

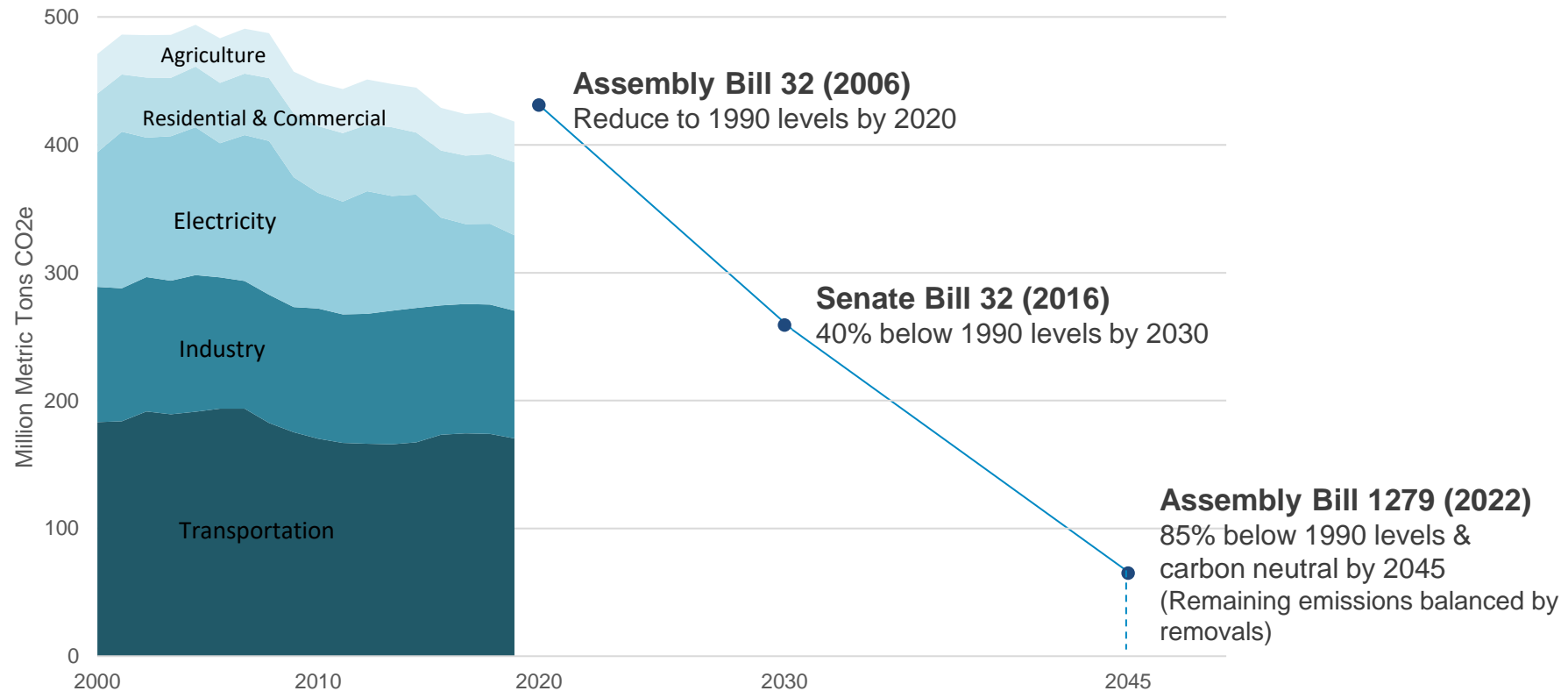
Long-Term Gas Planning and Decarbonization





California's 2045 Carbon Neutrality Goal

California has a statewide goal to achieve economy-wide carbon neutrality by 2045 and to maintain net negative emissions thereafter.

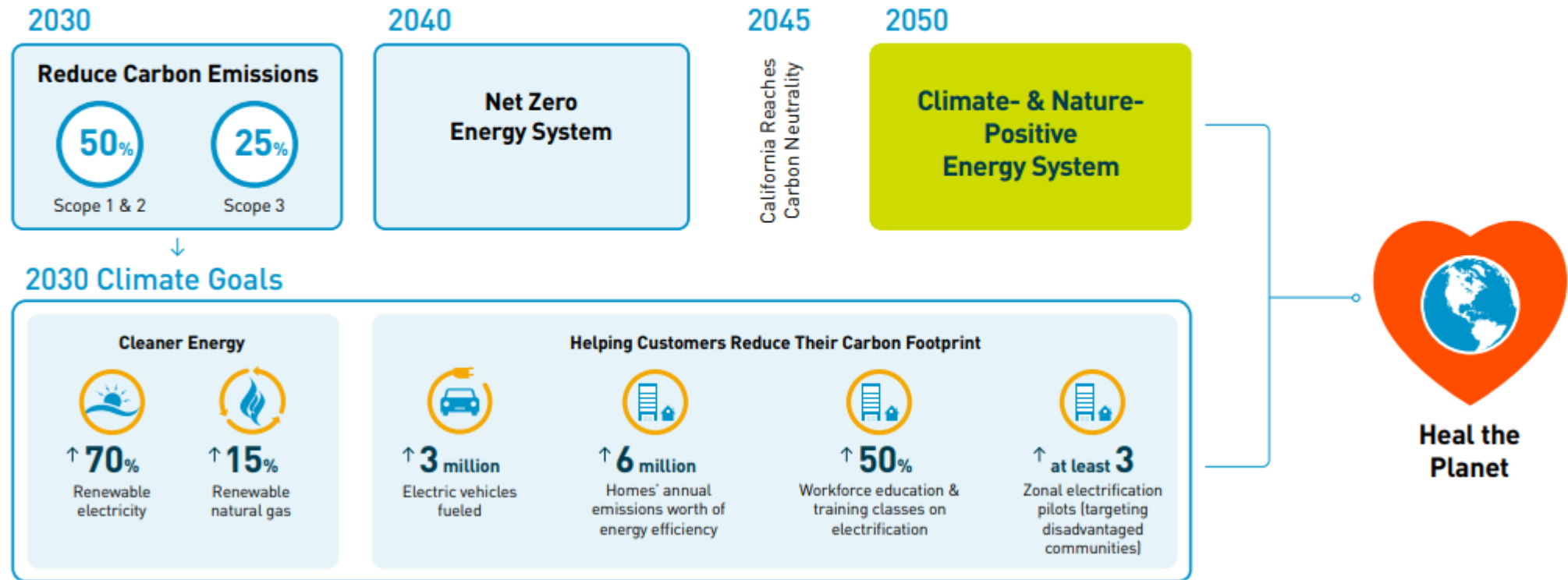




PG&E's Climate Goals

Our Commitment: Helping to Heal the Planet

Leading an equitable and viable transition that leaves no one behind



Notes:

Scope 1: *Direct* emissions from PG&E's operations.

Scope 2: *Indirect* emissions from facility electricity use and electric line losses.

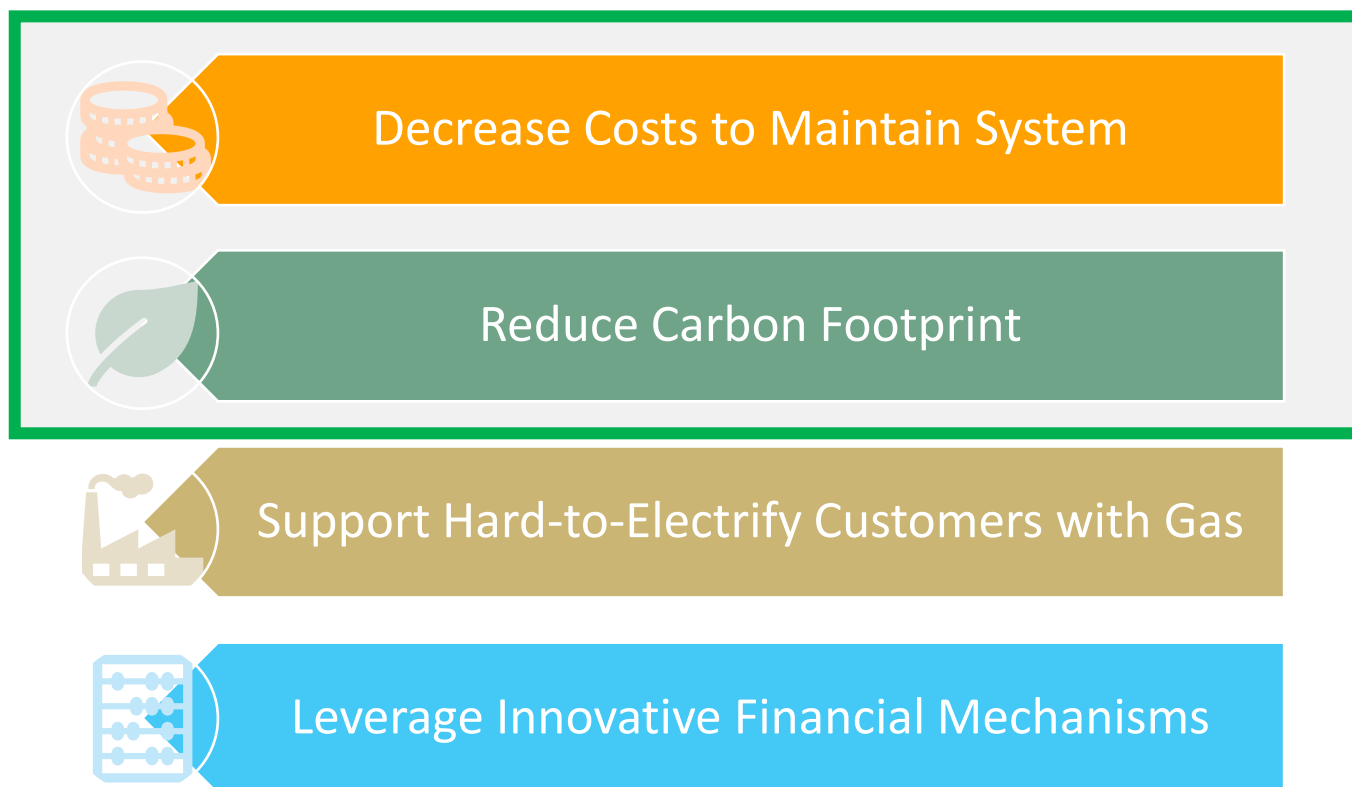
Scope 3: Emissions resulting from *value chain activities* not owned or controlled by PG&E but that can be indirectly impacted by PG&E actions.

"Scope 4": An emerging term for categorizing emission reductions enabled by a company. PG&E can make a significant contribution by enabling these emission reductions in our service area.



PG&E Gas Strategy Broad Overview

PG&E's Vision: The gas system evolves to be an affordable, reliable and safe energy delivery platform consistent with California's carbon neutrality goals.



Building electrification: New construction and retrofit electrification





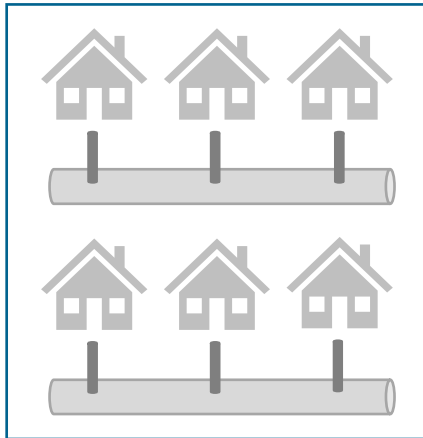
New Construction – PG&E Policy

- PG&E has supported new construction “reach” codes in our jurisdictions. Currently, 51 California jurisdictions have pro-electrification ordinances, 43 of which are located in PG&E’s service territory.
- In the Building Decarb OIR (R.19-01-011) PG&E proposed the elimination of gas line allowances, discounts and refunds for all residential customers and the elimination as allowances, discounts and refunds for non-residential customers where there was not a financial or environmental benefit to ratepayers.

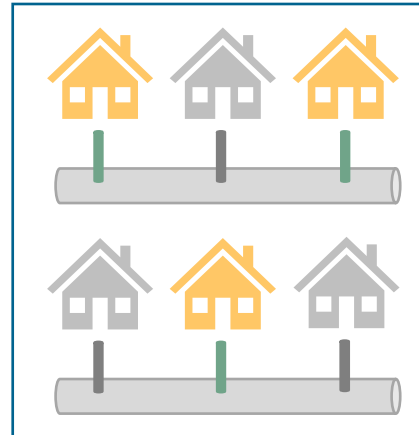


Building Electrification Impact on Long-Term Gas Rates

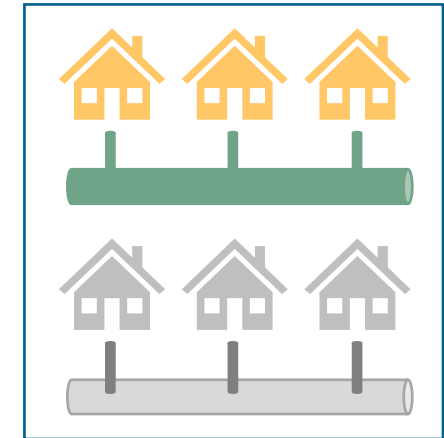
Device-by-device electrification



Whole-building electrification



Zonal/Targeted electrification



 Mixed-fuel customer

 All-electric customer

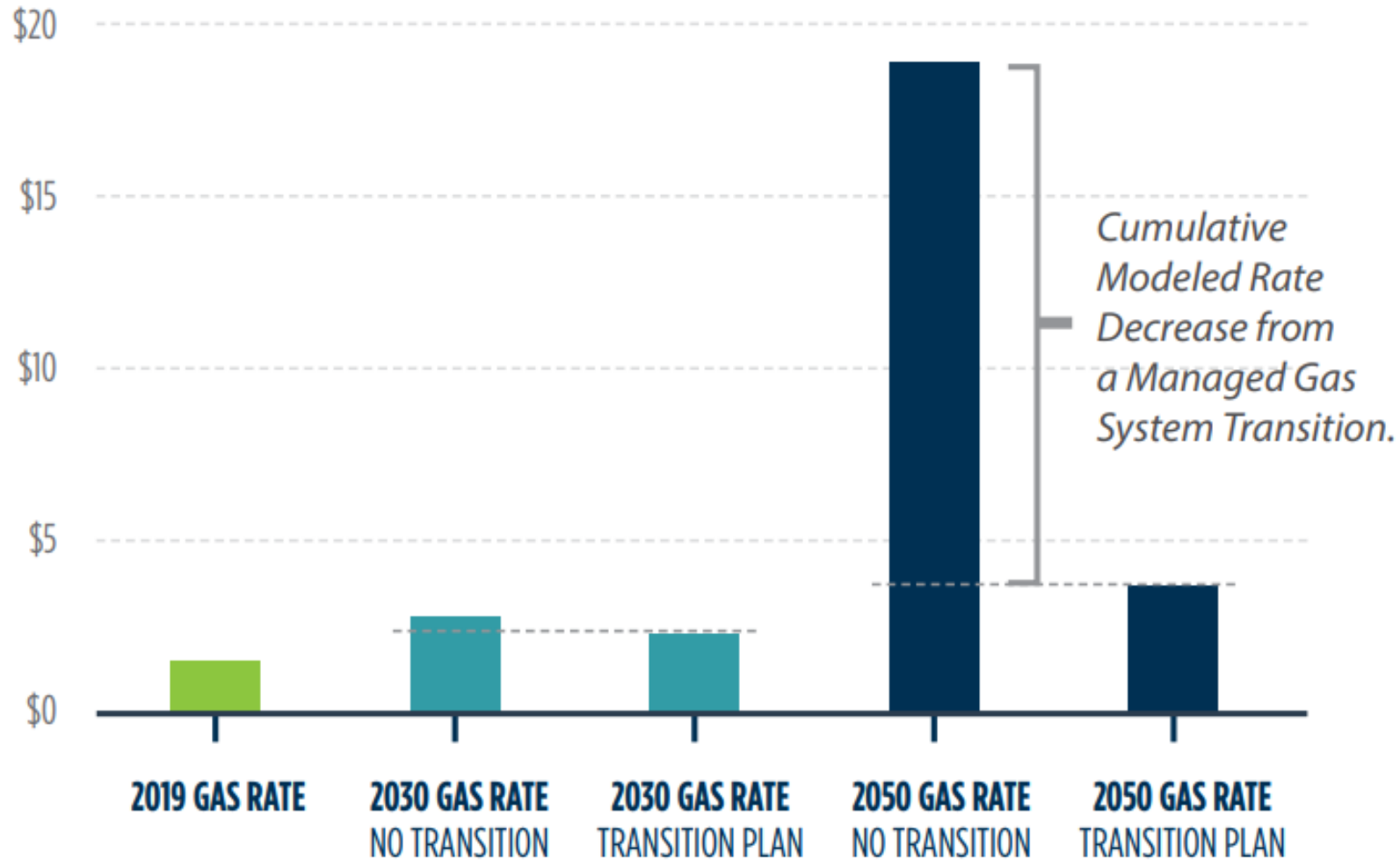
 Main

 Service and meter

 Potentially decommissioned Service and/or Main



Building Electrification Impact on Long-Term Gas Rates

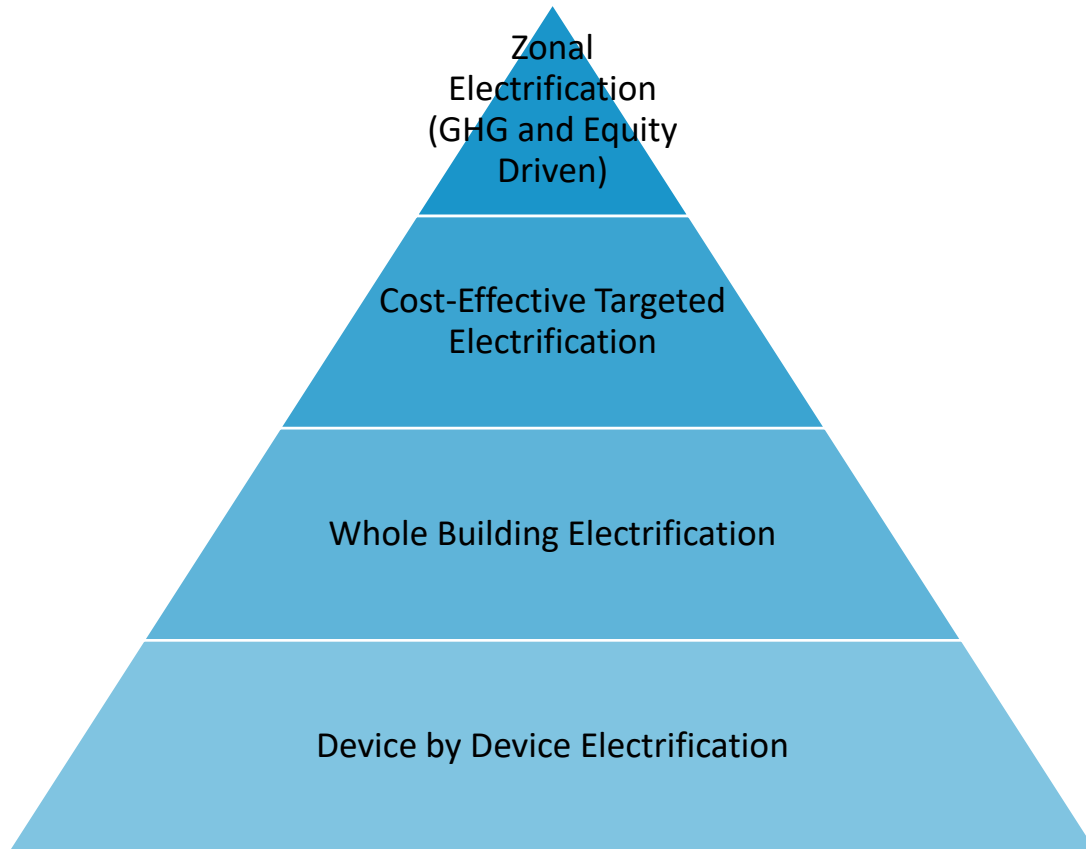


Source: [California's Gas System in Transition.pdf \(gridworks.org\)](https://www.gridworks.org/wp-content/uploads/2021/07/California-Gas-System-in-Transition.pdf)

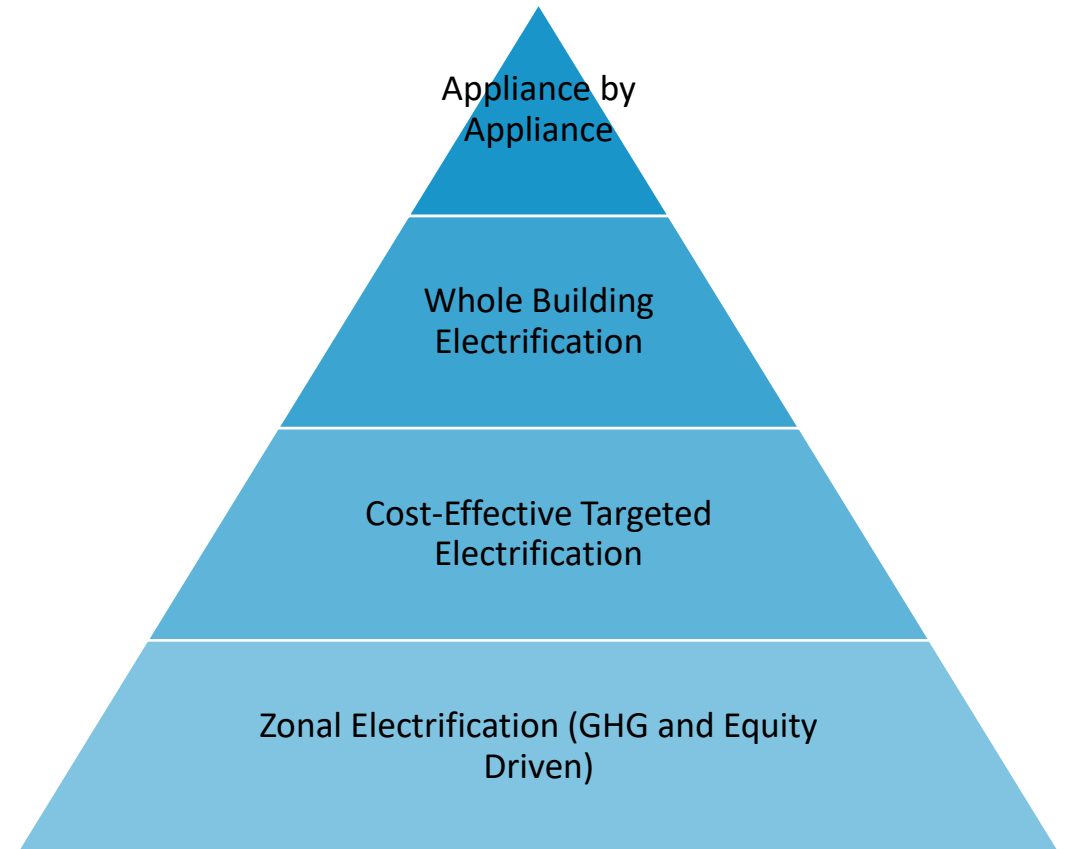


Electrification in California

Current state

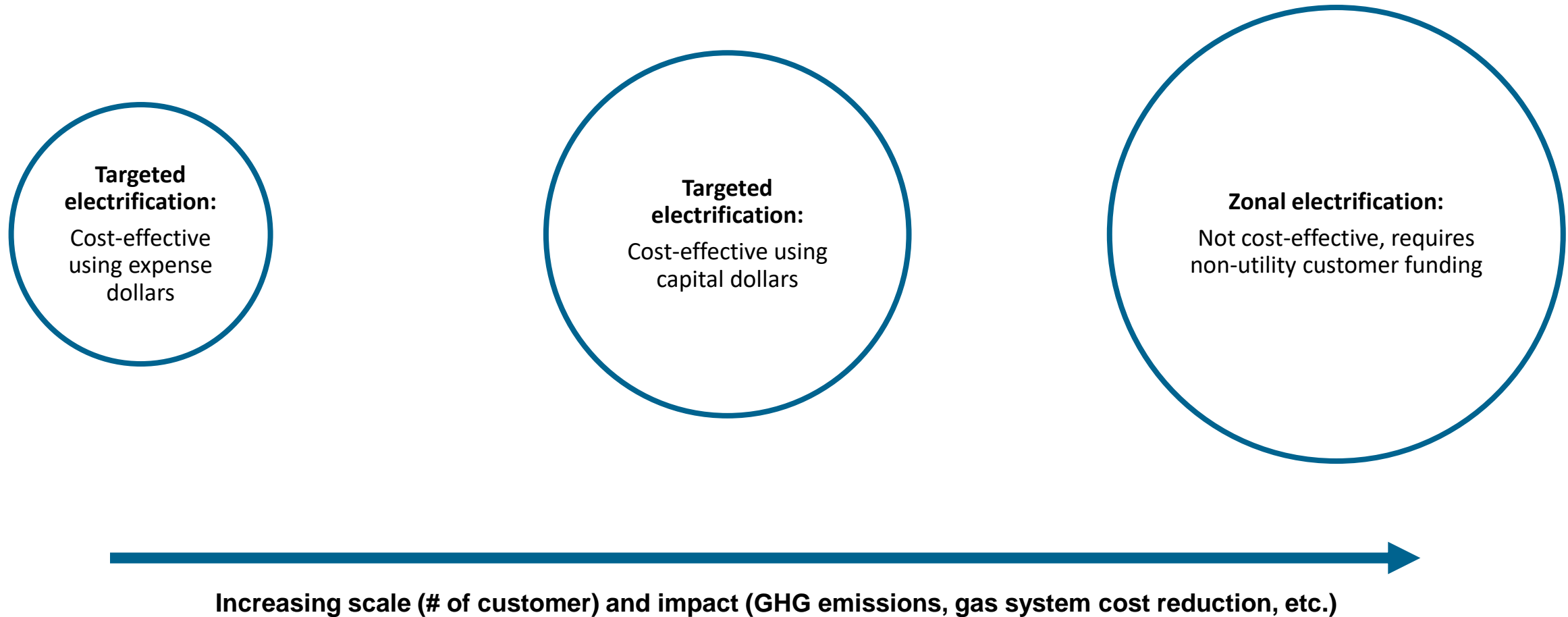


Desired end state





Type and scale of electrification projects





Targeted Electrification – A Cost-Based Approach to Electrification

Targeted electrification success story:
~2,000 ft Aldyl-A replacement project



Progress to Date

- Established the Gas Investment for the Future (GIFF) team to evaluate alternatives to gas investments and engage customers on alternatives to gas service
- Small-scale projects conducted to date have electrified 102 customers, avoided 80 high-pressure regulator rebuilds and 4.2 miles of distribution main, while enabling the retirement of 22 miles of line

Scaling Early Success

- Scale is dependent on changes to “obligation to serve”, external funding, and ability to capitalize behind-the-meter electrification costs
- Utilities need a streamlined application process for targeted electrification projects to ensure that they can be conducted on a timeline consistent with critical gas safety and/or reliability needs

	Status quo gas replacement	Electrification alternative
Pipe replacement/retirement	\$1.2M	\$20K
Customer electrification	-	\$130K
Service retirement	-	\$6K
TOTAL	\$1.2M	\$156K



Larger scale targeted electrification project

CSU Monterey



- In 2022, PG&E filed an application with the CPUC that asks for up to \$17.2M to pursue “zonal” electrification at CSU Monterey Bay
- Includes 8 miles of gas line that requires replacement from 2022-2025
- This project requires electrification of all gas in-unit appliances (space heating, water heating, cooking, laundry) and retirement of the existing gas pipeline
- The costs of the zonal electrification project are anticipated to be fully offset by the avoided gas distribution replacement costs; PG&E is requesting regulatory asset (or “capital”) treatment for the behind-the-meter electrification costs to ensure the project is cost-effective
- As estimated, electrification of CSU Monterey Bay would result in 5 million pounds (2,278 metric tons) of CO2 emission reductions, the equivalent of retiring 491 gasoline-powered passenger vehicles from the road for one year

Zonal Electrification: increased scale and impact

Progress to Date

- Developed an internal *Gas Asset Analysis Tool* to evaluate potential areas for zonal electrification. The tool includes data such as customer income, prevalence of renters, geographic risks, and electric capacity
- PG&E provides a version of this tool, under NDA, to local governments to allow collaboration on planning efforts
- Submitted a zonal electrification program, targeting low-income neighborhoods, in PG&E's 2023-2027 energy efficiency portfolio

Scaling Early Success

- Similar to targeted electrification “scale is dependent on changes to ‘obligation to serve’, [significant] external funding, and ability to capitalize behind-the-meter electrification costs”
- Building networks of local, trusted partners is needed to support customer acceptance for community-led electrification

Questions?

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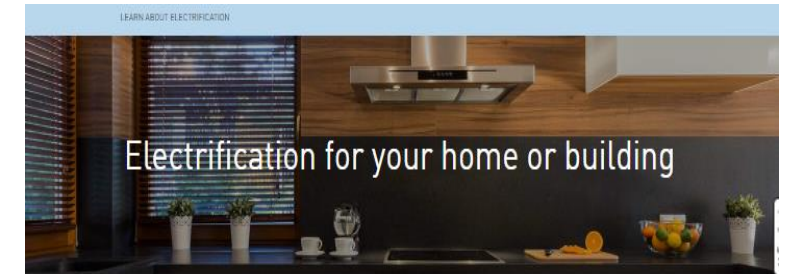
New Construction – PG&E Resources

Incentive Programs

- California Energy Smart Homes (residential) and California Energy Design Assistance (non-residential) : Offer incentives for new construction all-electric homes and major retrofits.

Customer Support

- New Electric Home Rate (E-ELEC) and Electric Baseline
- Customer support available at electrification@pge.com
- Free technical training on electrification through PG&E Energy Centers



Are you ready to move to an all-electric home or building?

Electrification refers to the process of changing appliances over from gas and other non-electric fuel sources to electricity.

Electrification is green. It reduces greenhouse gases, results in better air quality and comfort.

Electrification costs less.

[Get no-cost training on the benefits of electrification.](#)

How PG&E can help you

We're committed to helping our customers embrace an all-electric future. To maximize your cost savings and complete your electrification project as quickly and efficiently as possible:

Identify the scope of your project with a licensed contractor. Your contractor can help you understand whether your existing electric panel is sized appropriately for your electric home. You may be able to avoid panel upgrades with low-ampereage products or circuit sharing devices.

• For electric-panel upgrades or to shut off gas service to your home or business, submit an [online application to "Your Projects"](#) or call [1-877-743-7782](tel:1-877-743-7782)



Retrofits – PG&E Resources

Incentive Programs

- Evolved 2024-2027 Energy Efficiency Portfolio focuses on electrification, especially for under-served communities.
- Single appliance incentives available for electric technologies, with direct install options for low-income customers through ESA.
- WatterSaver demand response program for heat pump water heaters.
- Whole-building incentives being piloted for low-income customers in ESA.



Additional Customer Support

- [Electrification Guidebook](#)
- Electrification Rate Comparison Tool coming Q2-4 2023
- Free Induction Cooktop Lending Program (residential) and equipment demonstrations (non-residential)

