

Framework for Affordable Electrification in California

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SUMMARY: To meet California’s energy and climate goals, the state must shift away from fossil fuels like natural gas, diesel, and propane to low- and zero-carbon energy sources. With more than 11 million natural gas meters statewide,¹ this transition requires strategies that protect customers from rising electricity costs, service disruptions, and inequities.

The transition to electrification must be well-managed through carefully planned cost-containment strategies. Policymakers and regulatory agencies, including the California Public Utilities Commission, must prioritize actions that address safety, equity, reliability, and affordability to ensure a smooth transition.

OUR GUIDING PRINCIPLES

Decarbonizing California’s entire energy sector is a complex undertaking that demands a structured roadmap to achieve the greatest reductions in greenhouse gas emissions (GHGs) while maintaining safety, equity, reliability, and affordability.

- **Safety** – As natural gas use declines and reliance on electric systems increases, gas and electric infrastructure must be maintained and operated to ensure safe, reliable energy delivery.
- **Equity** – Electrification will require replacing gas appliances with electric ones and increasing the use of electric vehicles (EVs). Strategies must guarantee equitable access to new technologies for all communities, ensuring benefits are widely distributed and do not deepen existing income disparities.
- **Reliability** – Expanding electrification can lower the average cost of electricity, provided it does not strain the system in ways that compromise reliability or require expensive upgrades. Policies should promote “beneficial electrification,” by considering *when* and *where* energy is used to maintain safety, system reliability, control costs, and prevent inequities.
- **Affordability** – Electrification must be approached thoughtfully to maximize ratepayer value and avoid unnecessary cost burdens.

Decarbonizing through electrification will reshape our energy system at a scale not seen since the grid’s initial buildout. Much like the rural electrification of the late 1930s,² transitioning from fossil fuels to electrification offers significant public benefits. Achieving these ambitious goals will require substantial public investment. When done effectively, this shift can stimulate economic growth, enhance public health, and improve welfare in California.

To meet the state’s decarbonization goals, funding must come from sources beyond ratepayers. Broader investments from California taxpayers and other funding streams are essential. Relying solely on funding through surcharges on utility bills would be both regressive and inequitable, placing an undue burden on ratepayers.

¹ https://www.cpuc.ca.gov/natural_gas/

² <https://livingnewdeal.org/a-light-went-on-new-deal-rural-electrification-act/>

ACTIONS TO SUPPORT CALIFORNIA'S ELECTRIFICATION GOALS

Electric and natural gas ratepayers cannot and should not bear the full or even a substantial cost of transitioning to electrification. Electric bills are already too high – and further increases would undermine incentives for customers to adopt electric vehicles and appliances and hinder the transition from fossil fuels.

IMMEDIATE ACTIONS (0-3 YEARS) – REIN IN ELECTRICITY COSTS AND RATIONALIZE RATES

Prioritize Ratepayer Funding:

- Limit utility bill charges to only include necessary costs to provide safe, reliable services consistent with California's clean energy statutes.
- Ensure programs funded to achieve state policy goals offer commensurate benefits to ratepayers and do not result in excessive private gains at the expense of affordability.
- Shift funding to non-ratepayer sources for programs that are not directly related to ensuring safety, reliability, or cost savings for all ratepayers (except for income-qualified rate discount programs, such as CARE/FERA).

Make Electric Rates More Equitable:

- Align ratepayer-funded programs with the state's clean energy and greenhouse gas reduction goals, with an emphasis on cost-effectiveness (eliminate overlapping programs, focus on encouraging deployments that incorporate efficiency and demand response capability).
- Refine the fixed charge³ by establishing discounted tiers for both low- and middle-income brackets, with discounts funded through the "Climate Credit" (Cap & Trade GHG Revenue).
- Limit the impact of the Net Energy Metering (NEM) cost shift on non-participating customers.⁴

Phase Out Non-Cost-Effective Program Costs from Rates:

- Evaluate ratepayer-funded programs for cost-effectiveness (determine whether programs reduce overall operating costs or increase utility bills) and remove those programs that are cost inefficient.
- Stop providing incentives for installing gas appliances. If funding of appliances is appropriate, it should be consistent with the long-term goals of eliminating the need for natural gas service.

NEAR-TERM ACTIONS (2 TO 4 YEARS) – PRIORITIZE AFFORDABILITY & ELECTRIFICATION

Balance Incentives (Profits and Costs) for Infrastructure Investments in Grid Hardening:

- Evaluate the use of securitization or other methods to lowering financing costs for major capital projects, like undergrounding power lines. While reducing wildfire risks aligns with utility shareholders' interests, there is an incentive to prioritize high-cost methods that maximize utility profits, which could raise rates in the long term.
- Avoid securitization of routine costs, such Operations & Maintenance (O&M) expenses, which only provide short-term rate relief but result in higher long-term costs to ratepayers.

³ For more on existing fixed charge, see: <https://www.publicadvocates.cpuc.ca.gov/press-room/commentary/240328-flat-rate>

⁴ See: <https://www.publicadvocates.cpuc.ca.gov/press-room/reports-and-analyses/nem-cost-shift-methodology-fact-sheet-2024>

Address Stranded Costs and Rising Per-Unit Energy Costs:

- Develop policies to ensure “stranded costs” and increased “per unit energy” costs due to reduced gas throughput (and fewer gas customers) do not increase inequities among households and communities and unreasonably raise energy burdens for customers who depend on the gas system.

Create a Roadmap for Electrification Priorities:

- ***Transportation Electrification:***
 - Pursue a smart, strategic buildout of utility infrastructure to support electric vehicle (EV) charging facilities.
 - Ensure electric utilities meet customer demand for infrastructure to support charging stations, including freight, mass-transit, and light-duty vehicles. Construction and maintenance of the charging stations should not be funded by ratepayers.
 - Develop policies and technologies for managed charging to reduce the need for expensive grid upgrades.
 - Require coordination among state agencies to update building codes and require Level 2 and fast-charging infrastructure that supports mid-day charging and leverages California’s high solar generation capacity.
- ***Building Electrification:***
 - Align residential Energy Efficiency and Demand Response programs to support appliances with direct load control features to enhance system reliability and lower consumer operating costs.
 - Establish enhanced codes and standards that encourage load shifting and accelerate the transition from gas to electric systems.
 - Provide state-funded incentives for heat pump installations to drive market adoption and transformation.
 - Offer financial assistance for replace-on-burnout of gas appliances to ensure older buildings without adequate electrical wiring can transition smoothly to electrification without imposing a financial hardship.

MEDIUM- AND LONG-TERM ACTIONS (4+ YEARS) – INTEGRATE ELECTRIFICATION PLANNING INTO UTILITY OPERATIONS

Enhance planning for integration of electrification and utility upgrades

- Incorporate “pruning” of the natural gas system in long-term utility infrastructure plans to phase out unnecessary assets.
- Identify regions or industries where ongoing natural gas use is essential for safety or operational needs in the long term, ensuring reliably delivery.
- Regularly evaluate time-of-use rate structures to reflect changing usage patterns while avoiding revenue shortfalls and mitigating unintended cost shifts or punitive customer impacts.

ACHIEVING ELECTRIFICATION WITHOUT SACRIFICING AFFORDABILITY OR SAFETY

Decarbonizing California's energy sector will require substantial investments in the electric grid and careful financial planning. Addressing the ongoing electric rates crisis demands a strategic approach to determine which costs can reasonably be recovered from ratepayers. Programs and activities that do not directly contribute to providing safe and reliable energy should not be funded by ratepayers, as higher rates risk undermining California's efforts to economically switch from fossil fuels to renewable electricity.

Programs and policies intended to drive decarbonization efforts must be rigorously evaluated to ensure they align with the principles of affordability, safety, and equity. An "all of the above" approach is not practical given the critical role gas and electric infrastructure plays in the health and welfare of Californians. Policymakers should use the Public Advocates Office's framework to establish clear priorities and align funding sources with actionable, well-coordinated objectives that support the state's climate and energy goals.

For more detailed information regarding these policy levers, please see our memo here: [Advancing Affordable Electricity in California: Policy Levers to Address Rising Rates](#).

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The Public Advocates Office represents utility customer interests before the California Public Utilities Commission and other forums. We develop recommendations that advance the state's energy and climate goals in the most affordable ways for ratepayers. You can visit our website at www.publicadvocates.cpuc.ca.gov.