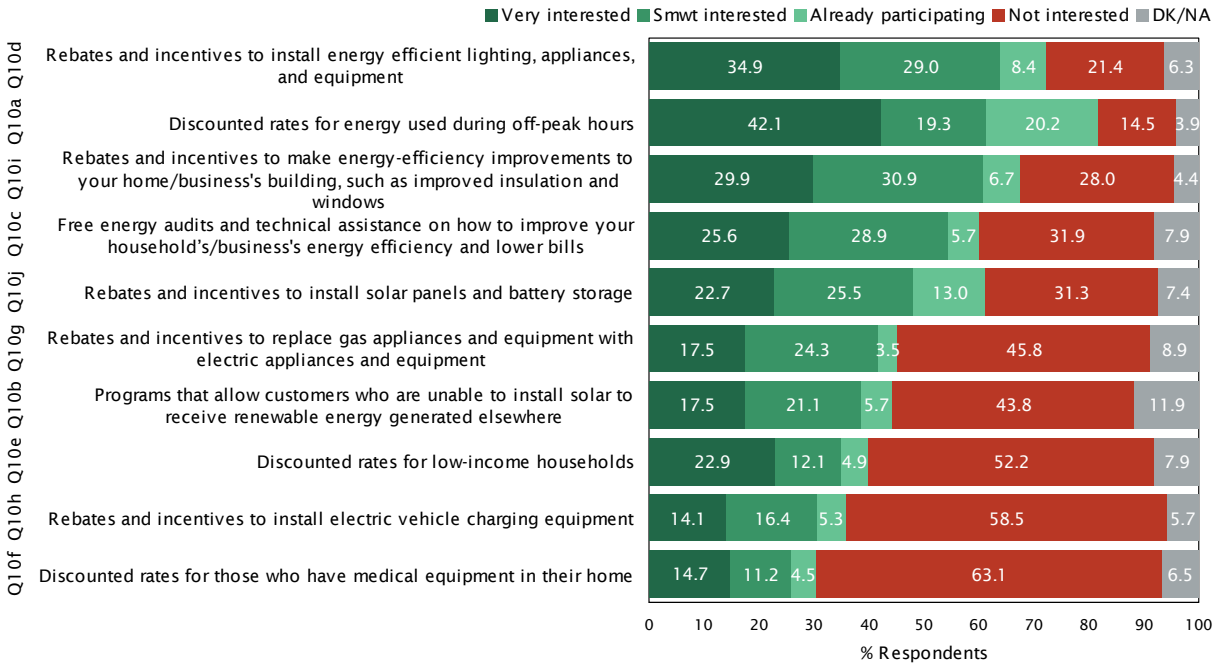
	Gender (QD3)		CARE Customer in Database		Rooftop Solar Customer in Database	
	Male	Female	Yes	No	Yes	No
Discounted rates for energy used during off-peak hours	81.7	77.8	71.0	81.7	86.2	76.1
Discounted rates for low-income households	64.8	68.8	76.6	63.3	62.8	69.0
Rebates and incentives to install solar panels and battery storage	64.1	59.7	49.2	63.1	76.9	51.4
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	50.1	44.9	35.0	48.4	51.9	43.0
Rebates and incentives to install energy efficient lighting, appliances, and equipment	44.2	42.2	29.0	48.7	45.0	43.8
Discounted rates for those who have medical equipment in their home	41.3	46.9	46.3	43.3	35.1	49.0
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	40.3	44.5	30.2	47.6	49.9	40.8
Rebates and incentives to install electric vehicle charging equipment	38.1	30.2	17.1	38.0	37.1	33.6
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	27.8	31.4	19.7	32.7	27.1	33.0
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	24.3	18.8	12.0	26.1	20.5	24.0

INTEREST IN PROGRAMS Irrespective of their prior awareness of the programs, all respondents were next asked how *interested* their household or business would be in participating in the same list of programs. As shown in Figure 12 below, CEA customers expressed the greatest interest in rebates and incentives to install energy efficient lighting, appliances, and equipment (64% very or somewhat interested), discounted rates for energy used during off-peak hours (61%), and rebates and incentives to make energy-efficient improvements to their home/business's building, such as improved insulation and windows (61%). Free energy audits and technical assistance on how to improve their household's/business's energy efficiency and lower bills (55%) and rebates and incentives to install solar panels and batter storage (48%) were also popular with many customers.

At the other end of the spectrum, programs that had a narrow target audience or purpose tended to garner less interest, including discounted rates for those who have medical equipment in their home (26%), rebates and incentives to install electric vehicle charging equipment (31%), and discounted rates for low-income households (35%).

Question 10 *For the same list of programs, please indicate how interested your household/business would be in participating in the program. If your household/business is already participating in the program, please indicate so.*

FIGURE 12 INTEREST IN PROGRAMS



Tables 31-36 show how interest in each program varied across subgroups of CEA customers, with the top three programs of interest within each subgroup highlighted in green to ease comparisons.

TABLE 31 INTEREST IN PROGRAMS BY AGE (SHOWING % VERY OR SOMEWHAT INTERESTED)

	Age (QD1)			
	Under 45	45 to 54	55 to 64	65 or older
Rebates and incentives to install energy efficient lighting, appliances, equipment	87.8	77.6	65.4	58.2
Discounted rates for energy used during off-peak hours	79.5	71.2	51.7	54.5
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	90.8	69.3	68.4	52.6
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	70.0	58.8	60.6	59.0
Rebates and incentives to install solar panels and battery storage	53.8	68.5	60.9	37.9
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	42.6	52.4	48.3	47.2
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	55.0	32.5	28.6	42.7
Discounted rates for low-income households	64.3	34.8	19.1	36.9
Rebates and incentives to install electric vehicle charging equipment	35.3	61.3	28.6	19.9
Discounted rates for those who have medical equipment in their home	28.7	36.5	17.9	33.2

TABLE 32 INTEREST IN PROGRAMS BY CUSTOMER CITY (SHOWING % VERY OR SOMEWHAT INTERESTED

	Customer City					
	Carlsbad	Escondido	Oceanside	San Marcos	Solana Beach / Del Mar	Vista
Rebates and incentives to install energy efficient lighting, appliances, equipment	72.6	65.7	58.9	54.8	65.1	67.9
Discounted rates for energy used during off-peak hours	59.8	62.7	60.9	62.7	62.9	61.0
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	65.6	58.9	59.5	61.8	60.6	58.4
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	65.3	50.4	53.1	46.7	53.6	57.1
Rebates and incentives to install solar panels and battery storage	44.8	48.6	48.5	59.0	29.5	45.6
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	45.1	39.1	41.9	38.2	40.6	44.6
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	42.2	40.2	39.8	33.0	32.0	37.2
Discounted rates for low-income households	33.4	43.1	27.8	29.7	6.1	49.1
Rebates and incentives to install electric vehicle charging equipment	33.6	25.1	26.2	46.7	18.2	29.4
Discounted rates for those who have medical equipment in their home	21.4	34.1	21.9	21.7	6.1	34.7

TABLE 33 INTEREST IN PROGRAMS BY HOME TYPE & OWNERSHIP STATUS (SHOWING % VERY OR SOMEWHAT INTERESTED

	Home Type (Q8)				Ownership Status (QD2)	
	Single family	Apartment	Condo/ Townhome	Mobile home	Own	Rent
Rebates and incentives to install energy efficient lighting, appliances, equipment	62.6	81.0	59.9	64.6	62.9	68.0
Discounted rates for energy used during off-peak hours	56.3	85.4	59.2	63.9	55.3	74.6
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	64.0	0.0	52.3	0.0	62.8	53.9
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	52.2	52.2	58.5	63.9	54.3	55.7
Rebates and incentives to install solar panels and battery storage	53.1	0.0	34.2	0.0	50.9	41.2
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	47.2	0.0	34.7	0.0	46.7	26.9
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	24.5	46.0	48.5	60.0	33.6	51.4
Discounted rates for low-income households	25.5	62.7	31.9	56.1	28.5	55.5
Rebates and incentives to install electric vehicle charging equipment	31.6	0.0	27.1	0.0	30.5	30.8
Discounted rates for those who have medical equipment in their home	22.5	36.9	19.0	52.2	22.4	35.7

Table 34 Interest in Programs by Household Income (Showing % Very or Somewhat Interested

	Household Income (QD5)				
	<$50K	$50K to <$99K	$100K to <$149K	$150K to <$199K	$200K+
Rebates and incentives to install energy efficient lighting, appliances, equipment	73.1	71.5	61.6	66.4	61.8
Discounted rates for energy used during off-peak hours	80.8	69.4	58.6	57.7	47.0
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	76.7	65.3	55.4	56.5	62.9
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	69.1	62.9	52.2	51.9	40.4
Rebates and incentives to install solar panels and battery storage	52.1	40.1	45.6	61.1	61.1
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	56.4	45.7	40.8	51.5	37.9
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	40.5	44.8	44.5	37.1	15.6
Discounted rates for low-income households	71.6	58.7	15.3	18.0	14.0
Rebates and incentives to install electric vehicle charging equipment	28.7	21.8	35.1	39.9	39.2
Discounted rates for those who have medical equipment in their home	56.0	27.1	17.9	19.9	9.8

Table 35 Interest in Programs by Ethnicity & Customer Type (Showing % Very or Somewhat Interested

	Ethnicity (QD4)				Customer Type	
	Asian American	Caucasian / White	Latino / Hispanic	Mixed / Other	Residential	Commercial
Rebates and incentives to install energy efficient lighting, appliances, equipment	72.2	59.5	79.6	55.3	65.2	55.1
Discounted rates for energy used during off-peak hours	48.7	54.7	79.6	60.6	62.2	56.1
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	78.0	52.9	73.0	56.2	61.1	59.5
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	60.5	54.1	59.6	56.3	53.8	58.8
Rebates and incentives to install solar panels and battery storage	69.8	44.8	58.6	35.6	48.3	47.5
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	59.9	40.7	51.8	28.6	44.1	29.4
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	60.9	33.3	39.3	26.6	34.8	64.8
Discounted rates for low-income households	36.6	24.8	56.7	41.6	35.0	0.0
Rebates and incentives to install electric vehicle charging equipment	33.7	23.7	47.7	32.2	30.5	30.8
Discounted rates for those who have medical equipment in their home	19.0	24.9	31.6	38.4	25.9	0.0

Table 36 Interest in Programs by Gender, CARE Customer in Database & Rooftop Solar Customer in Database (Showing % Very or Somewhat Interested

	Gender (QD3)		CARE Customer in Database		Rooftop Solar Customer in Database	
	Male	Female	Yes	No	Yes	No
Rebates and incentives to install energy efficient lighting, appliances, equipment	71.2	60.8	76.0	60.4	65.1	63.4
Discounted rates for energy used during off-peak hours	63.7	61.9	80.6	55.8	55.4	64.2
Rebates and incentives to make energy-efficiency improvements to your home/business's building, such as improved insulation and windows	63.6	58.7	65.5	60.0	58.5	62.2
Free energy audits and technical assistance on how to improve your household's/business's energy efficiency and lower bills	55.9	54.1	58.4	53.3	49.9	56.6
Rebates and incentives to install solar panels and battery storage	57.3	37.6	43.4	49.0	52.5	45.6
Rebates and incentives to replace gas appliances and equipment with electric appliances and equipment	46.8	38.8	60.4	38.5	50.6	36.3
Programs that allow customers who are unable to install solar to receive renewable energy generated elsewhere	33.1	38.2	42.1	37.5	14.2	49.7
Discounted rates for low-income households	37.3	36.7	64.9	24.5	26.3	39.8
Rebates and incentives to install electric vehicle charging equipment	39.5	17.7	40.4	28.8	33.8	28.5
Discounted rates for those who have medical equipment in their home	34.5	18.6	42.1	20.2	23.1	27.5

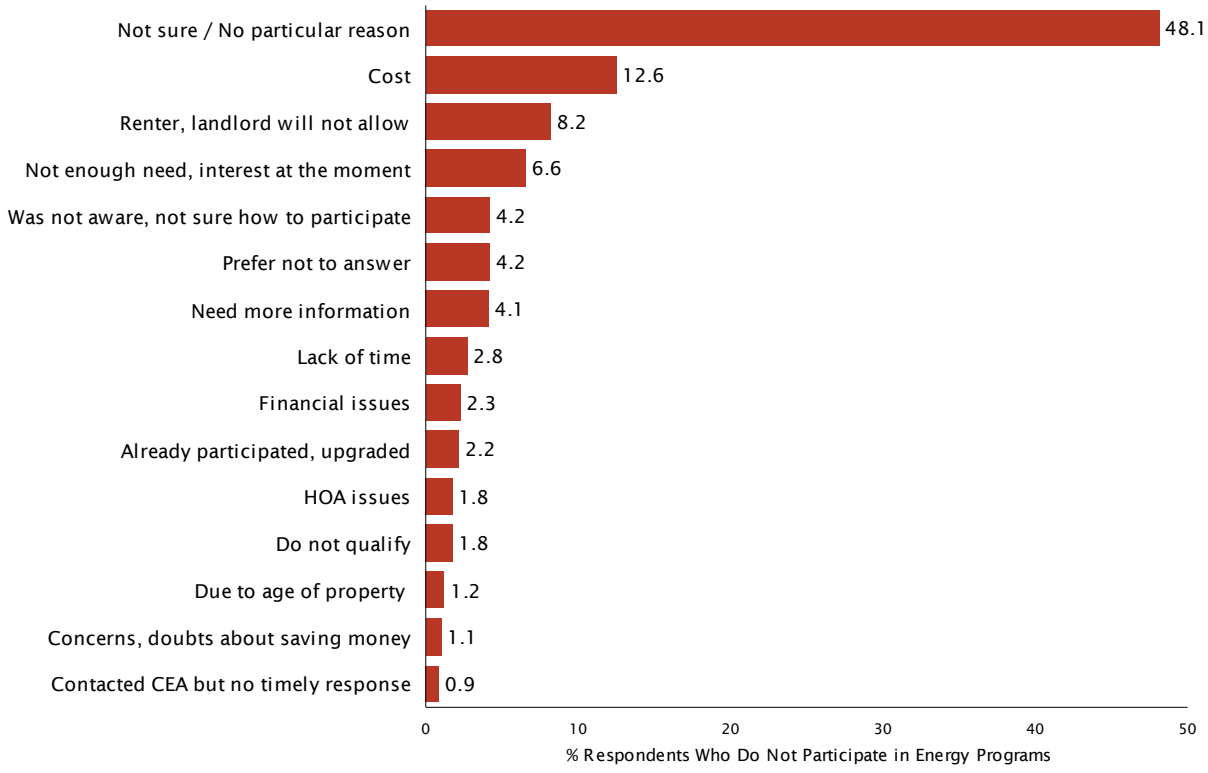
REASONS FOR NOT PARTICIPATING IN PROGRAMS

Respondents who indicated they were previously aware of a program (Question 9) and were interested in the program, but had yet to participate (Question 10), were subsequently asked if there was a particular obstacle or reason keeping them from participating. Question 11 was presented in an open-ended manner so that respondents could cite any obstacle or reason that came to mind without being prompted by or constrained to a particular list of options. True North later reviewed the verbatim respondents and grouped them into the categories shown in Figure 13 below.

Nearly half of respondents (48%) who received Question 11 indicated they weren't sure or there was no particular reason for not participating in the program(s) to date. Among the specific reasons offered, cost was the most common (13%), followed by the fact they are a renter and the landlord would not allow their participation (8%), and they did not have enough need/interest at the moment (7%).

Question 11 *You mentioned your household/business would be interested in participating in certain energy programs, but has yet to do so. Is there a particular obstacle or reason keeping you from participating?*

FIGURE 13 REASON, OBSTACLE FOR NOT PARTICIPATING IN ENERGY PROGRAM



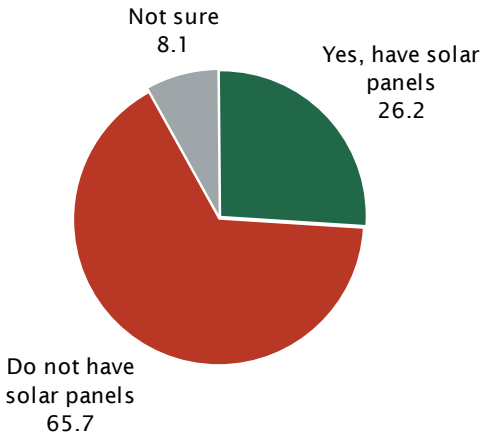
COMMUNITY SOLAR PANELS & EV CHARGING STATIONS

CEA customers who reside in apartments or mobile homes are often limited in their ability to participate in clean-energy solutions like solar panels, battery storage, and EV charging stations. The decision to make these energy improvements is left to those who own the apartment or complex. Accord-

ingly, the survey asked respondents who live in an apartment or mobile home whether their community has solar panels (Question 12) and an EV charging station(s) (Question 13). Approximately one-quarter of respondents (26%) who fit this housing category indicated their community has solar panels (Figure 14), whereas just 8% reported that their community has one or more EV charging stations (Figure 15).

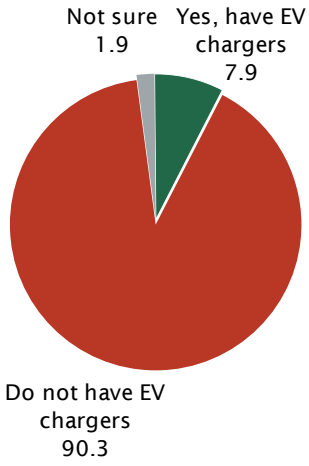
Question 12 *Does your <<apartment | mobile home>> community have solar panels?*

FIGURE 14 SOLAR PANELS AT APARTMENT/MOBILE HOME COMMUNITY



Question 13 *Does your <<apartment | mobile home>> community have electric vehicle chargers?*

FIGURE 15 ELECTRIC VEHICLE CHARGERS AVAILABLE AT APARTMENT/MOBILE HOME COMMUNITY



COMMUNICATION

The final substantive questions of the survey focused on CEA customers' communication habits and preferences, their prior awareness of their status as a CEA customer, as well as any final suggestions they may have for CEA regarding ways to better serve their needs.

PRIMARY INFORMATION SOURCE FOR LOCAL EVENTS & PROGRAMS

When asked to describe their *primary* source for information about local events and programs, the Internet in general (not including Social Media) was the most common source (43%), followed by television (20%), social media (14%), and newspapers (9%). Figures 17-20 show how CEA customers' primary information sources varied by subgroup.

Question 14 *Which of the following would you say is your primary source for information about local events and programs?*

FIGURE 16 PRIMARY SOURCE OF INFORMATION

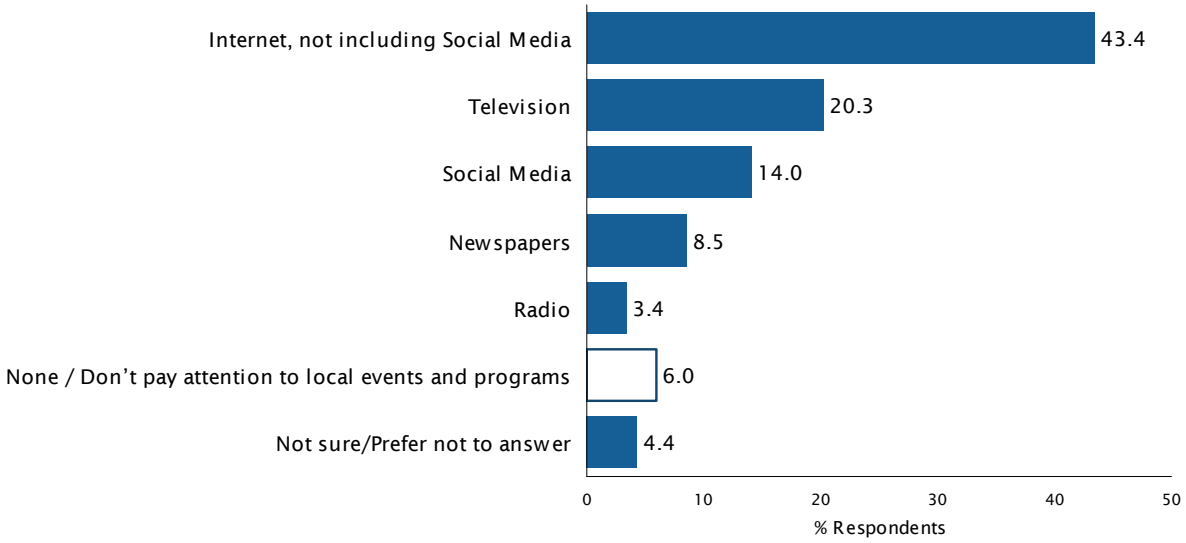


FIGURE 17 PRIMARY SOURCE OF INFORMATION BY HOME TYPE & AGE BY THOSE WHO PROVIDED OPINION

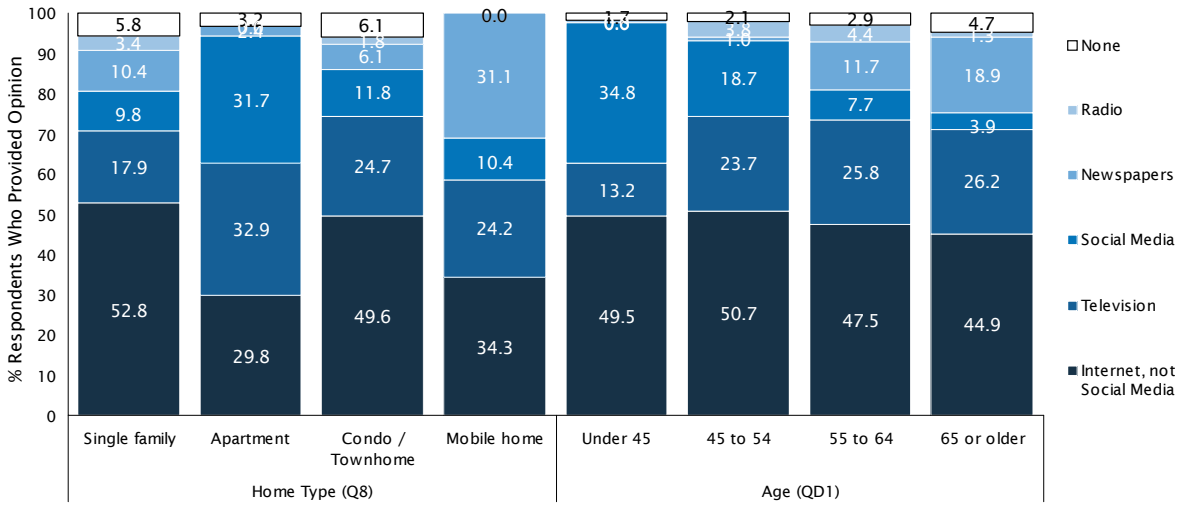


FIGURE 18 PRIMARY SOURCE OF INFORMATION HOW INFORMED ABOUT ENERGY RELATED IMPROVEMENTS & CUSTOMER CITY BY THOSE WHO PROVIDED OPINION

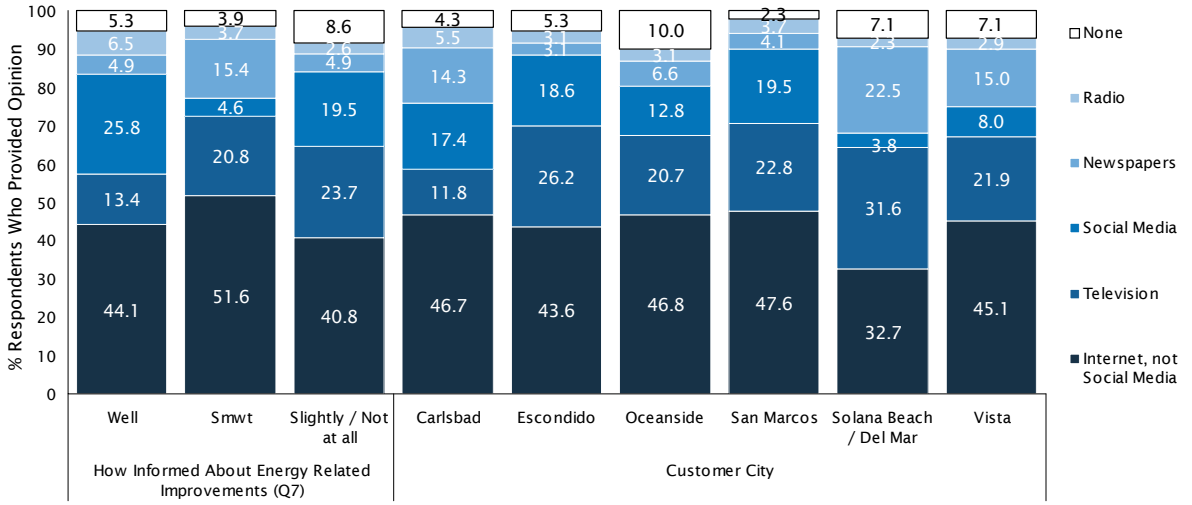


FIGURE 19 PRIMARY SOURCE OF INFORMATION ETHNICITY & HOUSEHOLD INCOME BY THOSE WHO PROVIDED OPINION

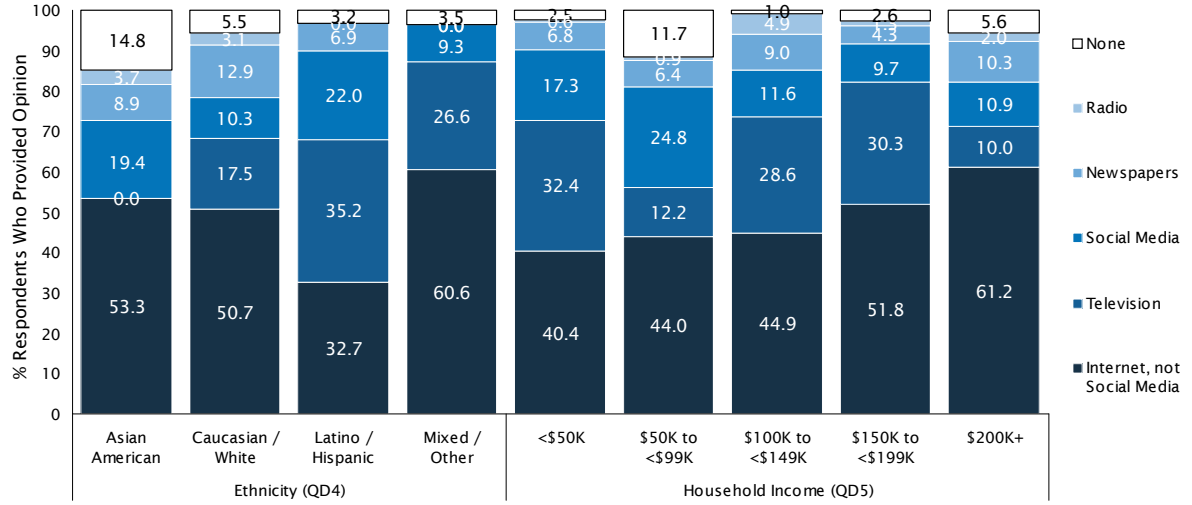
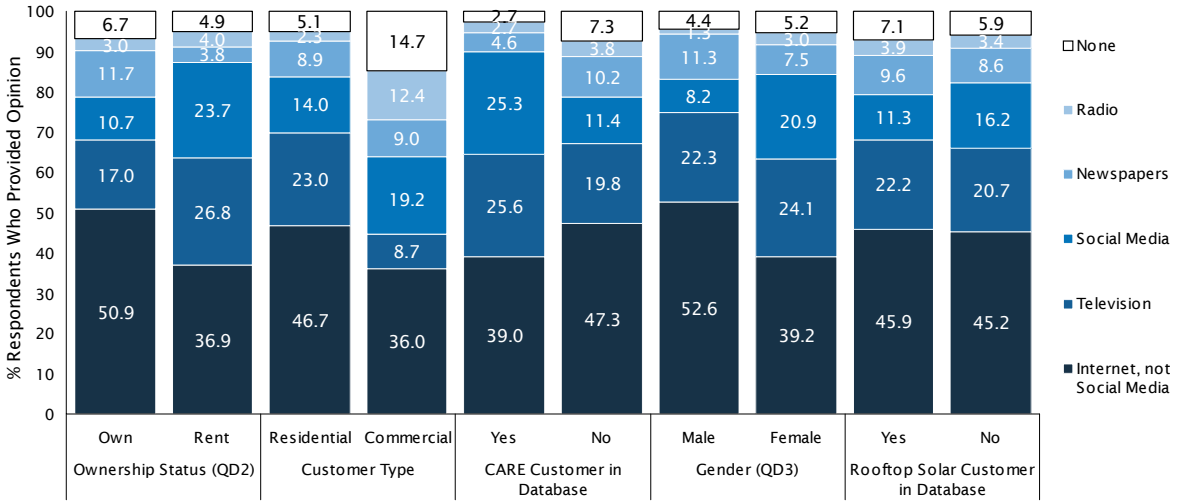


FIGURE 20 PRIMARY SOURCE OF INFORMATION BY OWNERSHIP STATUS, CUSTOMER TYPE, CARE CUSTOMER IN DATABASE, GENDER & ROOFTOP SOLAR CUSTOMER IN DATABASE THOSE WHO PROVIDED OPINION

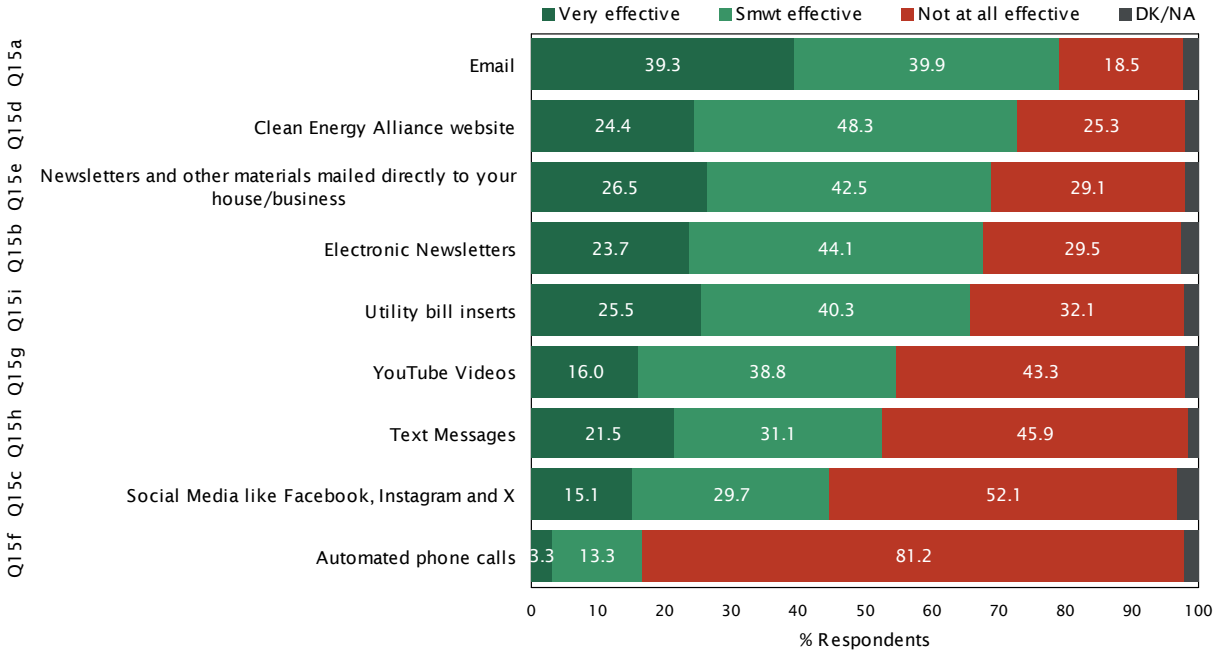


EFFECTIVE COMMUNICATION METHODS

To help CEA identify the most effective means of communicating with customers, it is helpful to understand which methods of communication they prefer. Accordingly, for each of the methods shown to the left of Figure 21, respondents were simply asked to indicate if it would be an effective way for CEA to communicate with them.

Question 15 *As I read the following ways that the Clean Energy Alliance can communicate with customers, I'd like to know if you think they would be a very effective, somewhat effective, or not at all effective way for communicating with you/your business.*

FIGURE 21 EFFECTIVENESS OF COMMUNICATION METHODS



Overall, CEA customers ranked email (79% very or somewhat effective), the Clean Energy Alliance website (73%), direct mail (69%), electronic newsletters (68%), and utility bill inserts (66%) as the most effective methods for CEA to communicate with them. Preferred communication methods varied considerably across CEA subgroups as shown in tables 37-42.

Table 37 Effectiveness of Communication Methods by Age (Showing % Very Effective)

	Age (QD1)			
	Under 45	45 to 54	55 to 64	65 or older
Email	56.6	53.8	32.1	39.8
Newsletters, other materials mailed directly to your house/business	24.7	32.8	27.9	27.5
Utility bill inserts	28.9	23.3	22.9	29.8
Clean Energy Alliance website	32.7	35.7	19.5	24.4
Electronic Newsletters	26.4	28.6	30.1	33.0
Text Messages	33.4	30.9	15.2	18.7
YouTube Videos	27.5	34.8	10.7	8.7
Social Media like Facebook, Instagram and X	28.6	27.1	14.2	6.1
Automated phone calls	4.9	12.1	0.0	0.0

Table 38 Effectiveness of Communication Methods by Customer City (Showing % Very Effective)

	Customer City					
	Carlsbad	Escondido	Oceanside	San Marcos	Solana Beach / Del Mar	Vista
Email	31.6	45.2	36.3	48.4	29.5	39.5
Newsletters, other materials mailed directly to your house/business	27.2	28.2	26.1	18.7	25.7	31.2
Utility bill inserts	24.0	35.8	25.8	23.0	16.4	17.9
Clean Energy Alliance website	25.0	29.6	22.6	21.3	24.9	22.8
Electronic Newsletters	29.4	21.8	19.4	21.4	28.6	27.2
Text Messages	13.2	34.1	18.4	10.2	4.6	33.8
YouTube Videos	12.0	14.5	19.5	23.3	4.7	13.1
Social Media like Facebook, Instagram and X	20.0	9.4	18.5	7.8	7.0	20.0
Automated phone calls	3.3	6.0	1.0	2.2	0.0	5.1

Table 39 Effectiveness of Communication Methods by Home Type & Ownership Status (Showing % Very Effective)

	Home Type (Q8)				Ownership Status (QD2)	
	Single family	Apartment	Condo/ Townhome	Mobile home	Own	Rent
Email	41.7	29.9	55.6	36.7	43.6	33.8
Newsletters, other materials mailed directly to your house/business	24.2	36.0	30.4	53.2	27.0	27.0
Utility bill inserts	25.9	34.1	15.5	44.3	23.1	27.3
Clean Energy Alliance website	24.0	17.3	32.1	54.0	26.1	19.3
Electronic Newsletters	28.2	17.3	28.5	8.6	27.8	15.5
Text Messages	16.9	31.9	25.6	31.1	19.1	26.4
YouTube Videos	16.0	17.1	21.3	6.5	16.0	17.8
Social Media like Facebook, Instagram and X	12.8	22.0	13.5	31.1	13.5	19.5
Automated phone calls	1.1	10.3	1.8	0.0	1.0	8.8

Table 40 Effectiveness of Communication Methods by Household Income (Showing % Very Effective)

	Household Income (QD5)				
	<$50K	$50K to <$99K	$100K to <$149K	$150K to <$199K	$200K+
Email	42.1	45.4	45.3	42.9	40.5
Newsletters, other materials mailed directly to your house/business	39.6	15.2	26.9	19.4	29.5
Utility bill inserts	39.7	22.8	23.7	35.7	6.7
Clean Energy Alliance website	37.1	30.8	17.1	14.0	23.7
Electronic Newsletters	26.0	25.8	18.7	27.5	31.6
Text Messages	42.7	23.2	21.4	10.1	17.1
YouTube Videos	23.9	23.4	16.5	8.7	14.0
Social Media like Facebook, Instagram and X	24.6	28.4	8.4	6.9	11.2
Automated phone calls	5.1	6.6	0.0	1.3	0.0

TABLE 41 EFFECTIVENESS OF COMMUNICATION METHODS BY ETHNICITY & CUSTOMER TYPE (SHOWING % VERY EFFECTIVE)

	Ethnicity (QD4)				Customer Type	
	Asian American	Caucasian / White	Latino / Hispanic	Mixed / Other	Residential	Commercial
Email	52.5	41.2	47.4	35.9	41.4	25.0
Newsletters, other materials mailed directly to your house/business	24.3	27.8	31.6	23.9	27.9	16.6
Utility bill inserts	20.7	24.3	31.1	30.5	26.4	19.2
Clean Energy Alliance website	23.4	18.0	34.8	25.8	25.7	15.4
Electronic Newsletters	22.2	26.2	35.3	19.2	25.9	8.1
Text Messages	16.0	15.9	38.7	23.9	22.2	16.6
YouTube Videos	16.9	10.5	28.6	20.0	16.5	12.7
Social Media like Facebook, Instagram and X	8.1	9.6	28.0	13.4	14.9	16.7
Automated phone calls	0.0	0.7	5.1	10.5	2.8	6.8

TABLE 42 EFFECTIVENESS OF COMMUNICATION METHODS BY GENDER, CARE CUSTOMER IN DATABASE & ROOFTOP SOLAR CUSTOMER IN DATABASE (SHOWING % VERY EFFECTIVE)

	Gender (QD3)		CARE Customer		Rooftop Solar Customer	
	Male	Female	Yes	No	Yes	No
Email	42.5	39.6	48.4	36.7	41.3	38.4
Newsletters, other materials mailed directly to your house/business	25.6	30.2	42.7	21.7	22.5	28.3
Utility bill inserts	24.6	26.5	34.6	22.8	23.2	26.6
Clean Energy Alliance website	26.6	23.1	43.5	18.8	21.4	25.8
Electronic Newsletters	30.7	23.1	24.8	23.3	32.3	19.7
Text Messages	23.9	21.7	44.9	14.6	15.0	24.5
YouTube Videos	18.8	15.0	24.0	13.7	16.3	15.9
Social Media like Facebook, Instagram and X	15.3	15.1	25.1	12.1	14.8	15.2
Automated phone calls	4.2	1.6	8.7	1.7	1.0	4.3

CLEAN ENERGY ALLIANCE CUSTOMER AWARENESS

Among respondents who opted into the survey, most (78%) were aware prior to taking the survey that the energy their household or business receives is provided by Clean Energy Alliance (Figure 22). Awareness of being a CEA customer generally increased with age and income, and was highest among those living in single family homes and mobile homes, residents/businesses in Carlsbad, Escondido, Solana Beach and Del Mar, residential customers, males, Asians and Caucasians, those who felt somewhat informed about energy-efficiency programs, customers with rooftop solar, and those who own their residence (see figures 23-26).

Question 16 *Prior to taking this survey, were you aware that the energy your household/business uses is provided by the Clean Energy Alliance?*

FIGURE 22 AWARENESS OF CLEAN ENERGY ALLIANCE

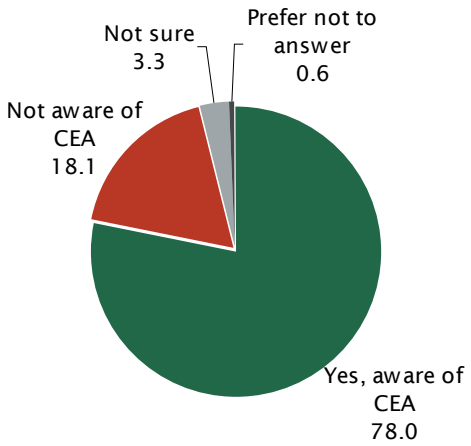


FIGURE 23 AWARENESS OF CLEAN ENERGY ALLIANCE BY AGE & HOME TYPE

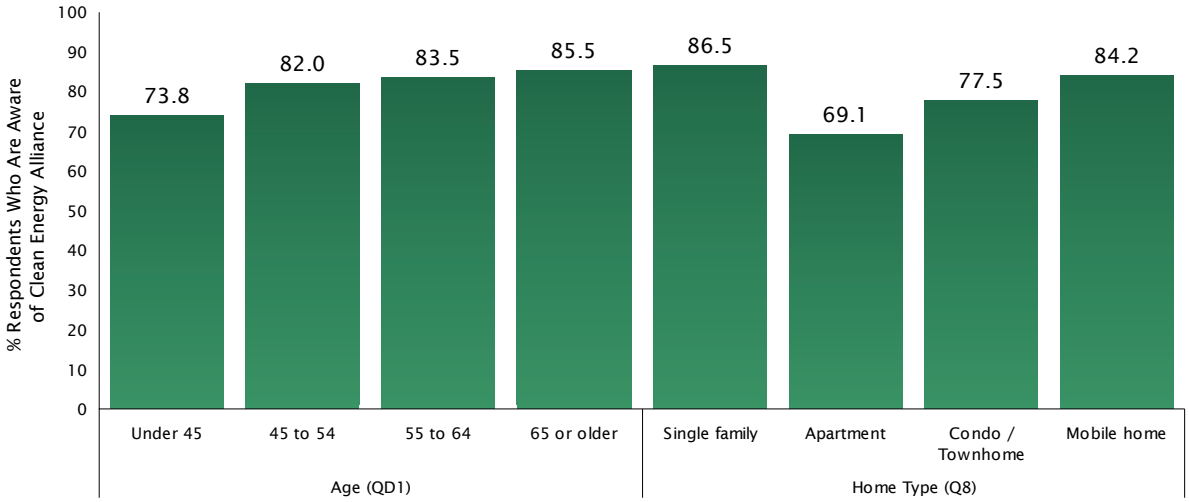


FIGURE 24 AWARENESS OF CLEAN ENERGY ALLIANCE BY CLEAN ENERGY ALLIANCE BY CUSTOMER CITY, CUSTOMER TYPE & GENDER

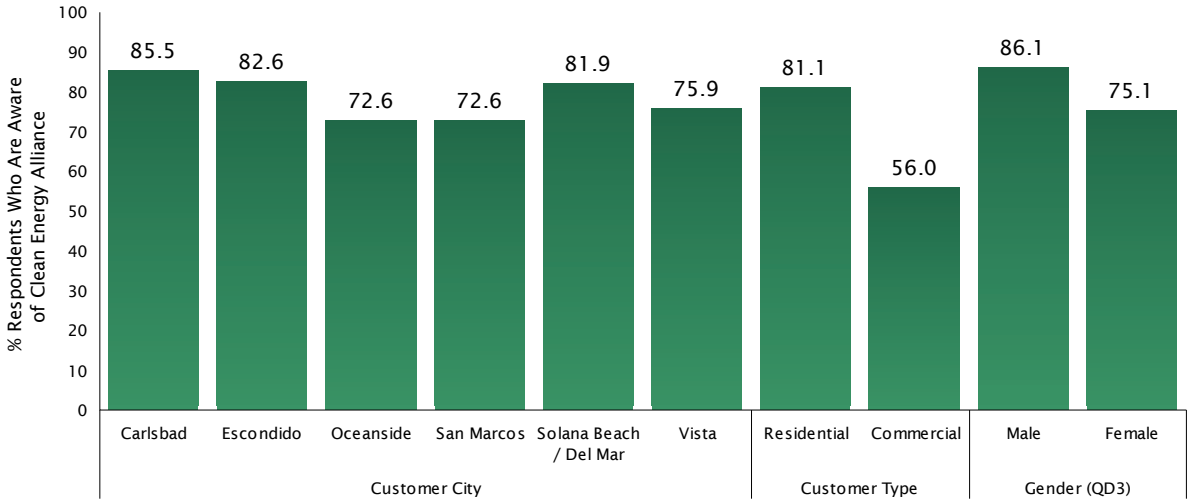


FIGURE 25 AWARENESS OF CLEAN ENERGY ALLIANCE BY CLEAN ENERGY ALLIANCE BY ETHNICITY & HOUSEHOLD INCOME

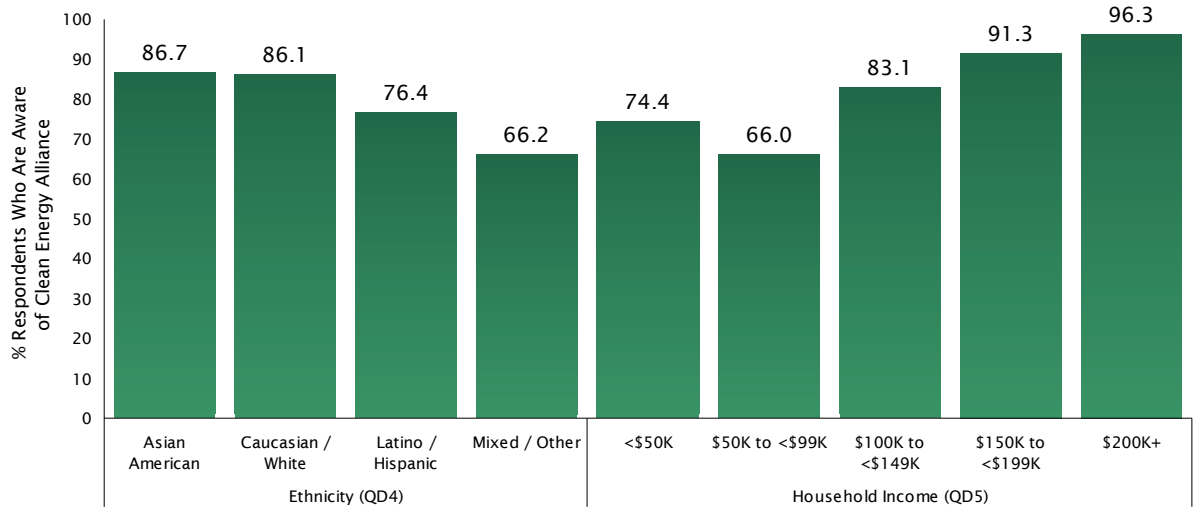
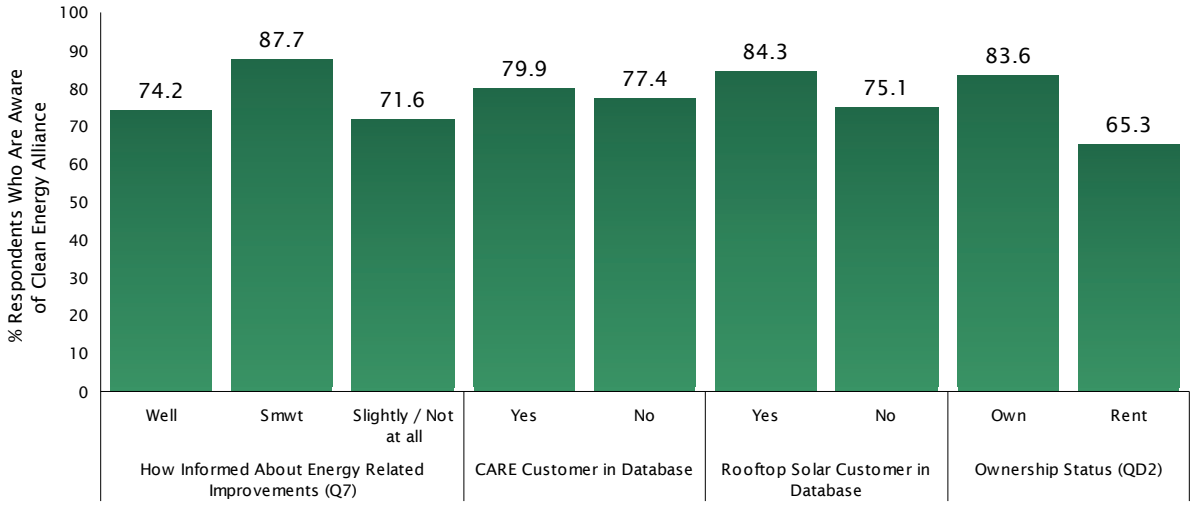


FIGURE 26 AWARENESS OF CLEAN ENERGY ALLIANCE BY CLEAN ENERGY ALLIANCE BY HOW INFORMED ABOUT ENERGY RELATED IMPROVEMENTS, CARE CUSTOMER IN DATABASE, ROOFTOP SOLAR CUSTOMER IN DATABASE & OWNERSHIP STATUS



SUGGESTIONS ON HOW CEA CAN BETTER SERVE The final substantive question of the survey asked customers if they had any suggestions for how Clean Energy Alliance could better serve them/their business. Presented in an open-ended manner, respondents were at liberty to mention any improvement that came to mind without being prompted by or limited to a list of options. True North subsequently reviewed the verbatim comments and grouped them into the categories shown in Figure 27 on the next page. More than half of respondents did not have a suggestion for improvement (48%) or preferred to not answer the question (5%). Among the specific suggestions, reducing rates/costs was the most common (27%), followed by providing more detailed information to customers on topics like rates, bill breakdowns, programs, and savings (8%), and financial assistance for solar panels, energy efficient appliances (2%) or in general (2%).

Question 17 *If the Clean Energy Alliance could do one thing to better serve you/your business, what would that be?*

FIGURE 27 ONE THING CEA COULD DO TO BETTER SERVE CUSTOMERS

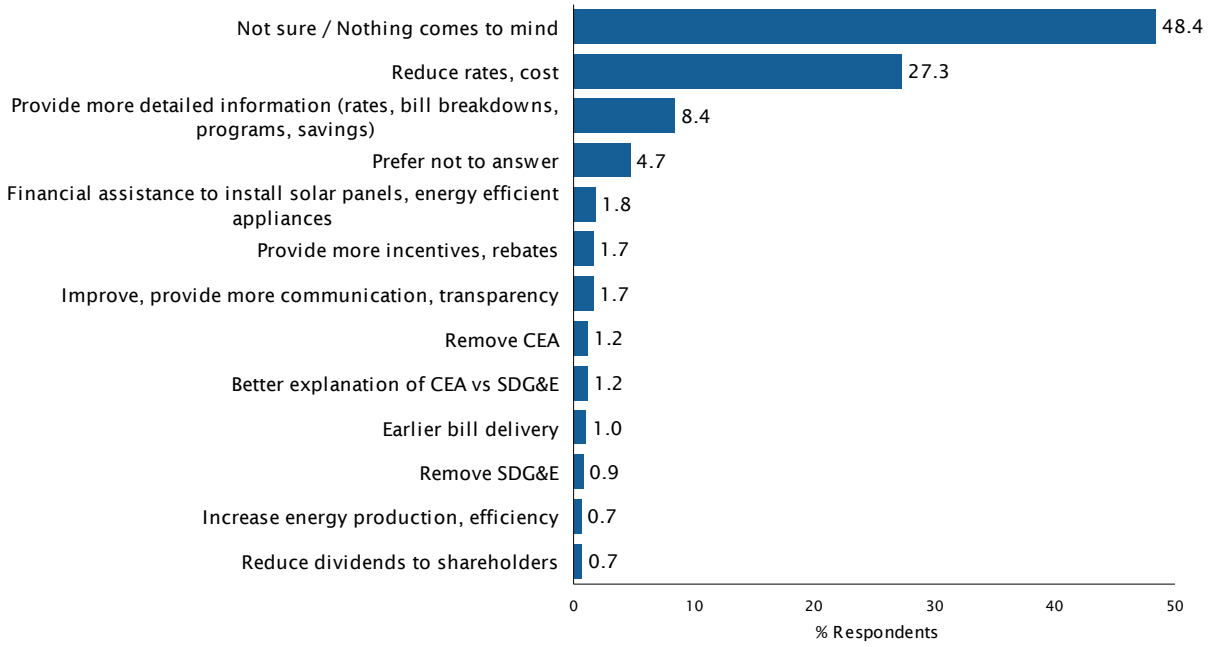


TABLE 43 DEMOGRAPHICS OF SAMPLE

Total Respondents	*509*
Home Type (Q8)	
Single family	50.1
Apartment	15.5
Condo / Townhome	16.9
Mobile home	2.9
Prefer not to answer	14.6
Age (QD1) *Residential only*	
Under 45	15.0
45 to 54	13.2
55 to 64	8.4
65 or older	28.7
Prefer not to answer	34.8
Ownership Status (QD2)	
Own	65.1
Rent	29.9
Prefer not to answer	5.1
Gender (QD3) *Residential only*	
Male	48.3
Female	46.3
Other	1.3
Prefer not to answer	4.1
Ethnicity (QD4) *Residential only*	
Asian American	5.4
Caucasian / White	32.0
Latino / Hispanic	27.2
Mixed / Other	6.0
Prefer not to answer	29.3
Household Income (QD5) *Residential only*	
<$50K	19.3
$50K to <$99K	15.6
$100K to <$149K	14.4
$150K to <$199K	8.9
$200K+	12.3
Prefer not to answer	29.6
Employees at Worksite (QD6) *Commercial only*	
0	5.8
1 to 2	22.2
3 to 5	21.7
6 to 10	13.2
More than 10	31.9
Prefer not to answer	5.3
Customer Type	
Residential	87.5
Commercial	12.5
Customer City	
Carlsbad	18.4
Escondido	20.8
Oceanside	25.9
San Marcos	14.8
Solana Beach / Del Mar	3.8
Vista	16.2
CARE Customer in Database	
Yes	22.8
No	77.2
Rooftop Solar Customer in Database	
Yes	31.4
No	68.6

Table 43 presents the key demographic and background information collected during the survey. The primary motivation for collecting the information was to provide a better insight into how results of the substantive questions of the survey vary by customer characteristics, as well as ensure that the sample aligns with CEA's customer database on key characteristics.

METHODOLOGY

The following sections outline the methodology used in the study, as well as the motivation for using certain techniques.

QUESTIONNAIRE DEVELOPMENT Dr. McLarney of True North Research worked closely with Clean Energy Alliance to develop a questionnaire that covered the topics of interest and avoided many possible sources of systematic measurement error, including position-order effects, wording effects, response-category effects, scaling effects, and priming. Several questions included multiple individual items. Because asking items in a set order can lead to a systematic position bias in responses, items were asked in random order for each respondent.

Some questions asked in this study were presented only to a subset of respondents. For example, only respondents who indicated they live in an apartment or mobile home (Question 8) were asked if their community has solar panels (Question 12) and electric vehicle chargers (Question 13). The questionnaire included with this report (see *Questionnaire & Toplines* on page 42) identifies the skip patterns used during the interview to ensure that each respondent received the appropriate questions.

PROGRAMMING, PRE-TEST & TRANSLATION Prior to fielding the survey, the questionnaire was CATI (Computer Assisted Telephone Interviewing) programmed to assist interviewers when conducting the phone interviews. The CATI program automatically navigates the skip patterns, randomizes the appropriate question items, and alerts interviewers to certain types of keypunching mistakes should they happen during the interview. The survey was also programmed into a passcode-protected online survey application to allow online participation for sampled residents. The integrity of the questionnaire was pre-tested internally by True North and by dialing into random homes in CEA's service area prior to formally beginning the survey. The final residential customer questionnaire was also professionally translated into Spanish to allow for data collection in English and Spanish.

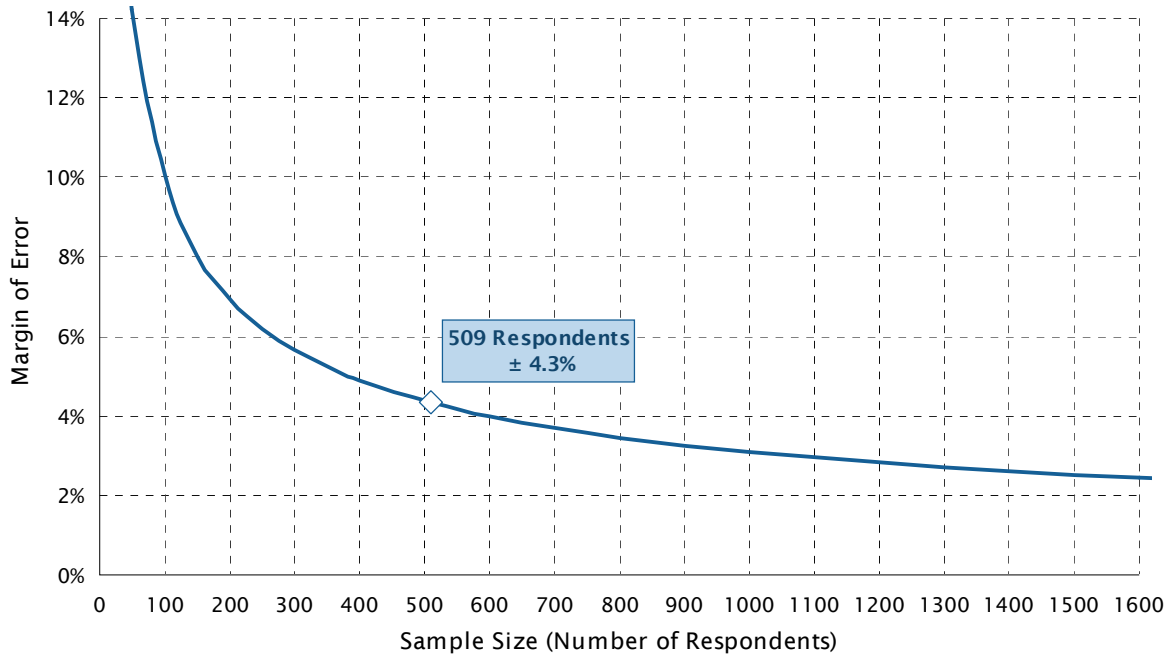
SAMPLE, RECRUITING & DATA COLLECTION Starting with a comprehensive list of residential and commercial customers provided by CEA, True North stratified by member city and account type (residential vs. commercial) to ensure a proportional sample on these dimensions. Customers were then randomly selected within their appropriate strata. Once selected for inclusion in the study, customers were initially invited to participate in the survey online at a secure, passcode-protected website designed and hosted by True North. Customers were recruited using email invitations and text invitations, and each was assigned a unique passcode to ensure that only CEA customers who received an invitation could access the online survey site, and that the survey could be completed only one time per passcode. Email reminder notices were also sent to encourage participation among those who had yet to take the survey. Following a period of online data collection, True North placed calls to land lines and cell phone numbers of residential and commercial customers that had yet to participate in the online survey.

Telephone interviews averaged 16 minutes in length and were conducted during weekday evenings (5:30PM to 9PM) and on weekends (10AM to 5PM) for residential customers, and from 9AM to 5PM weekdays for commercial accounts. A total of 509 surveys were completed among residential (445) and commercial (64) customers between April 9 and April 18, 2025

MARGIN OF ERROR DUE TO SAMPLING The results of the survey can be used to estimate the opinions of all CEA customers. Because not every customer in CEA's service area participated in the survey, however, the results have what is known as a statistical margin of error due to sampling. The margin of error refers to the difference between what was found in the survey of 509 customers for a particular question and what would have been found if all 261,826 CEA customers had been interviewed.

Figure 28 provides a plot of the *maximum* margin of error in this study. The maximum margin of error for a dichotomous percentage result occurs when the answers are evenly split such that 50% provide one response and 50% provide the alternative response. For this survey, the maximum margin of error is ± 4.3% for questions answered by all 509 respondents.

FIGURE 28 MAXIMUM MARGIN OF ERROR



Within this report, figures and tables show how responses to certain questions varied by demographic characteristics such as age of the respondent, home ownership status, and account type. Figure 28 is thus useful for understanding how the maximum margin of error for a percentage estimate will grow as the number of individuals asked a question (or in a particular subgroup) shrinks. Because the margin of error grows exponentially as the sample size decreases, the reader should use caution when generalizing and interpreting the results for small subgroups.

DATA PROCESSING Data processing consisted of checking the data for errors or inconsistencies, coding and recoding responses, categorizing verbatim responses, weighting the data to make minor adjustments to the sample profile, and preparing frequency analyses and crosstabulations.

ROUNDING Numbers that end in 0.5 or higher are rounded up to the nearest whole number, whereas numbers that end in 0.4 or lower are rounded down to the nearest whole number. These same rounding rules are also applied, when needed, to arrive at numbers that include a decimal place in constructing figures and tables. Occasionally, these rounding rules lead to small discrepancies in the first decimal place when comparing tables and charts for a given question. Due to rounding, some figures and narrative include numbers that add to more than or less than 100%.

TRUE NORTH RESEARCH

Clean Energy Alliance Survey
Final Toplines (n=509)
April 2025

Section 1: Introduction to Study
Hi, may I please speak to: _____. Hi, my name is _____ and I'm calling from TNR on behalf of the Clean Energy Alliance, your household's/business' electricity provider. We're conducting a survey of customers about important electricity-related issues and would like to get your opinions.
If needed or doesn't recognize Clean Energy Alliance: The City of <city name> joined with several other North County cities to form the Clean Energy Alliance. Although SDG&E delivers electricity to your home/business and manages billing, the energy your household/business receives is purchased by the Clean Energy Alliance directly from energy suppliers or generated locally.

Section 2: Importance of Issues		
Q1	To begin, what would you say is the *most* important issue or challenge facing your community today? Verbatim responses recorded and later grouped into categories shown below.	
	Not sure / Nothing comes to mind	25%
	High cost of living, affordability	20%
	High cost of electricity	11%
	Government / Political issues	9%
	High utility rates	5%
	Climate change / Environmental issues	4%
	Housing availability, affordability	4%
	Economy	3%
	Homelessness	3%
	Inflation	2%
	Traffic	2%
	Public safety	2%
	Infrastructure	2%
	Availability, cost of insurance	2%
	No issues / Everything is fine	2%
	Immigration issues	1%
	High taxes	1%
	Power outages / Grid concerns	1%
	Water concerns	1%

Q2	Next, I'm going to read a list of specific issues. For each one, please tell me how concerned you are about the issue. Here is the (first/next) issue: _____. Would you say you are very concerned, somewhat concerned, slightly concerned, or not at all concerned about this issue?					
	Randomize. Split Sample B1/B2, C1/C2	Very concerned	Somewhat concerned	Slightly concerned	Not at all concerned	Prefer not to answer
A	Cost of living in general	73%	18%	7%	1%	0%
B1	Paying for essentials like food, gas, and electricity	61%	21%	11%	7%	0%
B2	Cost of electricity	68%	22%	6%	4%	0%
C1	Climate change	46%	23%	8%	22%	1%
C2	Greenhouse gas emissions	33%	34%	15%	15%	4%
D	Air pollution	38%	32%	20%	10%	0%
E	Protecting the environment	55%	20%	19%	6%	0%
F	Traffic congestion	38%	37%	18%	7%	0%
G	The pace of construction and development	22%	33%	26%	17%	2%
H	Addressing homelessness	46%	29%	15%	10%	1%

Section 3: Electricity Issues & Priorities							
Q3	Turning now to the topic of **energy**, I'm going to read a list of specific issues. For each one, please tell me how important this issue is to you/your business. Here is the (first/next) issue: _____. Do you think this issue is extremely important, very important, somewhat important, or not at all important?						
	Randomize	Extremely important	Very important	Somewhat important	Not at all important	Not sure	Prefer not to answer
A	Creating good-paying jobs in the energy sector	23%	29%	29%	15%	2%	3%
B	Reducing your home's/business' energy costs	55%	26%	15%	4%	0%	0%
C	Receiving a discount on your energy bill if you use less energy during peak periods	44%	24%	20%	8%	2%	2%
D	Addressing climate change by reducing greenhouse gas emissions	35%	28%	20%	13%	2%	1%
E	Having cleaner air to breathe in your home/building	50%	27%	17%	4%	1%	1%
F	Ensuring that low-income households and underserved populations have the same opportunities to transition to clean energy	32%	31%	22%	13%	2%	1%
G	Generating more electricity *locally* through rooftop solar and other small installations	37%	27%	22%	8%	4%	2%
H	Avoiding power outages at your home/business	43%	31%	17%	6%	0%	2%

Q4	Next, I'm going to read a short list of actions that could be taken in the future. As I read each item, please indicate whether you think it should be a high priority, medium priority, or low priority for your community. If you think the action shouldn't be taken, please indicate so. Also, please keep in mind that not all items can be high priorities. Here is the (first/next) one: _____. Should this be a high, medium, or low priority for the future – or should we not take this action?						
	Randomize	High priority	Medium priority	Low priority	Should NOT take this action	Not sure	Prefer not to answer
A	Requiring all new construction to be **all-electric** to improve indoor air quality	22%	24%	20%	25%	7%	2%
B	Increasing the number of **electric cars, trucks, and buses** to reduce greenhouse gas emissions and air pollution	28%	28%	25%	12%	4%	3%
C	Improving the reliability of energy supplies by building **large-scale renewable energy generating systems** locally in the San Diego region	39%	34%	14%	6%	6%	2%
D	Installing more **small-scale renewable energy** systems like solar on home/small business rooftops and parking lots	40%	36%	14%	5%	3%	2%
E	Improving the **energy efficiency of buildings** so they use less energy and have lower energy bills	50%	33%	12%	3%	1%	2%
F	Providing **job training and certification programs** to fill the need for skilled workers in the clean energy sector	38%	38%	14%	6%	2%	1%
G	Helping **low-income families** pay their energy bills	41%	24%	22%	10%	1%	1%
H	Improving access to technical experts who can **advise on energy saving projects** in the home/for businesses	24%	34%	31%	7%	3%	2%
I	Creating more **back-up power** systems that can operate during a power outage	41%	39%	15%	3%	1%	1%
J	Increasing the number of **public access charging stations** for electric vehicles	26%	25%	32%	10%	4%	2%
K	**Incentivizing** customers to better manage energy use during high-demand periods	39%	35%	17%	5%	2%	2%
L	**Upgrading the electric grid and infrastructure,** including undergrounding utility wires, expanding grid capacity, and replacing outdated equipment	60%	25%	9%	0%	3%	2%
M	**Streamlining** the process and shortening the time it takes to connect new solar, back-up batteries, and other renewable energy projects to the grid.	34%	38%	16%	2%	8%	2%

Q5	Is there an energy-related project or program *not* previously mentioned that you think should be a high priority for your community? *If yes, ask:* Please briefly describe it to me. Verbatim responses recorded and later grouped into categories shown below.	
	No other high priorities / Nothing comes to mind	75%
	Reduce electricity rates, bills	7%
	Program to retrofit roof for solar panels	4%
	Prefer not to answer	3%
	Pursue nuclear energy resources	2%
	Educate customers about electricity, usage in general	1%
	Improve, provide battery storage, backup	1%
	Support community solar, backup, energy efficiency efforts	1%
	Pursue more wind, hydroelectric power resources	1%
	Pursue geothermal energy resources	1%
	Improve, address fire prevention measures	1%
	Provide incentives for solar, energy efficiency efforts	1%

Section 4: Energy Improvements & Programs					
Q6	Next, I'm going to read a list of energy improvements that can be made to a home/building. For each, please say 'yes' if your current home/business's building has this improvement – 'no' if not.				
	Randomize	Yes	No	Not sure	Prefer not to answer
A	Electric vehicle charging station	21%	73%	3%	3%
B	An electric furnace	20%	66%	12%	2%
C	An electric stove	26%	71%	2%	1%
D	An electric heat pump water heater	22%	62%	14%	2%
E	Solar panels	44%	50%	5%	1%
F	Back-up battery storage	18%	69%	11%	2%
G	Improved insulation, windows, roof, or other weatherization improvements	55%	34%	8%	2%
H	Energy efficient lighting	78%	13%	8%	1%

I	Smart home energy/Building management system that monitors, controls heating/air conditioning, lighting, appliances to optimize performance, reduce energy use		43%	45%	10%	2%
Q7	In general, how informed do you feel about the programs and services that are available to help residents/businesses with energy-related improvements? Would you say you feel well informed, somewhat informed, slightly informed, or not at all informed?					
	1	Well informed	15%			
	2	Somewhat informed	38%			
	3	Slightly informed	32%			
	4	Not at all informed	14%			
	98	Not sure	0%			
	99	Prefer not to answer	1%			
Q8	So that I can limit the following questions to just those that apply to your home, which of the following best describes your current home? *(asked of residents only)*					
	1	Single family detached home	57%			
	2	Apartment	18%			
	3	Condominium or Townhome	19%			
	4	Mobile home	3%			
	99	Prefer not to answer	2%			
Q9	As I read the following list of programs that may be available in your community, please indicate if you were **aware** of the program's existence prior to taking the survey. Here is the (first/next) one: _____.					
	Randomize		Yes, was aware	No, was not aware	Not sure	Prefer not to answer
	All respondents receive items A-F.					
A	**Discounted rates** for energy used during off-peak hours		79%	18%	2%	1%
B	Programs that allow customers who are unable to install solar to receive **renewable energy generated elsewhere**		23%	66%	9%	2%
C	Free **energy audits** and **technical assistance** on how to improve your household's/business' energy efficiency and lower bills		44%	47%	7%	2%
D	Rebates and incentives to install energy efficient **lighting**, **appliances**, and **equipment**		44%	47%	7%	2%
E	Discounted rates for **low-income** households *(asked of residents only)*		67%	27%	5%	1%
F	Discounted rates for those who have **medical equipment** in their home *(asked of residents only)*		44%	47%	7%	2%

	Only ask items G-J if Q8=(1,3)						
G	Rebates and incentives to **replace gas appliances** and equipment with electric appliances and equipment	31%	63%	5%	1%		
H	Rebates and incentives to install **electric vehicle charging equipment**	35%	56%	6%	2%		
I	Rebates and incentives to make **energy-efficiency improvements to your home/business' building**, such as improved insulation and windows	46%	48%	5%	1%		
J	Rebates and incentives to install **solar panels and battery storage**	61%	32%	6%	1%		
Q10	For the same list of programs, please indicate how **interested** your household/business would be in participating in the program. If your household/business is *already* participating in the program, please indicate so. Here is the (first/next) one: _____. Would you be very interested, somewhat interested, or not interested in participating in this program?						
	Randomize	Very interested	Somewhat interested	Not interested	Already participating	Not sure	Prefer not to answer
	All respondents receive items A-F.						
A	**Discounted rates** for energy used during off-peak hours	42%	19%	14%	20%	2%	2%
B	Programs that allow customers who are unable to install solar to receive **renewable energy generated elsewhere**	17%	21%	44%	6%	7%	4%
C	Free **energy audits** and **technical assistance** on how to improve your household's/business' energy efficiency and lower bills	26%	29%	32%	6%	5%	3%
D	Rebates and incentives to install energy efficient **lighting**, **appliances**, and **equipment**	35%	29%	21%	8%	4%	3%
E	Discounted rates for **low-income** households *(asked of residents only)*	23%	12%	52%	5%	4%	4%
F	Discounted rates for those who have **medical equipment** in their home *(asked of residents only)*	15%	11%	63%	5%	3%	4%
	Only ask items G-J if Q8=(1,3)						
G	Rebates and incentives to **replace gas appliances** and equipment with electric appliances and equipment	17%	24%	46%	4%	6%	2%
H	Rebates and incentives to install **electric vehicle charging equipment**	14%	16%	58%	5%	3%	2%
I	Rebates and incentives to make **energy-efficiency improvements to your home/business' building**, such as improved insulation and windows	30%	31%	28%	7%	2%	2%

J	Rebates and incentives to install **solar panels and battery storage**	23%	26%	31%	13%	5%	3%

Ask Q11 if Q9=1 AND Q10=(1,2) for any item A-J. Otherwise skip to instruction preceding Q12.

Q11	You mentioned your household/business would be interested in participating in certain energy programs, but has yet to do so. Is there a particular obstacle or reason keeping you from participating? *If yes, ask:* Please briefly describe the reason to me. Verbatim responses recorded and later grouped into categories shown below.	
	Not sure / No particular reason	48%
	Cost	13%
	Renter, landlord will not allow	8%
	Not enough need, interest at the moment	7%
	Need more information	4%
	Was not aware, not sure how to participate	4%
	Prefer not to answer	4%
	Lack of time	3%
	Financial issues	2%
	Do not qualify	2%
	Already participated, upgraded	2%
	HOA issues	2%
	Due to age of property	1%
	Contacted CEA but no timely response	1%
	Concerns, doubts about saving money	1%

Ask Q12 & Q13 if Q8=(2,4). Choose home type based on Q8 answer. Otherwise skip to Q14.

Q12	Does your <<apartment | mobile home>> community have **solar panels**? *(asked of residents only)*		
	1	Yes	26%
	2	No	66%
	98	Not sure	8%
	99	Prefer not to answer	0%
Q13	Does your <<apartment | mobile home>> community have **electric vehicle chargers**? *(asked of residents only)*		
	1	Yes	8%
	2	No	90%
	98	Not sure	2%
	99	Prefer not to answer	0%

Section 5: Communication						
Q14	Which of the following would you say is your **primary** source for information about local events and programs? *Ask items 1-5 in random order.*					
	1	Newspapers	9%			
	2	Television	20%			
	3	Radio	3%			
	4	Internet, not including Social Media	43%			
	5	Social Media	14%			
	6	None/Don't pay attention to local events and programs	6%			
	98	Not sure	3%			
	99	Prefer not to answer	1%			
Q15	As I read the following ways that the Clean Energy Alliance can communicate with customers, I'd like to know if you think they would be a very effective, somewhat effective, or not at all effective way for communicating with you/your business.					
	Randomize		Very	Somewhat	Not at all	Prefer not to answer
A	Email		39%	40%	19%	2%
B	Electronic Newsletters		24%	44%	30%	3%
C	Social Media like Facebook, Instagram and X		15%	30%	52%	3%
D	Clean Energy Alliance website		24%	48%	25%	2%
E	Newsletters and other materials mailed directly to your house/business		26%	43%	29%	2%
F	Automated phone calls		3%	13%	81%	2%
G	YouTube Videos		16%	39%	43%	2%
H	Text Messages		21%	31%	46%	2%
I	Utility bill inserts		26%	40%	32%	2%
Q16	Prior to taking this survey, were you aware that the energy your household/business uses is provided by the Clean Energy Alliance?					
	1	Yes	78%			
	2	No	18%			
	98	Not sure	3%			
	99	Prefer not to answer	1%			

Q17	If the Clean Energy Alliance could do *one* thing to better serve you/your business, what would that be? Verbatim responses recorded and later grouped into categories shown below.	
	Not sure / Nothing comes to mind	48%
	Reduce rates, cost	27%
	Provide more detailed information (rates, bill breakdowns, programs, savings)	8%
	Prefer not to answer	5%
	Financial assistance to install solar panels, energy efficient appliances	2%
	Improve, provide more communication, transparency	2%
	Provide more incentives, rebates	2%
	Reduce dividends to shareholders	1%
	Better explanation of CEA vs SDG&E	1%
	Increase energy production, efficiency	1%
	Remove SDG&E	1%
	Remove CEA	1%
	Earlier bill delivery	1%

Section 6: Background & Demographics			
Thank you so much for your participation. I have just a few background questions for statistical purposes.			
D1	In what year were you born? *(asked of residents only)* Year coded into age categories shown below.		
	Under 35		8%
	35 to 44		9%
	45 to 54		15%
	55 to 64		10%
	65 or older		33%
	Prefer not to answer		25%
D2	Do you own or rent your current residence/lease the building your business is in?		
	1	Own	65%
	2	Rent	30%
	99	Prefer not to answer	5%

D3	What is your gender? *(asked of residents only)*		
	1	Male	48%
	2	Female	46%
	3	Other	1%
	99	Prefer not to answer	4%
D4	What ethnic group do you consider yourself a part of or feel closest to*? (asked of residents only)*		
	1	African-American/Black	2%
	2	American Indian or Alaskan Native	<1%
	3	**Asian** -- Korean, Japanese, Chinese, Vietnamese, Indian, Filipino or other Asian	6%
	4	Caucasian/White	37%
	5	Latino/Hispanic	31%
	6	Middle Eastern	<1%
	7	Pacific Islander	1%
	8	Mixed Heritage	2%
	98	Other	1%
	99	Prefer not to answer	19%
D5	This last question is for statistical purposes only. As I read the following income categories, please stop me when I reach the category that best represents your household's total annual income before taxes. *(asked of residents only)*		
	1	Under $50,000	22%
	2	$50,000 to less than $100,000	18%
	3	$100,000 to less than $150,000	17%
	4	$150,000 or $200,000	10%
	5	More than $200,000	14%
	98	Not sure	0%
	99	Prefer not to answer	19%

D6	How many people are currently employed at your worksite? *(asked of businesses only)*		
	1	0	6%
	2	1 to 2	22%
	3	3 to 5	22%
	4	6 to 10	13%
	5	More than 10	32%
	98	Prefer not to answer	5%
Thanks so much for participating in this important survey! This survey was conducted for the Clean Energy Alliance.			

Post-Interview & Sample Items		
S1	Customer Type	
	Residential	87%
	Commercial	13%
S2	Customer City	
	Carlsbad	18%
	Del Mar	1%
	Escondido	21%
	Oceanside	26%
	San Marcos	15%
	Solana Beach	3%
	Vista	16%
S3	CARE Customer in Database	
	Yes	23%
	No	77%
S4	Rooftop Solar Customer in Database	
	Yes	31%
	No	69%

Appendix B – Universidad Popular Workshops Summary

Community Conversations
Let's Talk About Your Energy Needs
Community Workshops Report

Report prepared by Universidad Popular
Authors: Dr. Arcela Nuñez & Natalie Aguilar
December 21, 2025

Contents

INTRODUCTION

The **Community Conversations: Let's Talk About Your Energy Needs** is the result of a partnership between Clean Energy Alliance, Universidad Popular, and community members from across North County.

Universidad Popular was engaged by the Clean Energy Alliance to co-facilitate a series of community workshops scheduled between September and November 2025. The purpose of these sessions was to create a forum where community members could express their perspectives and contribute to shaping the direction of energy programs within CEA's service area. The structured dialogues addressed key topics, including an analysis of Community Needs Survey results, assessment of customer energy requirements and associated challenges, identification of preferred energy and energy efficiency initiatives, visions for the sector's future, and strategies for knowledge sharing.

ACKNOWLEDGEMENTS

This project was developed with community members and customers of Clean Energy Alliance in mind. More specifically, the primary goal was to reach individuals who are hard to reach and engage in civic opportunities. Numerous individuals, cities, agencies, and organizations provided invaluable expertise and input during the development of the project scope and methodology and the development of the summary report. In particular, we thank and acknowledge the following:

Clean Energy Alliance (CEA): Greg Wade, Chief Executive Officer, Rob Howard, Key Accounts/Program Manager, Kaitlin McGee, Key Accounts/Program Manager, Karen Villaseñor, Programs Analyst, Tiffany Reynolds, Key Accounts Analyst and other staff for working closely with Universidad Popular to plan, design and implement the community workshops.

Also, thank you to the Board of Directors who attended the community workshops including Katie Melendez, Chair, City of Vista Council Member, Christian Garcia, Vice Chair, City of Escondido Council Member, María Nuñez, Board Member, City of San Marcos Council Member, and David A. Zito, Alternate Board Member, City of Solana Beach Council Member.

Additionally, thank you to the Community Advisory Committee (CAC) members who attended the community workshops and shared updates and information with community members including Tracie Barham, City of Escondido, John Mosher, City of San Marcos and Daniel Dominquez, City of Oceanside.

Thank you to the cities of Escondido, San Marcos, Carlsbad, Vista, Oceanside, and Solana Beach for providing meeting space and assisting with outreach.

Universidad Popular (UP): The authors thank the UP team for overall support on this project including community outreach, education, engagement, data collection, data entry, data analysis, facilitation, and report preparation.

Interpreter: Thank you to Mario Garcia for providing interpretation services in English and Spanish during the community workshops.

Special appreciation to more than 211 participants who attendees the community workshops and shared their opinions and provided valuable input.

OVERVIEW

Beginning July 2025, Universidad Popular (UP) and Clean Energy Alliance (CEA) initiated a dialogue to assess the feasibility of conducting a series of community workshops, planning, goals, and timeline. CEA shared interest in reaching community members to hear their energy-related challenges and seek input regarding future programs, rebates, and incentives. UP provided an overview of outreach and education pedagogy and engagement strategies. After several planning meetings, UP and CEA agreed to move forward with implementation of the community workshops.

Initially, only a limited number of workshops were planned. Following the successful completion of the first two sessions and subsequent requests from community members in other cities seeking increased accessibility through local events, further in-person and virtual workshops were organized throughout CEA's service area in North County.

A Total of six (6) in-person bilingual (English/Spanish) workshops were held from September to November 2025 in the cities of Escondido, San Marcos, Carlsbad, Vista, Oceanside, and Solana Beach. Two (2) virtual workshops were also held in English and Spanish.

Table 1: Community Conversations

Date	Location	# of Attendees
9/8/25	Escondido	36
9/16/25	San Marcos	88
9/17/25	Carlsbad	19
9/24/25	Online - Spanish	7
9/24/25	Online - English	7
10/20/25	Vista	22
11/5/25	Oceanside	19
11/6/25	Solana Beach	13
Total		211

UP and CEA developed and prioritized the workshop content for the target communities. Materials developed for the workshops included a workshop guide for

facilitators, community survey to assessment, and PowerPoint presentations in English and Spanish to use during the workshops. The workshop content provided introductory overviews of Universidad Popular and Clean Energy Alliance. The presentation on Universidad Popular highlighted the organization's history, outreach and education programming, and culturally/linguistically responsive approaches. The presentation on CEA included background information about CEA's history, service areas, Joint Powers Agency, how CEA works, key information to know as customer, energy plan options, and questions/answers regarding programs.

In addition to the general presentations, each workshop included a facilitated roundtable conversation in small groups in a primary language (English/Spanish) and provided interpretation as needed by participants. The conversation portion of the workshop provided a platform for community members to voice their opinions and provide input regarding energy programs in CEA's service territory. Each group was led by a trained facilitator who guided the conversation in English or Spanish and a notetaker who transcribed notes. Facilitators guided the conversation through structured questions centered around the following key areas: results from the Community Needs Survey, understanding customer energy needs and identifying challenges, desired energy and energy efficiency programs, visions for the future, and existing knowledge sharing.

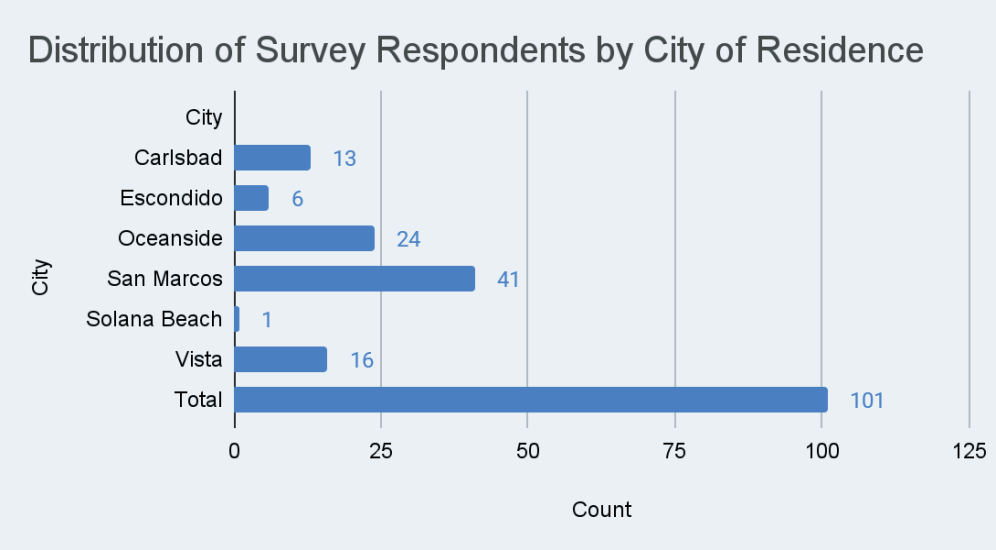
This report summarizes survey and workshop findings, key insights and feedback by session.

OVERALL SURVEY RESULTS

Workshop participants were asked to complete a brief survey reporting on what city they live in, whether they rent or own their home, whether they are business owners and if so, what city their business is in and if they are CEA customers. A total of 101 (N=101) surveys were collected. Below is a summary of responses:

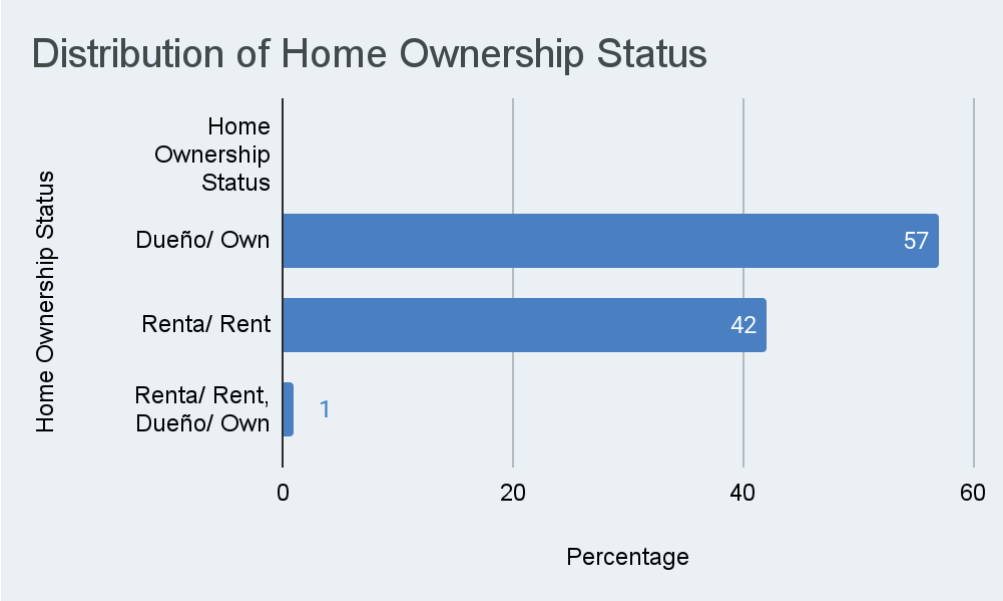
Survey respondents reported living in Carlsbad, Escondido, San Marcos, Solana Beach, and Vista.

Figure 1: Survey Respondents by City of Residence



Most survey respondents reported owning their homes (N=57) and 42 participants are renters.

Figure 2: Distribution of Home Ownership versus Renters



SUMMARY OF INPUT FROM COMMUNITY WORKSHOPS

Section 1: Understanding Customer Priorities

Workshop participants were provided with the following explanation and questions to understand factors that matter most to consumers and the priority that most influences their decisions around energy use.

When it comes to energy, people value different things. Some might focus on keeping costs low, while others care more about environmental impacts or having reliable service. These questions help us understand what matters most to you when it comes to energy.

a) *When thinking about energy, what matters most to you? For example:*
   - *Affordability: How much energy costs.*
   - *Sustainability: Using energy in ways that protect the environment. Reliability: Having consistent access to energy without frequent outages.*
   - *Access: Being able to get energy and participate in programs.*
   - *Other*

b) *Which priority most influences your decisions around energy use?*

Response Summary for Section 1: Customer Priorities

Affordability emerged as the leading priority among participants across all cities.

Table 2: Customer Priorities

Escondido Workshop	In Escondido, participants expressed a pronounced interest in saving money and voiced concerns regarding excessive costs. Community members requested additional information and educational resources about CEA programs, with particular emphasis on resources for renters. Concerns were also raised about the reliability of older appliances and their energy consumption, potential fraud associated with solar energy, and there was evident interest in solar solutions.
San Marcos Workshop	The primary concern among community members in San Marcos centered on cost, including themes of financial savings and increasing expenses. One group advised interest in learning more about energy-efficient appliances, while another indicated insufficient knowledge about clean energy, though they acknowledged its relevance and the need for further information. Participants described efforts to reduce energy use, such as turning off appliances, switching off lights, turning off the television, and operating washing machines during nighttime hours. Another group highlighted that residents of

	mobile homes often lack access to billing or the ability to make enrollment decisions independently.
Carlsbad Workshop	Both discussion groups in Carlsbad underscored the importance of cost reduction, along with other priorities such as affordability, sustainability, reliability, and access. Additional feedback included skepticism towards supporting shareholders and suggestions to explore small-scale wind energy options.
Online Workshop – English	Participants emphasized the significance of understanding various energy sources and discussed environmental justice issues.
Online Workshop – Spanish	Priorities identified by participants included cost management, reducing energy consumption, clean energy adoption, and family well-being.
Vista Workshop	All three discussion groups in Vista ranked cost as the principal concern. Specific comments included apprehension about rising expenses and references to substantial monthly bills (e.g., $1,030 for one business owner). The business group also noted a desire for clearer billing and highlighted clean energy and solar support as organizational priorities, although assistance is needed.
Oceanside Workshop	Cost and escalating energy prices were consistent concerns across all three discussion groups in Oceanside. While sustainability, reliability, and access were acknowledged, one group remarked that prohibitive costs limit capacity to engage with these issues. Reported monthly bills ranged from $85 to $255. Some participants avoid using lights between 4 to 9 pm to manage costs. Recommendations included hosting more workshops at libraries and schools, distributing information via bill inserts, and increasing program promotion through social media and email.
Solana Beach Workshop	Although the City of Solana Beach has set an objective for 100% renewable electricity, the predominant concern remains cost and affordability, with balancing expense and renewable priorities being a key issue. Reliability is crucial, particularly for individuals with medical needs; one participant experienced an eight-hour outage resulting in food loss. Reliable AC and heating systems were also cited as important. Additionally, time-of-use factors have a significant influence on energy consumption decisions.

Summary of Customer Priorities

Across all workshops, affordability was identified as the top priority for participants when it comes to energy use. Concerns about excessive costs were prevalent in every city, with additional interests in energy efficiency, reliability, sustainability, and access to

programs. Many participants expressed a need for more information and resources, especially for renters, and highlighted issues related to older appliances and challenges with clean energy adoption. Reliability and time-of-use were noted as important considerations, particularly for those with medical needs or high energy bills.

Section 2: Identifying Energy-Related Issues and Barriers

Workshop participants were provided with the following explanation and questions to understand factors the types of barriers customers face when it comes to energy at home or in their business. They were also asked if they have considered making improvements to reduce energy use or to name specific barriers that prevent them from making energy improvements.

Whether you're a homeowner, renter or business owner, energy use can come with challenges. The following questions help us understand what types of barriers you face when it comes to energy.

a) *What are the biggest challenges you face when it comes to energy use at home or in your business? For example, high bills, outdated equipment that is not energy efficient, limited control on energy choices due to renting or inconsistent service.*
b) *Have you considered making energy improvements in your household? Are you able to? (renter vs. homeowner vs. business) For example, upgrading insulation, installing solar panels, switching to energy-efficient appliances.*
c) *Are there specific barriers that prevent you from making energy improvements? For example, cost of upgrades, lack of information, limited access to technology or not knowing your options.*

Response Summary for Section 2: Energy-Related Issues and Barriers

Participants identified several barriers to energy improvements, including tenancy status, high energy costs, outdated appliances, insufficient financial resources, unfamiliarity with available programs and technologies, and limited knowledge about innovation.

Table 3: Energy-Related Issues and Barriers	
Escondido Workshop	Community members cited renting as a significant obstacle to implementing household energy upgrades. The quality and efficiency of appliances for renters is dependent on the landlords and leasing companies. Additionally, qualifying for low-income assistance programs was described as challenging. Aging infrastructure contributed to excessive energy consumption, and replacing or

	servicing appliances such as pipes and air conditioning units in multi-family housing was deemed expensive. Concerns regarding solar installations included lengthy permitting processes, elevated costs, inadequate insurance coverage, and insufficient information. Further barriers noted were escalating utility bills, limited technological literacy, uncertainty about available options, and the necessity to disconnect certain appliances. Interest in window replacement was expressed, and one member reported an annual energy bill of $5,000.
San Marcos Workshop	Key challenges included high energy bills relative to income levels, lack of insulation, absence of air conditioning and heating, and minimal impact from window upgrades. Renters indicated that their options are subject to landlord decisions regarding temperature control, cable inspections, and appliance replacements. Old appliances remain prevalent and inefficient; although participants showed interest in upgrading, there is a need for additional information. Some members expressed interest in solar panels and window upgrades but highlighted concerns about affordability and limited information. Groups also reported financial and time constraints associated with making upgrades. Despite apartment complexes installing solar panels, residents sometimes pay more than they consume and are enrolled in CARE programs. Other issues raised included insufficient follow-through on SDGE programs, costly roof replacements required for solar, and confusion over Tesla technology and CEA enrollment. Routine energy-saving behaviors, such as turning off refrigerators and lights, were mentioned.
Carlsbad Workshop	Identified obstacles included costs related to energy usage and equipment such as air conditioners and heaters, limited awareness of CEA and government programs, older homes not suited to electrification, and the need for insulation and battery upgrades. The suggestion to permit portable solar panels was made. English-speaking participants expressed interest in electric vehicles, solar chargers, foam insulation, and energy-efficient appliances, though uncertainty existed around contacting professionals concerning batteries. To mitigate expenses, some avoid running air conditioning.
Online Workshops — English & Spanish	A lack of information regarding CEA and its programs emerged as a predominant barrier. In the Spanish session, summer cooling costs and trust in organizations were additional challenges, alongside support requirements for completing applications.
Vista Workshop	Participants highlighted difficulties related to landlord-controlled outdated equipment, complex integrated systems, paperwork challenges for homeowners, architectural limitations, and user-

	unfriendly automatic controls. One participant reported inadequate follow-up on program outreach. Institutional energy limits also restrict business capabilities, as noted by a local nursery owner. Recommendations included introducing resource programs for home upgrades and establishing a community office to provide guidance.
Oceanside Workshop	Energy costs were a common challenge, with reports of overcharging for gas and electricity and experiences of excessive payments despite having solar panels. Community members expressed interest in reducing their carbon footprint, efficiently checking appliances to save energy without additional costs, and receiving more information about CEA programs. Some groups stated reluctance to rely on SDGE for price reductions.
Solana Beach Workshop	Challenges included navigating landlord relationships as renters, difficulties in accessing upgrades due to various management layers, and lack of notification or involvement in upgrade planning. Questions concerning the benefits of renewables were raised. Older homes present ongoing challenges; residents frequently cite inability to upgrade to energy-efficient appliances. Insufficient information about battery chargers was identified, as was the need for better communication at point of sale for electric vehicles. Panel upgrades required for advanced chargers were described as an additional barrier. Participants also indicated skepticism about the effectiveness of equipment changes, noting a demand for consistent performance evidence.

Summary of Energy-Related Issues and Barriers

Across workshops, participants cited high energy costs, outdated and landlord-controlled appliances, and financial constraints as major barriers to improving energy usage. Many renters felt limited by their tenancy status, while others noted a lack of information, difficulty qualifying for assistance programs, and challenges with technology or program enrollment. Additional obstacles included expensive upgrade requirements (such as for solar panels), architectural limitations, skepticism about the benefits of new equipment, and a need for better communication and support regarding energy programs and technologies.

Section 3. Understanding Energy Usage and Decision-Making

Workshop participants were provided with the following explanation and questions to understand the way people make decisions about energy and the tools they have and use that motivate them. This discussion helps to understand how familiar individuals are with their bills and whether they are tracking their energy use.

The way people make decisions about energy can depend on what we know, what tools we have and what motivates us. With this set of questions, we want to understand how familiar you are with tracking your energy use and what motivates you to make changes.

a) *Do you know how to track your energy use?*
b) *If you do know how to track your energy, what methods do you use to track it? For example, checking your monthly paper or online bill, reading your meter, using smart apps or monitoring specific appliances.*
c) *What motivates you to reduce energy use or invest in clean energy solutions? For example, saving money, helping the environment, improving comfort at home or increasing property value.*

Response Summary for Section 3: Energy Usage and Decision-Making

Few individuals are familiar with the details of their energy bills, and even fewer actively monitor their energy consumption.

Table 4: Energy Usage and Decision-Making

Escondido Workshop	Most discussion groups acknowledged a lack of awareness regarding peak hours, and many reported not knowing how to track their energy use. One participant remarked that their busy lives make it difficult to review bills, resulting in limited understanding of the relationship between usage and cost. Some participants expressed interest in learning how to read their bill, reduce costs, and explore options such as hybrid vehicles. In some instances, payment responsibilities fall to other family members. Suggestions to improve access included the development of an efficient and user-friendly app for tracking billing and energy information, as well as providing a dedicated phone line for assistance. Key motivators included low costs, environmental concerns, community considerations, and interest in electric vehicles. Awareness of programs like CARE/FERA was noted in some groups, while others were unaware of the broader impacts of energy use.
San Marcos Workshop	Half of the discussion groups tracked their energy use via their energy bill, with others using online reviews, brief bill checks, or identifying no alternate means. Three groups were unfamiliar with methods for monitoring consumption and did not understand the connection between meter readings, bills, and cost. A subset reported practicing energy-saving behaviors during peak hours, turning off appliances, air-drying laundry, minimizing lighting use, or utilizing laundromats. There was a perception among some that businesses benefit from lower rates than residents. Cost savings were identified as the primary motivation, with some groups requesting additional

	information about the environmental impacts of energy use. Barriers to upgrades included confusing information and apprehension about ineffective investments. Information needs centered on saving energy, reading bills, and leveraging technology.
Carlsbad Workshop	In one group, only one of four participants understood how to track energy use. Recommendations included funding community organizations to provide education about available programs. Other methods used for tracking included spreadsheets, bill reviews, and solar apps. Environmental protection was cited as the top motivation for reducing energy consumption, alongside increasing property values.
Online Workshops - English	Participants requested more information about SDG&E's roles, products, discounts such as CARE/FARE, differences in energy offerings, and training on bill structure to promote behavior change. Family-centered education was suggested to support engagement where men often manage household bills.
Online Workshop - Spanish	Attendees generally indicated they were only able to track energy use via their utility bill.
Vista Workshop	Most participants tracked their energy consumption through either paper or online billing statements. Additional tracking tools included applications, websites, and using sleep timers on electronics. Motivations for reducing energy use included decreasing costs, supporting a better future and environment, reducing public safety power shutoffs, and preventing wildfires.
Oceanside Workshop	Some groups lacked knowledge on how to track energy usage or their participation status with CEA. Time constraints were cited as a barrier to reviewing bills. However, in one group, all five participants used their SDGE statement (online or paper) to monitor consumption. Motivation included environmental benefits and cost reduction. Participants desired resources on reading bills, receiving information via text, and learning to read meters. An app was recommended for sharing relevant information.
Solana Beach Workshop	This group was largely knowledgeable about tracking energy use. Reliability and outage concerns motivated some to invest in solar panels. Participants cited cost, affordability, and environmental stewardship as driving factors for adopting clean energy solutions. Interest was also expressed in home upgrades, supported by financing options such as GoGreen Financing, which participants found effective in improving efficiency.

Summary of Energy Usage and Decision-Making
Most workshop participants demonstrated limited familiarity with their energy bills, and few actively tracked their energy usage. Tracking methods varied, with some using paper or online billing statements, apps, or spreadsheets, while others lacked awareness of how to monitor consumption. Key motivations for reducing energy use included saving money, environmental protection, and increasing comfort or property value. Barriers to effective decision-making involved confusing information, time constraints, and skepticism about the benefits of energy upgrades. Participants expressed a desire for improved resources, such as user-friendly apps and educational support, to help them better understand and manage their energy consumption.

Section 4. Exploring Past and Future Energy Improvements

Workshop participants were provided with the following explanation and questions to understand what type of energy-related projects individuals have prioritized or are considering for the future. This can help CEA determine program prioritization.

Understanding what type of energy-related projects you have prioritized or are considering for the future can help CEA determine program prioritization. These questions will help us learn what improvements you've made and what resources would be helpful for projects you're considering.

a) *Have you made any energy-related upgrades to your home or business (e.g., LED lighting, insulation, solar panels)?*
b) *If you are considering improvements for the future, what support or resources would help you take the next step?*

Response Summary for Section 4: Past and Future Energy Improvements
Workshop participants consistently prioritized energy-focused initiatives, including upgrading to LED lighting, installing solar panels, and improving insulation.

Table 5: Past & Future Energy Improvements	
Escondido Workshop	Participants noted successful upgrades such as LED lights and solar-powered lightbulbs. Mobile homeowners expressed interest in solar panels with battery systems, and other community members shared ongoing installation efforts. Recommended programs included workshops led by staff to address individual needs, informational text messages, renter-friendly initiatives, electronic recycling programs, and events like a "feria de focos" (light show) offering discounted

	LEDs. One discussion group suggested diverse renewable energy program options, self-installation assistance for solar panels to mitigate challenges associated with contractors, increased tax credits, financial support for repairs and home insulation, and reduced rates for low-income households. Additional delivery recommendations encompassed support with application paperwork, multilingual accessibility (English, Spanish, French), and expanded electricity-related programming. Other groups advocated for discount programs, targeted support for low-income families, and various incentives. Concerns were raised about limited information within the Latino community for accessing benefits, as well as the desire for lower energy bills and more affordable electric vehicles.
San Marcos Workshop	Community members shared energy-saving practices such as reducing television use, air drying laundry, installing LED lighting, utilizing solar panels, switching off unused lights, using fans instead of air conditioning, upgrading windows, and replacing gas stoves with induction models. Desired upgrades included appliances that consume less energy and water. Requested programs focused on window replacement assistance, cost-reducing options, alternatives to solar power, free solar panel offerings, battery purchase support, solar panel cost transparency, energy audits, individualized contract support, and educational workshops. Participants also sought information regarding energy-efficient appliances, weatherization, home insulation, and programs benefiting families with multiple children. Preferred modes of engagement included interactive presentations, door-to-door outreach, and personal explanations due to difficulties with social media platforms. Skepticism about the actual impact of solar panels on energy savings was noted, alongside barriers such as installation costs and qualifications for CARE programs. There were suggestions to develop neighborhood-specific plans, and recognition that all energy-related changes present both advantages and disadvantages.
Carlsbad Workshop	Groups reported completing LED light replacements and discussed cost barriers requiring financial support, with some awaiting price reductions before making additional purchases. The workshop proved beneficial in facilitating knowledge sharing among participants with relevant experience. Battery replacement costs remain high, prompting requests for further information on solar technology and battery systems.
Online Workshops – English	Discussions highlighted obstacles accessing public charging stations, concerns about solar panels installed in apartments without tenant input or battery integration, and a lack of renter education regarding these impacts. Participants emphasized the need for comprehensive

	information on energy conservation strategies, including electronics and lighting choices, while noting infrastructure challenges such as outdated wiring and inefficient appliances that complicate efforts to reduce peak energy usage.
Online Workshop – Spanish	Participants expressed a strong interest in enhancing energy efficiency through solar panel installations and charging stations, with requests focused on financial incentives and support for implementation.
Vista Workshop	Community members reported upgrades including LED lighting, insulation improvements, solar panel installations, electric water heaters, and heat pumps. Additional strategies mentioned involved using candles and checking appliances prior to bedtime. Programmatic requests featured free mobile solar panels for renters, school-based energy education presentations, improved rebate availability, cost reduction measures, and regulatory mandates for new construction.
Oceanside Workshop	Attendees described implementing solar panels, batteries, insulation, mini splits, heat pumps, furnaces, water heaters, and window replacements. Energy-saving behaviors included unplugging electronics when not in use. Requested programs focused on affordable and free solar panel solutions, appliance and light bulb replacements, electric vehicle charging stations, educational workshops on insulation, and support for home weatherization. Participants also identified the need for clearer guidance on renting versus owning in relation to utility discounts, and funding for mobile home upgrades and modernized kitchen appliances.
Solana Beach Workshop	Discussion groups stressed the importance of renter-specific workshops and landlord engagement to facilitate energy-efficient upgrades. Concerns centered on reduced affordable housing following property improvements, reinforcing renters as an underserved priority group. Participants highlighted limitations faced by landlords, the critical role of business owners and property managers, and the burden placed on managers who may lack adequate education and resources.

Summary of Past and Future Energy Improvements

Across workshops, participants prioritized energy-saving upgrades such as LED lighting, solar panels, and improved insulation. Community members expressed interest in additional measures like battery storage, electric appliances, and weatherization, but noted barriers including high upfront costs, information gaps, and limited access—especially for renters and

low-income households. Desired support included financial incentives, multilingual resources, renter-friendly programs, hands-on workshops, and personalized guidance to make upgrades more attainable and effective for diverse community needs.

Section 5. Gauging Awareness of CEA Programs

Workshop participants were provided with the following explanation and questions to understand customer familiarity with programs that help save money, reduce energy and adopt cleaner energy.

CEA offers energy programs designed to help customers save money, reduce energy use and adopt cleaner energy. We want to understand your familiarity with these programs and what programs interest you most.

- *Are you aware of any energy programs or services offered by CEA?*
- *Which types of programs or incentives would you be most interested in learning more about? For example, reduced rates, energy use tracking, solar panels and battery storage, rebates and incentives.*

Response Summary for Section 5: Awareness of CEA Programs

Workshop participants reported limited or no awareness of CEA prior to attending the presentation. Individuals are not familiar with programs to help them reduce energy use. Everyone requested information about CEA and information regarding programs that can help consumers reduce usage and access incentives.

Table 6: Awareness of CEA Programs	
Escondido Workshop	A discussion group expressed interest in cash incentives but raised concerns regarding whether such incentives would be directed to help homeowners rather than renters. Participants noted that customers typically pay attention to their bills primarily in terms of total cost, rather than monitoring actual energy usage. In three out of five groups, attendees reported that the workshop in Escondido was their first exposure to CEA and its programs. One group indicated particular interest in learning about solar panels and clean energy. Another group requested a program providing guidance on selecting appliances—including TVs, computers, washers, and microwaves—as well as general support for energy conservation initiatives. An additional group asked for information addressing the impacts and benefits of energy use. Further requests included a workshop or presentation on bill interpretation, an explanation of the advantages of being a CEA client, education on the distinction between clean and non-clean energy, advice on energy savings, and clarification on energy distribution processes.

	Additional feedback took the form of questions, such as: Do lamp lights contribute significantly to energy costs? What responsibilities does the community bear in terms of energy consumption? At what times do we use energy most frequently? Is there access to reliable renewable energy programs? Other inquiries included: What is the impact if widespread adoption of clean energy or solar panels reduces electric company revenue? How does city lighting affect local economic outcomes? What constitutes clean energy?
San Marcos Workshop	Participants in San Marcos provided the following information regarding awareness of programs. There is general awareness of CARE; however, some individuals are not familiar with CEA programs. One participant expressed regret over lacking information about CEA prior to their decision not to continue with the program, citing a lack of previous awareness. There is notable enthusiasm regarding sustainability initiatives and cost savings. Community members have expressed interest in educational opportunities such as understanding how to read energy bills, measure energy usage, and access available rebates and incentives. Reduced utility rates and increased transparency about CEA through community meetings are also valued, with one group showing specific interest in peak smart programs. Other highlighted interests include participation in free LED lighting distribution, gaining information on the health impacts of pollution, solar panel programs, home upgrades involving weatherization and electrification, battery storage, and access to complimentary batteries. Furthermore, there is a strong preference among community members for receiving information in Spanish and for opportunities to learn more about CEA programs. Questions: ● Is CEA a government agency? ● What impact does energy use and consumption have on environmental pollution? ● How is clean energy defined? ● Does SDGE distribute non-renewable energy, and what distinguishes CEA from SDGE? ● Does CEA provide programs for individuals with low income? ● Are there additional resources offered by CEA to help reduce energy bills?

	● Where can I find more information about strategies to lower energy costs? ● How can I verify my enrollment with CEA? ● Will there be future community meetings to learn more about CEA? ● What are the advantages and potential drawbacks of installing solar panels, especially regarding cost savings? There are concerns that installation may lead to higher expenses. ● What would be my current payments if I install solar panels? ● How can I determine whether the energy I receive is clean? ● When will responses to these questions be provided? ● Is it possible to switch energy providers? ● Can you clarify what is meant by clean energy? ● Could you explain the percentages referenced in the presentation regarding the energy mix? ● What are the specific benefits of CEA? ● How many customers both receive and fully understand their energy bills? ● In what ways do solar panels benefit residents of apartment buildings? ● From where is safe energy sourced? ● Does electricity generation or distribution produce radiation? ● Do energy prices vary depending on usage levels?
Carlsbad Workshop	In one discussion group, most participants were aware of CEA's programs. In another group, half of the members indicated familiarity with these programs, while one individual stated they did not meet the eligibility requirements. Feedback from participants highlighted insufficient advertising related to CEA initiatives. The English-language group expressed a preference for email as their primary mode of communication and suggested collaborating with stakeholders to advocate for supportive legislation. Additionally, concerns were raised regarding profit distribution to businesses and perceptions of excessive charges. Question: What is the cost of solar panels?
Online Workshops - English	The group emphasized the necessity of enhancing education and dissemination of information regarding available programs. There was an inquiry as to whether participation in these programs would be considered a "public charge" for immigrants. An attendee also

	requested additional data on usage for comparison purposes, details about peak operating hours, and asked whether implementing informational campaigns—such as distributing magnets with peak hour details—would be beneficial. Additional questions raised included: a) whether participation in these programs requires disclosure of immigration status; b) if involvement in CEA programs would be classified as a public charge (see: https://www.ilrc.org/public-charge); and c) the need for informational guidance on demand response programs to be provided as handouts. CEA committed to following up with UP regarding concerns around program accessibility and potential perception as a "public charge."
Online Workshop - Spanish	Participants expressed interest in informational programs provided by CEA and educational workshops designed to involve children. Additionally, a discussion group member highlighted an application accessible to select customers.
Vista Workshop	One discussion group indicated a general awareness of the programs offered by CEA, while another expressed limited knowledge regarding these initiatives. Recommendations from community members include enhancing outreach efforts, providing clear information about existing CEA programs and their operations, and featuring testimonials from individuals who have benefited from these programs through online platforms or news outlets. Additionally, it was noted that not all community members utilize social media, and CEA should consider alternative communication channels. A request was also made for a pamphlet detailing the available CEA programs.
Oceanside Workshop	During one discussion group, two participants indicated familiarity with CEA's programs, while three reported they were unaware of them. One group mentioned knowledge of medical care electrical services as well as low-income gas and electric service options. Participants expressed interest in receiving incentives related to gas and electricity, noted discouragement from not receiving support through 211, and requested information regarding qualification for low-income programs. Additional requests included more workshops, guidance on energy conservation for older homes, discounts on electricity, further incentives, assistance with electricity and water bill payments, and reference to the EBD (Equitable Decarbonization Program). The group also raised questions such as how individuals can determine their inclusion in CEA and CEA's perspective on nuclear

	energy. There was a desire for increased promotion of CEA, additional workshops, expanded information about programs, presentations on cost-saving strategies, and sessions on understanding utility bills and energy meters.
Solana Beach Workshop	Several participants were unaware of Peak Smart, opt-out options, and expressed uncertainty regarding available programs for renters. Some participants were familiar with tracking their bill via the SDG&E app and knew about relevant programs; however, they were not eligible to participate. Additionally, some participants did not know that the website featured a comparison tool.

Summary Regarding Awareness of CEA Programs

Overall, workshop participants demonstrated limited awareness of CEA and its energy-saving programs prior to attending. Most individuals requested more information about CEA offerings, especially regarding how to reduce energy usage and access available incentives. Interest was expressed in educational opportunities—such as understanding energy bills, learning about rebates, and exploring clean energy options—while questions and feedback highlighted the need for clearer communication, more outreach, and resources tailored to renters and low-income households. Some participants were familiar with related services, but many were not eligible or lacked information about specific tools and program distinctions.