

Napa County

1195 THIRD STREET
SUITE 310
NAPA, CA 94559



Agenda

Friday, September 27, 2024

9:30 AM

Board of Supervisors Chambers
1195 Third Street, Third Floor

Climate Action Committee (and the Napa County Board of Supervisors*)

**This meeting is also being noticed as a Board of Supervisors' meeting due to having 2 current Board Members (Supervisors Cottrell and Gallagher) and 1 Supervisor-Elect (Councilmember Alessio) at the Climate Action Committee meeting.*

AMERICAN CANYON Leon Garcia, Mark Joseph, Vacant (Alternate)

CALISTOGA Kevin Eisenberg, Lisa Gift, Irais Lopez-Ortega (Alternate)

NAPA Bernie Narvaez, Liz Alessio (Chair), Beth Painter (Alternate)

NAPA COUNTY Anne Cottrell, Joelle Gallagher (Vice-Chair), Belia Ramos (Alternate)

ST. HELENA Anna Chouteau, Billy Summers, Eric Hall (Alternate)

YOUNTVILLE Hillery Bolt Trippe, Pamela Reeves, Eric Knight (Alternate)

David Morrison, Special Projects Director, Chris Apallas, County Counsel

Ryan Melendez, Natural Resources, Planner II

How to Watch or Listen to the Napa County Climate Action Committee Meetings

The Climate Action Committee will continue to meet at 9:30 AM on the 4th Friday of each month. December 6, 2024 CAC meeting adopted in place of the Regular November and December meetings.

The Climate Action Committee realizes that not all County residents have the same ways to stay engaged, so several alternatives are offered. Remote Zoom participation for members of the public is provided for convenience only. In the event that the Zoom connection malfunctions for any reason, the Climate Action Committee reserves the right to conduct the meeting without remote access.

Please watch or listen to the Climate Action Committee meeting in one of the following ways:

1. Attend in-person at the Board of Supervisors Chambers, 1195 Third Street, Napa Suite 305.
2. Watch on Zoom using the attendee link: <https://countyofnapa.zoom.us/j/82901122471>. Make sure the browser is up-to-date.
3. Listen on Zoom by calling 1-669-900-6833 (Meeting ID: 829-0112-2471).

If you are unable to attend the meeting in person and wish to submit a general public comment or a comment on a specific agenda item, please do the following:

1. Email your comment to meetingclerk@countyofnapa.org. Emails received will not be read aloud but will still become part of the public record and shared with the Committee Members.
2. Use the Zoom attendee link: <https://countyofnapa.zoom.us/j/82901122471>. Make sure the browser is up-to-date. When the Chair calls for the item on which you wish to speak, click "raise hand." Please limit your remarks to three minutes.
3. Call the Zoom phone number 1-669-900-6833 Enter Meeting ID 829-0112-2471 When the Chair calls for the item on which you wish to speak, press *9 to raise hand. Please limit your remarks to three minutes.

****Please note that phone numbers in their entirety will be visible online while speakers are speaking****

For more information, please contact us via telephone at (707) 253-4417 or send an email to meetingclerk@countyofnapa.org.

ANY MEMBER OF THE AUDIENCE DESIRING TO ADDRESS THE COMMITTEE:

ON A MATTER ON THE AGENDA

Please proceed to the podium when the matter is called and, after receiving recognition from the Chair, give your name and your comments or questions. In order that all interested parties have an opportunity to speak, please be brief and limit your comments to the specific subject under discussion. Time limitations shall be at the discretion of the Chair or Committee, but is generally limited to three minutes.

ON A MATTER NOT ON THE AGENDA

Public comment is an opportunity for members of the public to speak on items that are not on the agenda but are within the subject matter jurisdiction of the Committee. Public comment is limited to three minutes per speaker, subject to the discretion of the Chair. Comments should be brief and focused, and speakers should be respectful of one another who may have different opinions. Please remember this meeting is being recorded and broadcasted live via ZOOM. The County will not tolerate profanity, hate speech, abusive language, or threats. Also, while public input is appreciated, the Brown Act prohibits the Committee from taking any action on matters raised during public comment that are not on the agenda.

- 1. CALL TO ORDER; ROLL CALL**
- 2. PLEDGE OF ALLEGIANCE**
- 3. PUBLIC COMMENT**

In this time period, anyone may address the Climate Action Committee regarding any subject over which the Committee has jurisdiction but which is not on today's posted agenda. In order to provide all interested parties an opportunity to speak, time limitations shall be at the discretion of the Chair. As required by Government Code, no action or discussion will be undertaken on any item raised during this Public Comment period.

4. CONSENT ITEMS

- A. Approval of minutes from the regular meeting on August 23, 2024. [24-1651](#)

Attachments: [Draft 8-23-24 Minutes.pdf](#)

5. ADMINISTRATIVE ITEMS

- A. PRESENTATION: Video - "How much land does it take to power the world?" - Ted-Ed [24-1653](#)

- B.** PRESENTATION: SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION (BCDC) - REGIONAL SHORELINE ADAPTATION PLAN [24-1670](#)
STAFF REQUEST: Receive a presentation by Dana Brechwald, Assistant Planning Director for Climate Adaptation, and Jessica Fain, Planning Director, on implementing SB 272, legislation requiring local governments to prepare rising sea level adaptation plans.
Attachments: [BCDC RSAP Roadshow - Napa_Updated.pdf](#)
- C.** PRESENTATION: PENINSULA CLEAN ENERGY COST ANALYSIS OF BUILDING ENERGY EFFICIENCY UPGRADES AND SWITCHING FROM GAS TO ELECTRIC APPLIANCES [24-1669](#)
Staff requests that the Climate Action Committee receive a presentation from Blake Herrschaft, Building Electrification Program Manager with Peninsula Clean Energy on the costs, benefits, and on-bill savings when customers have made energy efficiency and electrification upgrades to buildings.
Attachments: [5C - PCE Napa Presentation.pdf](#)
- D.** PRESENTATION: UPDATE ON THE CALIFORNIA GREEN BUSINESS NETWORK LODGING PILOT PROGRAM IN PARTNERSHIP WITH VISIT NAPA VALLEY [24-1683](#)
Staff will provide a brief update on the pilot program to administer and promote the California Green Business Network and the Green Lodging Certification Pilot Program.

6. REPORTS AND ANNOUNCEMENTS

7. FUTURE AGENDA ITEMS

8. ADJOURNMENT

I HEREBY CERTIFY THAT THE AGENDA FOR THE ABOVE STATED MEETING WAS POSTED AT A LOCATION FREELY ACCESSIBLE TO MEMBERS OF THE PUBLIC AT THE NAPA COUNTY ADMINISTRATIVE BUILDING, 1195 THIRD STREET, NAPA, CALIFORNIA ON 9/24/2024 BY 12:00PM. A HARDCOPY SIGNED VERSION OF THE CERTIFICATE IS ON FILE WITH THE COMMITTEE CLERK AND AVAILABLE FOR PUBLIC INSPECTION

ANGIE RAMIREZ VEGA (by e-signature)

Angie Ramirez Vega, Clerk of the Commission



Napa County

Board Agenda Letter

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Main: (707) 253-4580

Climate Action Committee (and the Napa County Board of Supervisors*)
File ID #: 24-1651

Agenda Date: 9/27/2024

TO: Napa County Climate Action Committee
FROM: Brian D. Bordona, Director, Napa County Planning, Building, & Environmental Services
REPORT BY: Ryan Melendez, Planner II - Sustainability
SUBJECT: Approval of Minutes

RECOMMENDATION

Approval of minutes from the regular meeting on August 23, 2024.

EXECUTIVE SUMMARY

The Clerk requests approval of minutes from the regular meeting on August 23, 2024.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND AND DISCUSSION

Only committee members who attended the August 23, 2024 meeting of the Climate Action Committee (CAC) may vote on the minutes. All other CAC members should abstain from the vote.



Regular Meeting Minutes

Climate Action Committee

Committee Members

American Canyon	Leon Garcia	Mark Joseph
Calistoga	Kevin Eisenberg	Lisa Gift
Napa	Bernie Narvaez	Liz Alessio (<i>Chair</i>)
Napa County	Anne Cottrell	Joelle Gallagher (<i>Vice-Chair</i>)
St. Helena	Anna Chouteau	Billy Summers
Yountville	Hillery Bolt Trippe	Pamela Reeves

County Staff

David Morrison, Special Projects Director
 Chris Apallas, Committee Counsel
 Ryan Melendez, Planner II
 Alexandria Quackenbush, Meeting Clerk
 Angie Ramirez Vega, Meeting Clerk

Alternates

American Canyon	Vacant
Calistoga	Irais Lopez Ortega
Napa	Beth Painter
Napa County	Belia Ramos
St. Helena	Eric Hall
Yountville	Eric Knight

Friday, August 23, 2024

9:30 AM

**Board of Supervisors Chambers
1195 Third Street, Third Floor**

1. CALL TO ORDER; ROLL CALL

Committee Members Present: Leon Garcia, Mark Joseph, Kevin Eisenberg, Bernie Narvaez, Liz Alessio, Anne Cottrell, Joelle Gallagher, Anna Chouteau, Billy Summers, Hillery Trippe
Committee Members Absent: Lisa Gift, Pamela Reeves

2. PLEDGE OF ALLEGIANCE

Led by Member Garcia.

3. PUBLIC COMMENT

None.

4. CONSENT ITEMS

A. The Clerk of the Committee requests approval of minutes from the following meeting held on: July 26, 2024.

Motion by Member Garcia to approve minutes for the July 26, 2024, meeting as presented, seconded by Member Joseph.

Vote: Carried 10-0-2

Yes: Garcia, Joseph, Eisenburg, Narvaez, Alessio, Cottrell, Gallagher, Chouteau, Summers, Trippe

No: None

Absent: Gift, Reeves

5. ADMINISTRATIVE ITEMS

- A. PRESENTATION (VIDEO):** Staff requests that the Climate Action Committee (CAC) begin the regular meeting on August 23, 2024, with a brief video describing Climate Mitigation and Climate Adaptation, and how we can implement strategies to better prepare for extreme climate impacts. The goal of this video is to help educate CAC members on a variety of climate and environmental topics.

Ryan Melendez shared the video.

Chair Alessio opened public comment; receiving none, she closed public comment.

- B. DISCUSSION & PRESENTATION:** Staff will present the Final Napa County Regional 2019 Greenhouse Gas Short-Lived Climate Pollutant Inventory Memorandum. Staff requests the CAC receive the presentation, discuss, and provide any direction to staff regarding the memo.

Ryan Melendez and David Morrision presented the item along with Brenda Hom and Erik DeKok from Ascent.

CAC Members asked, and staff responded to, questions regarding metrics and mitigation.

Chair Alessio opened public comment; two public comments were received.

Chair Alessio closed public comment. Staff and Ascent responded to public comment questions.

Member Cottrell requested staff provide clarification on the two memos provided to clearly distinguish all updates on the most recent memo.

- C. ACTION ITEM: DISCUSSION & PRESENTATION:** Staff requests the CAC receive a presentation from Ascent Environmental and RCAAP project staff on the Draft Climate Adaptation Strategies, Measures and Actions Memo. Ascent and staff will also present the Top Ten (10) Recommended Adaptation Measures for Cost and Funding Analysis. Staff requests the CAC discuss the presented top ten draft measures, provide guidance to staff on any adjustments, and vote to accept them to move forward with Cost and Funding Analysis for each measure.

Erik DeKok, Ascent, presented the item.

CAC Members asked, and staff and Ascent responded to, questions.

Chair Alessio opened public comment; one public comment was received.

Chair Alessio closed public comment; County staff and Ascent responded to public comment questions.

CAC Members unanimously agreed on the presented Top Ten Priority Adaptation Measures.

Motion by Member Joseph to approve Top Ten Priority Adaptation Measures as presented, seconded by Member Cottrell.

Vote: Carried 10-0-2

Yes: Garcia, Joseph, Eisenburg, Narvaez, Alessio, Cottrell, Gallagher, Chouteau, Summers, Trippe

No: None

Absent: Gift, Reeves

6. REPORTS AND ANNOUNCEMENTS

Ryan Melendez announced recent and upcoming workshops and events.

7. FUTURE AGENDA ITEMS

Members proposed potential future agenda items.

8. ADJOURNMENT

Meeting adjourned at 11:24 a.m.

LIZ ALESSIO, Chairperson

KENDALL SAWYER, Meeting Clerk



Napa County

Board Agenda Letter

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Climate Action Committee (and the Napa County Board of Supervisors*)
File ID #: 24-1653

Agenda Date: 9/27/2024

TO: Napa County Climate Action Committee
FROM: Brian D. Bordona, Director of Planning, Building, and Environmental Services
REPORT BY: Ryan Melendez, Planner II - Sustainability
SUBJECT: Climate Education Video: How much land does it take to power the world?

RECOMMENDATION

PRESENTATION: Video - "How much land does it take to power the world?" - Ted-Ed

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND

Video: "How much land does it take to power the world?" - Ted-ED

[≤https://www.youtube.com/watch?v=DW0jTe80kmM&list=PLBoopqPhzJXwVbmvx59ZldgKrqzAHsS9t&index=1&t=1s>](https://www.youtube.com/watch?v=DW0jTe80kmM&list=PLBoopqPhzJXwVbmvx59ZldgKrqzAHsS9t&index=1&t=1s)

*Note: Copy and paste entire link above into a web browser.

Explore the sustainability of fossil fuels, nuclear power, and renewable energy and how much space each of these power sources use.

No matter how we make electricity, it takes up space. Coal requires mines and plants to convert it into electricity. Nuclear power takes uranium mines, facilities to refine it, a reactor, and a place to store the spent fuel safely. Renewable energy needs wind turbines or solar panels. So how much space would it take to power the whole world? Explore the sustainability of different power sources.



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Climate Action Committee (and the Napa County Board of Supervisors*)
File ID #: 24-1670

Agenda Date: 9/27/2024

TO: Napa County Climate Action Committee
FROM: Brian D. Bordona, Director, Napa County Planning, Building, & Environmental Services
REPORT BY: Ryan Melendez, Planner II, Sustainability
SUBJECT: Presentation from San Francisco Bay Conservation and Development Commission

RECOMMENDATION

PRESENTATION: SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION (BCDC) - REGIONAL SHORELINE ADAPTATION PLAN

STAFF REQUEST: Receive a presentation by Dana Brechwald, Assistant Planning Director for Climate Adaptation, and Jessica Fain, Planning Director, on implementing SB 272, legislation requiring local governments to prepare rising sea level adaptation plans.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND

BCDC protects and enhances the San Francisco Bay and advances the Bay's responsible, productive, and equitable uses for this and future generations, as we face a changing climate and rising sea levels.

SB 272 requires local governments lying within a coastal zone within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC) to develop a sea level rise plan as part of either a local coastal program that is subject to approval by the California Coastal Commission, or a subregional San Francisco Bay shoreline resiliency plan that is subject to approval by the SF BCDC on or before January 1, 2023.

The bill requires local governments that receive approval for a sea level rise plan to be prioritized for funding for the implementation of sea level rise adaptation strategies and recommended projects in the local

governments' approved sea level rise plan. The bill requires, on or before December 31, 2024 the California Coastal Commission, in close coordination with the Ocean Protection Council and the California Sea Level Rise State and Regional Support Collaborative, to establish guidelines for the preparation of the sea level rise plan. The bill also requires, on or before December 31, 2024, the San Francisco Bay Conservation and Development Commission, in close coordination with the California Coastal Commission, the Ocean Protection Council, and the California Sea Level Rise State and Regional Support Collaborative, to establish guidelines for the preparation of the sea level rise plan.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state.

Staff from BCDC will provide an overview of the draft Regional Shoreline Adaptation Plan, a new regional plan to make the Bay shoreline resilient to rising sea levels, including guidance for local government planning as required by SB 272 (Laird, 2023). The plan sets forth a unified vision and priorities for adaptation in the Bay and guides the creation of mandated city and county adaptation plans along the Bay shoreline. The Regional Shoreline Adaptation Plan is currently open for public comment, and staff will describe opportunities to engage and comment on the plan.

Dana Brechwald is the Assistant Planning Director for Climate Adaptation at the Bay Conservation and Development Commission (BCDC). She works with regional stakeholders to develop innovative climate adaptation and resilience solutions for the Bay shoreline and is the Project Director for BCDC's Bay Adapt initiative.

A satellite-style aerial photograph of Napa County, California, showing the Napa River winding through the landscape, agricultural fields, and urban areas. The text is overlaid on a dark blue area on the left side of the image.

Regional Shoreline Adaptation Plan

An implementing project of **BAY ADAPT**

Resilient Napa Shoreline: The Role of Regional Shoreline Adaptation Plans

Napa County Climate Action
Committee

2/3 of California's sea level rise impacts will be felt in the Bay Area

- Already seen: + 8 inches SLR*
- Projected by 2050: 0.8 ft SLR**
- End of Century: 3.1 – 6.6 ft SLR?

** Past sea level rise as measured by NOAA tidal datums for the San Francisco Bay*

***Projections based on 2024 State of California Sea Level Rise Guidance*

Photo: Levee Breach near Highway 37 (February 26, 2019)
Photo courtesy of Ghilotti Construction Company



**Regional Shoreline
Adaptation Plan**
An implementing project of **BAY ADAPT**





What's at risk?*

- **20,000** acres of wetlands habitat
- **5 million** daily vehicle trips
- **60,000** daily rail commuters
- **13,000** existing housing units
- **70,000** new planned housing units
- **104,000** existing jobs
- **85,000** new planned jobs
- **28,000** socially vulnerable residents
- *ART Bay Area, 2020. Risks at 4' SLR

Cost of inaction**

- **\$230 billion** in damages
- **Funding and Investment Framework, 2023, costs include assessed property values and select transportation infrastructure at 4.9' SLR



Regional Shoreline
Adaptation Plan
An implementing project of BAY ADAPT



How Much Will it Cost?

Adaptation Needs

\$110 billion¹

Estimated cost of sea level rise adaptation through 2050 (in Year of Expenditure dollars)

- **\$52 billion:** Estimated cost for known or planned projects
- **\$54 billion:** Estimated placeholder cost for areas with adaptation needs
- **\$3 billion:** Estimated additional sediment management needs³

Cost of Inaction

\$230+ billion²

Estimated value of a subset of assets at risk through 2050

**The cost of inaction is far higher than the cost of adaptation.
We stand to lose much more if we do not act**

¹ In year of expenditure (YOE) dollars. ² In 2022 dollars. ³ Estimate developed by BCDC and SFEI analysis.

Napa County Highlights

American Canyon Wetlands Restoration Project

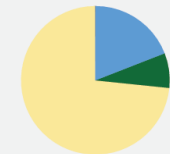


Estimated median cost: \$36.9 million
 Project type: Green
 Adaptation types: Restoration/Rehabilitation/Enhancement
 Protective to 4.9 ft. TWL: N/A
 Project status: Planning/Scoping

Napa Projects (by cost)
SR 37 Corridor
Petaluma River Baylands Strategy
Novato Baylands
American Canyon Wetlands Restoration Project
The Grand Byway
Edgerly Island Prioritized Alternative: Groundwater Well and Wastewater System Floodproofing
Napa River Flood Protection Project

- Project Type
- Grey
 - Hybrid
 - Green
 - Placeholders

Napa
\$5 B



What are cities and counties required to do to plan for sea level rise adaptation?

- SB 272 (Laird, 2023) mandates that **local governments within BCDC's jurisdiction must complete a Subregional Shoreline Adaptation Plan** by January 2034
- BCDC is charged with developing the guidelines for these Subregional Plans by December 2024 – **Subregional Plan Guidelines are included in the RSAP**
- Local governments will submit completed plans to BCDC **for review and approval**
- Local governments are eligible for **SB1 funding to complete plans** and completed plans unlock implementation dollars

Lots of flexibility to use and build upon what you've already done

Cities and Counties in BCDC's jurisdiction

*Local government not in BCDC's jurisdiction but impacted by near-term coastal flood hazards

Lots of flexibility in how to create your plans with and across jurisdictions

Counties with BCDC Jurisdiction

Cities with BCDC Jurisdiction or impacted by near-term coastal hazards

Alameda

Alameda
Albany
Berkeley
Emeryville
Fremont

Hayward
Newark
Oakland
San Leandro
Union City

Contra Costa

Concord*
El Cerrito*
Hercules
Martinez

Pinole
Pittsburg*
Pleasant Hill*
Richmond

Marin

Belvedere
Corte Madera
Larkspur
Mill Valley
Novato

Ross*
San Rafael
Sausalito
Tiburon

Napa

American Canyon*

Napa*

San Francisco

San Francisco

San Mateo

Belmont
Brisbane
Burlingame
East Palo Alto
Foster City
Menlo Park

Millbrae
Redwood City
San Bruno
San Carlos
San Mateo
South San Francisco

Santa Clara

Milpitas
Mountain View
Palo Alto

San Jose
Santa Clara*
Sunnyvale

Solano

Benicia
Fairfield*

Suisun City
Vallejo

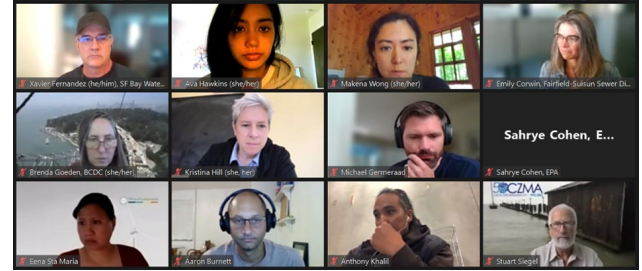
Sonoma

Petaluma

- **Coordinated** adaptation
- Priority resources to **frontline communities**
- Long-term **health of wetlands**
- **Strategic** implementation
- Common **standards and methods**
- Advance priority **projects** and **funding**
- Track and **measure progress**

Why do we need a regional approach to adaptation planning?

Communities have shaped this draft



- **10** Community events
- **5** Advisory Group meetings
- **15+** Subcommittee meetings
- **1** Public workshop
- **5** Local workshops
- **1** Practitioner workshop
- **3** Conferences
- **1** Online survey
- **9-County** local elected official road show

Bottom three photos by Karl Nielson.

Napa County Electeds Engaged with BCDC

Commissioners and Alternates

- **Belia Ramos**, Napa County Board of Supervisors (Commissioner)
- **Joelle Gallagher**, Napa County Board of Supervisors (Alternate)

Local Electeds Task Force

- **Mark Joseph**, City of American Canyon

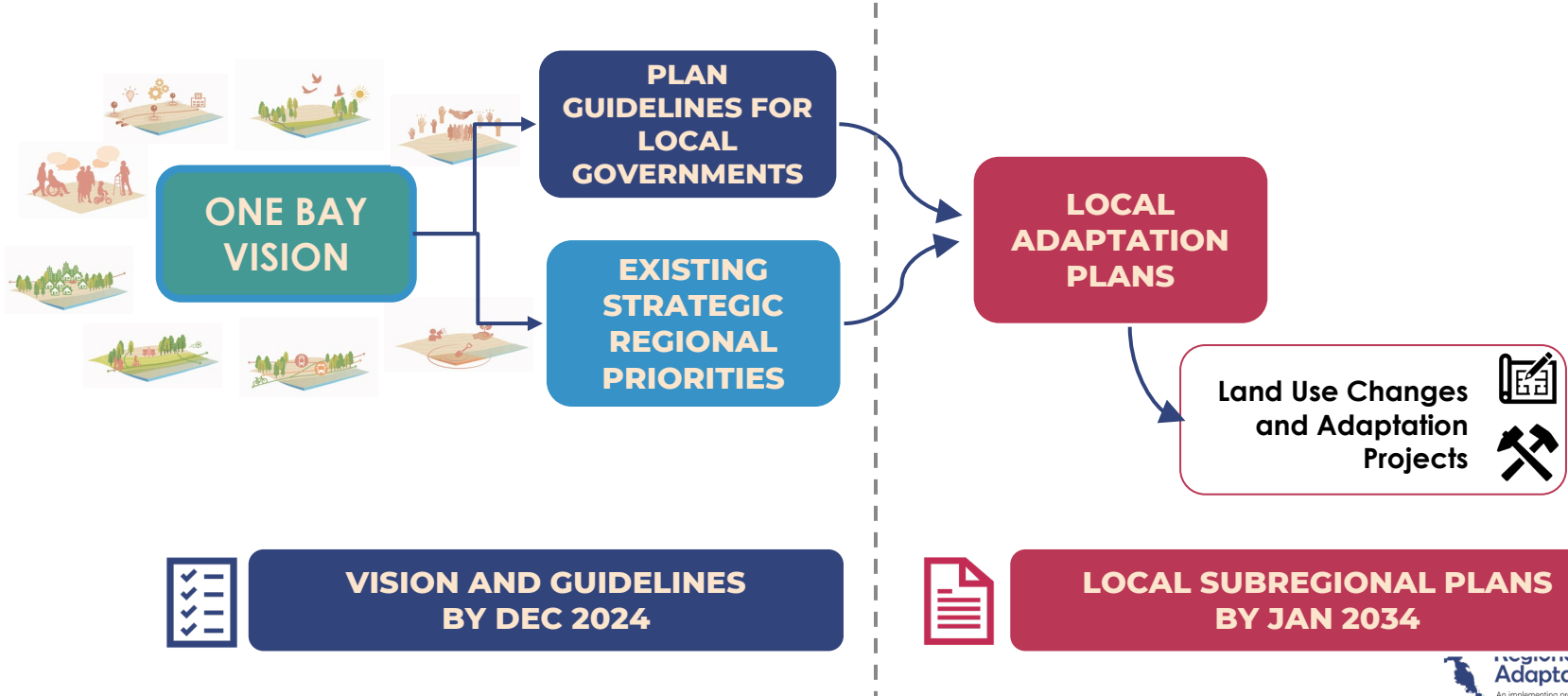
How do we start developing guidelines?



What Constitutes The Regional Shoreline Adaptation Plan?



**REGIONAL
ADAPTATION
ONLINE MAP**



Where are we now?

WHAT IS A SUBREGIONAL PLAN?

Possible Scale and Leads

- County Plan
- Single Jurisdiction Local Plan
- Multi-Jurisdictional Local Plan
- Combo

Plan Contents

- Vulnerability Assessment
- Adaptation Pathways
- Project List
- Land Use Plan
- Implementation Plan

Submission and Adoption

- Submit to BCDC for approval
- Local adoption
- Incorporated into local plans
- Eligible for prioritized funding for projects after adoption

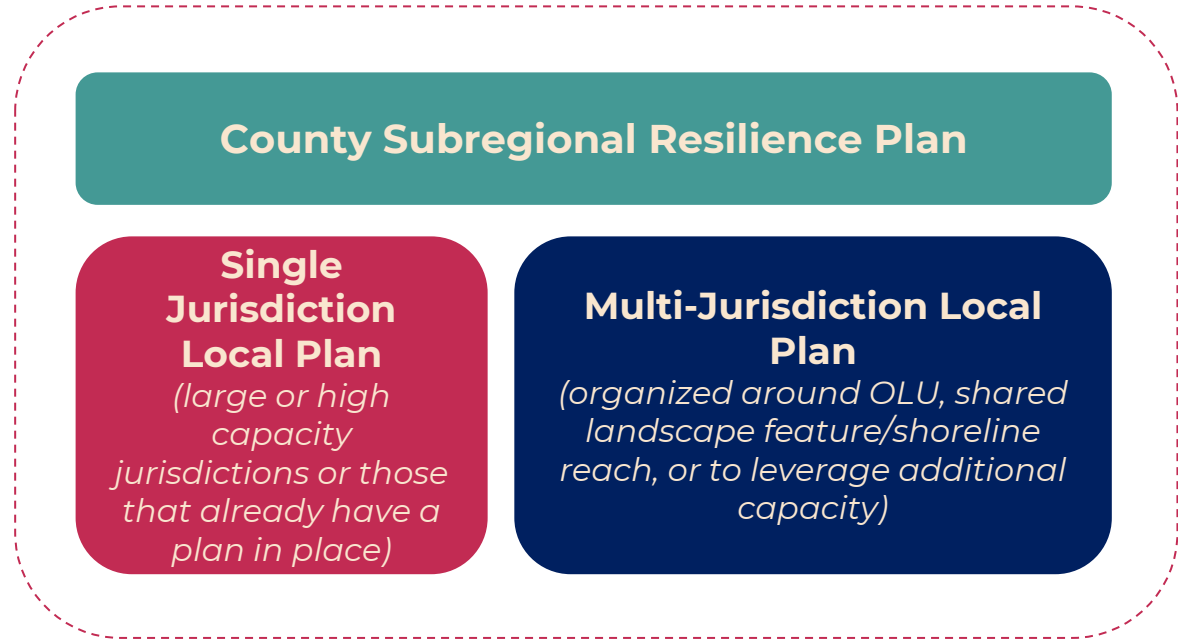
Subregional Plan Requirements Key Concepts

County Plan

- Covers unincorporated parts of the county
- Coordinates and organizes local plans

Local Plans

- Jurisdictions may submit **either** a single jurisdiction local plan or partner with their neighbors to submit a multi-jurisdiction local plan



Subregional Shoreline Resiliency Plan

How can the RSAP assist local governments?

- ✓ **Reduce uncertainty** surrounding climate change adaptation plans and projects
- ✓ Provide **needed resources** for planning and projects
- ✓ Plan in an **integrated way**
- ✓ **Prioritize** EJ communities, local and regionally-significant infrastructure, habitats, and areas most at risk into a cohesive planning process
- ✓ Require **collaboration** for multi-benefit and multi-jurisdictional adaptation projects



RSAP – What’s Next

- Sea Level Rise **Planning Grants available now** from Ocean Protection Council!
- **Local Electeds Task Force** meeting
- Launching a **Shoreline Leadership Academy** to build capacity for community-driven planning
- **Public review and Commission approval** of RSAP guidelines in December 2024
- **Technical and policy assistance** program to help plans get developed in 2025
- Long-term **funding strategy** – how will the region pay for this and decide what to fund first?
- **Aligning permitting** with innovative planning



Stay Involved

Learn more & sign up for our newsletter at

www.bayadapt.org

Larry Goldzband

Executive Director

Larry.Goldzband@bcdc.ca.gov

Dana Brechwald

Assistant Planning Director for Climate Adaptation

Dana.Brechwald@bcdc.ca.gov



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Climate Action Committee (and the Napa County Board of Supervisors*)
File ID #: 24-1669

Agenda Date: 9/27/2024

TO: Napa County Climate Action Committee
FROM: Brian D. Bordona, Director, Napa County Planning, Building & Environmental Services
REPORT BY: Ryan Melendez, Planner II, Sustainability
SUBJECT: Presentation: Peninsula Clean Energy - Cost Analysis of Building Energy Efficiency and Electrification Upgrades

RECOMMENDATION

PRESENTATION: PENINSULA CLEAN ENERGY COST ANALYSIS OF BUILDING ENERGY EFFICIENCY UPGRADES AND SWITCHING FROM GAS TO ELECTRIC APPLIANCES

Staff requests that the Climate Action Committee receive a presentation from Blake Herrschaft, Building Electrification Program Manager with Peninsula Clean Energy on the costs, benefits, and on-bill savings when customers have made energy efficiency and electrification upgrades to buildings.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND AND DISCUSSION

According to the 2019 Napa County Regional Greenhouse Gas Emissions Inventory, buildings are the second largest source of GHG emissions in Napa County, accounting for 23% of total emissions. This percentage is higher for the incorporated cities/town and lower for the unincorporated county, as most buildings are in the incorporated jurisdictions.

To reduce emissions associated with the operation of buildings, three key strategies need to be implemented in building operations:

1. Improve the energy efficiency of buildings,

2. Switch from Methane (Natural Gas)-powered equipment to high-efficiency electric equipment, and
3. Provide emissions-free electricity to power the new electric equipment.

Many of the buildings in Napa County, and the greater San Francisco Bay Area, are relatively old with outdated appliances, equipment, and infrastructure. While there are many resources and incentives available to building owners to complete improvement projects, those resources can be difficult to navigate even for those who have the time and means to dedicate to improving their buildings. Additionally, while the incentives can help lower the cost of building improvements, much of the cost can still be borne unto property owners.

In August 2023, the Napa County Climate Action Committee recommended - to take back to each members' respective jurisdictions - a proposed draft reach code of the State Building Energy Code, which would require newly developed buildings to meet a threshold of energy performance standards above-and-beyond what the California State Code requires. Constructing buildings to this standard can add upfront costs but is relatively comparable to standard construction practices; however, completing energy upgrades to an existing building can be much more labor and cost intensive for property owners. Costs can also vary widely depending on several factors including availability and quality of equipment, size of building and equipment, availability of knowledgeable and certified contractors to carry out the work, location, what type of climate you live in, and more.

As Napa County and its property owners prepare for the process of reducing climate pollution from buildings, several members of the CAC, and members of the public, have inquired about the average costs of completing building energy upgrade projects. Blake Herrschaft, a Building Electrification Programs Manager with Peninsula Clean Energy (PCE), will provide a presentation on analyses of the cost to property owners for energy efficiency improvements and electrification of buildings.

Blake leads key building electrification initiatives including reach codes and electrification programs. He has been working in the green building space for 15 years. His work has included mechanical and plumbing design, energy modeling, LEED consulting, water efficiency, zero net energy buildings, portfolio energy retrofits. Blake's award-winning designs span five continents, and his first all-electric building was University of San Diego's Torrero Field Ballpark.

Costs of Home Electrification

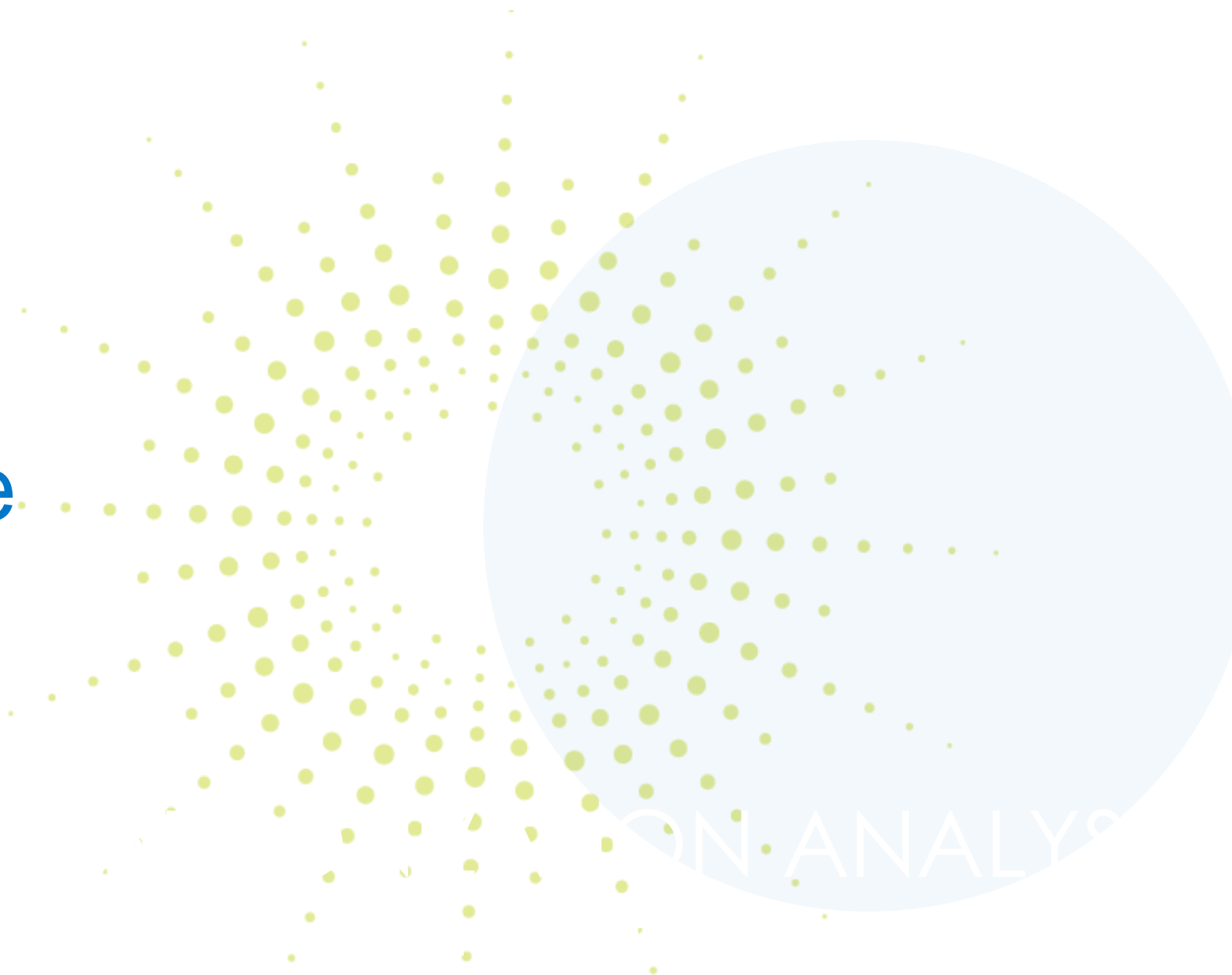
September 27, 2024



Agenda

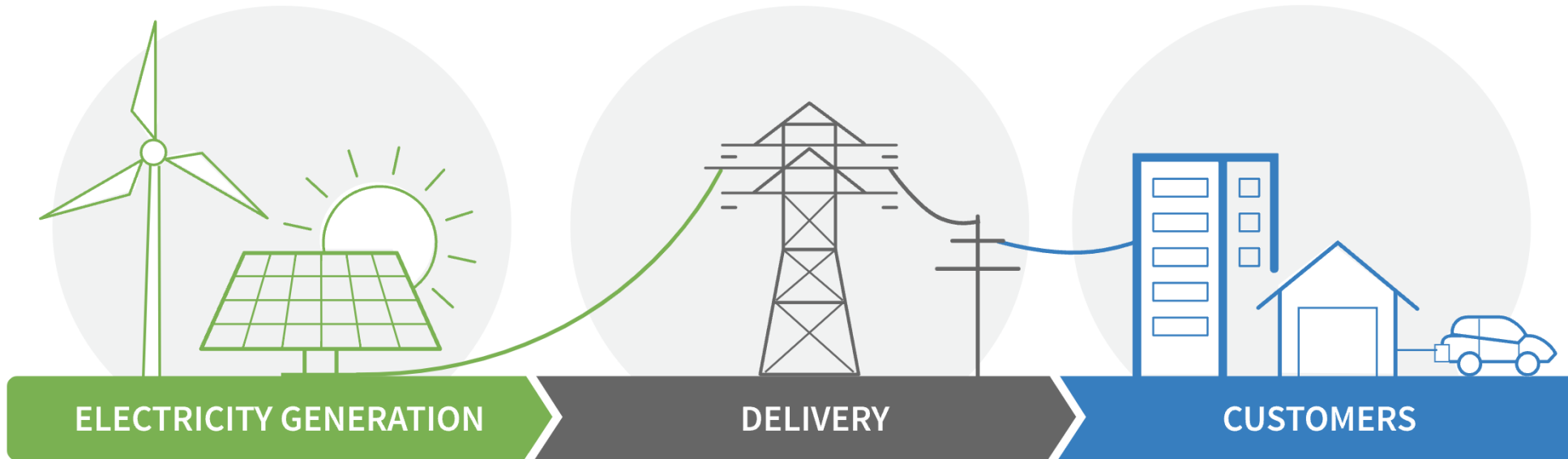
1. Background & Policy Timeline
2. The Research (2018-2023)
 - a. Costs of electrification
 - b. Do we really need to upgrade electrical panels?
3. Proof of Concept (2023-2024)
 - a. Pilot home takeaways
4. Scaling Our Programs (2023-2030)

Background & Policy Timeline



ON ANALYS

Background



Peninsula Clean Energy provides electricity from clean energy sources at lower rates than PG&E.

PG&E owns the power lines and delivers the power we generate. They send a consolidated bill.

As a **customer** of Peninsula Clean Energy, you are helping the environment and saving money.

The Big Picture

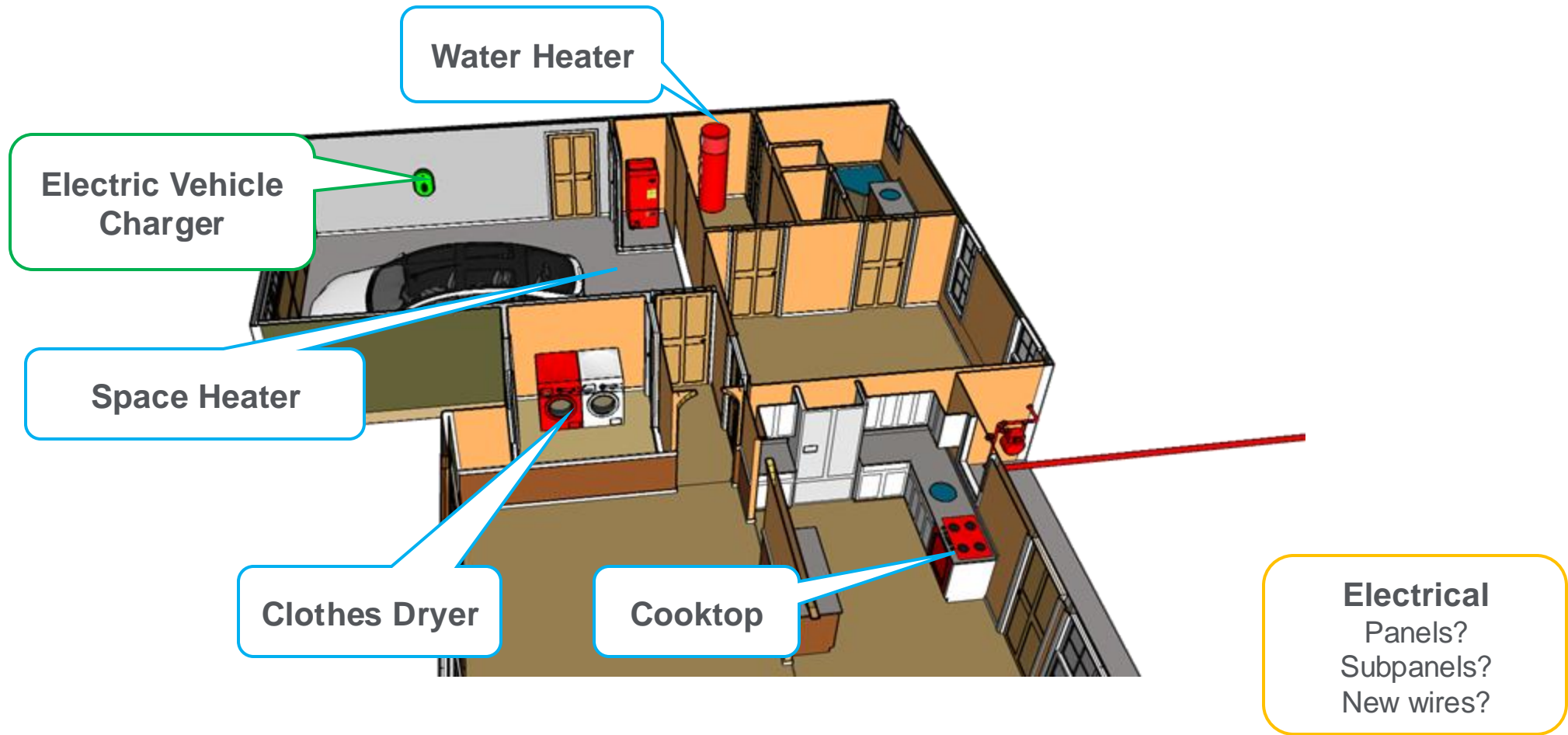
Programs

to enable

Policy

to enable

Massive Decarb



Current Offerings and Uptake



Rebates for heat pump water heaters & heat pump HVAC



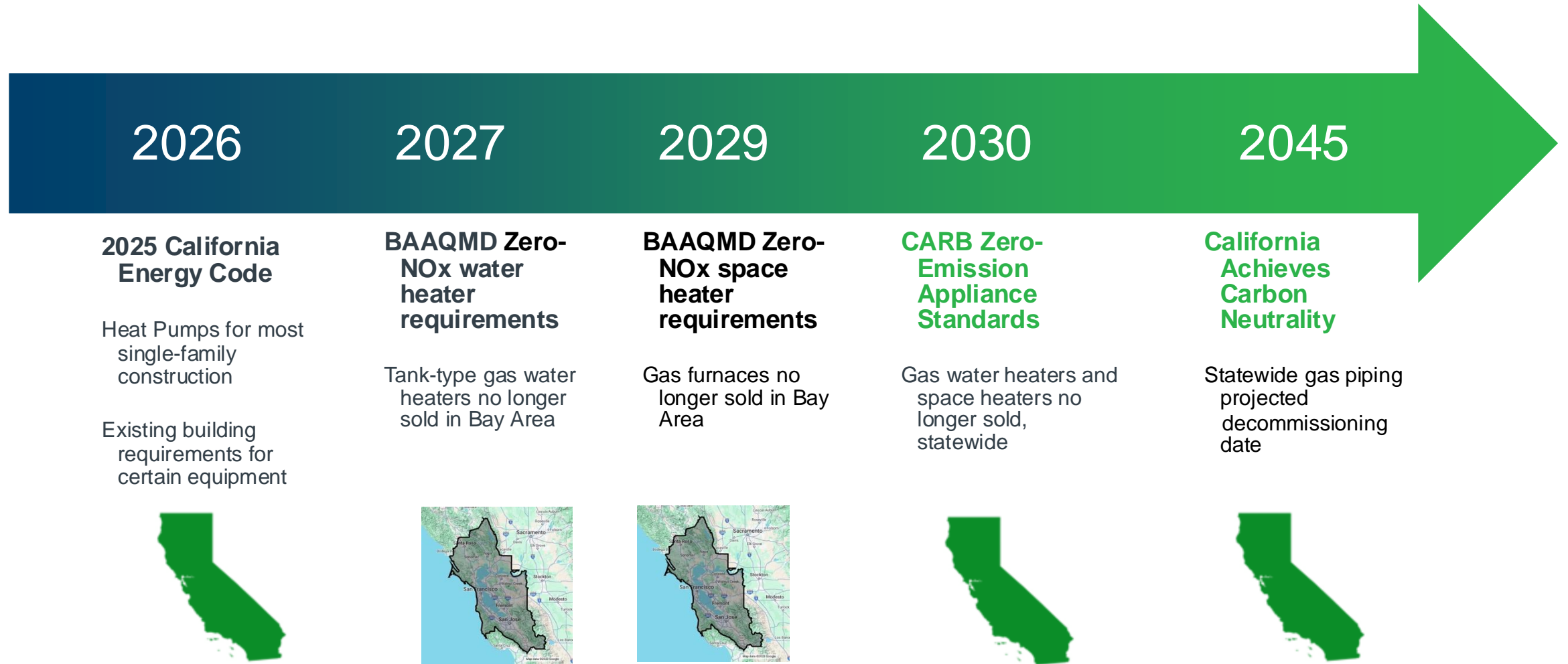
0% loans up to \$10k for heat pump water heaters & heat pump HVAC



Home Upgrade program: no-cost electrification & minor home repairs for income-qualified homeowners

Participants	Count
Rebates	2,761
Loans	618
Home Upgrade program	305
Appliances installed (all programs)	Count
Heat pump water heater	1,442
Heat pump HVAC	1,707
Induction cooktop/range	89
Electric dryer	80

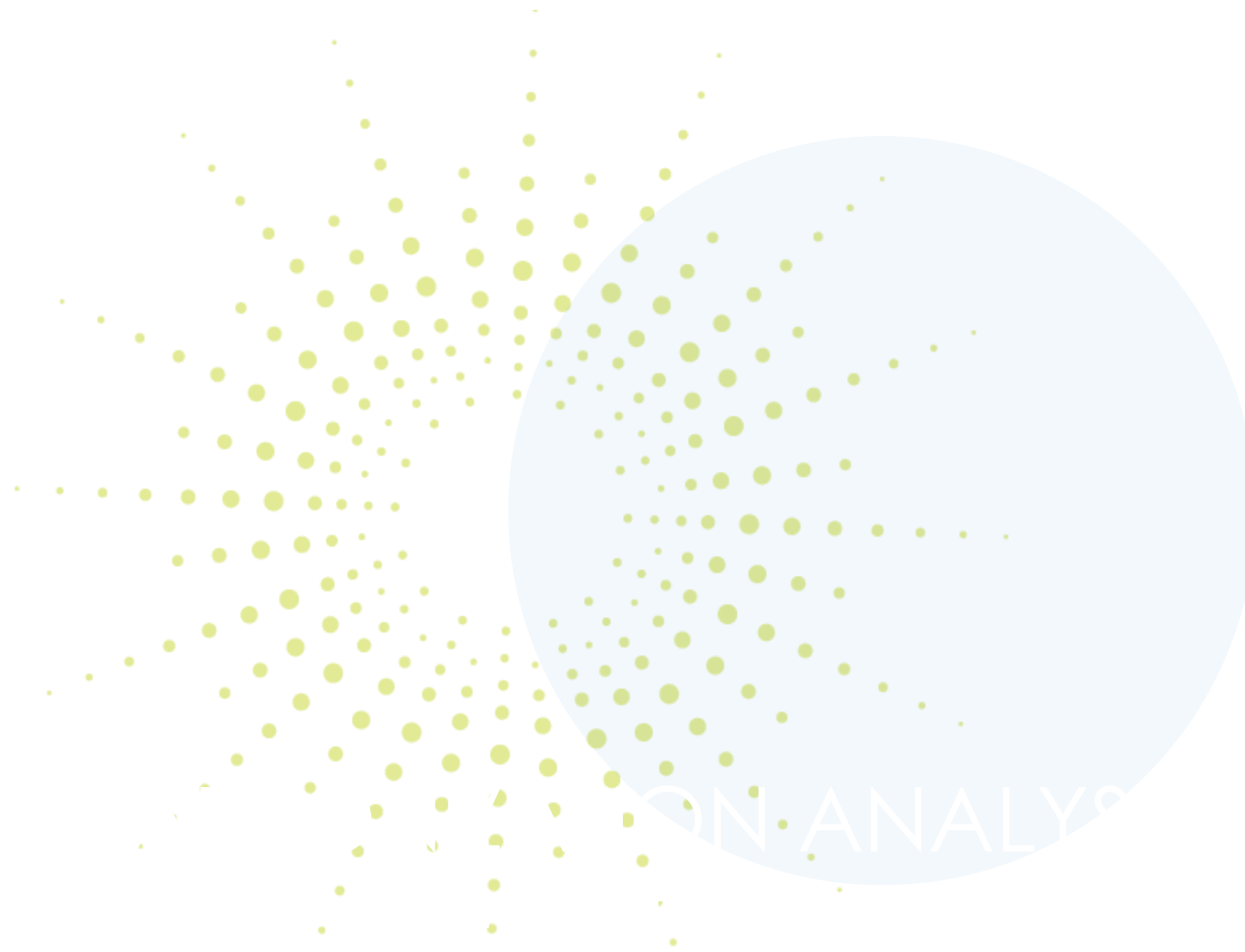
Upcoming Policy Changes



In 2021, We Had No Idea What Local Prices Were

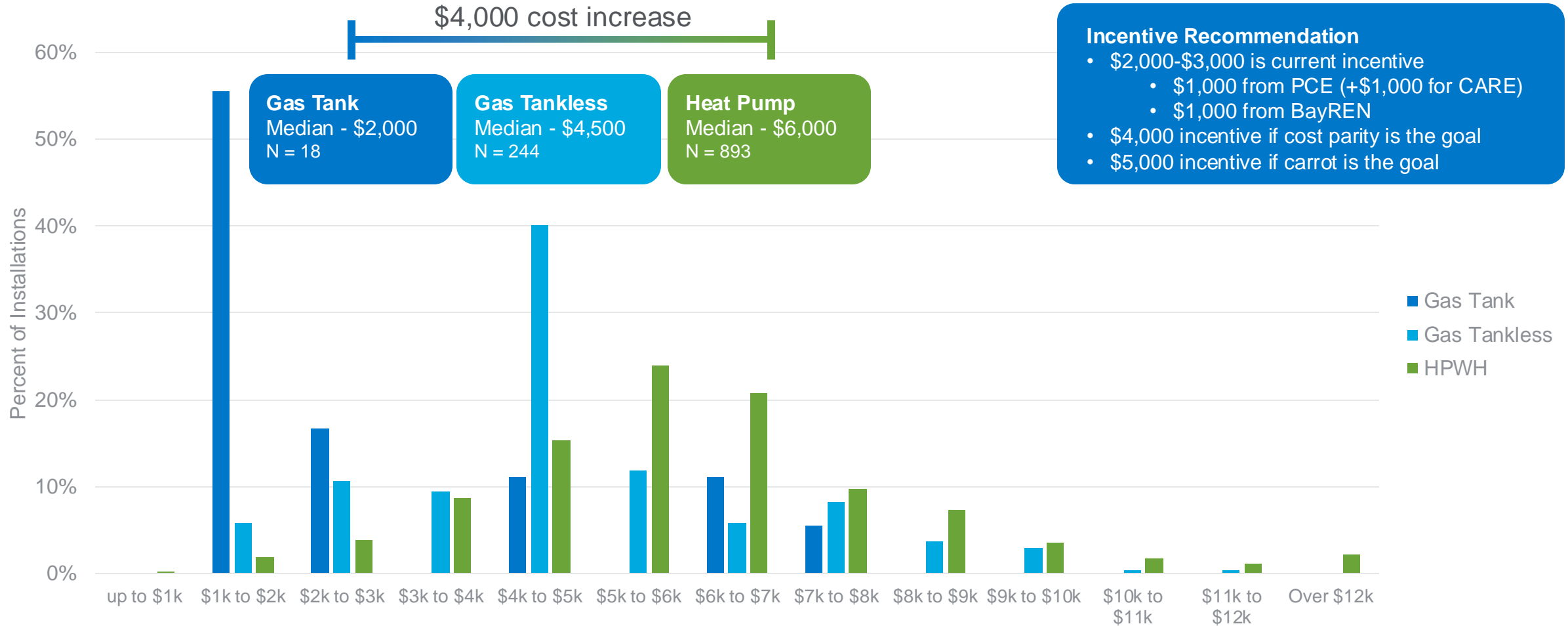
The Research

2018-2022





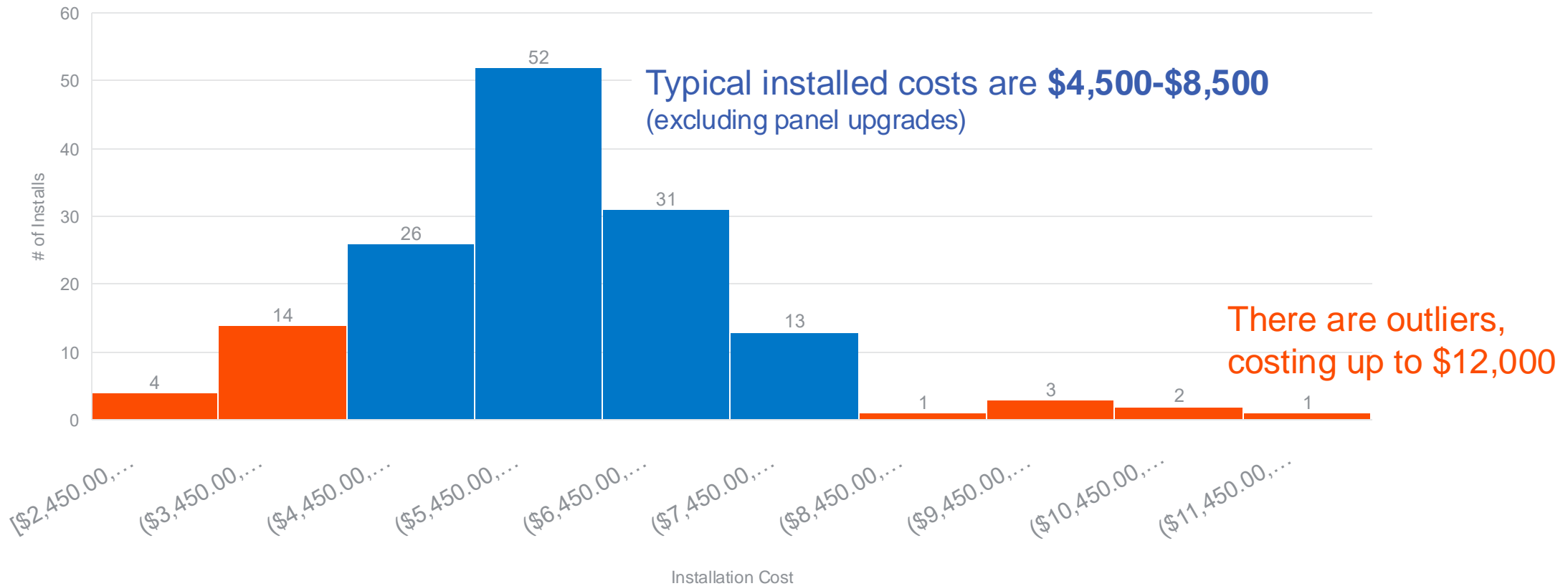
Single Family Water Heater Installation Costs





Heat Pump Water Heater Costs

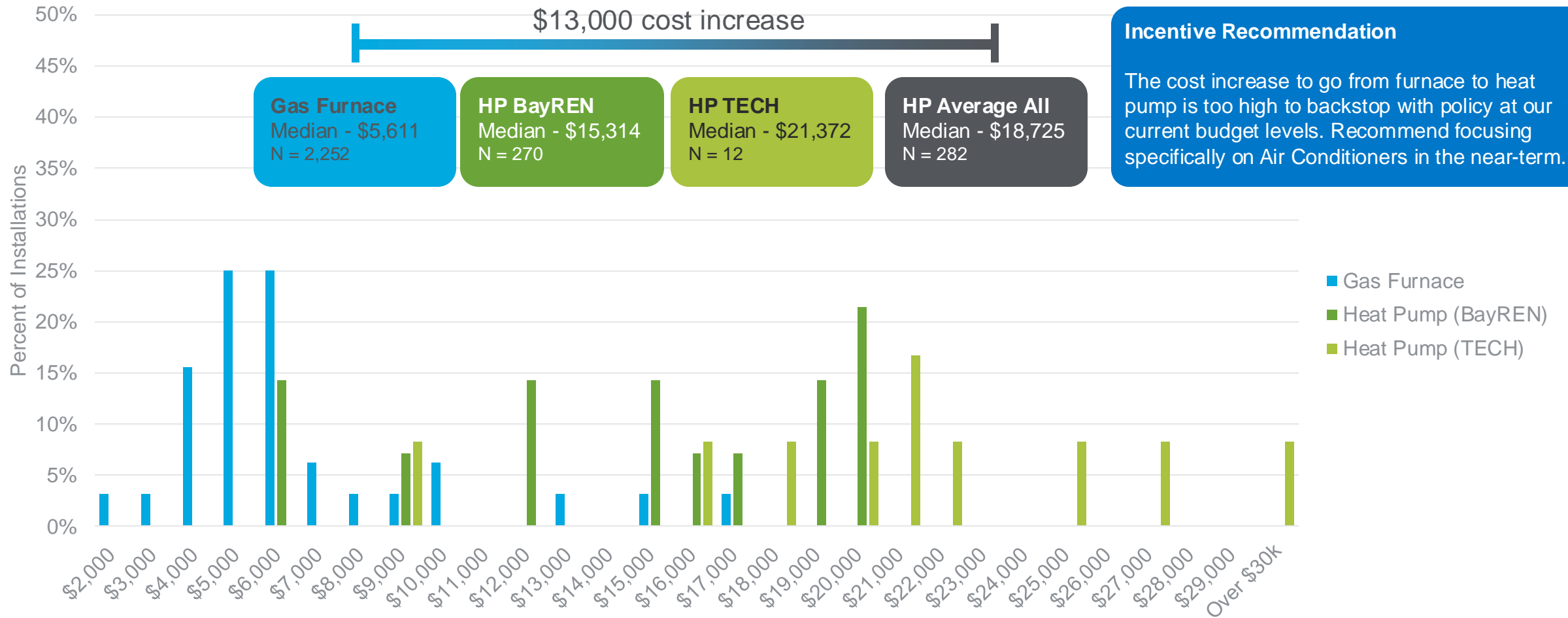
PCE HPHW Installation Costs (Excluding Panel Upgrades and Split Systems)



Average cost is \$6,100



Single Family Space Heater Installation Costs

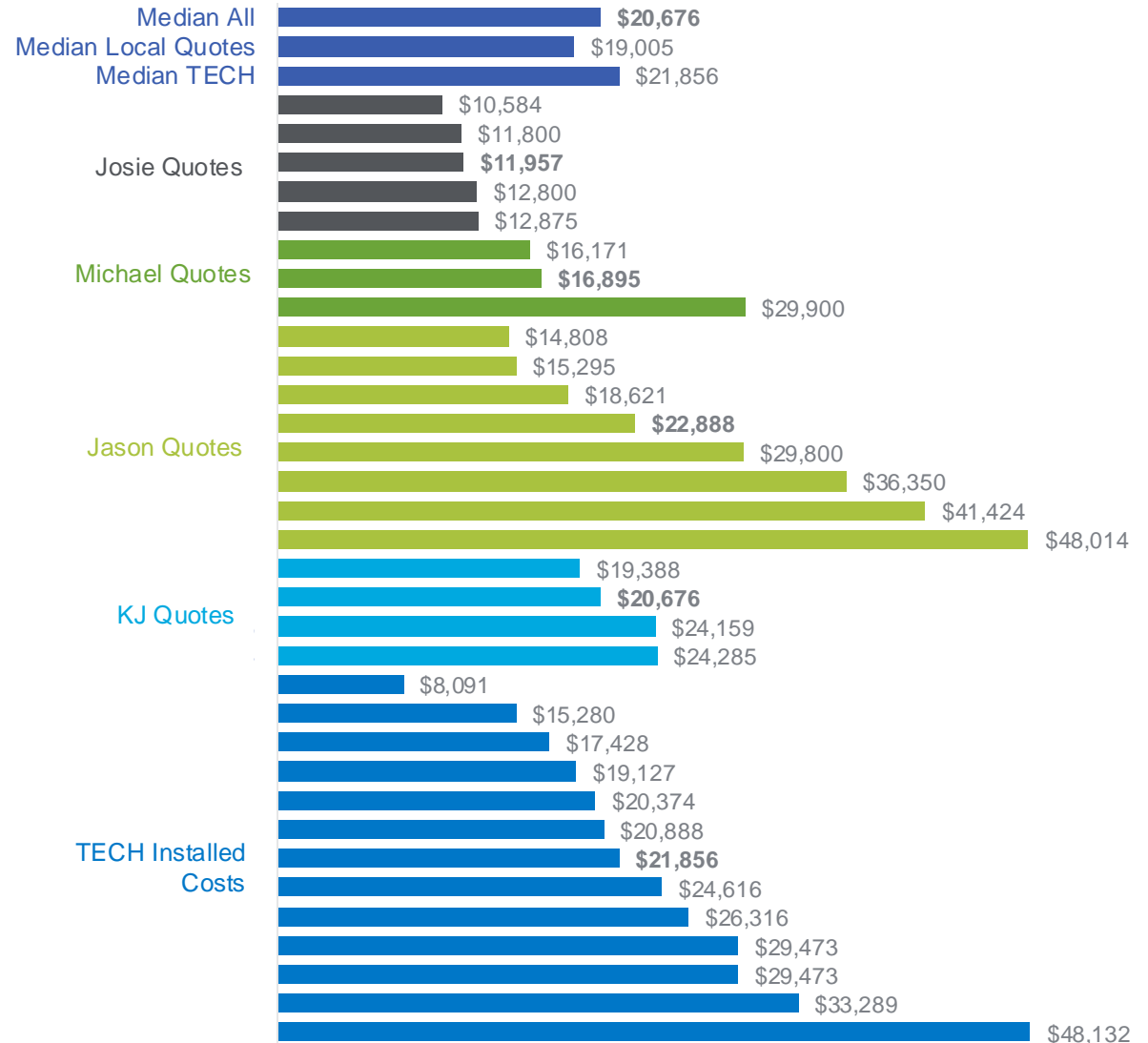




Heat Pump Space Heater Costs

We reviewed quotes and installation cost data from 15 projects in San Mateo County as well as the quotes from KJ on our team, who lives in Santa Clara County. We found the following results:

- **The median cost of a heat pump space heater is \$20,700**
- Quotes at an individual home can range by \$15,000 or more.
- TECH installations appear to be slightly more expensive than non-TECH installations. This could be because:
 - Contractors are keeping some of the incentive
 - Contractors are charging more for early adopters
 - Later installation data reflects recent inflation



2-Way AC Incentives



Default Intent



Default Intent



Default Intent



Default Intent



	Adding A/C only (keep furnace)	Adding HP (keep furnace)	Adding HP (remove furnace)	Replacing A/C + Furnace	Replacing A/C & Furnace w/HP	Replace A/C (keep furnace)	Replace A/C with HP (keep furnace)	Replace A/C (keep furnace)	Replace A/C with HP (remove furnace)
Add circuit	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
Indoor unit equipment			+\$1,000-\$2,000						+\$1,000-\$2,000
Indoor unit labor				+\$500-\$1,000					
Refrigerant pipe									
Duct test + seal									
Cap gas line			\$100		\$100		\$100		\$100
Flue work	\$100	\$100		\$100	N/A	\$100		\$100	
Outdoor unit equipment		+\$500-\$1,000	+\$500-\$1,000		+\$500-\$1,000		+\$500-\$1,000		+\$500-\$1,000
Outdoor Unit labor									
Heat pump alt.		+\$500-\$1,000	+\$1,500-3,000	Neutral			+\$500-\$1,000		+\$1,500-3,000




Dryers and Ranges

Dryers cost around **\$925** delivered and installed, old one removed


Your Appliance

Earliest Delivery: **January 15**
Based on Zip Code **94061**
You can choose another date during checkout.

	LG Electronics 7.3 cu. ft. Ultra Large White Smart Electric Vented Dryer with EasyLoad Door and Sensor Dry, ENERGY STAR Qty: 1	\$848.00
Parts & Services		
Installation		FREE
Standard Installation Kit (required)		\$52.97
Haul Away Your Old Appliance		\$25.00
Manufacturers Standard Warranty		FREE
Total		\$925⁹⁷ <small>Taxes calculated in checkout.</small>

Ranges cost around **\$1,150** delivered and installed, old one removed

This item is non-returnable.

	FRIGIDAIRE GALLERY 30 in. 5.4 cu. ft. Induction Electric Range with Self-Cleaning Oven in Smudge-Proof Stainless Steel with Air Fry Model #GCR3058AF	\$1,098.00 \$1,999.00 Save 22%
Parts & Services		
Home Delivery		FREE
Store Pickup		
Range Power Cord	\$32.85	Included in the actual price
Manufacturer's Standard Warranty		Included in the actual price
Haul Away Your Old Appliance	\$25.00	

Subtotal **\$1,456.85**
Savings **-\$301.00**
Appliance Delivery **FREE**
Sales Tax (determined in later step) **---**

Total \$1,155⁸⁵
You Saved **21% Off Your Item**

Have a promo code?

Checkout

PayPal Checkout

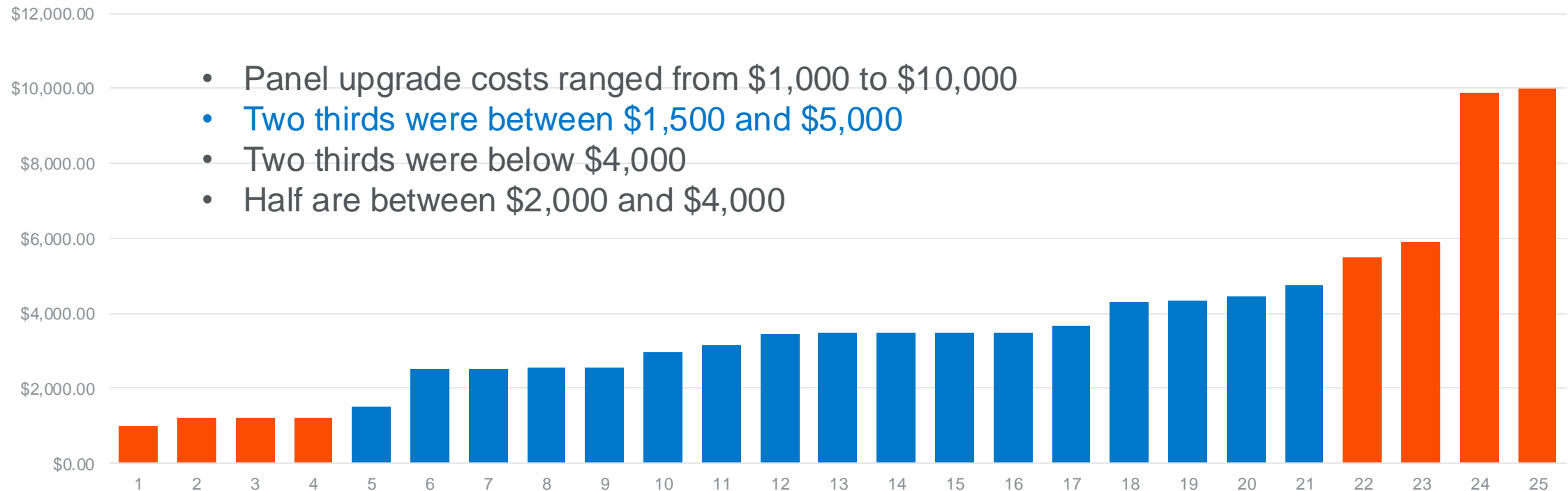


Blake estimates **wiring runs** to cost **\$500 - \$2,000** (excluding panel or sub-panels)



Panel Upgrade Program Costs (n = 25)

Panel Upgrade Costs from Our Program



- Panel upgrade costs ranged from \$1,000 to \$10,000
- Two thirds were between \$1,500 and \$5,000
- Two thirds were below \$4,000
- Half are between \$2,000 and \$4,000

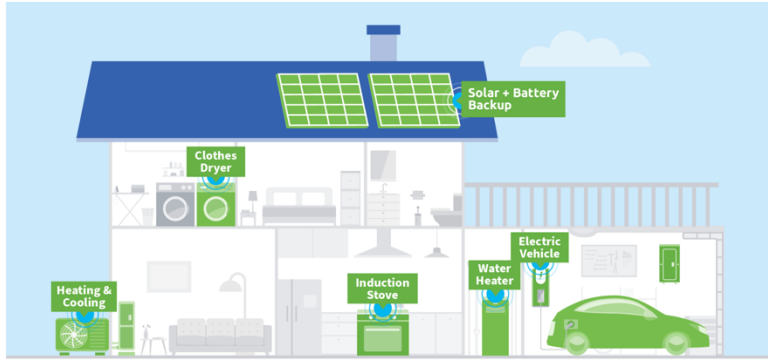
Average cost is \$3,700



Single-Family Home Average Cost

The most common single-family home in SM County has:

- Gas water heating, tank-type
- Gas space heating, without air conditioning
- Gas cooktop
- Electric drying



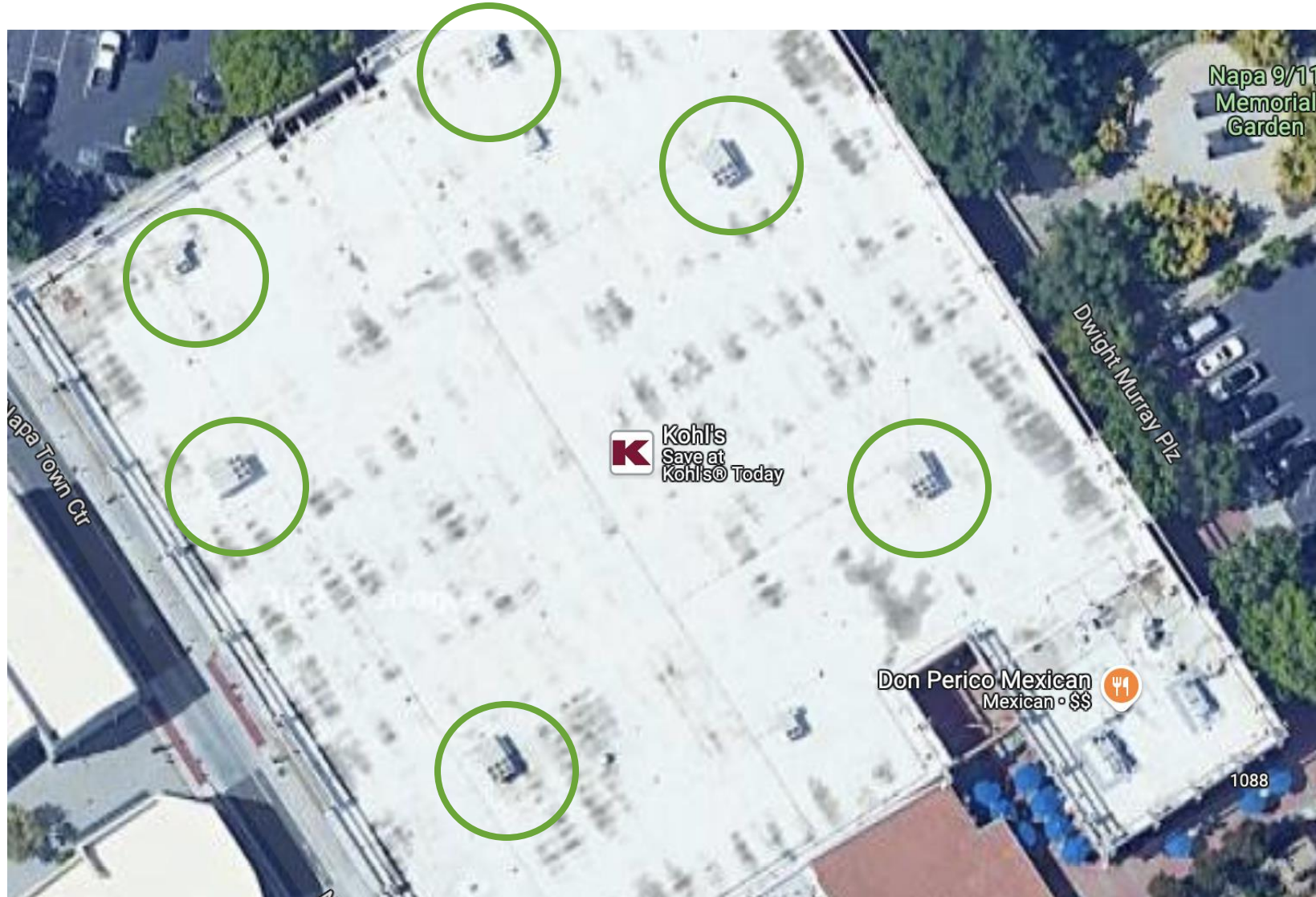
The cost to electrify will be \$28,000, an increased cost to the homeowner of \$18,600 versus typical replacement costs.

	Electrification Cost	Replace In-Kind Cost	Incremental Cost
Water Heating (includes 240V circuit)	\$6,100	\$2,000	\$4,100
Space Heating	\$20,700	\$6,132	\$14,568
Cooking	\$1,098	\$1,155	-57
Clothes Drying	\$925	\$925	\$0
Total	\$28,823	\$9,057	\$18,611
Panel, if required	\$3,700		
Total non-optimized cost	\$32,523		

Up to 2,500 sqft home with one central heating system. In most cases panel upgrades are not required if 100 A service is available.



Commercial: Rooftop Packaged Unit Costs

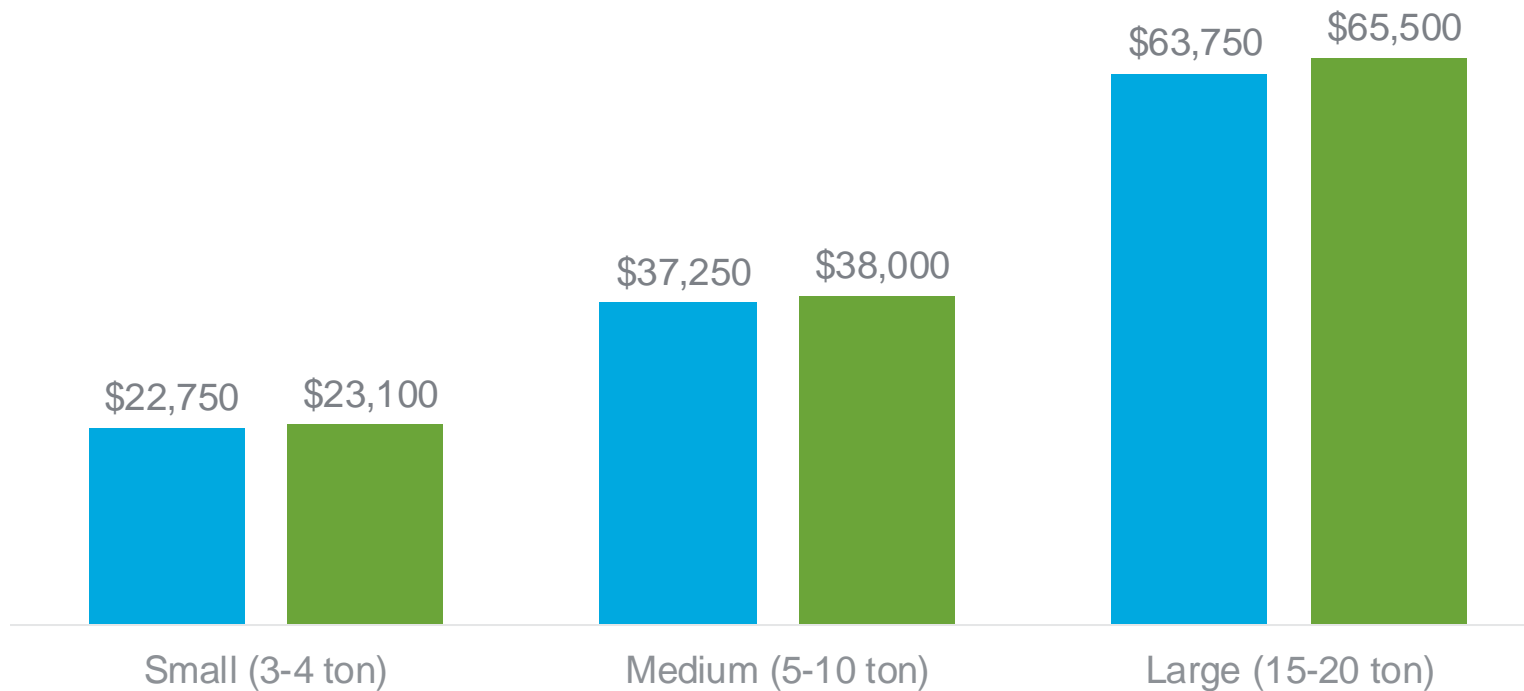




Commercial: Rooftop Packaged Unit Costs

Median Rooftop Packaged Heat Pump Installation Costs

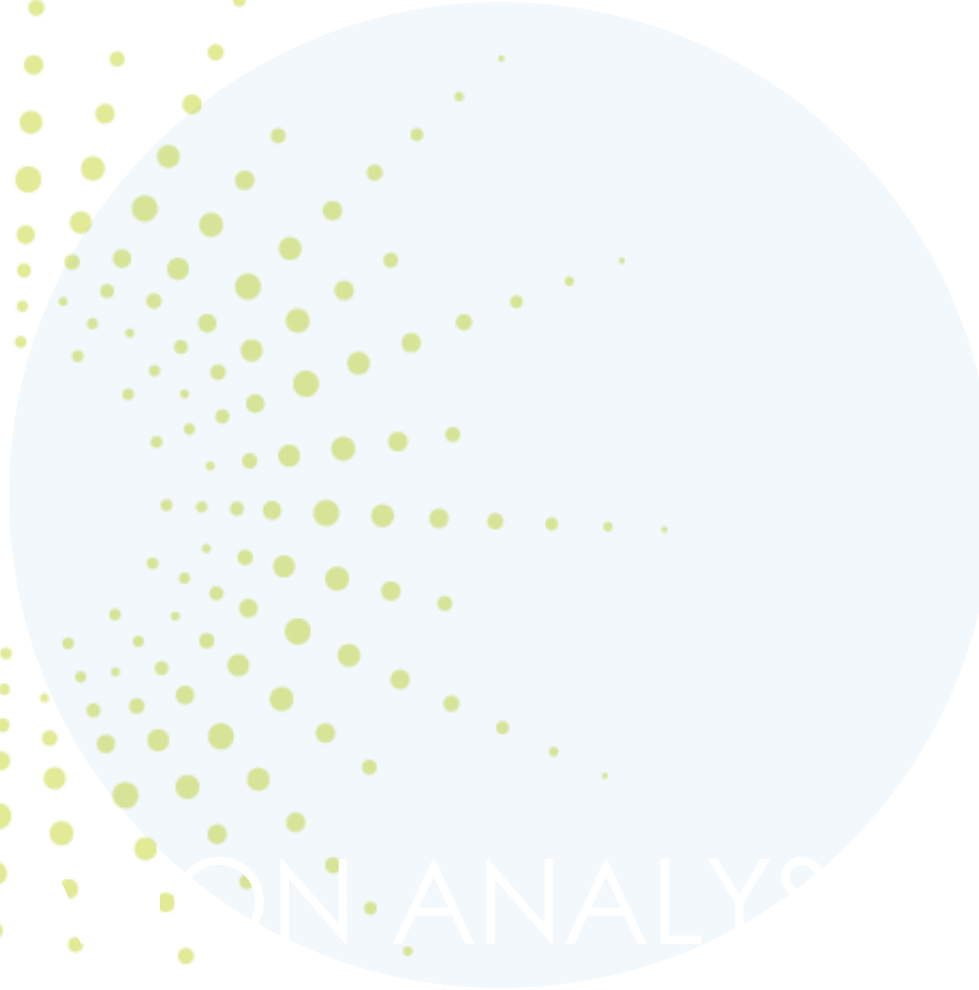
■ Gas ■ Heat Pump



Reach Code Opportunity

Costs of rooftop heat pumps are nearly identical to gas-fired rooftop packaged unit costs. While an incentive of \$100/ton would provide cost parity, it may not be required for commercial existing building policies for this technology.

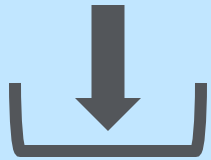
Do We Really Need to Upgrade Electrical Panels?



Three Reasons Panels are Replaced

Capacity Constrained

Capacity, measured in Amps, is too low to add equipment



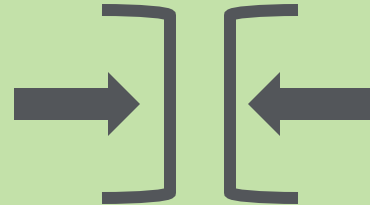
Max. 100A

Solutions to avoid upgrade:

- Circuit splitters
- Circuit pausers
- Smart panel
- Low-amp equipment

Space Constrained

There are no longer spare breaker spaces in the panel



Solutions to avoid upgrade:

- Subpanels
- Circuit splitters
- Smaller breakers
- Breaker re-use

Unsafe to Use

The panel is unsafe to work on, sometimes found on panels from the 1970s or earlier

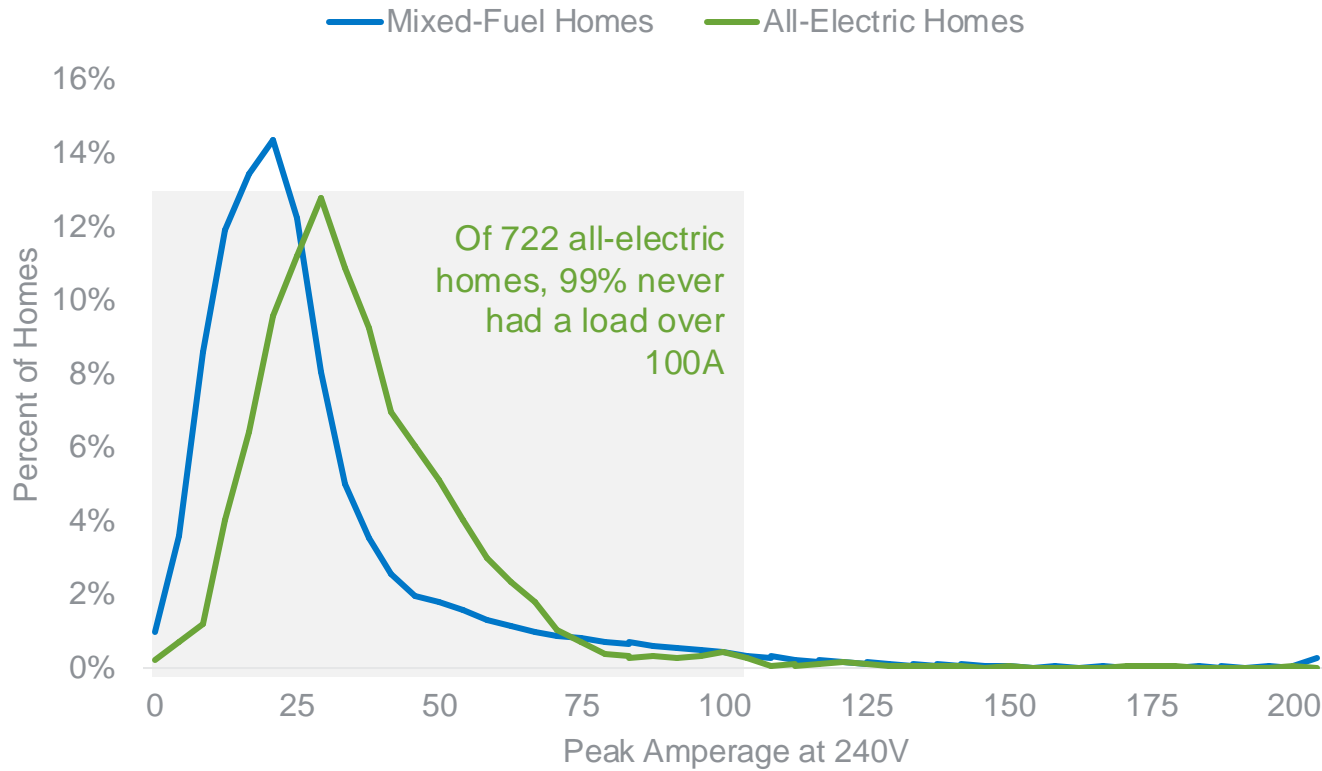


Solutions to avoid update:

The panel must be replaced for your safety. However, it may be worth avoiding a service upgrade using solutions for capacity-constrained panels, and planning ahead by providing breaker space for an all-electric life.

Data shows 100A is enough capacity for most homes

Maximum Annual Peak Demand at Single Family Homes in Peninsula Clean Energy Territory



Peninsula Clean Energy analyzed hourly utility data at hundreds of thousands of customer accounts. The peak demand at customer accounts tended to be well-below the 100A threshold.

99% of all-electric single-family homes use less than 100A of power at all hours of the year.

The most common peak demand is 29 Amps, indicating over 70% of capacity goes unused throughout the year.

Over 99% of mixed-fuel, single-family homes use less than 100A of power at all hours of the year.

The most common peak demand is 21 Amps, indicating nearly 80% of capacity goes unused throughout the year. 80% are 38 Amps or less.

Including Solar When a Panel is At Capacity

For Solar systems under 5kW

The [120% rule](#) in the National Electrical Code allows load to go up to 120% of the rated busbar capacity, allowing 20A on top of the 100A capacity to be reserved for solar installations

To put it simply, the 120% NEC rule for the busbar roughly allows the following in addition to 100A-worth end uses:

- 3.8 kW-AC
- 5.5 kW-DC

Please consult your solar installer or electrician for detailed information when applying the 120% rule.

For Larger Systems and Going Net Zero

There are three alternative installation approaches that could be used to allow up to 20kW of solar in addition to the 100A worth of end uses. While these strategies are being used in some areas, they are not yet common in PG&E territory.



[Renewable meter adapters](#) are connect to the existing main panel and are wired to the utility-side of the panel, allowing for larger, streamlined installations. These are a common in San Diego Gas and Electric (SDG&E) territory



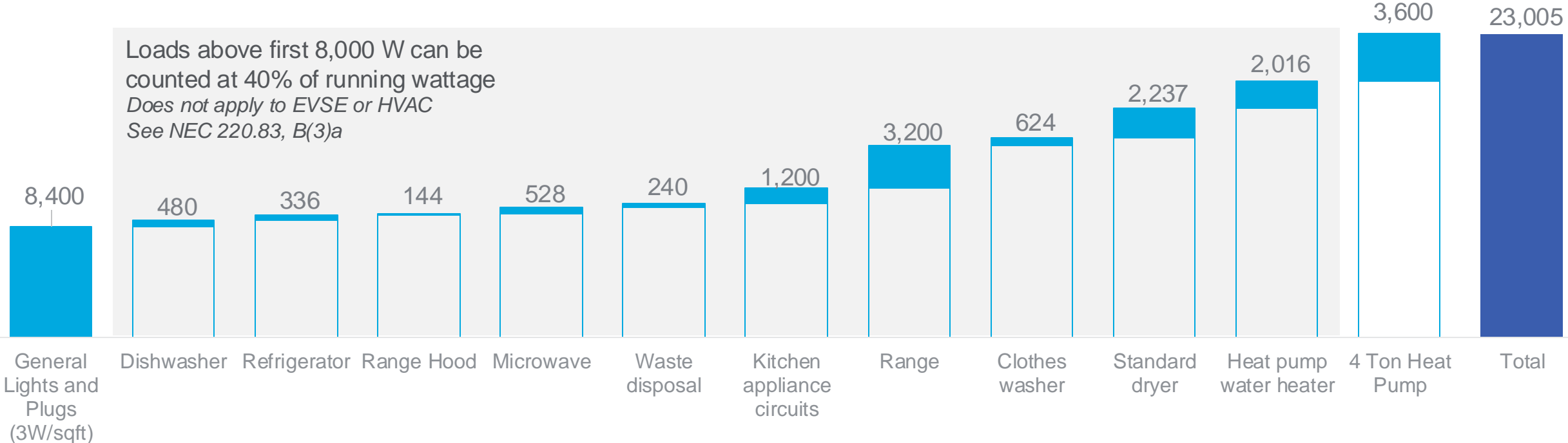
[Meter collars](#) are wired similarly to a renewable meter adapter, and are designed to connect to the existing utility meter. These are not yet available as an option in California.

Line
Side
Tap

A “line-side tap” is a similar approach that installs solar on the line between the bus bar and the meter. This approach is possible with older meter boxes, but not newer ones

Calculation Summary

Panel Size Calculations for Sample 2,800 sqft Single Family Home
(Watts at panel)



Typical Pre-1985 Single Family up to 2,800 sqft, up to 4-ton Heat Pump

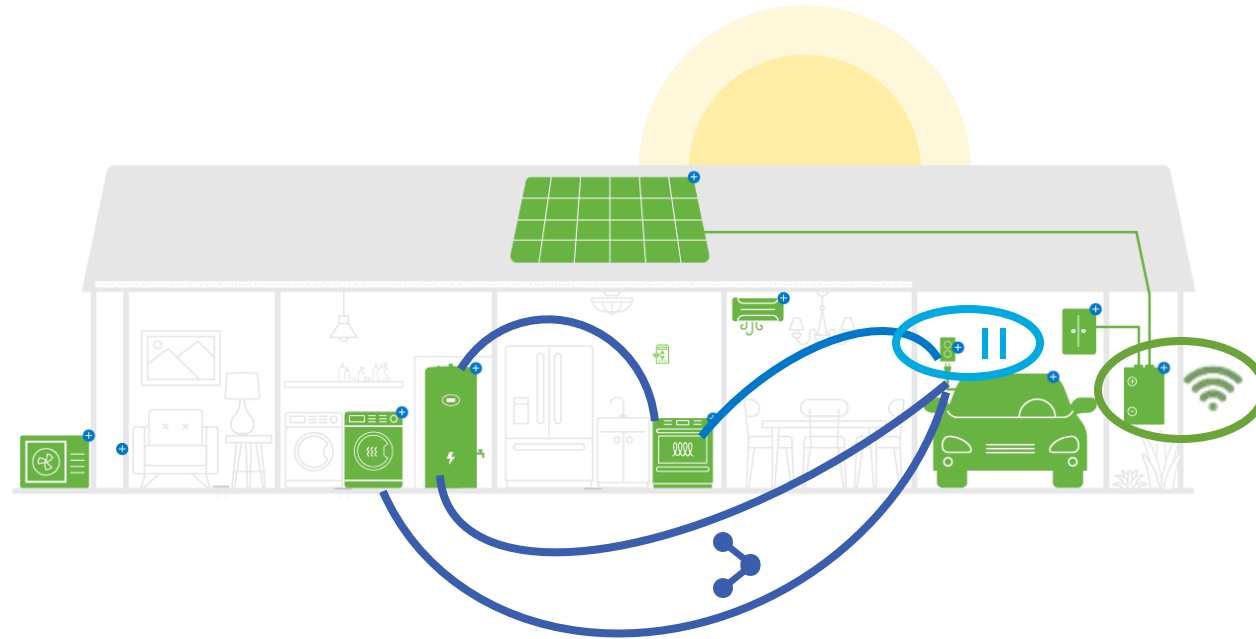
Home description:

- Up to 2,800 sqft
- 100A service and panel
- No pool or spa
- Slide-in range/oven combo
- One (1) 4-ton heat pump space heater

Summary:

It is relatively easy to electrify the typical single-family home up without upgrading above 100A service.

Focusing on circuit controls for EV charging is the easiest path to avoiding an upgrade. See options on the right.



Option 1

Control



Use a circuit pauser on the Level 2 EV charger

Option 2

Control



Use a **circuit-sharing** device with
EV charger + range
EV charger + water heater
EV charger + clothes dryer
Range + water heater

Option 3

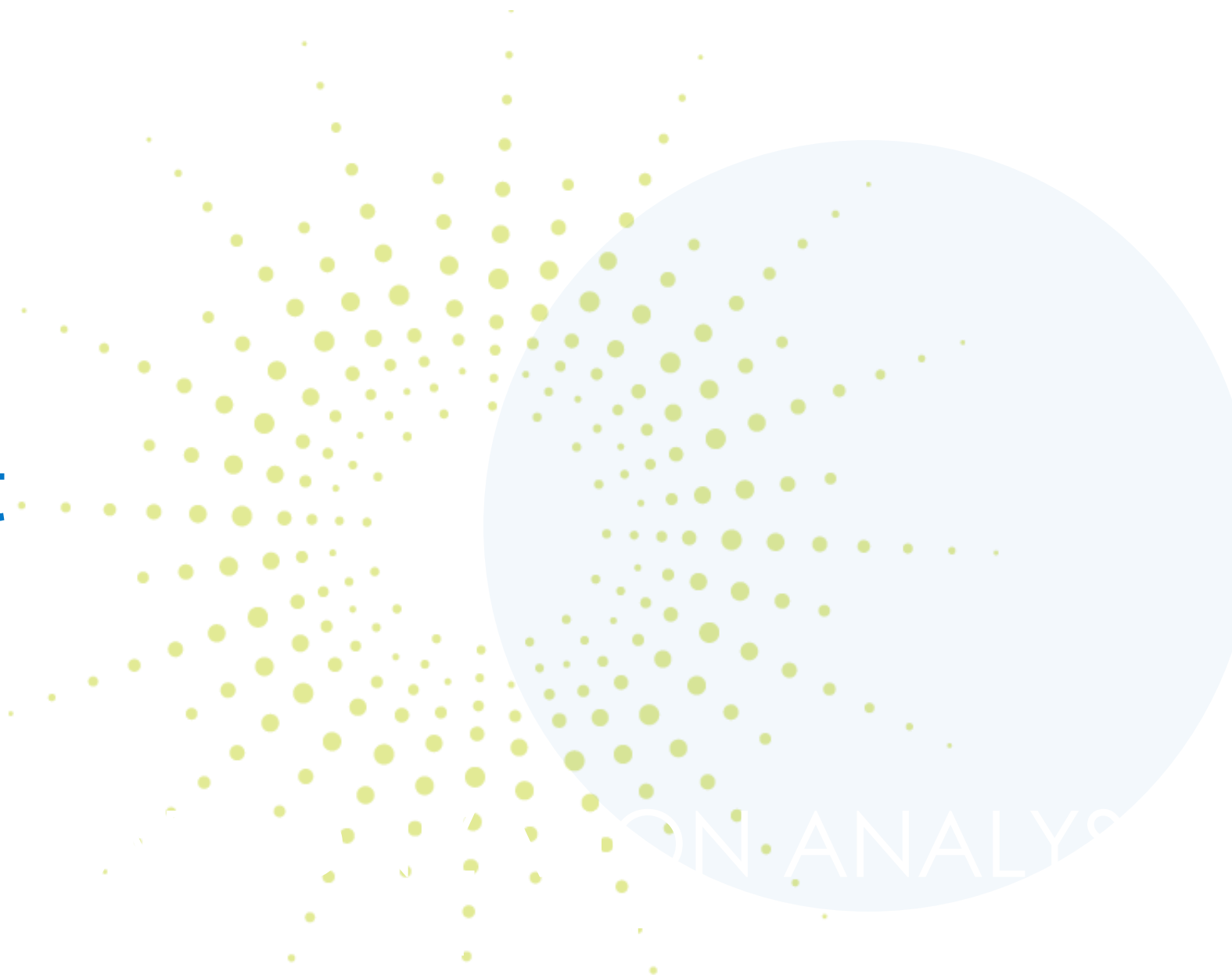
Control



Use a smart panel

Proof of Concept

2023-2024



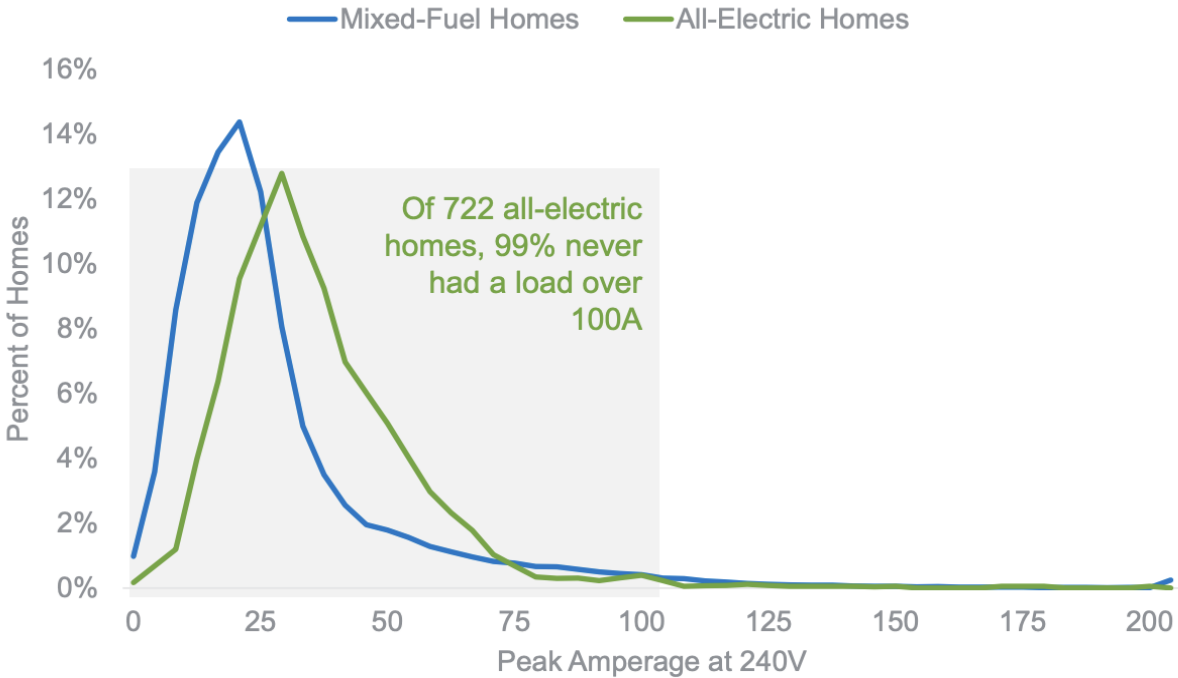
ON ANALYS

Whole Home Pilot

City	Woodside	Foster City	San Bruno	Millbrae	Menlo Park	San Mateo	San Mateo	San Mateo
Beds/Baths	3/3	3/2	2/2	3/1	3/2	3/2.5	2/1	4/2
Sqft	1,030 – 2,000							
Vintage	1927 - 1983							
Fuel	Propane	Methane Gas						
Panel size	100	100 to 200	125	100	100	100	200	200
Electrification total	Average Price - \$36,000							
Total incl. minor home repair	Average Price - \$36,500							
appliances	<ul style="list-style-type: none"> •Ducted HP •65g HPWH •Induction range •Dryer •Subpanel 	Ducted HP 65g HPWH (120v) •Induction cooktop	<ul style="list-style-type: none"> •2.5 HP •65 HPWH •Electric dryer •Subpanel 	<ul style="list-style-type: none"> •3 ton HP •65 HPWH •Electric range •Panel replacement 	<ul style="list-style-type: none"> •2.5 mini split HP •65g HPWH •Induction range •Electric dryer •Panel replacement 	<ul style="list-style-type: none"> •3 ton HP •Induction range •Electric dryer •New subpanel 	<ul style="list-style-type: none"> •4 zone mini split HP •65g HPWH •Induction Range 	<ul style="list-style-type: none"> •4 zone mini split HP •65g HPWH

Whole Home Pilot

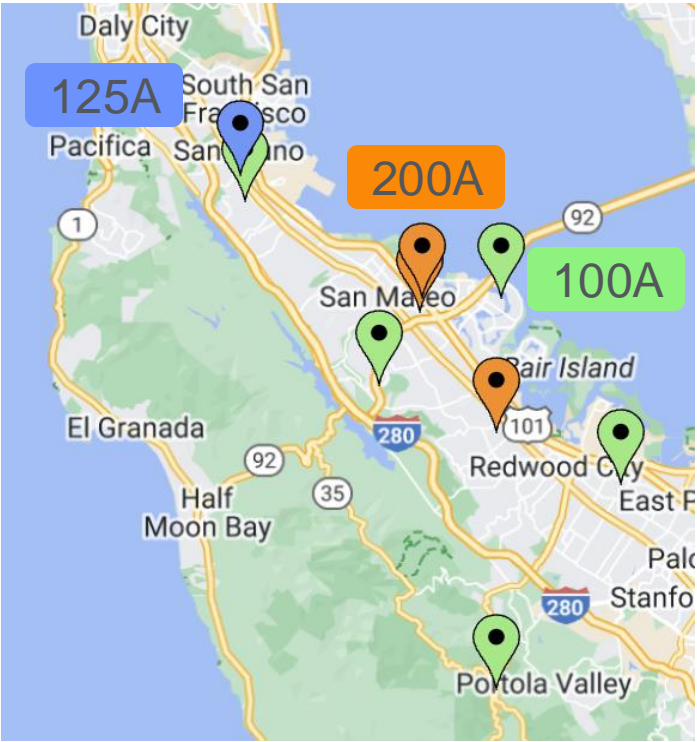
Maximum Annual Peak Demand at Single Family Homes in Peninsula Clean Energy Territory



Whole Home Pilot

- 9 electrified homes
- 5 100A homes
- No service upgrades required

PCE and SVCE analysis concludes that most homes under 2,800 square feet can electrify within 100A service capacity.




Scaling Our Programs

2023-2030



Program Background

Deeper assistance is needed to reach more single-family homes



Rebates
Post-install incentives.



Financing
0% loans up to \$10,000. (PCE only)



Advising & Support
One-on-one assistance for residents to learn how to electrify their homes.

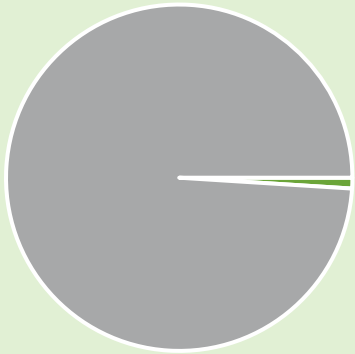


Full-Service Installation
Home assessments and installation services through PCE/SVCE backed partners.

Similar programs being built by:

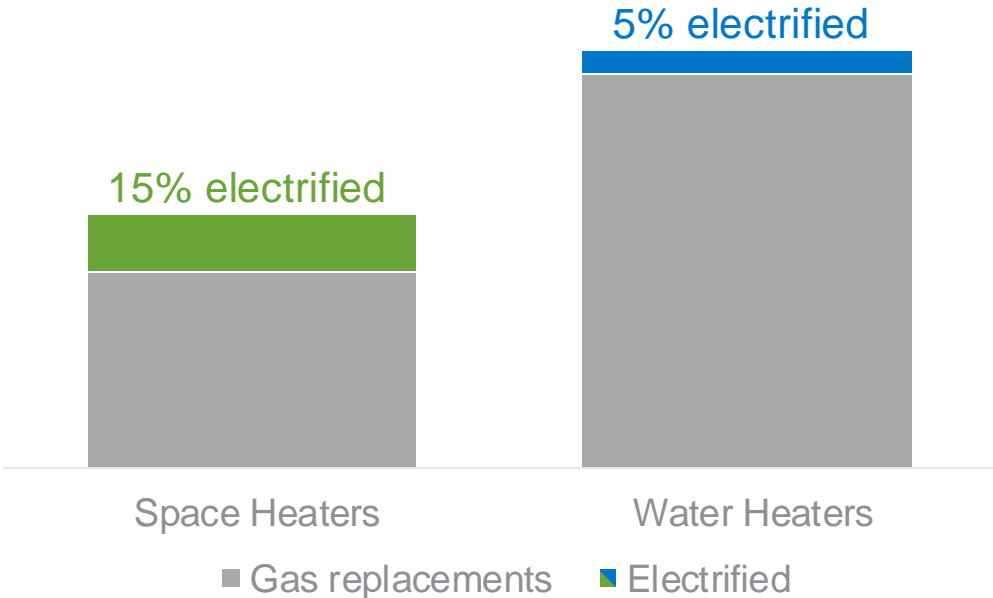
- California Energy Commission
- Palo Alto
- Marin Clean Energy

State of the Building Electrification Market



Only 1% of homes in PCE service territory are estimated to have taken any home electrification step

Electrification rebates as a percentage of replacements in 2023

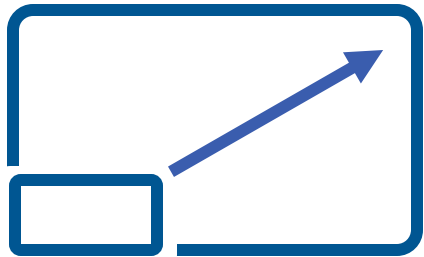


Annual small residential gas replacements

12,000 water heaters

7,000 space heaters

Vision Building Electrification v2 – Home Upgrade Services



Scale to Whole Home



Increase Homes Impacted per Year



One-Stop Shop Services



Concierge Services



Full-Service Installation

Full-Service Installation Offerings

Three components of comprehensive full-service installation services.

**Income-Qualified
No-Cost Electrification**

No-cost whole-home
electrification for low-
income residents

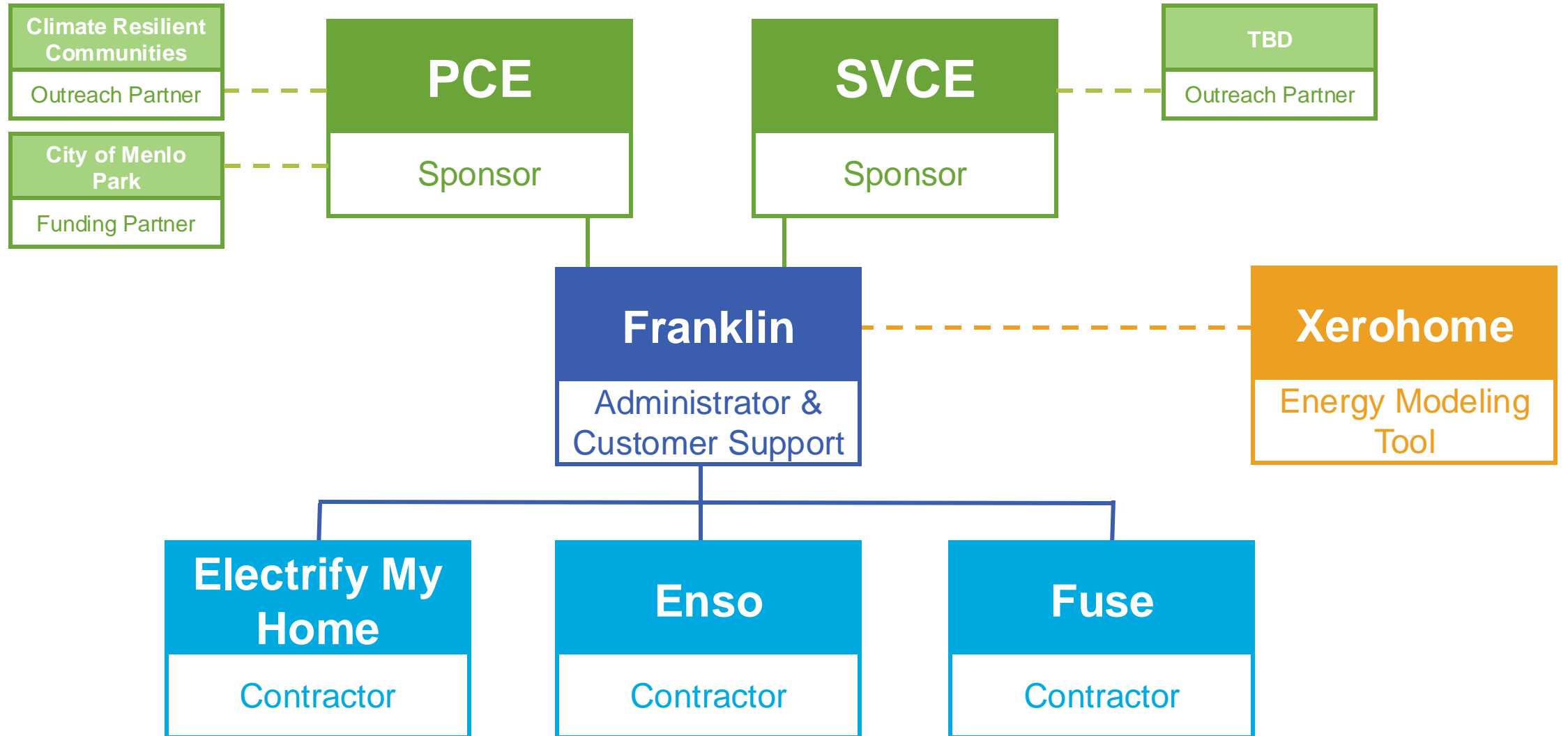
**Market-Rate
Low-Cost Electrification**

Low-cost whole-home
electrification for market-
rate residents

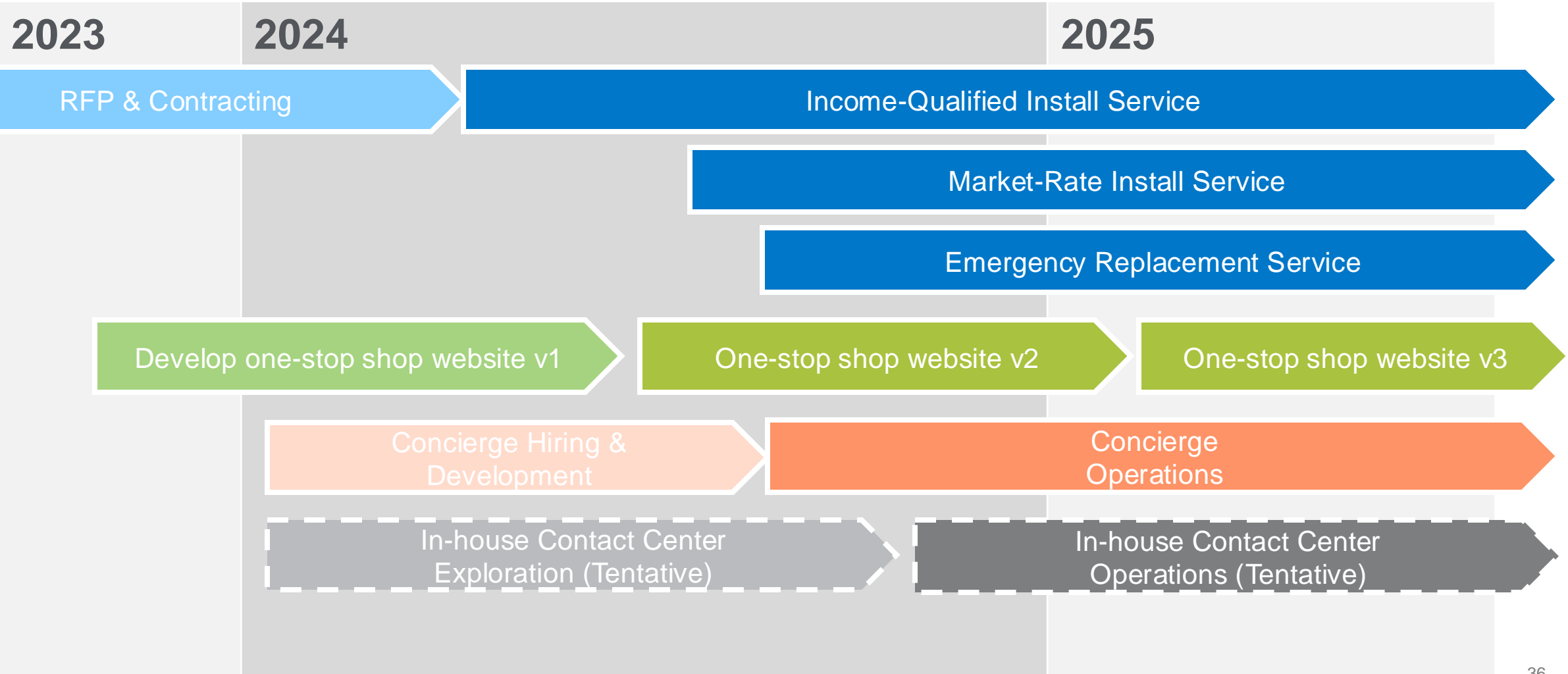
**Emergency
Water Heater Replacements**

Rapid replacement of
failing water heaters
with heat pump water
heaters

Home Upgrade Partners



Building Electrification v2: Timeline





Napa County

Board Agenda Letter

1195 THIRD STREET
SUITE 310
NAPA, CA 94559
www.countyofnapa.org
Main: (707) 253-4580

Climate Action Committee (and the Napa County Board of Supervisors*)
File ID #: 24-1683

Agenda Date: 9/27/2024

TO: Napa County Climate Action Committee
FROM: Brian D. Bordona, Director, Napa County Planning, Building & Environmental Services
REPORT BY: Ryan Melendez, Planner II, Sustainability
SUBJECT: Update: California Green Business Network - Lodging Pilot Program

RECOMMENDATION

PRESENTATION: UPDATE ON THE CALIFORNIA GREEN BUSINESS NETWORK LODGING PILOT PROGRAM IN PARTNERSHIP WITH VISIT NAPA VALLEY

Staff will provide a brief update on the pilot program to administer and promote the California Green Business Network and the Green Lodging Certification Pilot Program.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND AND DISCUSSION

In June, 2024, the CAC heard a presentation from Linsey Gallagher and Rachel Miers on the partnership between Visit Napa Valley and Napa County staff to market and implement the California Green Business Network (CA GBN) to businesses in the tourism industry as well as the Green Lodging Certification Pilot Program led by Rachel Miers. The pilot aimed to certify eight (8) small-to-medium-size hotels in Napa County through the CA GBN with an "Entry Level" certification. Thus far, two (2) businesses have completed the necessary steps to earn this certification, and another four (4) businesses are underway in their sustainable efforts to earn this certification. River Terrace Inn (City of Napa) and Auberge Du Soleil Resort (County of Napa, East of St. Helena) have both completed their final inspections to become Entry-Level Certified Green Businesses under the CA GBN.

The CA GBN is led by a coalition of cities and counties in California to work with small-to-medium-sized businesses to create a vibrant green economy. Businesses begin by registering and completing information on

their business on the GBN website. Once registered, business work with program coordinators (Napa County and Visit Napa Valley) to implement a comprehensive suite of measures to improve the sustainability of the business' operations. The different measures are summarized in a checklist which includes actions to improve the processes of energy consumption, pollution prevention, solid waste monitoring and disposal, transportation, wastewater, water consumption, and community relations and benefits. Once a business successfully implements all the required actions (as shown on a completed checklist) staff from the County and Visit Napa Valley will conduct an audit in which compliance is verified and certify the business as a "Green Business." Businesses are then allowed access to use the CA GBN online tool to create a company profile and let the public know who they are and be featured on the CA GBN website. There is no cost to businesses to sign up and become certified (other than any costs associated with implementing the required measures), and businesses located within the City of Napa can receive a \$500 stipend for becoming a certified Green Business.