

# An Analytical Framework for Targeted Electrification and Strategic Gas Decommissioning

Identifying Potential Pilot Sites in Northern California's East Bay Region

Final Public Webinar  
2/28/2024

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# Objectives & Agenda

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## + Objectives

- Review project overview
- Share key findings from core project tasks
- Share recommendations for regulators and policymakers
- Describe next steps
- Answer questions from the public regarding this project

## + Relevant Links

- [Gridworks Webpage](#)
- [Ava Webpage](#)
- [E3 Webpage](#)

## + 9:30 AM Welcome & Housekeeping

## + 9:40 AM Draft Final Report Presentation

- Project Background and Overview
- Key Findings From Four Project Tasks
- Summary of Recommendations

## + 10:25 PM Audience Q&A

## + 10:55 AM Wrap Up

## + 11:00 AM Adjourn

# Project Background

**+ As building electrification advances, gas system costs will be spread across fewer customers and a lower volume of gas sales.**

- As a result, remaining customers could face large increases in their gas rates.
- Low-income homeowners, who cannot afford electric alternatives, and renters, who cannot elect these alternatives, will be most vulnerable to these gas rate increases.

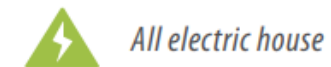
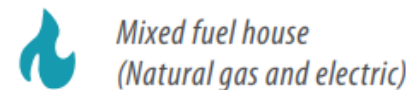
**+ One strategy that may help mitigate gas system cost impacts is **targeted building electrification coupled with strategic gas system decommissioning.****

- This approach could be part of a “managed transition” to reduce gas system spending and manage gas rates.

**UNTARGETED ELECTRIFICATION**  
*(No retirements)*



**TARGETED ELECTRIFICATION**  
*(Targeted retirements)*





# Executive Summary

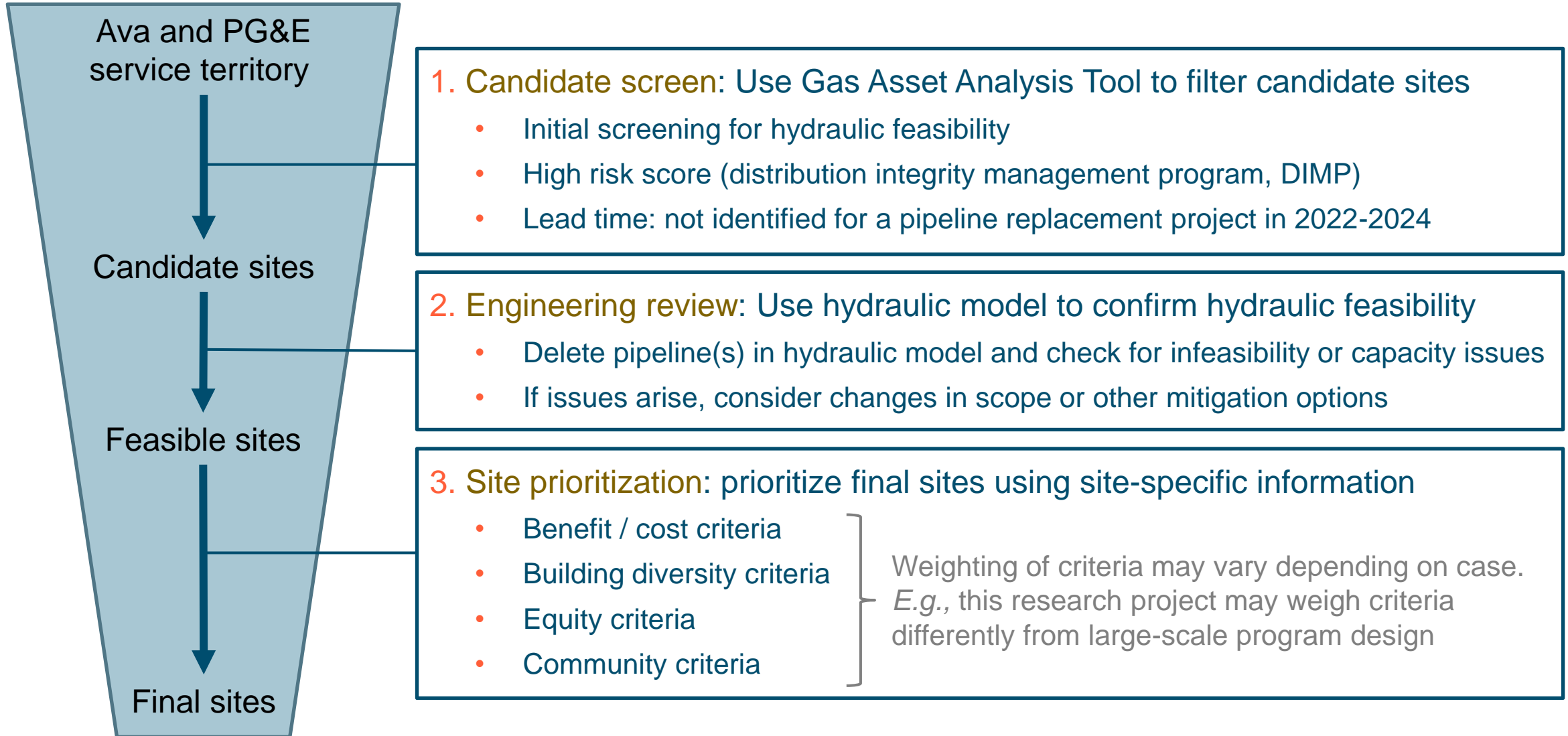
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- + Overall, we find that targeted electrification and gas decommissioning is a **promising strategy** but **not a silver bullet** to solve the long-term gas cost challenge.
- + These projects could generate **significant gas system cost savings** if successfully implemented. However, they face **serious challenges** regarding **customer preferences, high upfront costs, and the current policy and regulatory environment**.
- + We estimate that approximately **5-10% of gas distribution main miles** may be eligible to capture savings from strategic gas decommissioning over the next two decades. Nonetheless, these projects reflect an important **opportunity to avoid a large share of the capital costs that would otherwise be incurred** on the gas system.
- + Key recommendations for near-term pilots include providing significant **outreach and education, upfront funding**, and potentially **bill guarantees**, as well as **starting community engagement efforts as early as possible**.
- + This project considered two important but distinct equity goals: **promoting electrification in disadvantaged communities** and **maximizing gas system cost savings**. We believe the state may achieve better outcomes by developing and **promoting different programs for these two goals**.

# 1. Site Selection Framework

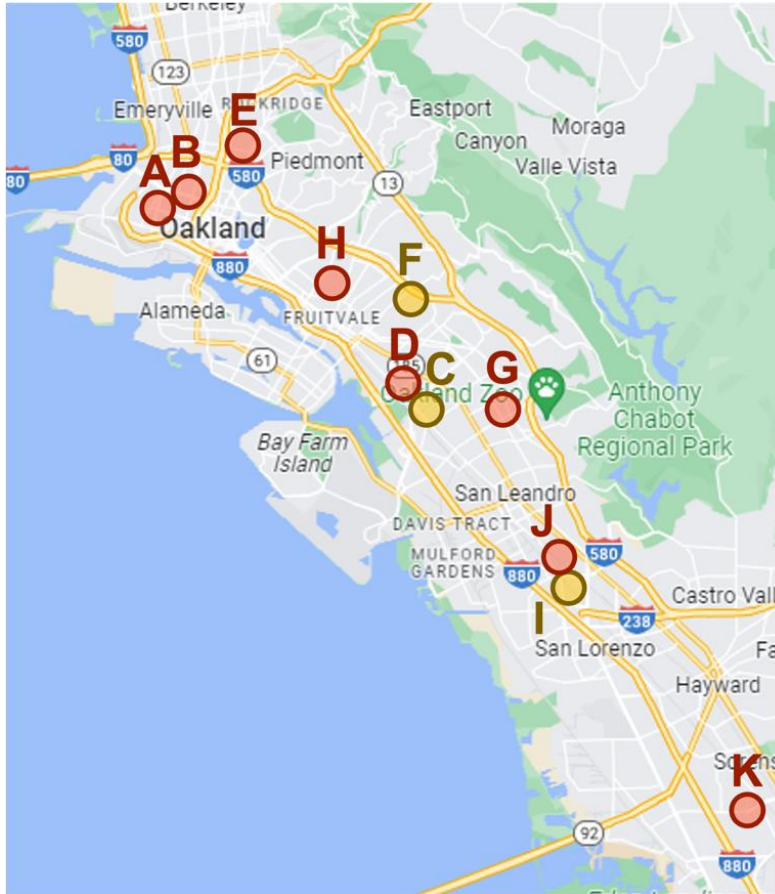


# Proposed site selection framework



This framework was used to identify 11 feasible candidate sites and 3 final proposed pilot sites.

# Key findings from site selection process



11 candidate sites, including 3 proposed pilot sites in yellow

1. A **longer-term project planning process** is needed to support the identification of sites for gas decommissioning with enough lead time to implement electrification or other alternatives
2. There is a need for **better data and planning tools** to support the identification of candidate sites for targeted electrification and gas decommissioning.
3. The **timing and scale for these projects will be limited** by the pipeline replacement schedule and by hydraulic feasibility for decommissioning.
  - We estimate that approximately **5-10% of gas distribution main miles** may be eligible to capture savings from strategic gas decommissioning over the next two decades.
  - Nonetheless, these projects reflect an important **opportunity to avoid a large share of the capital costs that would otherwise be incurred** on the gas system over the next two decades

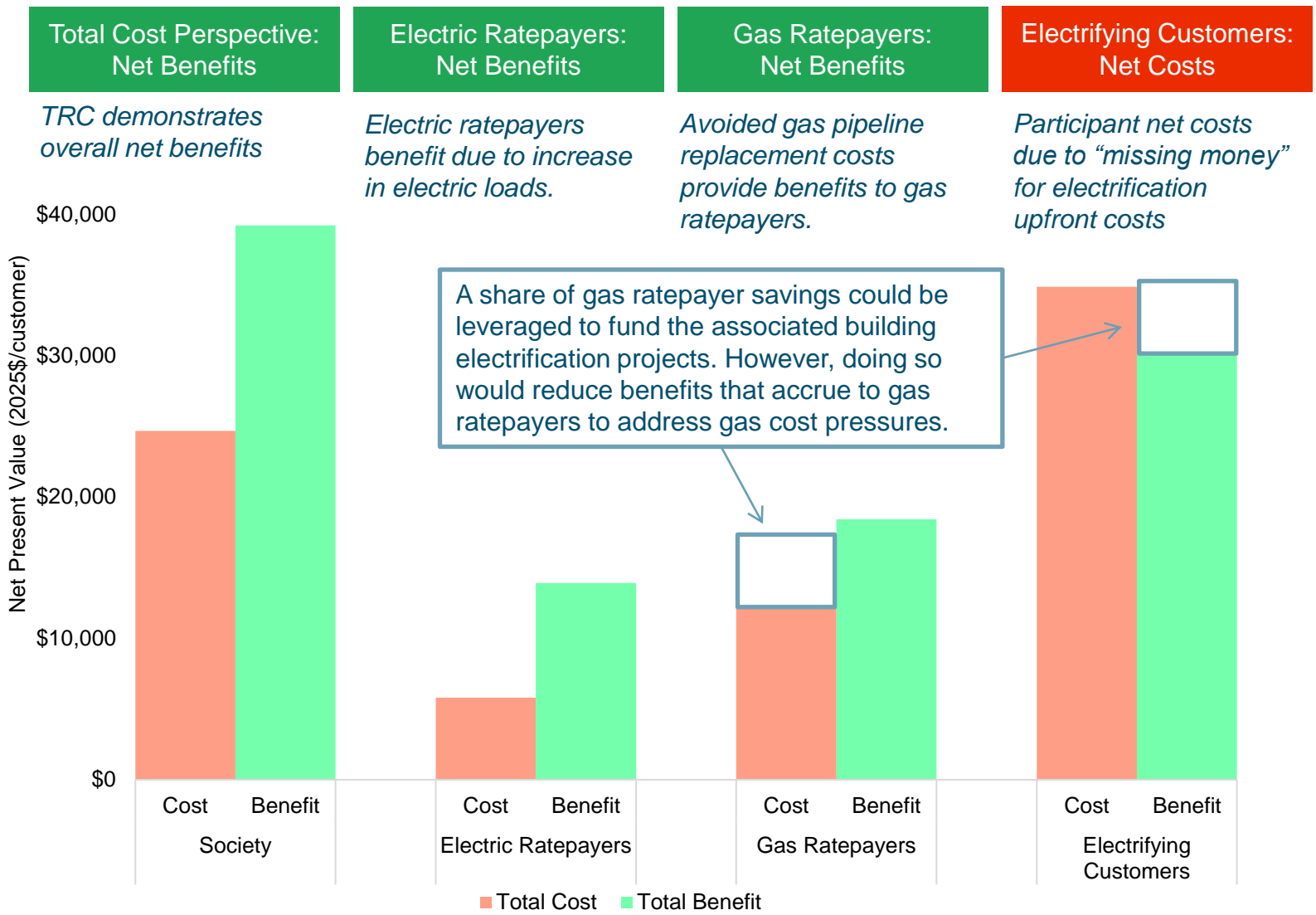
For more information, see our [Interim Report](#)



## 2. Benefit-Cost Analysis



# Net benefits for society and for ratepayers, but “missing money” for electrifying customers



## Key Findings:

1. Targeted electrification and gas decommissioning **can provide net benefits** to the state, electric ratepayers, and gas ratepayers.
2. There is a **significant funding gap** for the upfront costs of electrifying buildings, **even after accounting for existing incentives**.
3. One option is to **repurpose savings to fund the associated building electrification**. However, this approach **reduces long-term savings to gas ratepayers**.
4. High program **administration costs** would have a significant **negative impact on cost-effectiveness**.



# 3. Community Outreach and Education



# Community Outreach Approach

## + Strategy #1: Partner with local CBO

Issued an RFP for CBO partner(s) for up to \$120,000 total

- + 0 responses received; CBOs had limited bandwidth or resources to support.

## + Strategy #2: Partner with existing electrification efforts

Partnered with City of Oakland to host local home energy resource fairs

- + Low attendance, may not be the best avenue for informing or getting feedback on electrification.

## + Strategy #3: Host facilitated focus groups

Partnered with Environmental / Justice Solutions to facilitate 3 paid focus groups for residents in the proposed pilot sites.

- + Attendance = 44 out of 90



CITY OF OAKLAND

# HOME ENERGY RESOURCE FAIR

**Are You Ready to Electrify?**  
Learn about **rebates and other resources** to make your home **safe, healthy, and affordable.** Find out how electrifying can help!

**DATE**  
June 7th, 2023

**TIME**  
5:30 - 7:30PM

**Dimond Branch Library (3565 Fruitvale Ave.)**

- Free food!
- Register now with the QR code!

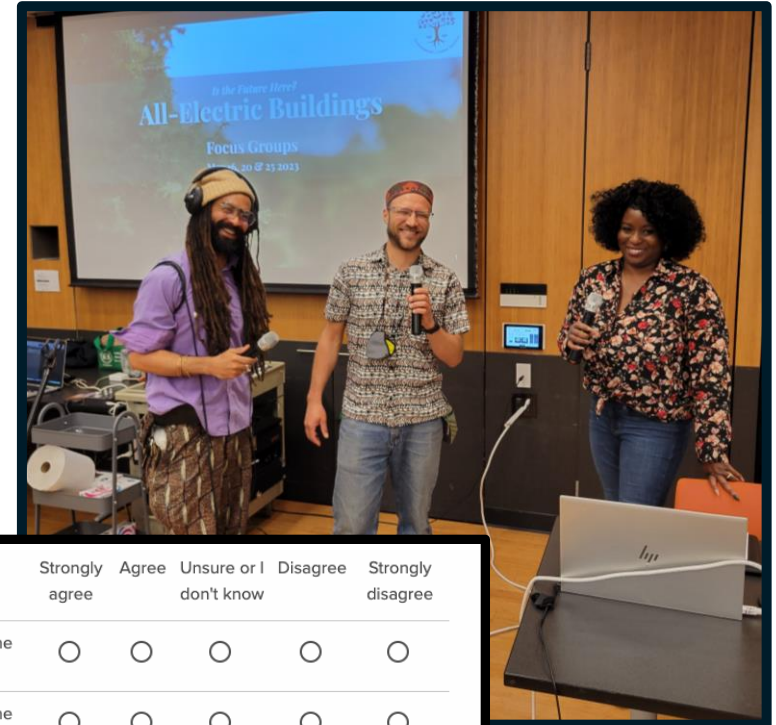
Learn more at [oaklandca.gov/electrify](https://oaklandca.gov/electrify)

**BAYREN** **PG&E** **GRID ALTERNATIVES**

**EAST BAY COMMUNITY ENERGY** **RISING SUN CENTER FOR OPPORTUNITY**

# Community Outreach Findings

- + Top concerns: upfront cost, lack of familiarity with electric equipment, and the potential increases to electricity bills.
  - Other concerns: grid reliability, renter challenges
- + Community prioritizes health-related issues, mold, lead, and/or asbestos, affordability (no upfront costs) and improved health and indoor air quality remediation before electrification
- + Most effective messaging:
  - Need for easy to understand, multilingual, digital and printed resources
  - Want proof that this concept has worked in other communities before buying in



	Strongly agree	Agree	Unsure or I don't know	Disagree	Strongly disagree
I think living in an all-electric home would be safe and comfortable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think living in an all-electric home would benefit me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have concerns about home electrification.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a good understanding of what electrification is.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned about the impacts of climate change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned about indoor air quality in my home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# 4. Deployment Plan



# Feedback that Informed Deployment Plan

## Deployment Plan

*Tactical document* describing how to implement selected pilot projects with the end goal of decommissioning gas systems. Includes: feasible near-term milestones, long-term milestones, and strategies to engage and motivate customers



### + Sources of feedback

- Local CBOs
- Self Help Enterprise (SJV DAC Pilot)
- Various Program Administrators
- Oakland Home Energy Resource Fairs
- Facilitated Focus Groups
- Surveys
- TAC meetings

### + Community

- Communities move at the speed of trust

### + Building

- Housing stock requires attention to energy efficiency upgrades + health & safety remediations

### + Customer

- Various levels of familiarity with electrification equipment
- Need for customer-friendly education about benefits of electrification
- Cost is the largest concern for most customers considering electrification





# Deployment Plan Findings

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- + **Phased approach for sites with large number of customers:** Implementing gas decommissioning projects with a large volume of customers requires a phased approach to build trust. Traditional approach of seeking individual customer consent is not feasible, thus highlighting the need for no-regrets investment.
- + **Timeline challenges:** Community buy-in takes time and is critical to successful implementation, which conflict with short funding timeline.
- + **Significant administrative funds:** Total project costs may exceed equipment and installation costs. True administrative costs are unknown, though expected to be substantial and need to be budgeted for to ensure effective implementation.
- + **Importance of energy efficiency and health and safety remediations:** Prioritizing funding for EE and health and safety remediations as pre-electrification investments is critical to ensure positive electrification implementation.

# Summary of Recommendations



# Key recommendations for policymakers and regulators

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- 1. Regulatory and policy changes are needed for targeted electrification and gas decommissioning to achieve significant scale, including:**
  - A. Longer-term capital project planning process
  - B. Better data and planning tools for site selection
  - C. Reforms to the obligation to serve
  - D. Significant additional funding to address the upfront cost gap for building electrification
- 2. The state and/or utilities should develop a long-term plan for gas customers and gas infrastructure that is aligned with the state's climate goals.**
  - A. The CPUC's Long-Term Gas Planning proceeding is entering a new phase focused on long-term planning for gas system decarbonization
  - B. Clear plans and targets could provide key regulatory support for alternatives to gas pipeline replacement
  - C. Long-term planning should consider the role of targeted electrification and gas decommissioning as part of a portfolio of measures to reduce gas system investments and mitigate long-term cost pressures

# Key recommendations for future pilots and programs

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- 1. Significant outreach and education, along with upfront funding and potentially bill guarantees, will be key to project success.**
  - A. Our community outreach found that electrification may not be a high priority for many residents
  - B. We also found that residents have concerns with home electrification including upfront costs, increases in electric bills, and lack of familiarity with electric equipment
- 2. We recommend building community engagement efforts into project timeline, scope of work, and budget, and starting engagement efforts as early as possible.**
- 3. The state may achieve better outcomes by developing and promoting distinct programs for two different equity objectives:**
  - A. Promoting electrification in disadvantaged communities
  - B. Maximizing gas system cost savings and implementation feasibility

# Audience Q&A



*Please raise your hand  
or type your question in  
the Q&A box*

# Thank You

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Allison Lopez, Ava Community Energy

Neha Bazaj, Gridworks



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[bit.ly/Gridworks\\_signup](https://bit.ly/Gridworks_signup)



**Catch up on Blog Posts**

[gridworks.org/category/gas-decommissioning/](https://gridworks.org/category/gas-decommissioning/)

# Appendix

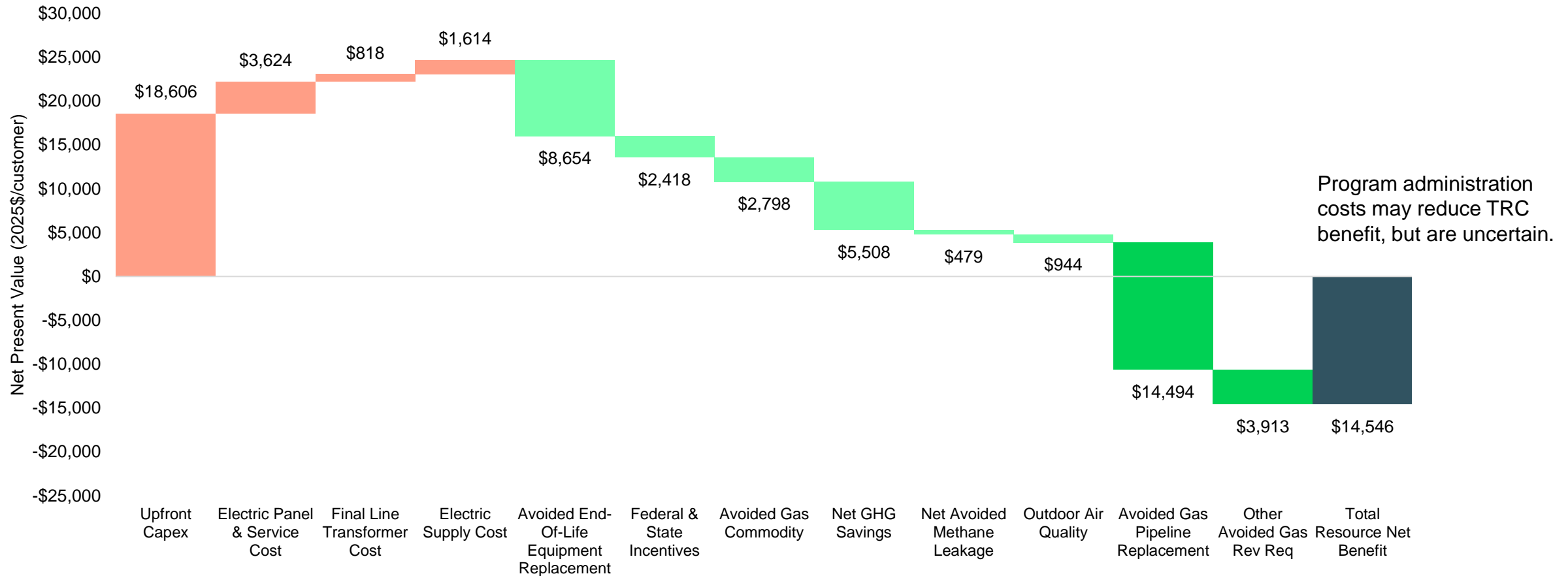




# Benefit-cost analysis: costs & benefits

## Total Resource Cost test (TRC)

Average Lifecycle Costs and Benefits Per Customer Across 11 Candidate Sites (1,500 Customers)



# Importance of rate design for promoting bill savings

## + PG&E Rate Options

- Default rate: E-TOU-C
  - TOU rate; 2 monthly usage tiers; no customer charge
- Electrification rate: E-ELEC
  - TOU rate; no tiers; \$15/mo customer charge

## + Results:

- On the default electric rate, 58% of customers see a net bill increase
- With the option of shifting to the electrification rate, only 25% of customers see a bill increase

## + Note that ongoing CPUC residential rate reform may result in changes to these bill impacts

- Open proceeding intends to implement income-graduated fixed charges and reduce the volumetric component of rates

## Bill impacts modeled for 1500 customers

