

1. Population Structure and Ethnic Distribution

- California's total population is approximately 38.96 million, with 22.2% (8.65 million) aged 60 and above, indicating a clear aging trend.
- Ethnic distribution: The largest group is White (48.06%), followed by Hispanic/Latino (40.4%), Asian (19.73%), African American (6.74%), and Native American (1.75%). The multicultural characteristics are prominent.
- Gender ratio: The male-to-female ratio is balanced (49.9% male, 50.1% female), but women account for a higher proportion (53.7%) among those aged 60+, likely due to longer female life expectancy.
- Target market segmentation: Provide multilingual services and culturally relevant products (e.g., food, media) for Hispanic/Latino and Asian communities.
- Aging economy: Develop healthcare, elderly care services, and retirement financial products to meet the needs of the 60+ population.

2. Income and Poverty Status

- Income structure: Salaries account for the highest proportion of average household income (63.93%, \$136,000), followed by pensions (17.85%, \$38,000) and social security (10.78%, \$23,000).
- Poverty rate: 12% of the population lives below the poverty line, while 7.3% are at 100-149% of the poverty line, highlighting economic inequality.
- Housing cost pressure: 53.3% of renting households spend over 30% of their income on rent, while 30% of homeowners face similar pressure.
- Financial services: Offer microloans or budget management tools for low-income groups to alleviate financial stress.

3. Energy Structure and Electricity Production

- California's total electricity generation in 2023: 216,000 GWh, with natural gas accounting for the largest share (43.7%), followed by solar (19.2%) and large-scale hydropower (12.5%).
- Renewable energy growth: Solar power generation surged from 850 GWh in 2009 to 41,344 GWh in 2023, with a compound annual growth rate of 34.5%, reflecting policy-driven green transition.

- Coal phase-out: Coal-generated electricity was only 257 GWh (0.1%) in 2023, aligning with California's clean energy goals.
- New energy investment: Significant opportunities exist in the solar and wind power supply chains (e.g., energy storage technology, smart grids).
- Corporate ESG strategy: Companies can enhance their sustainability profile by procuring renewable energy (e.g., through PPA agreements).

Summary and Recommendations

California exhibits notable trends in population diversity, energy transition, and social inequality. Deep patterns should be explored by segmenting data (e.g., by age, ethnicity, income).

Focus areas include the aging economy, renewable energy, affordable housing, and mental health services, leveraging policy incentives (e.g., clean energy subsidies) for long-term growth.

Priority recommendations:

1. Invest in solar and energy storage technology to capture the new energy market.
2. Develop culturally customized products for Hispanic/Latino and Asian communities.
3. Partner with the government to launch energy assistance programs for low-income families.